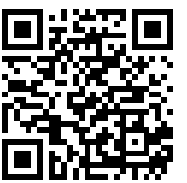


EMERGENCY MEDICAL SERVICES SYSTEMS AUTHORIZATION

HEARING

BEFORE THE

SUBCOMMITTEE ON HEALTH AND THE ENVIRONMENT

OF THE

COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE

HOUSE OF REPRESENTATIVES

NINETY-SIXTH CONGRESS

FIRST SESSION

ON

H.R. 3039

A BILL TO EXTEND FOR THREE FISCAL YEARS THE PROGRAM UNDER SECTION 789 AND TITLE XII OF THE PUBLIC HEALTH SERVICE ACT RELATING TO EMERGENCY MEDICAL SERVICES AND TO AUTHORIZE ASSISTANCE FOR POISON CONTROL AND ASSISTANCE CENTERS

H.R. 3124

A BILL TO EXTEND EXPIRING APPROPRIATION AUTHORIZATIONS FOR EMERGENCY MEDICAL SERVICES SYSTEMS AND HEALTH INFORMATION AND PROMOTION, AND FOR OTHER PURPOSES

H.R. 2212

A BILL TO AMEND THE PUBLIC HEALTH SERVICE ACT TO REVISE AND EXTEND TITLE XII OF THAT ACT RELATING TO EMERGENCY MEDICAL SERVICES

MARCH 21, 1979

Serial No. 96–9

Printed for the use of the
Committee on Interstate and Foreign Commerce

U.S. GOVERNMENT PRINTING OFFICE
WASHINGTON : 1979

46-142 O

COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE

HARLEY O. STAGGERS, West Virginia, *Chairman*

JOHN D. DINGELL, Michigan
LIONEL VAN DEERLIN, California
JOHN M. MURPHY, New York
DAVID E. SATTERFIELD III, Virginia
BOB ECKHARDT, Texas
RICHARDSON PREYER, North Carolina
JAMES H. SCHEUER, New York
RICHARD L. OTTINGER, New York
HENRY A. WAXMAN, California
TIMOTHY E. WIRTH, Colorado
PHILIP R. SHARP, Indiana
JAMES J. FLORIO, New Jersey
ANTHONY TOBY MOFFETT, Connecticut
JIM SANTINI, Nevada
ANDREW MAGUIRE, New Jersey
MARTY RUSSO, Illinois
EDWARD J. MARKEY, Massachusetts
THOMAS A. LUKEN, Ohio
DOUG WALGREN, Pennsylvania
ALBERT GORE, JR., Tennessee
BARBARA A. MIKULSKI, Maryland
RONALD M. MOTTL, Ohio
PHIL GRAMM, Texas
AL SWIFT, Washington
MICKEY LELAND, Texas
RICHARD C. SHELBY, Alabama
SAMUEL L. DEVINE, Ohio
JAMES T. BROYHILL, North Carolina
TIM LEE CARTER, Kentucky
CLARENCE J. BROWN, Ohio
JAMES M. COLLINS, Texas
NORMAN F. LENT, New York
EDWARD R. MADIGAN, Illinois
CARLOS J. MOORHEAD, California
MATTHEW J. RINALDO, New Jersey
DAVE STOCKMAN, Michigan
MARC L. MARKS, Pennsylvania
TOM CORCORAN, Illinois
GARY A. LEE, New York
TOM LOEFFLER, Texas
WILLIAM E. DANNEMEYER, California

W. E. WILLIAMSON, *Chief Clerk and Staff Director*
KENNETH J. PAINTER, *First Assistant Clerk*
GEORGE E. HARDY, Jr., M.D., *Professional Staff*
FRANCES LEE DE PEYSTER, *Staff Associate (Minority)*

SUBCOMMITTEE ON HEALTH AND THE ENVIRONMENT

HENRY A. WAXMAN, California, *Chairman*

DAVID E. SATTERFIELD III, Virginia
RICHARDSON PREYER, North Carolina
ANDREW MAGUIRE, New Jersey
THOMAS A. LUKEN, Ohio
DOUG WALGREN, Pennsylvania
BARBARA A. MIKULSKI, Maryland
PHIL GRAMM, Texas
MICKEY LELAND, Texas
RICHARD C. SHELBY, Alabama
JOHN M. MURPHY, New York
HARLEY O. STAGGERS, West Virginia
(Ex Officio)
TIM LEE CARTER, Kentucky
EDWARD R. MADIGAN, Illinois
DAVE STOCKMAN, Michigan
WILLIAM E. DANNEMEYER, California
GARY A. LEE, New York
SAMUEL L. DEVINE, Ohio
(Ex Officio)

ELLIOT A. SEGAL, *Staff Director*
MARGERY COLLOFF, *Counsel*

CONTENTS

EMERGENCY MEDICAL SERVICES SYSTEMS AUTHORIZATION

WEDNESDAY, MARCH 21, 1979

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON HEALTH AND THE ENVIRONMENT,
COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE,
Washington, D.C.

The subcommittee met, pursuant to notice, at 11 a.m., in room 2218, Rayburn House Office Building, Hon. Henry A. Waxman, chairman, presiding.

Mr. WAXMAN. The meeting will come back on the record. Accidents are the leading cause of death for Americans between the ages of 1 and 39. Before the Federal program on emergency medical services, accidents were responsible for 117,000 deaths a year. The number of deaths from accidents has dropped dramatically since Federal funding was made available to regionalize and systematize emergency care in communities all across the country.

Today we are here to evaluate the emergency medical services program. I expect to hear from the witnesses today that EMS has been one of the real success stories in Federal health programs. The life saving results are dramatic and tangible. Not only have EMS programs saved lives. They have saved unnecessary expenditures of health dollars as well. By providing lifesaving techniques, often before a person is admitted to the hospital, long-term hospitalization is often avoided. The likelihood of permanent disability is reduced.

One special concern I have is that rural areas are in serious need of generous EMS funding. The likelihood of dying because of a serious accident is four times as great if the accident occurs in a rural area rather than a city. The distances are greater. Major medical centers may be far from each other. And trained medical personnel are unevenly distributed in rural settings.

Our first witnesses are Dr. George Lythcott, Administrator of the Health Services Administration, and Dr. David Boyd, Director for the Division of Emergency Medical Services at HEW. They will be joined by Charles Livingston and Leo Schwartz, from the Department of Transportation, who are here to answer any inquiries the subcommittee may have about ambulance service.

Mr. CARTER. Mr. Chairman, I have a statement if I may.

Mr. WAXMAN. Yes, Dr. Carter.

Mr. CARTER. I strongly support continuation of the emergency medical services systems legislation. As you know, the purpose of this law has been to develop EMS systems across the Nation to provide early and effective intervention and treatment of emergen-

cy medical conditions in order to save lives and reduce disability. The Federal program envisions 304 regionally coordinated systems of emergency medical services, and significant progress has been made in planning and developing these systems.

In my view cutting off funding after 1982 as proposed by the administration would significantly weaken the potential effectiveness of the entire program and would not be consistent with congressional intent. Moreover, many of the less affluent communities simply cannot afford to support the development of an EMS system without additional Federal dollars.

Finally, I feel I should mention my concern about the subcommittee bill's proposal for poison control centers. Frankly, I have reservations about establishing a new separate categorical program for poison control at a time when the rest of the EMS program is already on shaky grounds with respect to funding levels. I would much rather see our limited resources put into strengthening and completing development of our present EMS systems.

However, I am looking forward to hearing from our witnesses today on this topic to learn about their experience with poison control efforts.

Thank you, Mr. Chairman.

Mr. WAXMAN. Thank you.

Without objection the text of H.R. 3039, H.R. 3124, H.R. 2212, and agency report on H.R. 3124 will be printed at this point in the record.

[Testimony resumes on p. 23.]

[The text of the bills referred to and agency report follow:]

96TH CONGRESS
1ST SESSION

H. R. 3039

To extend for three fiscal years the programs under section 789 and title XII of the Public Health Service Act relating to emergency medical services and to authorize assistance for poison control and assistance centers.

IN THE HOUSE OF REPRESENTATIVES

MARCH 15, 1979

Mr. WAXMAN (for himself, Mr. PREYER, Mr. WALGREN, Mr. LELAND, and Mr. CARTER) introduced the following bill; which was referred to the Committee on Interstate and Foreign Commerce

---

A BILL

To extend for three fiscal years the programs under section 789 and title XII of the Public Health Service Act relating to emergency medical services and to authorize assistance for poison control and assistance centers.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That section 789(g)(1) of the Public Health Service Act (42 U.S.C. 295g-9(g)(1)) is amended by striking out "the next five fiscal years" and inserting in lieu thereof "the next eight fiscal years".

SEC. 2. (a)(1) Paragraph (1) of subsection (a) of section 1207 of the Public Health Service Act (42 U.S.C. 300d–6(a)(1)) is amended to read as follows:

"(a)(1) For the purpose of making payments pursuant to grants and contracts under sections 1202, 1203, and 1204, there are authorized to be appropriated $40,000,000 for the fiscal year ending September 30, 1980, $40,000,000 for the fiscal year ending September 30, 1981, and $40,000,000 for the fiscal year ending September 30, 1982.".

(2)(A) Subparagraph (A) of paragraph (5) of such subsection is amended by striking out "two succeeding fiscal years at least 2½ per centum but" and inserting in lieu thereof "five succeeding fiscal years,".

(B) Subparagraph (B) of paragraph (5) of such subsection is amended by striking out "two succeeding fiscal years" and inserting in lieu thereof "five succeeding fiscal years".

(b) Subsection (b) of such section is amended to read as follows:

"(b) For the purpose of making payments pursuant to grants and contracts under section 1205, there are authorized to be appropriated $4,000,000 for the fiscal year ending September 30, 1980, $4,000,000 for the fiscal year ending September 30, 1981, and $4,000,000 for the fiscal year ending September 30, 1982.".

(c) Subsection (c) of section 1221 of such Act (42 U.S.C. 300d–21(c)) is amended by inserting before the period a comma and the following: "and for each of the next three fiscal years".

(d) Title XII is amended by adding the following new part:

"PART C—POISON CONTROL INFORMATION AND TREATMENT CENTERS

"AUTHORIZATION OF ASSISTANCE

"SEC. 1231. (a) The Secretary may make grants to and enter into contracts with public and private nonprofit entities to assist in meeting the costs of establishing, training personnel for, operating, and acquiring equipment and materials for poison control information and treatment centers.

"(b)(1) Each grant or contract under subsection (a) shall be made or entered into for costs incurred in the twelve-month period beginning with the month after the grant or contract is made or entered into. The total number of months for which an entity may receive grants or contracts, or both, under subsection (a) may not exceed thirty-six.

"(2) The amount of a grant or contract under subsection (a) shall be determined by the Secretary, except that no grant or contract may exceed 50 per centum of the costs for which it is made.

"(c) No grant may be made or contract entered into unless an application therefor is submitted to and approved by the Secretary. The application shall be in such form, submitted in such manner, and contain such information, as the Secretary may require by regulation.

"(d) To make payments under grants and contracts under subsection (a) there are authorized to be appropriated $20,000,000 for the fiscal year ending September 30, 1980, $15,000,000 for the fiscal year ending September 30, 1981, and $15,000,000 for the fiscal year ending September 30, 1982.".

SEC. 3. The amendments made by the first section and section 2 to section 789 and title XII of the Public Health Service Act shall take effect with respect to appropriations made under those provisions for fiscal years beginning after September 30, 1979.

96TH CONGRESS
1ST SESSION

H. R. 3124

To extend expiring appropriation authorizations for emergency medical services systems and health information and promotion, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

MARCH 20, 1979

Mr. WAXMAN (by request) introduced the following bill; which was referred to the Committee on Interstate and Foreign Commerce

---

A BILL

To extend expiring appropriation authorizations for emergency medical services systems and health information and promotion, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SHORT TITLE

SECTION 1. This act may be cited as the "Emergency Medical Services Systems and Health Information and Promotion Extensions of 1979".

EMERGENCY MEDICAL SERVICES SYSTEMS

SEC. 2. (a) Section 1207(a)(1) of the Public Health Service Act is amended (1) by striking out "and" after "1977,", and (2) by striking out everything after "1978" and inserting instead ", $70,000,000 for the fiscal year ending September 30, 1979, $36,625,000 for the fiscal year ending September 30, 1980, $26,500,000 for the fiscal year ending September 30, 1981, and $13,200,000 for the fiscal year ending September 30, 1982.".

(b) Section 1207(b) of that Act is amended by inserting ", and $3,000,000 for the fiscal year ending September 30, 1980" before the period.

HEALTH INFORMATION AND HEALTH PROMOTION

SEC. 3. (a) Section 1701(b) of that Act is amended (1) by striking out "and" after "1978,", and (2) by inserting ", $18,300,000 for the fiscal year ending September 30, 1980, and such sums as may be necessary for the two succeeding fiscal years" before the period.

(b) The second sentence of section 1703(c) of that Act is amended by striking out "1978" and inserting instead "1981".

PREVENTIVE HEALTH SERVICE PROGRAMS

SEC. 4. The first sentence of section 317(j)(4) of that Act (as amended by the Health Services Extension Act of 1978) is amended by striking everything after "1979," and

inserting instead the following: "$5,000,000 for the fiscal year ending September 30, 1980, and such sums as may be necessary for the two succeeding fiscal years.".

DEFERMENT OF NATIONAL HEALTH SERVICE CORPS SERVICE

SEC. 5. The first sentence of section 752(b)(5)(A) of that Act is amended by inserting ", unless the Secretary chooses to permit not more than an additional year" after "three years".

ELIMINATION OF SET-ASIDE FOR DENTISTRY TRAINING

SEC. 6. Section 786(c) of that Act is repealed.

MINOR AND TECHNICAL AMENDMENTS

SEC. 7. (a)(1) Section 2(f) of that Act is amended by striking out "sections 314(g)(4)(B), 318(c)(1), 331(h)(3), 355(5), 361(d), 701(9), 1002(c), 1201(2), 1401(13), 1531(1), and 1633(1)" and inserting instead "sections 355(5), 361(d), and 1531(1)".

(2) Sections 331(h)(3), 701(9), 1002(c), 1201(2), 1401(13), and 1633(1) of that Act are repealed.

(3)(A) Paragraph (10) of section 701 of that Act is renumbered as paragraph (9).

(B) Subsection (d) of section 1002 of that Act is redesignated as subsection (c).

(C) Paragraphs (3) through (5) of section 1201 of that Act are redesignated as paragraphs (2) through (4), respectively.

(D) Paragraph (16) of section 1633 of that Act is renumbered as paragraph (1) and is inserted immediately before paragraph (2).

(b)(1) Section 311(c)(1) of that Act is amended by striking out "referred to in section 317(f)" each place it occurs.

(2) The first sentence of section 311(c)(1) of that Act is amended by striking out "such".

(c)(1) Subsections (a) through (c) of section 314 of that Act are repealed.

(2) Subsection (g) of that section is redesignated as subsection (a) and is inserted before subsection (d).

(3) Effective October 1, 1979, subsection (d) of that section is redesignated as subsection (b).

(4) The heading to that section is amended to read as follows: "GRANTS FOR MENTAL HEALTH PROGRAMS AND COMPREHENSIVE PUBLIC HEALTH SERVICES".

(5) Section 1511(c) of that Act is repealed.

(d) The heading to subpart IV of part D of title III of that Act is amended by adding "and Technical Assistance Demonstration Grants and Contracts" at the end.

(e) Sections 726(b) and 805(b) of that Act are each amended by inserting "agree to" after "subsection (f),".

(f)(1) Title IX of that Act is repealed.

(2) Section 1511(b)(2) of that Act is amended by striking out everything after "State" the first place it occurs and inserting instead a period.

(3) Section 1514 of that Act is amended by striking out "(including entities presently receiving financial assistance under section 314(b) of title IX or as experimental health service delivery systems under section 304)".

(4) Section 1515(b)(4) of that Act is amended by striking out the last sentence.

(5) Section 1515(c)(2) of that Act is amended by striking out the last sentence.

(g)(1) Section 1301(b) of that Act is amended by adding after paragraph (5) the following:

"A health maintenance organization which has members who are entitled to benefits under title XVIII of the Social Security Act or under a State plan approved under title XIX of that Act shall provide health services to those members in the manner prescribed in those titles, to the extent that the applicable provisions of those titles explicitly differ from the provisions of this subsection. A health maintenance organization which has members who are enrolled under the health benefits program authorized by chapter 89 of title 5, United States Code, shall not be required to provide to those mem-

bers health services in a manner other than as in accordance with that chapter.".

(2) Section 1301(c) of that Act is amended by adding after paragraph (11) the following:

"A health maintenance organization which has members who are entitled to benefits under title XVIII of the Social Security Act or under a State plan approved under title XIX of that Act shall be organized and operated with respect to those members in the manner prescribed in those titles to the extent that the applicable provisions of those titles explicitly differ from the provisions of this subsection. A health maintenance organization which has members who are enrolled under the health benefits program authorized by chapter 85 of title 5, United States Code, shall not be required, with respect to those members, to be organized and operated in a manner other than as in accordance with that chapter.".

(3) Section 1307(d) of that Act is repealed.

(h) Section 1604(b)(1)(I) of that Act is amended by inserting "medical" after "outpatient".

(i) The first sentence of section 1620(b)(2) of that Act is amended by striking out the comma after "pay".

(j)(1) Section 1707(f) of that Act is amended by striking out "503(d)" and inserting instead "1708(c)".

(2) Subsection (d) of section 1708 of that Act is redesignated as subsection (c).

(k)(1) Section 202 of the Health Services and Centers Amendments of 1978 is amended by striking out "Effective October 1, 1979" and inserting instead "Effective October 1, 1978".

(2) Effective November 10, 1978, section 204(b)(2) of that Act is amended (1) by striking out paragraph (2), and (2) by striking out the paragraph designation "(1)".

(l)(1) Title VI of the Health Services and Centers Amendments of 1978 is amended by striking out "Act" each place it occurs, except in paragraphs (14), (15), (16), and (18) of section 606(a), and inserting instead "title".

(2) The first sentence of section 701(c) of that Act is amended (A) by striking out "this Act" the first place it occurs and inserting instead "section 607", and (B) by striking out "this Act" the second place it occurs and inserting instead "title VI".

(m) Effective November 1, 1978, section 11(a) of the Health Maintenance Organization Amendments of 1978 is amended by striking out "section 1310(b)" and inserting instead "section 1301(b)".

(n) Effective November 9, 1978, section 3(d) of the Health Services Research, Health Statistics, and Health Care Technology Act of 1978 is amended by striking out "section 304(d)(3)" and inserting instead "section 304(b)(3)".

46-142 O - 79 - 2

(o) Section 111 of the Community Mental Health Centers Extension Act of 1978 is amended by inserting ", and shall also apply with respect to a fourth grant under section 203(e)(1)(A)(i) of the Community Mental Health Centers Act made from appropriations for the fiscal year ending September 30, 1978" before the period.

96TH CONGRESS
1ST SESSION

H. R. 2212

Introduced by Mr. Mollohan on February 15, 1979.
Cosponsored on March 14, 1979, by:
Mr. Andrews of North Dakota, Mr. Bedell, Mr. Buchanan, Mr. Cleveland, Mr. David of South Carolina, Mr. Emery, Mr. Florio, Mr. LaFalce, Mr. Lott, Mr. McDade, Mr. Murphy of Pennsylvania, Mr. Price, Mr. Rahall, Mr. Vento, and Mr. Drinan.

A BILL

To amend the Public Health Service Act to revise and extend title XII of that Act relating to emergency medical services.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. (a) This Act may be cited as the "Emergency Medical Services Amendments of 1979".

(b) Whenever in this Act an amendment or repeal is expressed in terms of an amendment to, or a repeal of, a section or other provision, the reference shall be considered to be made to a section or other provision of title XII of the Public Health Service Act.

SEC. 2. (a) Section 1203(c)(2) is amended by inserting after "(2)" the following: "The first grant or contract made under this section after the date of the enactment of the Emergency Medical Services Amendments of 1979 to an entity for the establishment and operation of an emergency medical services system shall be available to the entity for establishment and operation costs incurred in the twenty-four month period beginning after the month in which the grant or contract is made.".

(b)(1) Section 1203(c)(3)(A) is amended (A) by striking out "(i)", and (B) by striking out all after "is made" and inserting in lieu thereof "; and".

(2) Section 1203(c)(3)(B) is amended (A) by striking out "(i)", and (B) by striking out all after "is made" and inserting in lieu thereof a period.

(c) Paragraph (4) of section 1203(c) is repealed.

SEC. 3. (a) Section 1204(b)(2)(A) is amended (1) by striking out "(i)", and (2) by striking out all after "is made" and inserting in lieu thereof "; and".

(b) Section 1204(b)(2)(B) is amended (1) by striking out "(i)", and (2) by striking out all after "is made" and inserting in lieu thereof a period.

SEC. 4. (a) Section 1207 is amended to read as follows:

"AUTHORIZATION OF APPROPRIATIONS

"SEC. 1207. (a) Except as provided in section 1202(g), there are authorized to be appropriated $40,000,000 for the fiscal year ending September 30, 1980, $43,000,000 for the fiscal year ending September 30, 1981, and $46,000,000 for the fiscal year ending September 30, 1982, for the purpose of making payments pursuant to grants and contracts under sections 1202, 1203, and 1204.

"(b) There are authorized to be appropriated $3,200,000 for the fiscal year ending September 30, 1980, $3,500,000 for the fiscal year ending September 30, 1981, and $3,800,000 for the fiscal year ending September 30, 1982, for the purpose of making payments pursuant to grants and contracts under section 1205.".

(b) Section 1202 is amended by adding at the end the following:

"(g) No grant may be made or contract entered into under subsection (a) or (b) after September 30, 1981.".

SEC. 5. Section 1221 is amended to read as follows:

"TRAINING FELLOWSHIPS

"SEC. 1221. (a) The Secretary may make grants to hospitals with special expertise in providing care for individuals injured by burns to assist the hospitals in providing fellowships for training in the treatment of such individuals.

"(b) Fellowships under a grant shall be provided in accordance with such regulations as the Secretary shall promulgate. The amount of a fellowship provided under a grant shall be $15,000.

"(c) The amount of a grant under subsection (a) shall be determined by the Secretary, except that in any fiscal year, the amount of a grant to any hospital may not exceed the amount necessary to provide two fellowships. No grant may be made under subsection (a) unless an application therefor has been submitted to and approved by the Secretary. Such application shall be in such form, submitted in such manner, and contain such information, as the Secretary shall by regulation prescribe.

"(d) For making payments under grants under subsection (a) there are authorized to be appropriated $250,000 for the fiscal year ending September 30, 1980, $250,000 for the fiscal year ending September 30, 1981, and $250,000 for the fiscal year ending September 30, 1982.".

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

APR 25 1979

The Honorable Harley O. Staggers
Chairman, Committee on
Interstate and Foreign Commerce
House of Representatives
Washington, D.C. 20515

Dear Mr. Chairman:

This responds to your request for a report on H.R. 3124, a bill "To extend expiring appropriation authorizations for emergency medical services systems and health information and promotion, and for other purposes".

H.R. 3124 is the Administration's proposal concerning emergency medical services systems, health information and promotion, and fluoridation, transmitted as a draft bill on March 13 to the Speaker of the House. A copy of our transmittal letter is enclosed.

We urge that the Committee give H.R. 3124 its prompt and favorable consideration.

The Office of Management and Budget advises that enactment of H.R. 3124 would be in accord with the President's program.

Sincerely,

Secretary

Enclosure

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

March 13, 1979

The Honorable Thomas P. O'Neill
Speaker of the House of Representatives
Washington, D.C. 20515

Dear Mr. Speaker:

Enclosed for consideration by the Congress is a draft bill "To extend expiring appropriation authorizations for emergency medical services systems and health information and promotion, and for other purposes".

The draft bill would extend through fiscal year 1982 this Department's programs in the areas of emergency medical services systems and health information and promotion. The appropriation authorizations of the draft bill are set out at Tab A; the draft bill appears at Tab B.

The Emergency Medical Services (EMS) Systems Program has, since 1973, provided assistance to 282 of the nation's 304 EMS regions. The program has improved the effectiveness and timely delivery of quality services for emergency patients, and has contributed to the reduction in deaths resulting from accidents and other injuries. As a result, States and local communities have shown increased interest in supporting EMS operations. Accordingly, the draft bill would provide for a gradual phase-out of Federal support for the program through fiscal year 1982, by which time fully 82 percent of the regions will have completed either initial development or expansion activities.

Activities under the proposed extension of our health information and promotion authority--including studies in smoking and health, research and demonstrations to identify environmental or other factors affecting health, and the formulation of national goals for health information, health promotion, and preventive health services -- would be a major focal point in the Department's prevention program. The proposed three-year postponement of the matching requirement would permit full Federal financing for projects initiated in fiscal years 1979 through 1981,

the first three years of funding under this authority, and yet would maintain the original congressional intent of encouraging greater non-Federal participation during subsequent funding periods.

The draft bill would also authorize additional funding for preventive health services to provide clear statutory authority for the Department's support of community and school-based fluoridation programs.

In addition, the draft bill would assist in the effective implementation of the National Health Services Corps Program by permitting the Secretary to defer the beginning of service for scholarship recipients for an additional year beyond the three years currently granted for advanced clinical training. The draft bill would also eliminate the requirement that at least 10 percent of funds appropriated for training in family medicine and the general practice of dentistry be used for dental training.

We urge that the Congress give the draft bill its prompt and favorable consideration.

The Office of Management and Budget advises that enactment of the draft bill would be in accord with the President's program.

Sincerely,

/s/ Joseph A. Califano, Jr.

Secretary

Enclosure

DRAFT BILL - APPROPRIATION AUTHORIZATIONS

	FY 1980	FY 1981	FY 1982
	(in thousands of dollars)		
Emergency medical services systems - feasibility, planning, establishment, initial operation, expansion, and improvement	36,625	26,500	13,200
Emergency medical services systems - research	3,000	--	--
Health information and health promotion	18,300	"such sums as may be necessary"	
Preventive health service programs*	5,000	"such sums as may be necessary"	

*These authorizations would replace current authorizations of $1 million for each of the fiscal years 1980 and 1981.

Mr. WAXMAN. Dr. Lythcott, you may proceed.

STATEMENT OF GEORGE I. LYTHCOTT, M.D., ADMINISTRATOR, HEALTH SERVICES ADMINISTRATION, PUBLIC HEALTH SERVICE, DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, ACCOMPANIED BY DAVID BOYD, M.D., DIRECTOR, DIVISION OF EMERGENCY MEDICAL SERVICES, BUREAU OF MEDICAL SERVICES, HEALTH SERVICES ADMINISTRATION; LARRY ROSE, M.D., RESEARCH MANAGER, NATIONAL CENTER FOR HEALTH SERVICES RESEARCH, HEALTH RESOURCES ADMINISTRATION; KEN MORITSUGU, M.D., DIRECTOR, DIVISION OF MEDICINE, BUREAU OF HEALTH MANPOWER, HEALTH RESOURCES ADMINISTRATION; CHARLES LIVINGSTON, DEPUTY ASSOCIATE ADMINISTRATOR OF TRAFFIC PROGRAMS, NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION, DEPARTMENT OF TRANSPORTATION; AND LEO SCHWARTZ, CHIEF, EMERGENCY MEDICAL SERVICES BRANCH, TRAFFIC SAFETY PROGRAM

Dr. LYTHCOTT. Mr. Chairman, members of the committee, I am pleased to be here today to discuss with you the emergency medical services program. Seated with me at the table on my right is Dr. David Boyd, Director of our Division of Emergency Medical Services in the Health Services Administration; Dr. Larry Rose on my right of the National Center for Health Services Research; and Dr. Ken Moritsugu, of the Bureau of Health Manpower in the Health Resources Administration, on my far right.

As you have requested, I will keep my oponing remarks to a minimum. I do have a rather lengthy formal statement which will be inserted into the record for this hearing. As you know, the emergency medical services systems program has provided the mechanism and the funds for States and communities to develop regional systems of emergency care throughout the Nation. This program was enacted by the Congress in 1973. It has provided the incentive for other Federal programs, States, and local agencies to undertake a nationwide effort to improve the care to our sick and injured citizens.

As a result of the interest of Congress in this program, $184 million have been appropriated for fiscal year 1979 to provide grants to plan, establish and improve emergency medical services systems.

About $22 million have been appropriated to undertake an EMS research program to explore applied research problems responsive to many of the regional concerns of emergency medical services systems.

As you know, the current EMS law provides for three distinct levels of activity. The first funding year is directed toward developing a program plan for a regional system. The following 2 years are the operational or establishment years, which will produce a basic life-support system.

The law provides for 2 additional funding years during which the regional community may improve or expand the regional system to upgrade services to advanced life support. With the award of grants in fiscal year 1979 it is estimated that 291 of the 304 national EMS regions will have received funding at some level under the EMS program.

It is further estimated that 66 regions will have completed the funding process. Another 140 will be in the developmental phase. And 85 regions will have completed the planning process. This will leave 13 regions that have not participated in the program at all. Within the 140 regions that are in the development phase, 131 will be in the basic life-support portion of the program, and 9 will be just instituting the advanced life-support program.

The program has been in existence since fiscal year 1974. The results through fiscal year 1978 have continued to support the contention that emergency medical services can be a major contributing factor to saving lives.

For example, 51 projects in the EMS program within metropolitan communities with populations of over 100,000 are providing prehospital advanced support for cardiac care. Various projects have reported in the literature describing 20 to 60 percent field conversion of ventricular fibrillation. This is a mortal condition when it occurs outside of the medical system. With the advent, however, of advanced life support in EMS systems it is coming under medical control.

We have had projects reporting as high as 33 percent long-term survival rate for this patient group. The advent of CPR, or cardiopulmonary resuscitation, by citizens has also been a major contributing factor in supporting many of these heart attack patients until the emergency medical service arrives on the scene.

Major emergency medical services systems are building and incorporating poison care as one of the critical patient categories. In those locales where there are regional poison control centers there has been a 40- to 60-percent reduction of poisoning encounters in the emergency departments. This has been attributable to outreach information programs and the management of a poison episode within the home through intervention of poison control centers.

This early intervention provided by experts prevents inappropriate use of the expensive emergency department resources, and of course results in the most appropriate care for those patients that do incur a life-threatening poisoning episode.

The emergency medical services program of the Department of Health, Education, and Welfare has worked exceedingly well with other components of the total health care delivery system and other programs that are related to emergency medical services.

These include coordinated activities with the Health Resources Administration's Bureau of Health Manpower, the National Center for Health Services Research, the National Institutes of Health, the Food and Drug Administration, the Indian Health Service, and the Bureau of Community Health Services.

The National Center for Health Services Research administers the program in emergency medical services research authorized under section 1205 of the Public Health Service Act. Since fiscal year 1974, $22 million have been appropriated for EMS research, supporting 66 grants and 19 contracts. Twenty-five projects are presently being funded under section 1205 and 18 additional EMS-related studies are being supported under the NCHSR general research authority.

The Federal program to establish EMS systems has been implemented vigorously with emphasis on compliance with required sys-

tems configurations. The applied research program is focused on ways to obtain credible evidence about the effectiveness and efficiency of this mandated model and other appropriate and economic alternatives.

Dr. Rose is here today to answer any questions you may have about this applied research effort.

While the primary mission of the National Institutes of Health is basically biomedical research, much of this research is indirectly related to emergency medical services. The National Heart, Lung, and Blood Institute; the National Institute of Neurological and Communicative Disorders and Strokes; and the National Institute of General Medical Sciences each fund research programs in their program areas related to EMS.

These Institutes and others coordinate closely with the Health Services Administration. The emergency medical training program authorized under section 789 of the Public Health Service Act provides grants and contracts to appropriate schools and other entities to assist training programs in the techniques and methods of providing emergency medical services.

In addition to institutional grants, financial assistance is provided to medical students who plan to practice or specialize in emergency medicine. Of these amounts at least 30 percent is used to train physicians in emergency medicine.

Since 1974, $18,700,000 has supported the training of approximately 92,000 emergency-care providers.

Dr. Moritsugu of Health is available for any further information you may want in the area of training.

As I indicated earlier, Mr. Chairman, with the completion of projects funded in fiscal year 1979, 95.5 percent or 291 of the 304 State-designated emergency medical services regions will have received assistance under title XII of the Public Health Service Act. Eighty-five regions will have completed the planning phase, covering a population of 59,500,000. One hundred and forty regions will be in some phase of operational development, serving a population of 98 million people, and 66 regions serving a population of 52,100,000, will have completed their eligibility under title XII.

We have recently submitted to the Congress proposed legislation for continuation of the EMS program for another 3 years. We have proposed that this be the final extension of the EMS legislation with a planned phaseout of the program in 1982.

For the period 1980 through 1982, the program priorities will be placed upon completing those regional systems that are currently in the process of developing an advanced life-support system. The major emphasis will be given to completing the greatest number of EMS systems through the basic life-support capability.

For the period 1980 through 1982, no planning will be initiated and no new system previously not involved in the program will enter into the program. Through this approach we will anticipate that approximately 83 percent of the total 304 regions will be able to achieve either a basic life support or advanced life-support capability by the completion of the program in 1982. Approximately 17 percent of the regions will have received no support or only planning support.

In summary, Mr. Chairman, we have been able to collect information from our EMS systems grantees, which indicates that EMS has directly and indirectly contributed considerably to the reduction of death and serious injury. We feel that there is an improved awareness by citizens of the need for emergency medical services. There is an improved awareness by Government officials of the need, and there has been an increase in local and State spending to support the development and continuation of emergency medical services.

We therefore feel that this is an appropriate Federal program to complete in the immediate future, so that we can devote our existing procedures to other health initiatives having a greater need for Federal support.

Thank you, Mr. Chairman, for your time. I will be happy to answer questions.

[Testimony resumes on p. 38.]

[Dr. Lythcott's prepared statement follows:]

Statement of George I. Lythcott, M.D., Administrator, Health Services Administration, Public Health Service, Department of Health, Education, and Welfare

Mr. Chairman and Members of the Subcommittee:

My name is Dr. George Lythcott. I am the Administrator of the Health Services Administration which administers a number of health services programs, one of which is the subject of today's hearing: Emergency Medical Services. I am accompanied today by Dr. David Boyd, the Director of the Division of Emergency Medical Services of our Bureau of Medical Services; Dr. Kenneth Moritsugu, Director of the Division of Medicine, Bureau of Health Manpower, Health Resources Administration; and Dr. Larry Rose, Senior Research Manager, National Center for Health Services Research.

I am pleased to appear before you this morning to discuss the EMS program and our position on extension of the EMS authorities contained in Title XII of the PHS Act. We note that several bills have been introduced in the Congress on this subject: H.R. 3039, introduced late last week by several members of this Subcommittee; H.R. 2212, introduced by Rep. Mollohan; S. 497, introduced by Sen. Cranston; and the Administration's bill, which was recently submitted to the Congress.

As you know, the Emergency Medical Services Systems Program has provided the mechanism and funds for States and communities to develop regional systems of emergency care throughout the Nation. This program was enacted by the Congress in 1973 and has provided the incentive for other Federal programs, States, and local agencies to undertake a nationwide effort to improve the care to our sick and injured citizens.

In the EMSS Act, some 15 components are identified to assist planners, coordinators, and operators of emergency medical services systems in the development of comprehensive areawide regional programs. The Health Services Administration, through the Division of Emergency Medical Services, has been the responsible administrative unit for implementing this program.

The central theme and intent of the EMSS Act was to develop systems of emergency medical care that could significantly decrease rates of death and disability. The goal of the national EMS Program has been to initiate regional planning and integration of the 15 component systems so that communities can provide essential and appropriate EMS care to all emergency patients.

The current EMS problem confronting the Nation is compounded by the 75 million encounters of patients to hospital emergency departments each year. Approximately 80 percent of these patients cannot be considered true medical emergencies. These patients are those seeking primary care and using emergency facilities to access the health system. Another 15 percent of encounters are real, but not life-threatening, emergencies which require urgent care for minor trauma, infectious diseases and other acute general medical and surgical problems. The remaining five percent of encounters are for the critically-ill and injured patients who are in a life-threatening or near life-threatening situation. The emphasis of the EMS Program has been to develop a regional system of care directed at this five percent of critically-ill and injured patients, and to develop adequate resources, procedures and implementation techniques which can save the lives of this five percent of the total emergency workload. Through this system, improved care can be provided to the other less urgent patients who also require emergency services.

Program Accomplishments

Mr. Chairman, I would like to discuss what has been accomplished, thus far, and what impact these emergency medical services systems have had in reducing injury and death, which was the original purpose of the program.

As a result of the interest of Congress in this program and the administration support, $184,000,000 have been appropriated through fiscal year 1979 to provide grants to plan, establish and improve emergency medical services systems. About $22,000,000 have been appropriated to undertake an EMS research program. These activities have tended to explore applied research problems related to many of the regional concerns of emerging emergency medical services systems.

As you know, the current EMS law provides for three distinct levels of activity. The first funding year is directed toward developing a program plan for a regional system. The following two years are the operational or establishment years which will produce a basic life support system. This system meets the national criteria by an integration of prehospital emergency medical personnel (to include emergency medical technicians), ambulances meeting national specifications, two-way voice communications, and equipment recommended by the American College of Surgeons. Effective basic life support can provide patient stabilization, airway management, hemorrhage control, shock management with initial wound care, fracture stabilization and, under medical control, specific non-invasive treatment. Transportation of the patient is provided to the closest most appropriate hospital that has been preselected through a categorization program. The patient is received in the hospital emergency department staffed by physicians, and, if required, admitted to a critical care unit specific to his disease or injury.

The current EMS law provides for two additional funding years during which the regional community may improve or expand the regional system to upgrade

46-142 O - 79 - 3

services to advanced life support. At the advanced life support level, mobile prehospital units are equipped with intervenous fluids, drugs, some form of bioelectrical communication, and they are staffed with paramedics with proper physician backup to perform expert diagnoses, treatment and triage of critical conditions.

With the award of grants in fiscal year 1979, it is estimated that 291 of the 304 National EMS Regions will have received funding under the EMS Program. It is further estimated that 66 regions will have completed the funding process, another 140 will be in the developmental phase and 85 regions will have completed the planning process. This will leave 13 regions that have not participated in the program. Within the 140 regions that are in the development phase, 131 will be in the basic life support portion of the program and 9 will be just instituting the advanced life support program.

The program has been in existence since fiscal year 1974. The results, through fiscal year 1978, have continued to support the contention that emergency medical services can be a major contributing factor to saving lives. For example, fifty-one projects in the EMS program, within metropolitan communities with populations of over 100,000, are providing prehospital advanced support for cardiac care. Various projects have reported in the literature describing 20 to 60 percent field conversion of ventricular fibrillation. This is a lethal condition when it occurs outside the medical system. With the advent, however, of advanced life support in EMS systems, it is coming under medical control. We have had projects reporting as high as 33 percent long-term survival rate for this patient group. This means that the patient was alive at the time of hospital discharge. The advent of CPR, or cardio pulmonary resuscitation, by citizens has also been

a major contributing factor to saving many of these heart attack patients until the emergency medical service arrives on the scene.

Major emergency medical services systems are building and incorporating poison care as one of the critical patient categories. In those locales where there are poison control centers, such as Baltimore, Boston, Pittsburgh, Denver, Salt Lake City, Grand Rapids, and San Diego, there has been a 40 to 60 percent reduction of poisoning encounters in the emergency departments. This has been attributable to outreach information programs and the management of a poison episode within the home through intervention of poison control centers. This early intervention, provided by experts, prevents inappropriate use of the expensive emergency department resources, and results in the most appropriate care for those patients that do incur a life-threatening poisoning episode. Inappropriate use of the emergency department is reduced and appropriate care of emergency patients is enhanced. Since encouragement and support of such poison control centers (making use of FDA expertise) are currently being provided under existing legislative authorities, we feel it is inappropriate to provide a specific authorization for this purpose.

Program Coordination

The emergency medical services program of the Department of Health, Education, and Welfare has worked exceedingly well with other components of the total health care delivery system and other programs that are related to emergency medical services. These include some of the activities of the Health Resources Administration's Bureau of Health Manpower; the National Center for Health Services Research, OASH; the National Institutes of Health; the Food and Drug Administration; the Indian Health Service, and the Bureau of Community Health Services both of the Health Services Administration.

EMS Research

The National Center for Health Services Research (NCHSR) administers the program in Emergency Medical Services (EMS) research authorized under Section 1205 of the Public Health Service Act. Since fiscal year 1974, $22.4 million has been appropriated for EMS research, supporting 66 grants and 19 contracts. Twenty-five projects are presently being funded under Section 1205, and 18 additional EMS-related studies are being supported under the NCHSR general research authority (Sec. 305). The Federal program to establish EMS systems has been implemented vigorously with emphasis on compliance with required systems configurations. The applied research program is focused on ways to obtain credible evidence about the effectiveness and efficiency of this mandated model, and on appropriate and economical alternatives.

NCHSR has been working very closely with the Division of Emergency Medical Services (DEMS), Health Services Administration, to gain greater understanding and interaction between the research community and those who use research results--EMS system managers, advisors, and policymakers.

NCHSR's EMS research program has been developing and testing methods to evaluate system performance, such as measures of EMT performance, protocols for diagnosing and treating medical emergencies, and ways to audit the quality of care in Emergency Departments. Our research indicates that, even in communities with "mature systems," serious dangers are not being detected due to inadequate monitoring of systems performance.

As the Federal contribution is phased out, communities, particularly in rural and remote areas, will need, more than ever, valid information on which to

base decisions about safe alternatives. One alternative demonstrated by a NCHSR-supported project to be safe and cost effective, is the substitution of properly trained EMTs for Paramedics in resuscitating many heart attack victims. A study now being designed by NCHSR and DEMS to use survival rates from critical medical emergencies to evaluate the effectiveness of mature systems will help EMS systems after Federal funding has been discontinued.

Six research projects have been completed during this fiscal year providing insight into: strengths and weaknesses of central dispatcher performance, including guidance on training needs; methods to identify patients who seem to benefit more from rapid transportation than from elaborate pre-hospital care; advantages and problems with using public safety personnel, such as police officers, in the delivery of EMS; use of specially-trained assistants guided by protocols to improve handling of pediatric emergency telephone calls to an emergency room; evaluation of the effectiveness of burn treatment protocols as an educational device to improve the quality of care delivered to burn patients; and problems with development and use of an injury/illness severity index to classify emergency patients and evaluate the effectiveness of their care.

EMS research can help policymakers to make sound decisions about allocating scarce health resources. Measures now being developed will permit accurate assessment of system costs, benefits, and alternatives.

While the primary mission of the National Institutes of Health is basic biomedical research, much of this research is indirectly related to emergency medical services (EMS). The National Heart, Lung, and Blood Institute (NHLBI), the National Institute of Neurological and Communicative Disorders and Stroke

(NINCDS), and the National Institute of General Medical Sciences (NIGMS) each fund research programs in their program areas related to EMS. These Institutes and others coordinate closely with the Health Services Administration through such efforts as the Interagency Technical Committee, research center grants in EMS, NIH contract review of applications for HSA burn demonstration programs, and regional burn care systems whose research grants are supported by NIH and demonstration contracts by HSA. Still broader based transfer activities related to EMS were sponsored by NIGMS in 1978 when the Institute sponsored a Consensus Development Conference on Supportive Therapy in Burn Care. In attendance were burn specialists from 33 States and 7 foreign countries, representatives from 10 Federal agencies, and the news media. Consensus was reached and the results widely published on a number of critical issues, including the amount and type of fluid resuscitation, the use of steroids in the treatment of smoke inhalation, the use of antibiotics to curb infections, and nutritional support following burn injuries.

EMS Training

The Emergency Medical Training program, authorized under Section 789 of the Public Health Service Act, provides grants and contracts to appropriate schools and other entities to assist training programs in the techniques and methods of providing emergency medical services. In addition to institutional grants, financial assistance is provided to medical students who plan to practice or specialize in emergency medicine. Of the amounts appropriated, at least 30 percent is used to train physicians in emergency medicine. Since 1974, $18,700,000 has supported the training of approximately 92,600 emergency care providers.

The Emergency Medical Training program has been successful in providing support for expanding emergency medical care. However, continued financial assistance for the training of allied health professions in EMS should continue to be financed at the local level to coordinate the supply of providers with the local need. Also, medical schools now recognize the need to educate physicians in EMS training and are offering training experience in EMS, primarily at the residency level. Emergency medicine is a growing physician specialty. For all of these reasons, there is no need to continue Federal financial support for EMS training.

Administration Proposal

Mr. Chairman, as I indicated earlier, at the completion of fiscal year 1979 funding, 95.7 percent of the emergency medical services regions will have received assistance under Title XII of the Public Health Service Act. Eighty-five (85) regions will have completed the planning phase covering a population of 59,500,000; 140 regions will be in some phase of operational development, serving a population of 98,000,000; and 66 emergency medical services regions serving a population of 52,100,000 will have completed their eligibility under Title XII.

We have recently submitted to the Congress proposed legislation for continuation of EMS systems development at $36.6 million for fiscal year 1980, $26.5 million for fiscal year 1981, and $13.2 million for fiscal year 1982, plus a one-year, $3 million extension of the research authority. We propose that this be the final extension of the EMS legislation with a planned phase-out of the program in 1982. For the period 1980 through 1982, the program priority will be placed upon completing those regional systems that are currently (F.Y. 1979) in the process of developing an advanced life support system. The major emphasis will be given to completing the

greatest number of EMS systems through the basic life support capability. For the period 1980 to 1982, no planning will be initiated and no new systems previously not involved in the program will enter into the program. Through this approach, we anticipate that approximately 83 percent of the total 304 regions will be able to achieve either a basic life support or advanced life support capability by the completion of the program in 1982. Approximately 17 percent of the regions will have received no support or only planning support.

Essentially, we believe that the provision of care in emergencies is a local and State responsibility. The basis for funding for ongoing emergency services should come primarily from medical care reimbursement systems, i.e., insurance programs, Medicare and Medicaid, and other financing programs. There has been a need, however, to stimulate the establishment of systems, the installation of equipment and the coordination of the multiple agencies which must participate. The Federal Government has appropriately financed a major share of assistance during this capacity-building period. It is not appropriate, however, for the Federal Government, in our view, to indefinitely finance the operation of these systems or to bear the cost of the complete development of all the systems across the country. As noted, State and local responsibility is primary.

As you know, Mr. Chairman, both the Administration and the Congress are currently confronting the difficult choices required to slow the inflationary impact of Federal spending. Clearly, every valid social objective cannot be addressed at an optimal level. The EMS program has, we believe, reached that point of development where States and local communities have an

appreciation of the importance of the program. We believe that the EMS Program has accomplished the objective of increasing State and local awareness of the need to improve emergency medical services, and that the systems' approach has been shown to be successful. We believe that it is most appropriate, in view of continuation of State and local efforts and in terms of the Federal health priorities, that this program be extended only for a period of three years with a planned phase-out in 1982. This phase-out period will provide an interval of transition for States and local communities to pick up their responsibility. It will also provide a period of alert for States and local communities to complete that portion of the Federal program which will be funded through 1982.

In summary, Mr. Chairman, we have been able to collect information from our EMS systems' grantees which indicates that EMS has, directly and indirectly, contributed to the reduction of death and serious injury. We feel that there is an improved awareness by citizens of the need for emergency medical services. There is an improved awareness by government officials of this need, and there has been an increase in local and State spending to support the development and continuation of emergency medical services. We therefore feel that this is an appropriate Federal program to complete in the immediate future, so that we can devote our existing resources to other health initiatives having a greater need for Federal support.

Thank you Mr. Chairman for your time. I will be happy to answer questions.

Mr. WAXMAN. Thank you, Dr. Carter.

Mr. CARTER. Thank you, Mr. Chairman.

Dr. Boyd, if Congress were to continue the EMS program at approximately the same current level of support, how many more years would be needed to complete funding of the EMS systems which are presently being supported?

Dr. BOYD. We have projected that at the $50 to $60 million mark. We would have the program completed by 1985.

Mr. CARTER. I see. Why not complete what we have started? Seventeen States, I believe you say, have received no funding whatever.

Dr. LYTHCOTT. Thirteen regions, Mr. Carter. Some of these regions do not want to be involved in a Federal program of this nature. Others do not have the resources to generate what they must generate to meet the requirements. There will be a certain number of regions out of the 304——

Mr. CARTER. If the regions do not have the money to meet the requirements, then should they simply be ignored without any support to train EMT's or provide emergency care to those who need it?

Dr. LYTHCOTT. I wasn't referring to those——

Mr. CARTER. You are proposing to cut back on a program that is effective. We know that it is effective. I have seen the effectiveness of it all over our country. Yet, there are 17 States that have not participated. I can hardly conceive of doing that, Dr. Lythcott.

Dr. LYTHCOTT. Dr. Carter, I think you will appreciate that this decision was a budgetary decision.

Mr. CARTER. I do appreciate that.

Dr. LYTHCOTT. We have a large number of health care programs, and we have to have some priority.

Mr. CARTER. What is more important in a person's life than health?

How many more years of funding would be needed to bring all systems to the basic life support stage of development?

Dr. BOYD. That is 6 more years of funding.

Mr. CARTER. Six more years?

Dr. BOYD. Yes, sir.

Mr. CARTER. All right, sir, and at what cost would that be?

Dr. LYTHCOTT. $290 million is the amount that has been suggested totally in addition to what has been put in the program at this time.

Mr. CARTER. I wonder how that amount compares to what we have given to Samosa over the past 10 years. As you know in the 1976 House Commerce Committee's report on the EMS amendments, the committee urged the department to focus more EMS research on improving the delivery of such services in rural areas, the very areas we are talking about.

However, in looking over the list of the EMS research projects supported in 1978 I find only one project which specifically mentions the word "rural" of 25 projects that were funded. These are perhaps two additional projects that appear to have some reference to rural in their proposal.

While I realize that all research could ultimately have some indirect benefit for rural EMS systems, I am very much disappoint-

ed that there are not more projects of direct significance to rural areas as the committee intended. Would you please comment?

Dr. LYTHCOTT. Dr. Carter, may I ask Mr. Larry Rose on my right, who is the representative of the National Center for Health Services Research, to comment on that issue?

Dr. ROSE. I will see if I can speak to it briefly, Dr. Carter. It is a hard question to answer. What it really boils down to is that most of the concerns that appear in rural systems are problems of magnitude rather than of kind. Adequate training for technicians is a particularly important problem in rural areas. But it is the same problem as appears in any setting. We have made an active effort to try to develop studies which would be carried out in rural settings.

One of the problems with this effort is the fact that in order to carry out research in an economic manner you need fairly large numbers of cases. And as you know, one of the problems in rural settings is that it is hard to find large numbers of patients in a short period of time.

[The following information was subsequently received for the record:]

From the perspective of system planners, operators, and evaluators, the major problems in organizing an Emergency Medical Services (EMS) system in a rural setting are different in magnitude, but not in kind, from those of urban and suburban areas. Because rural areas are likely to have fewer resources to draw upon and greater distances to cover, errors and extravagences in system design are more consequential in these settings. Furthermore, safe and acceptable alternatives to prescribed standards are in greater demand in rural than in urban regions. Such differences do not describe a special kind of research approach, however, but rather dictate that results of any EMS research projects must be generalizable, timely, and credible.

Projects supported under Section 1205 deal with subjects such as methods to measure the performance of EMS personnel, evaluate the benefits and the costs of Advanced Life Support systems, examine the impact of categorization efforts, determine the clinical significance of response time, and explore the consequences of alternative system configurations and procedures. Other projects are developing systems of quality assurance, designing and testing clinical algorithms, and examining the relationships between Emergency Departments and their parent hospitals (including rural-urban differences). Results of such studies will affect decisions in all regions, but are of particular concern to rural communities which usually have limited local resources to rely on as Federal funding is phased out.

Only a few EMS research projects are actually being conducted in rural settings. Because a certain number of events must be observed to be certain that differences are not chance happenings, it is usually more efficient and economical to collect data in more densely populated areas. Moreover, qualified research teams able to design and conduct applied research projects are often located in metropolitan areas. Since findings from a well-designed study are generalizable to other settings, however, the research results are as useful to rural as to urban communities.

Mr. CARTER. That is quite true. But I have visited these places, and I find a sense of pride among the medical technicians who have this training. I have found no lack of young men who want to go into this training. But now you are proposing to cut back the funds for this.

Dr. LYTHCOTT. Dr. Carter, Dr. Rose has explained the research issue. You also should know that 50 percent of our EMS systems development grants have gone to rural areas. You spoke to research specifically but 50 percent of our activity is in rural areas.

Dr. BOYD. Legislatively, you require us to spend at least 20 percent of our dollars in rural America. For 5 years in a row we

have put more than 50 percent of our programs into rural areas. Some of our allocated programs are in places like Tuscaloosa, Southern Illinois, and in Alaska, where we are working with the Indian Health Services.

Our track record in the rural areas is pretty good. The problems are significant, in terms of the planning and the development, and actual operations. Most of our successes are in the rural metropolitan areas, with more difficulty in the wilderness metropolitan regions and probably the most difficulty is in our urban areas.

So our rural track record is probably pretty good in terms of funding, and the past data that we have for the programs relates to that area. We are rather proud of our program activities in rural America.

Mr. CARTER. And in some areas it has been extremely effective. In my area it has been quite good. It could stand improvement. It needs further funding. It needs continuation.

If I might ask another question, how are DOT's ambulance standards enforced, and are they regularly revised?

Mr. LIVINGSTON. The answer to both, if I may, before I get to that specific answer, my name is Charles Livingston of the National Highway Traffic Safety Administration. With me is Leo Schwartz, who is Chief of Emergency Medical Services.

But to your previous question, with regard to the rural area, I would like to inform the chairman and the committee that we in DOT have been coordinating with interagency committees, do have a research study underway right now at the University of Pittsburgh Health Operations Research Group, where we are developing some models that we can examine with the best tradeoff and placements and configurations to address on the major problems in the rural areas.

We also plan to participate again on a cooperative basis with them in a major meeting this coming summer on the rural health problems that we sponsored in the State of Oklahoma. With regard to the enforcement of the emergency ambulance vehicle standards we are cooperating and use those developed and promulgated by the General Services Administration. We enforce these through our grant funding mechanisms.

That means that the States or communities cannot acquire vehicles with our Federal highway safety funds unless they meet specifications.

[Testimony resumes on p. 82.]

[The following letter and attachments were received for the record:]

U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
WASHINGTON, D.C. 20590

THE ADMINISTRATOR

APR 19 1979

Honorable Henry A. Waxman
House of Representatives
Washington, D. C. 20515

Dear Mr. Waxman:

We very much appreciate the opportunity to have appeared before your Subcommittee on Health and the Environment on Wednesday, March 21, in reference to H-3039, a bill to extend the Emergency Medical Services Systems Act of 1973 (amended 1976). My staff informs me that it appeared that some of the Committee members were not fully informed or knowledgeable regarding the Emergency Medical Services (EMS) programs developed and implemented by the National Highway Traffic Safety Administration (NHTSA) under the authority of the Highway Safety Act of 1966, as amended.

I am enclosing several documents, pamphlets, and guidelines concerning the NHTSA EMS program which I am sure you and other Committee members will find of interest. However, I would like to highlight for you some of the significant accomplishments of our program to date, and to also inform you that our activities in support of State programs will continue for the coming years. Accomplishments to date based on 10 years of activity are:

	1966	1979
o Number of States with statewide EMS Coordinators (includes Washington, D.C., Puerto Rico, Guam, Virgin Islands, American Samoa, and Department of Interior)	4	56
o Number of States recognizing national vehicle criteria	0	56
o Number of States with State or local EMS funding	0	56

It's a law we can live with.

	1966	1979
o Number of States with EMS statutes (authorizations)	0	45
o Number of States applying essential medical equipment (ACS)* list to ambulance (66% of all vehicles)	0	54
o Number of States upgrading two-way communications in ambulances (79% of all vehicles to date)	0	54
o Number of States providing EMT-A (DOT Basic) training. (260,000 personnel trained to date)	0	56
o Number of States providing Crash Injury Management Training (first responders)	0	20
o Number of States providing extrication training.	0	32
o Number of States providing paramedic training.	0	45
o Number of States authorizing paramedic level procedures.	0	50

Since 1968, the States and communities will have applied more than $150 million of Federal 402 highway safety funds to EMS and we expect to see approximately $20 million in FY 1980.

Although the primary purpose of our EMS program is for highway safety related trauma, you can easily recognize that any such system must be based upon a comprehensive pre-hospital emergency response system. This is the principal reason why our activities must cover the total spectrum of a comprehensive Emergency Medical Pre-hospital Care System.

The transmitted materials are identified as separate enclosures in Enclosure 1. If there is any additional information we can provide for you or your Committee members, please do not hesitate to call me.

Sincerely,

Joan Claybrook

Joan Claybrook

*American College of Surgeons

UNITED STATES GOVERNMENT

Memorandum

SUBJECT: DOT/DOA Coordination in Developing an Effective Rural Emergency Medical Service Program **DATE:** Sept 12, 1977

FROM : Administrator, National Highway Traffic Safety Administration
Administrator, Farmers Home Administration
Chief, Forest Service

TO : Distribution

Purpose: The purpose of this memorandum is to provide information about Federal programs that are applicable to developing Emergency Medical Services (EMS) programs and to provide points of contact for assistance in developing EMS program components and systems.

Background: The Department of Transportation (through the National Highway Traffic Safety Administration, NHTSA) and the Department of Agriculture (through the Farmers Home Administration, FmHA, and the Forest Service) have programs of assistance in support of the development and implementation of life saving programs in rural areas. These are the Highway Safety Program (NHTSA), the Community Facilities Loan Program (FmHA) and Rural Community Fire Protection Program (Forest Service). These programs afford technical assistance, loans, grants and equipment for planning and implementing of components of rural EMS systems. The interrelationship and a brief outline of these programs is included as attachment 1.

Policy: It is the policy to get people at all levels to cooperate in developing rural EMS components and systems and to inform them about the variety of available Federal funds. To enhance this cooperation, we are providing a list (attachment 2) of key EMS personnel who can help rural system development. All personnel are encouraged to establish working relationships among organizations involved so that there is a clear understanding of how the programs are structured and interact in complementary and supplementary ways. DHEW Regional EMS Consultants are included.

Joan Claybrook Gordon Cavanaugh for John R. McGuire

HS Form
Oct. 1972 121

Attachment 1

DOT/DOA EMS Interface

The Highway Safety Act of 1966 requires that the States implement and develop an effective highway safety program, in accordance with uniform standards which are promulgated by the Department of Transportation (DOT). One such standard, Standard 11, entitled "Emergency Medical Services", administered by the National Highway Traffic Safety Administration (NHTSA) within DOT, is concerned with ambulance service and the post emergency response. Its objective is to reduce mortality and disability by bringing the injured and definitive medical care together in the shortest possible time. The DOT has developed ambulance standards, training programs, communication guidelines and certain suggested practices under this program, which target all prehospital medical emergencies.

In view of the above, additional mandatory guidelines were published in Volume 11, "Emergency Medical Services", of the Highway Safety Program Manual of April 1974. This manual also makes reference to other EMS program criteria which are mandatory and for general guidance. These were developed and published for amplification and clarification. This was also done to ensure that the best known resources knowledge, techniques, and equipment were being brought to bear on the victim of an emergency.

In pursuing the development and implementation of this life saving program, the DOT has viewed the rural requirements as being of equal stature with the urban. It has been policy of the DOT that the quality of service rendered to the victim of an emergency must not be a variable, subject to negotaition from community to community. The guidelines that have been published are considered minimal and appropriate for all who render emergency care. It does not seem practical to make exceptions and deprive some of life-saving and life-sustaining care merely because they happen to live in a small community. Highway death rates in rural areas have exceeded those of the urban areas by 70 percent. Trauma centers and emergency departments are of no value to the victim who has expired due to lack of proper care at the onset of the emergency or in transit to the facility. Quality of service rather than speed in transit is being emphasized.

Programs that support the upgrading of EMS in rural areas include community facility loans from the Farmers Home Administration (FmHA) and grants for equipment and training from the Forest Service (FS) of the

U.S. Department of Agriculture (USDA). The FmHA welcomes the opportunity to extend its rural loan authority to include EMS projects. This is another resource which the States should now include in Standard 11 planning and implementation. Community facility loans from FmHA are available in rural areas for upgrading EMS by purchase and development of essential buildings and equipment. Funds may also be used as the local share of cost for matching grant funds.

Loans secured under this program for EMS should be coordinated with the State Comprehensive EMS plan, should further the implementing schedule of that plan and should support the NHTSA published criteria for Standard 11 implementation.

The second program area is the Rural Community Fire Protection Program administered by the Forest Service. The goal of this program is to provide fire protection in unprotected or inadequately protected rural areas. It is intended to help revitalize the quality of life in rural America be preventing or reducing loss of life, protecting financial investments, and improving environmental conditions. Eligible applicants are official units of government, private and/or public nonprofit organizations, and other rural residents in communities under 10,000 population. Groups of smaller communities, however, may join together in a combined effort to serve more than 10,000 people. Priority is given to unprotected or inadequately protected rural communities. This determination will be based on the current Insurance Services Office rating of the community. State Foresters will select communities to participate in the program on the basis of vulnerability to fire, adequacy of existing protection and other factors. Participating communities can receive 50 precent of actual costs of approved projects.

This fire service program may be identified as supportive of both Standard 11 "Emergency Medical Services" and Standard 16 "Debris Hazard Control and Cleanup" under the Highway Safety Act of 1966.

Specifically, this would extend to providing extrication of persons entrapped in wreckage, emergency care as first responders, assistance with hazard control as identified in Standard 16, and emergency service communications.

Eligible candidates making application under either program should be encouraged by the responsible State officials to follow National Highway Traffic Safety Administration (NHTSA) Standards (11 and 16) when and

46-142 O - 79 - 4

where appropriate. The NHTSA Crash Injury Management Training Course is the appropriate level of training for any first responder to a traffic accident other than the personnel of ambulance services. The NHTSA Crash Victim Extrication Training Course provides the essential training and identifies the necessary equipment to meet 85% of the extrication needs. A survey of the rural rescue/extrication capability should also be encouraged. Any deficiencies related to prompt and efficient access to, and extrication of, trapped victims in vehicle crashes should be corrected. Projects under these programs can assist in this highway safety effort through training and purchase of communications/extrication equipment, in addition to providing purely fire protective services.

NOTE:

These programs are applicable to communities within DHEW funded projects under the Emergency Medical Services System Act of 1973 (amended 1976).

U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
WASHINGTON, D.C. 20590

THE ADMINISTRATOR

AUG 7 1978

To all Governors' Representatives

On July 21, 1978, the Secretary of the Army as Executive Agent for The Department of Defense announced that the National Guard would be included in the Military Assistance to Safety and Traffic (MAST) program. MAST is an inter-departmental cooperative program which provides military helicopters in support of the Emergency Medical Services system. Until now, only regular and reserve units of the Army and Air Force Aerospace Rescue and Recovery Service have participated in MAST. Twenty-five military installations currently serve the civilian communities within a 100 nautical mile radius surrounding each participating activity. Army and Air Force aircraft have flown over 30,000 hours on MAST missions and have served over 14,500 patients.

MAST is an interim measure to provide aeromedical transportation assistance to civilians until such time as similar services can be locally provided. The authorization of National Guard participation in MAST has the potential of adding 208 aircraft at 20 sites across the nation. National Guard activities will serve on a part-time basis coinciding with their normal drill periods. Local participation is voluntary and cannot interfere with the normal mission requirements of the unit. All costs must be borne from funds normally budgeted for training. The first National Guard activity to enter MAST is located in Spokane, Washington. Other communities having potential National Guard MAST sites are:

Lincoln, Nebraska	Smyrna, Tennessee
Bangor, Maine	Santa Fe, New Mexico
Meridian, Mississippi	New Orleans, Louisiana

Tupelo, Mississippi
Mather AFB, California
Bismarck, North Dakota
Parkersburg, West Virginia
Concord, New Hampshire
Ft. Belvoir, Virginia
Frankfort, Kentucky
Cheyenne, Wyoming
Rapid City, South Dakota
Westover AFB, Massachusetts
Montgomery, Alabama
Ellington AFB, Texas
Reno, Nevada

The MAST Program Manual is the basic guide for requesting new MAST sites. State officials having this new resource available to them are encouraged to investigate the forming of local MAST Coordinating Committees and becoming a part of this program.

Joan Claybrook

Joan Claybrook

Interagency Executive Group
January 1978

Program Manual for MAST Programs

U. S. Department of Transportation
U. S. Department of Defense
U. S. Department of Health, Education, and Welfare

INTRODUCTION

During the late 1960's, various individuals and organizations became interested in the possible role of the helicopter in civilian emergency medical service. Studies and trial projects have shown the cost of civilian helicopter ambulances to be not only extremely high, but the utilization to be unexpectedly low. The conclusion is that the helicopter ambulance in the civilian sector must first be justified for other duties which will still allow it to be diverted for emergency air ambulance work when needed. Several states now operate State police helicopters which are available as needed for emergency air ambulance work. In looking for additional available helicopters which had already been justified for other uses and which could be utilized in the emergency medical service system, the use of military helicopters was investigated. The result was the creation of the Military Assistance to Safety and Traffic (MAST) Program in July 1970.

UNITED STATES GOVERNMENT

Memorandum

U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

SUBJECT: INFORMATION: DOT (NHTSA) EMS Program and Resource Coordination

DATE: January 26, 1979

In reply refer to: NTS-13

FROM : National Highway Traffic Safety Administrator

TO : Regional Administrators, NHTSA
Regions I - X

Purpose:

The purpose of this memorandum is to provide information about the administration of the Department of Transportation's (DOT) Emergency Medical Services (EMS) program as administered by the National Highway Traffic Safety Administration (NHTSA) pursuant to its statutory authority and responsibility under the Highway Safety Act of 1966 (amended).

Discussion:

Through its highway safety program, the DOT has been the catalyst for the development of a high quality EMS system in the United States. Subsequent to our involvement, several other Federal programs have become involved in or have been developed to meet the needs of this evolving EMS system. As the system developed, the local and State program administrators have been able to make use of these multiple Federal programs to further their goal of developing quality emergency medical care. Previously distributed documentation relating to this program coordination and resource applications are: "DOT/DOA Coordination in Developing an Effective Rural Emergency Medical Service Program," of September 12, 1977, by the Administrator, NHTSA/DOT; Administrator, Farmers Home Administration FHA/USDA; Chief, Forest Service/USDA; and "Federal Policy on the use of Citizens Band Radio by Motor Vehicle Operators" of June 16, 1978, by the Secretary, DOT; Chairman, Interstate Commerce Commission (ICC); and Chairman, Federal Communications Commission (FCC).

Policy:

It is a continuing policy of the DOT and NHTSA to develop cooperation among individuals and all levels of government with the goal of providing an EMS system that meets the needs of this country. Attachments (1) through (5) are provided to amplify the NHTSA policy on program and resource coordination. Attachment (6) is a recently consummated Memorandum of Understanding with the Department of Health, Education and Welfare (DHEW) that supports and provides background for our policy statements.

Action:

All program administrators are encouraged to establish working relationships among organizations involved so that there is a clear understanding of how the programs are structured and interact in both complementary and supplementary ways. NHTSA Regional Administrators are enjoined to designate one staff member as the Regional NHTSA/EMS Coordinator to serve as counterpart to the DHEW Regional EMS Consultants and to work with State highway safety agencies and State EMS Directors/Coordinators. All State comprehensive EMS plans are to be updated by the States, approved by the Regions, and two copies transmitted to the EMS Branch by September 30, 1979. This memorandum supersedes and cancels NHTSA memorandum of October 11, 1974, Subject: "DOT/DHEW EMS Program and Resource Coordination."

Joan Claybrook

6 Attachments

NHTSA/EMS PROGRAM AND RESOURCE COORDINATION

1. The Highway Safety Act of 1966 (amended) requires that States have a highway safety program developed in accordance with uniform standards promulgated by the Secretary of Transportation. Standard 11 entitled "Emergency Medical Services" broadly outlines the elements of content required in that part of a State's program. The purpose of this standard is to improve the lifesaving capability of emergency medical services through personnel training, proper equipment, communications, operational coordination, and comprehensive planning at both the State and local levels. The comprehensive EMS plans are a basis of support and justification for EMS problem identification in the annual Highway Safety Plan (HSP).

2. Pursuant to the above, guidelines are published in Volume 11, "Emergency Medical Services," of the Highway Safety Program Manual, with changes and addenda. This manual makes reference to the program materials in training, vehicle specifications, communications, administration, evaluation, planning, etc. These were and will continue to be developed and published for amplification, clarification and implementation. This was and is being done in consonance with the professional community to ensure that the best known resources-knowledge, techniques, and equipment are being brought to bear on the victim of an emergency.

3. Section 402 of the Act provides funding assistance to States for the conduct of their highway safety programs. These funds may be used for political subdivision emergency medical services projects within the framework of an overall State highway safety program , which encompasses all eighteen areas of highway safety covered by Federal standards. Project application by a political subdivision under Section 402 must be made to the State to be considered for inclusion in the State EMS program. Direct assistance to political subdivisions is not possible, since all funds available under this section of the Act are apportioned for use by the States.

4. With the advent of the Emergency Medical Services Systems Act of 1973 (amended) and its implementation by the Department of Health, Education, and Welfare, a new Federal resource and effort was added to the Emergency Medical Services field. NHTSA views this program as not only an expression of National support and interest in EMS but also a specific expression of continued interest in implementating Standard 11 under the Highway Safety Act of 1966 (amended). Therefore, a change in priority or policy regarding use of NHTSA 402 funds for EMS is neither contemplated nor considered prudent. It is still doubtful that any

State has advanced so far in the implementation of an effective emergency medical services program that it cannot profitably add funds to what they are doing or to what needs doing. Rather than viewing the EMS Systems Act of 1973 as a substitute in the EMS program area, it must be viewed as a source of supplementary aid in getting on with the job of implementing Standard 11, while at the same time focusing attention on even broader EMS related needs (emergency department upgrading, physicians and nurses education in emergency care etc.). The legislative history of the EMS Systems Act also indicates that the Congress intended to supplement and broaden the EMS effort rather than shift emphasis or substitute funding sources. (See attachments 2 and 3).

5. It is published NHTSA policy that the coordination of all resources and activities relative to statewide EMS system development must begin with a State Comprehensive EMS Plan. This enables the responsible State Highway Safety agency to identify and correlate all projects and funding in such a manner that they may be interrelated, and result in a total plan and system development. An outline for Comprehensive State EMS plans, which will satisfy the needs of both HEW and DOT, has been developed and appears in revised Volume 11, (April 1974) "Emergency Medical Services," Highway Safety Program Manual.

6. Attachment 4 provides a diagram of what is considered the coordination requirements of the two programs. The focal point as shown here is the State Comprehensive EMS plan, copies of which should be in both the DOT/HEW channels. As is shown, there should be coordination between the HEW projects and DOT 402 funding in the Annual Highway Safety Plan (HSP) to ensure that they fill needs and problems identified in the State Comprehensive EMS plan. This coordination requirement will also be true of the evaluation and reporting procedures as they are developed. The Comprehensive EMS plan must reflect the identification and application of all resources.

7. Attachment 5 is identified as the EMS Continuum, Funding and Criteria Schematic or Coordinated Application of Resources (CAR). EMS is viewed as a Continuum consisting of three distinct segments as shown across the center. Resources that may be brought to bear are then identified as flowing into each segment. Note again the coordination requirement between A, B, and C. This State level coodination of resources is considered of paramount importance to ensure maximum impact, total system development, and the reduction of duplication. You will note that the DOT effort is limited in both funding and criteria development to the transportation or pre-hospital (non definitive care)

segment, with some funding overlap into the area of the emergency department to aid the transition to definitive care. This latter is exclusively in communications and interchangeable equipment with ambulances (litters, IV equipment; etc.).

8. This statement of NHTSA/EMS program administrative policy is in consonance with the DOT/DHEW Memorandum of Understanding (Attachment 6). It also takes cognizance of the following NHTSA Administrative note:

Under an amendment (1978) to Section 402, the highway safety Act of 1966 program will have to be administered through "State Highway Safety Agencies" instead of "State Agencies," thereby compelling greater legislative attention to State agencies which have been often viewed as Federal grant management offices.

Senate Report No. 93-397 Calendar No. 373
of September 18, 1973 to Accompany S. 2410

It should be stressed that, although assistance is authorized to be provided under a grant or contract as necessary to support the carrying out of any requisite component of a plan, the basic thrust of the bill is to provide incentive payments for the development of a comprehensive and integrated system with maximum reliance for funding placed on acquisition of funds and resources under other Federal programs (especially for facilities, health manpower training, and transportation and equipment) through the Division of Emergency Medical Programs, Department of Transportation, and MAST and on the generation of local funds. Provisions in the reported bill (subsections 1206 (e) and (f)) make this explicit.

(f)(1) In determining the amount of any grant or contract under section 1203 or 1204, the Secretary shall take into consideration the amount of funds available to the applicant from Federal grant or contract programs under laws other than this Act for any activity which the applicant proposes to undertake in connection with the establishment and operation or expansion and improvement of an emergency medical services system and for which the Secretary may authorize the use of funds under a grant or contract under section 1203 and 1204.

Attachment 2

House of Representatives Report No. 93-601
of October 19, 1973 to Accompany H. R. 10956

The Committee does not intend to create new grant authorities under the provisions of this bill which are duplicative of existing authorities. The basic purpose of the legislation is to encourage and provide incentives to appropriate units of government to inventory their resources for providing comprehensive emergency medical services, identify the gaps in such services, seek to remedy these deficiencies through better coordination or utilization of existing resources -- their own and those available under other Federal programs -- and develop the new components essential to the achievement of an integrated; comprehensive area EMS system. Where assistance is available under other Acts to support the development of any particular component of an EMS system, the Secretary is expected to direct the applicant first to seek such assistance and to provide support for such a component under the provisions of the new title XII only where such a component is not supported at all or is not sufficiently supported under other Acts to enable it to meet the requirements established under the reported bill.

Subsection (b) of new section 1203 -- Provides that special consideration shall be given to applications for grants and contracts for systems which will coordinate with statewide emergency medical services systems.

The Secretary shall take into consideration the amount of funds available to the applicant from Federal grant or contract programs under laws other than the Public Health Service Act for any activity which the applicant proposes to undertake in connection with the establishment and operation or expansion and improvement of an EMS system and for which the Secretary may authorize use of funds to carry out a grant or contract under new sections 1203 and 1204.

Attachment 3

Attachment 4

Attachment 5

MEMORANDUM OF UNDERSTANDING
BETWEEN THE UNITED STATES DEPARTMENT OF TRANSPORTATION
AND THE
UNITED STATES DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
FOR PROCEDURES RELATING TO
EMERGENCY MEDICAL SERVICES SYSTEMS

The Department of Transportation (DOT), under the Department of Transportation Act (49 U.S.C. 1651 et seq) and the Highway Safety Act of 1966 (23 U.S.C. 401 et seq) has authority to provide financial and technical assisiance for the transportation phases of Emergency Medical Services. The Department of Health, Education, and Welfare (DHEW) is authorized to provide technical assistance and funds in the form of grants and contracts for Emergency Medical Services Systems under Title XII, Part A, of the Public Health Service Act (42 U.S.C. 300d et seq).

For the purpose of assuring a clear understanding by State, Regional, and local officials responsible for the implementation and administration of emergency medical services programs, it is essential that the primary areas of responsibility between DOT and DHEW be defined. Therefore, DOT and DHEW agree, pursuant to their respective statutory authorities, to the terms of this Memorandum. In carrying out this Memorandum, the goals of DOT and DHEW will be to develop, establish, and implement consistent and comprehensive national uniform standards, criteria, procedures, technical assistance, related requirements and to avoid duplication of effort.

Section 1206 of the Public Health Service Act identifies 15 components of an emergency medical services system. These component requirements are used in this document solely to delineate responsibilities of DOT and DHEW for the development of program standards and procedures.

A. DOT RESPONSIBILITIES

In coordination with DHEW, DOT will develop uniform standards and procedures for the transportation phases of emergency care and response as follows:

1. Manpower - EMS administrative personnel involved in the transportation phases of emergency medical services (EMS).

2. Training - First responders (fire, police, etc.) Emergency Medical Technicians - Ambulance and Paramedics, communications dispatchers, and system coordinators and administrators.

3. Communications - Telecommunications systems in areas of citizen access, central dispatch, ambulance to emergency department (ED), field resource management of EMS systems including utilization of basic and advanced telecommunications technology.

Attachment 6

4. Transportation - Ambulances and special transportation vehicles (air, surface, water) and equipment both carried and installed (extrication, communications, medical), including emergency and safety specifications.

5. Facilities - The transportation and care of emergency patients to the appropriately categorized and/or otherwise designated facilities.

6. Critical Care Units - Transportation and care to such designated units.

7. Public Safety Agencies - Integration and improved utilization of all personnel, facilities, and equipment.

8. Consumer Participation - The opportunity for private citizens to participate in making policy for the transportation phases of an EMS system.

9. Accessibility to Care - Transportation response and extra-hospital EMS care without prior inquiry as to patients' ability to pay.

10. Transfer of Patients - Inter-hospital transport and care of critical patients to advanced treatment centers.

11. Coordinated Medical Recordkeeping - Record systems utilized during the transportation phases (e.g., dispatcher and ambulance data forms and processing).

12. Consumer Information and Education - Education and training of private citizens along with dissemination of program information relating to training and educational concepts, principles, standards, and criteria for the transportation phases of EMS systems.

13. Review and Evaluation - Evaluation of the extent and quality of pre-hospital and inter-hospital emergency response and care services provided in the system's service area as it relates to emergency transportation.

14. Disaster Linkages - Coordination of pre-hospital and inter-hospital EMS transportation response and care services during mass casualties, natural disasters, or national emergencies.

15. Mutual Aid Agreements - Setting requirements for pre-hospital and inter-hospital EMS transportation response on a reciprocal basis.

B. DHEW RESPONSIBILITIES

DHEW will develop, in coordination with DOT, medical standards and procedures for initial, supportive and definitive care phases of EMS systems as follows:

1. Manpower - EMS personnel involved in all phases of EMS.

2. Training- First responders, private citizens, Emergency Medical Techinicians - Ambulance and Paramedics, communications, EMS hospital communicators, emergency nurses and physicians, EMS medical directors and system coordinators and administrators.

3. Communications - Telecommunications systems in areas of citizen access, central dispatch and field resource management of EMS systems. DHEW emphasis would be in the areas of medical communications and control for vehicle to hospital communications for both basic and advanced life support as well as hospital to hospital communications for advanced technology.

4. Transportation - Patient care standards for ambulances, special transportation vehicles (surface, air, water) to include equipment and treatment specifications.

5. Facilities - Development and implementation of regional hospital categorization programs.

6. Critical Care Units - Appropriate designation of critical care capability.

7. Public Safety Agencies - Integration and improved utilization of personnel, facilities, and equipment in day-to-day EMS and in major disaster operating procedures.

8. Consumer Participation - The opportunity for private citizens to participate in making policy for the EMS system.

9. Accessibility to Care - Care without prior inquiry as to ability of patient to pay.

10. Transfer of Patients - Inter-hospital transfer agreements for critical patients to advanced treatment centers in order to provide maximum follow-up care and rehabilitation.

11. Coordinated Medical Recordkeeping - Establishing and operating record systems utilized during transportation phases (e.g., dispatcher and ambulance data forms and processing) as well as in-hospital emergency and critical care treatment phases.

12. Consumer Information and Education - Education and training of private citizens along with dissemination of program information relating to training and educational concepts, principles, standards, and criteria for the EMS system.

13. Review and Evaluation - Evaluation of the extent and quality of regional emergency medical response and care services provided within the system's service areas.

14. Disaster Linkages - Coordination of EMS response and patient care during mass casualties, natural disasters, or national emergencies.

15. Mutual Aid Agreements - Setting requirements for pre-hospital, hospital, and inter-hospital emergency medical care on a reciprocal basis.

C. RESEARCH AND DEMONSTRATION

DOT and DHEW will pursue research and demonstration activities in support of their respective program responsibilities as defined above. Joint efforts are encouraged where possible.

D. FUNDING AND TECHNICAL ASSISTANCE

DOT may fund those activities pertaining to its responsibilities outlined above under both Section 402 and 403 of Title 23, U.S.C., Highway Safety Act of 1966. Under Section 402, it is recognized that in the apportionment of funds to the States for program implementation, DOT does not determine the priorities by which these funds will be applied to the transportation phases of the State's EMS system. Subject to applicable statutes and regulations and the availability of funds, DHEW may fund the full spectrum of eligible entities as defined in Section 1206 of the Public Health Service Act. When DHEW funds are expended for emergency ambulance vehicles and the training of Emergency Medical Technicians - Ambulance and Paramedics, DOT criteria as specified in EMS program regulations apply. DOT funds may be used to assist in the transportation phases of DHEW-funded projects. Both agencies will provide technical assistance as appropriate and as required in support of their program responsibilities.

E. INTERAGENCY COOPERATION

In addition to the statutory requirements pertaining to the Interagency Committee on Emergency Medical Services, DOT and DHEW will keep each other advised on a continuing basis and coordinate the development of standards within their respective responsibilities. With respect to communications systems, every attempt should be made to harmonize DOT-DHEW requirements to the maximum extent practicalbe.

F. EXCHANGE OF INFORMATION

Prior to the issuance of procedures, training manuals, regulations, funding or other information pertinent to the respective responsibilities, DOT and DHEW will exchange information, consult with, and assist each other within the areas of their special competence. Both Departments will actively maintain identified channels so as to share with each other, at both the central and regional office levels, all pertinent issuances to their respective staffs and clientele.

G. WORKING ARRANGEMENTS

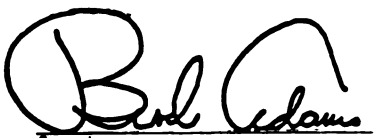
DOT and DHEW will designate staff representatives and will establish joint working arrangements from time to time for the purpose of administering this Memorandum of Understanding. Pursuant to this Memorandum of Understanding, DOT and DHEW Regional Offices will promote coordination of DHEW-sponsored projects with DOT required State comprehensive EMS plans and programs through a mutually acceptable lead agency. These offices will also assist each other in the identification and application of all available resources to support EMS upgrading within the scope of such plans, programs and/or projects.

H. GENERAL

This agreement shall take effect upon the signing by authorized representatives of the respective Departments.

Nothing in this Memorandum of Understanding is intended to affect in any way the statutory authority of either Department.

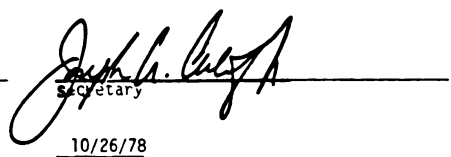
For the Department of Transportation



Secretary

10/26/78
Date

For the Department of Health, Education, and Welfare



Secretary

10/26/78
Date

DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
EMERGENCY MEDICAL SERVICES BRANCH

EMERGENCY MEDICAL SERVICES 1966-1979

PROGRAM REVIEW

and

FACT SHEET

Washington, D. C. 20590
March 22, 1979

DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

EMERGENCY MEDICAL SERVICES FACTSHEET

BACKGROUND:

In 1965 the President's Commission on Highway Safety published its final report "Health, Medical Care and Transportation of the Injured" which recommended a national accident response program to reduce deaths and injuries from highway accidents. In 1965, the National Academy of Sciences focused national attention on the unnecessary loss of life and injuries due to accidents in its report "Accidental Death-The Neglected Disease of Modern Society." Following are some of the conditions which existed in 1966 and which were documented in these reports:

- Few were adequately trained in the advanced techniques of cardiopulmonary resuscitation, childbirth, or other lifesaving measures, yet every ambulance and rescue squad attendant, policeman, firefighter, paramedical worker, and worker in high risk industry should be trained.

- There were no generally accepted standards for the competence or training of ambulance attendants. Certification or licensure of attendants was a rarity. There was a need for a standard course of instruction and training aids.

- Approximately 50 percent of the country's ambulance services were provided by 12,000 morticians, mainly because their vehicles could accommodate transportation on litters.

But in most instances, as in the case of many privately owned ambulances, the vehicles were unsuitable for active care during transportation. No manufacturer produced from the assembly lines a vehichle that could be termed an ambulance by proper definition. There were no acceptable standards for vehicle design.

- Helicopter ambulances had not been adapted to civilian peacetime needs nor their place and value in the civilian sector studed and evaluated.

- Ambulance medical equipment and supplies were incomplete.

- With rare exceptions, ambulance radio installations provided communications only between dispatcher and drivers. There was a need for the assignment of discrete

radio-frequency channels, to provide direct communications between the site of an accident, ambulances, hospital emergency departments, fire department traffic control officials and civil defense authorities.

In addition the study addressed the inadequacy of training programs for emergency department staffs; including physicians, nurses, and paramedics; the need for around-the-clock staffing by permenently assigned personnel; the implementation of recommendations provided by the Committee on Trauma of the American College of Surgeons on architectural design and equipment of emergency departments; the need for accreditation and categorization of emergency departments; and the need for symbols on road maps and road signs at appropriate locations, to designate routes to hospitals and emergency departments.

The issues and problems described in these reports were considered in drafting the basic legislation for the Department of Transportation and the National Highway Traffic Safety Administration.

Public Law 89-564, the Highway Safety Act of 1966, was enacted on September 9, 1966, to provide for a coordinated national highway safety program through financial assistance to the States to accelerate highway safety programs. Funds made available under matching grant provisions of Section 402 of the Act are apportioned to the States and administered by the Governor, through his representative for highway safety. There is no direct Federal funding for political subdivisions. Project application by a political subdivision must be made to the State for inclusion in the State program.

Under Section 403 of the Act, funds are provided for demonstration projects and studies. The results of these studies and Federal guidance are provided to State and local emergency medical services coordinators through the Administrators of the Ten NHTSA regions.

The Highway Safety Act of 1966, amended, required that States have a highway safety program developed in accordance with uniform standards promulgated by the Secretary of Transportation. One of these standards is Standard 11, "Emergency Medical Services." While the purpose of the DOT (NHTSA) involvement in EMS is primarily for highway safety, such a program requires a comprehensive EMS system. The same standards, plans, ambulances, equipment, personnel, operational procedures, organization, administration, and communications required for the Highway Safety Program are applicable to all medical emergencies. Thus, the EMS systems developed by the States for the Highway Safety Program can simply be augmented as needed to handle the total demand for pre-hospital emergency medical services. The NHTSA approach therefore has been to design an EMS Highway Safety Program which assures the States the degree of flexibility to permit augmentation as necessary to serve all medical emergencies.

In 1968, NHTSA formally initiated its EMS program publishing the Highway Safety Program Manual (HSPM) "EMS" for Standard 11. This was the first comprehensive Federal document which addressed principles, procedures and criteria for the process of upgrading pre-hospital emergency medical care with a view toward total system development.

THE NHTSA EMS SYSTEMS CONCEPT:

In developing its Emergency Medical Services Program Standard, NHTSA adopted a systems approach. Figure 1 illustrates the functional diagram of the system which is addressed by the NHTSA EMS Program Standard. The NHTSA program addresses the constituent elements required for each function of the EMS system. These constituent elements are:

ADMINISTRATION - planning, implementation, operation, evaluation and coordination.

MANPOWER - job identification, training, operations

EQUIPMENT - vehicles, medical, extrication

COMMUNICATIONS - radio communications, public awareness, citizen access

From its outset the NHTSA EMS program has been based on the premise that the States have the primary responsibility for implementing emergency medical services within their separate jurisdictions. The primary thrust of the Administration has been to develop an information base which will permit the States to make optimum use of the an "seed" funding available through the Highway Safety 402 funding program for development of their statewide EMS systems.

This information base has been developed through the 403 program by contract studies and demonstration projects dealing with all functions and elements of the EMS system. These 403 efforts are designed and managed by the EMS Branch as one of NHTSA's Traffic Safety Programs. Often the 403 projects are conceived and recommended by EMS practitioners and are oriented to explore problems which have been identified by State and regional EMS system managers and administrators.

ACCOMPLISHMENTS:

Following is a listing of the NHTSA 403 program accomplishments which provide the information base for the development of emergency medical service systems by the States:

Administration

- Regional and State EMS Coordinators identified and recognized as focal point for system development* 1969
- State comprehensive EMS plan guidelines (appendix O, HSPM) published and plans developed - 1973
- "Star of Life" adopted as National emergency medical care symbol - 1973 (Award of Certification Mark to NHTSA by patent Commissioner made on February 1, 1977) Criteria published 1978 - Brochure 1979.
- Data elements identified and collection and evaluation begun 1969-1979
- Legislation, regulation, licensure and certification as needs for system perpetuity - 1968. Survey and model legislation published 1977 and 1978 respectively.
- National Registry supported for training standard identification and reciprocity - 1972. authorized funding support through State agencies 1978
- Manual for EMS HSPM Vol. II (1969) revised and republished-1974 first national document for EMS System development.
- Developed and released multiple, major award winning EMS Film,"Between Life and Death" for public information and program promotion.

Manpower

- Emergency Medical Technician-Ambulance (EMT-A) job description developed and published - 1969-1972. Officially recognized by the Department of Labor as an occupational specialty.
- Training course for EMT-A developed and published with accompanying AAOS** text - 1969. Revised and republished 1978.

---

* State Highway Safety Program Review-1969-Appendix O Comprehensive EMS planning HSPM 1974. American Medical Association, Developing Emergency Medical Services-Guidelines for Community Councils, pages 17-20, (revised), July 1976

** American Academy of Orthopaedic Surgeons

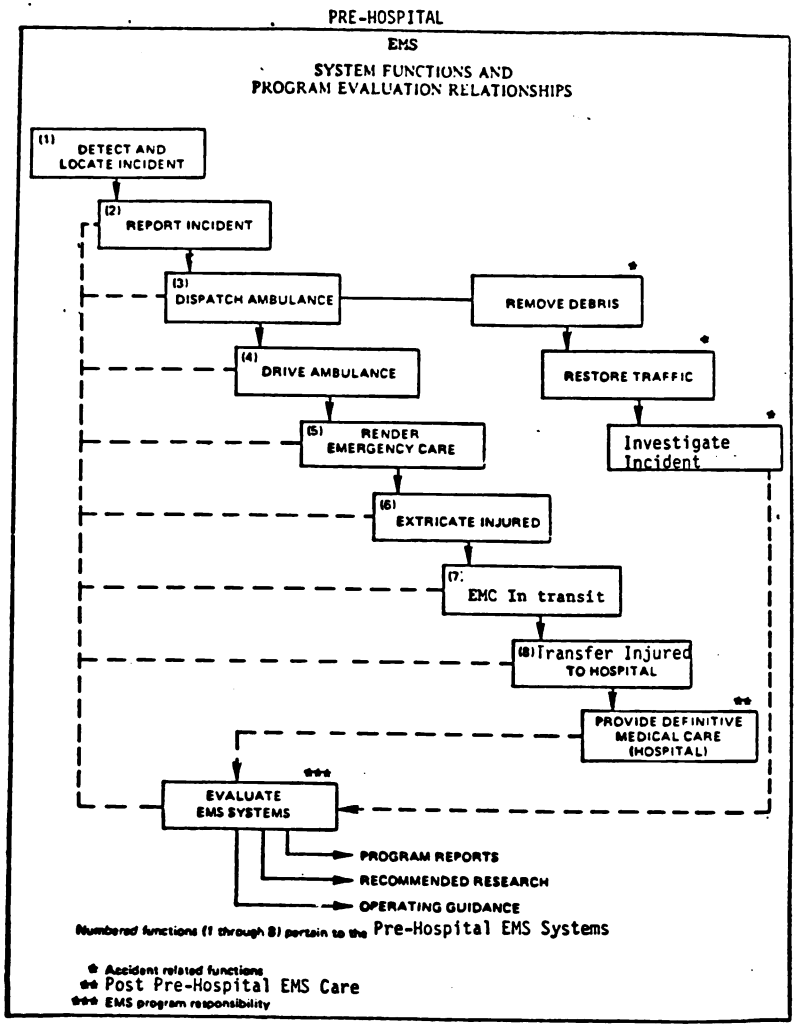


FIGURE 1

NOTE: Definitive care is provided by a hospital that has the capability of meeting the specific medical care needs of the incoming emergency patients.

- o Spanish translation for EMT-A training courses published-1975-Under revision in accordance with new English revision
- o Crash Injruy Management training for first responders developed and published - 1973-1974. Revised and being republished 1979 as "Emergency Care-First Responder,"
- o Extrication Training for all EMTs developed and published-1974. Revised and republished 1979
- o Dispatcher Training-1972. (Revised and republished 1979.)
- o Emergency Vehicle Driver Training (developed and published 1979.)
- o Administrator Training (curriculum guide published) -1975
- o EMT-P (Paramedic) Training course published - 1977. Text-1979
- o Initiated and particpated in course development for emergency handling of hazardous materials - 1976
- o Persian translation for EMT-A basic training course published in Iran. Seven other foreign countries have translated and are using the course. Other materials being studied and adopted. Egypt most recent country to apply NHTSA published criteria and materials.
- o Participated in revision and publication of "Emergency Serivces Guide for Hazardeous Materials" - 1974-1978. Provides standard procedures for Emergency Services Personnel. Supports training course above.

Operations

- o 24-hour service identified as national standard for emergency service - 1968
- o Two EMTs per ambulance run identified as national standard-1968
- o Standard colors and markings identified for ambulances as safety related factors for uniform national recognition-1971 and included in Federal Specifications for ambulance.

Equipment

- o Ambulance Design Criteria (ADC) developed in conjunction with the National Academy of Sciences 1969, adopted and published-1971. Served as basis for specifications. 1974

- o Initiated and participated in Federal Specification for Standard Ambulances which also identified national standard colors and markings - 1972-1973, published in 1974. Revised and republished in 1979.

- o Developed and published extrication/rescue vehicle guidelines-1976. Developed and published specification in 1979.

- o Developed and published specification use guidelines - 1976

- o Adopted and published American College of Surgeons Essential Equipment List as the National Standard - 1968. Subsequently included in the HSPM for Standard 11 and Federal Ambulance Specifications.

- o Studied and published criteria relative to helicopters - 1972

- o Initiated and participated in MAST program with DOD and DHEW relative to military helicopter use. Twenty-three MAST sites established to date in 29 States. A Federal expenditure of in excess of 3 million per year is involved with no cost to the State or local governments - 1972. Developed and published AST manual 1977.

Communications

- o Defined requirements for physician communication to emergency medical technician for supervision of advanced life support procedures to arrest trauma - 1968. Derived from report of the Secretary's Advisory Committee on Traffic Safety, DHEW, February 29, 1968, committee stated "The DOT should have primary responsibility for transportation and appropriate communications and command and control."

- o Provide financial support and stimulus for first national conference on Universal Emergency telephone numbers "911."

- o 911 Universal Emergency Number adopted and promoted as standard - 1973.

- o Communications Manual published 1972. New manual published to incorporate new UHF channel provisions, system characteristics, VHF interface and new FCC rules - 1977

- o Initiated, encouraged and supported FCC assignment of channels and rule-making in the UHF band for emergency medical service communications - 1973

- o Developed and published Sound/Slide presentation on common system development empolying UHF/VHF interface - 1975

- o Developed and published Appendix P to HSPM Vol. II for communications planning in accordance with the new FCC rules - 1975.

- o Published guidance memoranda for two tier communications planning in accordance with appendix P-HSPM Vol. II-1978

- o Developed EMS Communication System Architecture in Draft, to be published.

- o Initiated, developed and published manual on the NEAR (National Emergency Aid Radio) program. (This provides for Citizens Band (CB) involvement in emergency identification and reporting as an additional aid for entering the system.) 1976. Developed and published training course for citizen monitoring along with training film, "Help is Near" 1979

THE NATIONAL IMPACT OF THE NHTSA EMS PROGRAM:

The above was accomplished and is being pursued to National program implementation in the pre-hospital emergency medical care sector with the aid and cooperation of Federal agencies, related professional organizations and industry. In excess of 50 separate documents (manuals, memoranda, pamphlets, books, etc.) have been developed and published. The program, as developed by NHTSA under Standard 11, had the following national impact on the development of emergency medical services:

- o About 600-800 million dollars of non-Federal money has been generated in support of EMS since 1968. Very minimal amount could be identified in 1968.

- o State and community planning for EMS has become common place.

- o Legislatures are, increasing numbers, addressing EMS from the standpoint of both funding and standards fo care (including advanced care procedures).

- o States have obligated 137+million dollars of NHTSA funds to EMS since 1968. For 1976 alone, the total amount represented 16 percent of all funds available or 19.5 million to EMS. In 1978 the States applied 22+million and it appears that they will approach that figure in 1979.

- o Federal agencies have been involved in the application of the above criteria and standards in the pre-hospital emergency medical care field, namely; Department of Health, Education and Welfare, Department of Agriculture, Department of Labor Department of the Interior, General Services Administration, Veterans Administration, Federal Communications Commission and

Department of Defense. (Navy Corpsmen are being trained in the EMS-A course this year -- The Navy is establishing a procedure to incorporate the EMT-Paramedic (EMT-P) training course into their corpsmen training program.) The Coast Guard has fully integrated the DOT EMT training into its Search and Rescue mission.

PROGRESS IN EMS DEVELOPMENT:

Because of its obvious humanitarian and life saving nature, the EMS program won almost immediate popular public support and has become recognized as a necessary public service. In the ten years following NHTSA's initiative in EMS the following progress has been made:

Ten Years of Progress and EMS Program Development - 1966 to 1976#

A. System Commonent Status

Number of States with Statewide EMS Coordinators	4	56*
Number of States recognizing national vehicle criteria	0	56
Number of States with State or local EMS funding	0	56
Number of States with EMS statutes (authorization)	0	45**
Number of States applying essential medical equipment (ACS) list to ambulance (66% of all vehicles)	0	54
Number of States upgrading two way communications in ambulances (79% of all vehicle to date)	0	54
Number of States providing EMT-A (DOT Basic) training. (260,000 personnel trained to date)	0	56
Number of States providing Crash Inquiry Management Training (First Responders)	0	20

Latest Survey not Completed for updating.

* Includes Washington, D. C., Puerto Rico, Guam, Virgin Islands, American Samoa, and Department of the Interior

** U. S. State and Territorial Survey, Emergency Medical Services Statutes, Prepared by Public Technology, Inc. in accordance with DOT/NHTSA/EMS Contract No. NHTSA-65994. Final Report November 10, 1977, Washington, D. C. Model Legislation for Emergency Medical Services DOT HS-803-238

Number of States providing Extrication training	0	32
Number of State providing Paramedic Training	0	45
Number of States authorizing Paramedic level procedures	0	50

PROGRAM BENEFITS:

The objective of the NHTSA EMS program is to develop statewide EMS prehospital care systems. It is to save lives and reduce permanent disabilities and disfigurement arising from medical trauma occouring outside of the hospital setting by prompt delivery of effective pre-hospital emergency medical care. As part of its program, NHTSA ia sponsoring evaluatations which will provide a measure of these benefits in terms of the impact of EMS on mortality and morbidity. Some indications of these benefits have already been documented.

In a recent report, Dr. Robert I. Levy of the National Heart, Lung and Blood Institute presented data on the drop in mortality rate for both cardiac and non-cardiac diseases (figures 2) In doing so, he stated, "Ambulances and other emergency vehicles are better equipped and staff personnel better trained, resulting in patients being delivered to the hospital in better condition." It is significant to note that the beginning (1968) of consistant downward trends exhibited in the chart correlate with the initial mandated criteria for ambulances (high head room, medical equipment, communication) and training of ambulance personnel, which at that time was advanced Red Cross with the added requirement for a CPR capability.

Percent Decline in Death Rates Since 1950 for Cardiovascular and Non Cardiovascular Diseases

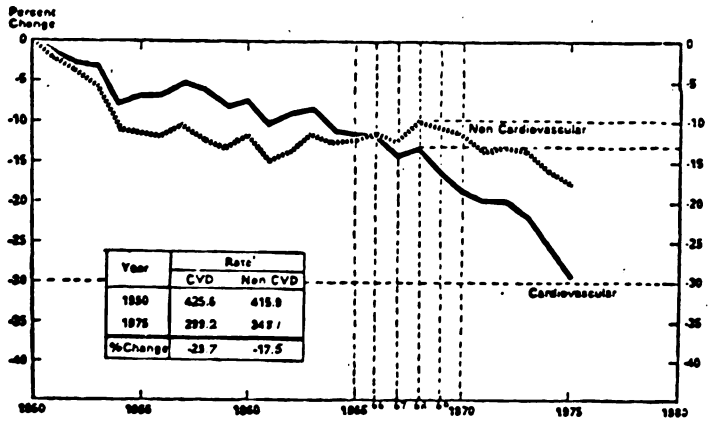


Figure 2

Evidence is beginning to suggest that reduction in amputations, paraphlegia, quadraphlegia, and onset of pneumonia are also taking place. That is why it is becomming important that measurements of performance and effectiveness be given a high priority at this stage of EMS development. For this reason NHTSA has and is initiating studies.

NHTSA, NATIONAL HEART, LUNG, BLOOD INSTITUTE (NHLBI)-DHEW AND STATE CONTRACT EFFORTS IN EVALUATION:

Beginning in 1970, there has been a steady decline in cardiovascular mortality in the United States in contradistinction to the marked steady increase in cardiovascular mortality past World War II. Many hypotheses have been postulated in an attempt to explanin this change in trend: Cornonary risk factor reduction, public health education, high risk patient identification, the introduction of pre-hospital mobile coronary care etc. Despite the many studies in each of these areas, there are no data to support any of these hypotheses conclusively. The ultimate explanation for this decline is probably a complex set of interactions among all these factors.

To gain further insight into the probable causes of this decline The National Heart Lung and Blood Institute (NHLBI) and NHTSA co-sponsored a joint agency effort and awarded a contract to the Boston University Medical Center to conduct a study to determine the following:

1. Ascertain information concerning the effectiveness of the Mobile Intensive Care Unit, and its value in reducing mortality and morbidity resulting from coronary heart disease. In addition to determine the validity and generalizability of the data in the effectiveness of the Mobile Intensive Care Unit.

2. Examine the feasibility of developing a conceptual model for evaluating a Mobile Intensive Unit to include the definition and identification of a minimum data set which would be considered essential in any objective evaluation.

3. To determine the extent to which an evaluation could rely upon existing data bases and how much additional Federal Resources initiative would be required to supplement present data collection activities.

Findings

The on-going MIC research is primarily located in academic medical centers in large urban areas and in advanced EMS regions only.

The Nationwide data base existing in the Federal Offices of Emergency Medical Services cannot support a national evaluation.

The findings in the report do not support the contention that MIC programs have substantially contributed to the decline in cardiovascular mortality rates in this country. The data do suggest that the principal effectiveness of MIC programs relates to the subset of patients found in cardiac arrest. There appears to be a decline in mortality rate in the subset from approximately 85% to 75%.

In FY 1979, NHTSA awarded four evaluation contracts to EMS projects to Harrisburgh, Pennsylvania, Seattle; Washington Lincoln; Nebraska; and Augsuta, Maine. These contracts are providing EMS projects with resources to evaluate impact of Advanced Life support Systems over Basis Life Support Systems, effect of MAST on Spinal cord injuries and the determination of response times on mortality and morbidity.

NHTSA ACTIVITIES IN RURAL EMS-1977

On 22 September 1978, NHTSA initiated the Rural EMS System Project Study under contract DOT-HS-8-0208 to the University of Pittsburgh Health Operations Research Group, for development of a computer simulation model for the analysis of alternative policies on rural emergency medical services systems. This systems model will permit one to address such questions as:

- o Cost and effectiveness of various rural EMS measures
- o Cost and effectiveness of various mixes of measures
- o Allocation of limited resources to various measures to provide the most effective EMS in a rural area
- o Optimum sequence for implementing a mix of measures in a new rural EMS system
- o Optimum level of development of rural EMS systems
- o Rural EMS system effectiveness as a function of level of development of the system
- o Management of changes to rural EMS systems.

The first report under this contract is a Model Concept Paper which was delivered on 15 March 1979 and is now being reviewed by a panel of experts.

In support of rural EMS development and the above study, NHTSA is assisting the State of Oklahoma in the administration of a rural EMS symposium in Oklahoma City on May 7,8, and 9, 1979. This symposium will premit rural planners to:

- o have visibility of the NHTSA rural study while it is in process and establish contact with the contractor so as to permit meaningful input regarding their needs for planning assistance for rural EMS system development
- o meet with each other to exchange information on rural EMS system development and administration - separate from the overriding influence of urban and metropolitan planners
- o forecast the types of data needed in their future for rural EMS system planning and evaluation.

NHTSA is also fostering exchange of information and coordination among rural States by authorizing 402 funding support of Interstate Councils of State EMS Administrators such as the Mid-Atlantic EMS Regional Council, and the newly formed Mid-America States rural EMS Council which includes the nine States in Federal Regions VI and VII.

In addition to the above planning and organizational activities, NHTSA is cooperating with NASA and several States in studies to extend communications for EMS throughout the rural areas of the United States. These studies include consideration of both terrestrial based and satellite based communications relay stations. Associated with these studies is a current project domonstrating the use of a satellite relay for communications between rural ambulances throughout the States of Mississippi, Alabama, and Louisiana (including offshore oil rigs) to distant EMS consulting hospitals. Through support of the 911 program and the NEAR program, NHTSA is facilitating rural citizen communications access to EMS services by means of telephone and Citizen Band Radio.

Through its development of training programs for First Responders and Paramedics, NHTSA is fostering the creation of new breeds of emergency medical practitioners to provide more speedy response to accident injuries in rural areas and to function as "physician extenders" in rural areas which suffer from a chronic shortage of physicians.

This initiative in rural EMS is a continuation of the guideline for rural EMS emphasis expressed by DOT in 1972. The quality of service rendered to the victim of an emergency must not be a variable, subject to negotiation from community to community. The guidelines that have been published are considered minimal and appropriate for all who render emergency care. It does not seem practical to make exceptions and deprive some of lifesaving and lifesustaining care merely because

they happen to live in a small community. Highway death rates in rural areas have exceeded those of the urban areas by 70 percent. Trauma centers and emergency rooms are of little value to the victim who has expired due to lack of proper care at the onset of the emergency or in transit to the facility. Quality of service rather than speed in transit is being emphasized.

NHTSA TECHNICAL (403) SUPPORT SUMMARY STATUS 1979 (FY 78 Funding)

Status of EMS Training Materials-1979

1. CB Monitor Training - Printed Course being delivered. Film on hand. Distribution in March.

2. Emergency Care First Responder - In type setting for printing - Distribution in May.

3. EMT-A Refresher - In final review for typesetting. Distribution in May.

4. Extrication Training - Being Printed - Distribution May.

5. Instructor Training - Going to printer for typesetting. Tape and Slides complete. Distribution in May.

*6. Paramedic Text - Illustrations being selected and integrated into text. Publication in June or July.

**7. Trauma Slides - At GPO for reproduction - Distribution in May.

Status of Specifications

1. Ambulance Emergency Care Vehicle -	Undergoing final staff editing for inclusion of pertinent materials from NHTSA Ambulance Electrical System Study being completed. Expected distribution July.
2. Rescue Vehicle, Emergency Light Rescue Surface Vehicle. -	Completed and undergoing final staff editing in conjunction with GSA. Expected publication in July.

* Limited prepublication copies available for training being conducted. These are the text material only without illustrations.

** For use as supplement for all training courses in EMS. Provide excellent insight into all forms of Motor Vehicle Trauma.

Status of Study reports

1. Emergency Medical Systems and Pre-Hospital Cardiovascular Care. - An evaluation of studies and inventory of data bases on the effect of Emergency Medical Systems on Pre-Hospital Cardiovascular Care. Study done jointly with NIH/DHEW under contract with the Boston University School of Medicine. Study completed and final report being edited for publication. Summer 1979 distribution.

2. Communications Compatibility - Analysis of existing UHF communications systems. Study done by SYSTECH Corporation. Study completed and report being printed. Expected distribution in May. Communications design manual to be a follow on project to this effort.

3. Ambulance Electrical Systems - In depth analysis of the Ambulance Electrical Systems will include users manual for maintenance of portable equipment. Work done under contract with Research Triangle Institute (RTI). Publication and distribution expected summer 1979.

Status of Recommended Legislation

1. Model State 911 Legislation - This is model legislation for use by States in establishing a Statewide 911 emergency telephone number. Work done under contract with the National Telecommunications Information Administration (NTIA), Department of Commerce. Expected Publication in May 1978.

NHTSA PLANNED (403) PROGRAM ACTIVITY FY 79 (FY 79 Funding)

Projects are continuing or being initiated to support study, investigation and/or development in the following areas: Loran-C, Rural EMS, Sattelite Cast effectiveness evaluation, film distribution, Communication design manual and FCC rules petition, Star-ofLife Highway sign evaluation, and Frequency Synthesizer development in conjunction with NHTSA-NASA Physician-EMT medical kit.

NHTSA EMS FUNDING RESUME 1966-1979

The NHTSA EMS program has generated massive grass roots financial support of State and local emergency medical services. This program has been one of the most significant catalysts in modern times for initiating and sustaining public support. Since 1968 the States have obligated about 142+ million of NHTSA 402 dollars and 600 to 800 million non-Federal (State, local and private) dollars to the implementation of EMS systems in connection with the NHTSA program. The cost to the tax payers for NHTSA management of the EMS program is reflected in the expenditure of Section 403 funds for NHTSA administered contracts and projects in support of EMS.

Altogether, from 1967 through 1979 about 50 such projects were and are being conducted for a total expenditure of 10+ million dollars. These projects fall in the areas of development (584K)* demonstrations (4,919K)* and studies/surveys (5,340K)*. From this 403 effort came, inter alia, helicopter criteria, ambulance design criteria, communications criteria, guidelines and criteria for plan development and evaluation, economics of ambulance service and extensive development of training courses.

The following are the expenditures by Fiscal Year for course development and instructor institutes which accompany the completion of each course development.

1968	$48,000	1973	110,343
1968	25,700	1974	124,795
1970	4,900	1975	97,564
1971	58,232	1976	162,140
1972	- 0 -	1977	373,691
			1.005,365

The following is a summary of NHTSA 402 funding obligations through January 1, 1979.

EMERGENCY MEDICAL SERVICES 1/

NHTSA 402 Funds ($000) Obligations by FY

Year	Total All Standards	Total Standard 11	% To EMS
1966	NONE	-	-
1967	646 2/	- 0 -	-
1968	23,900 2/	1,646	6.9
1969	63,800 2/	6,801	10.7
1970	67,950 2/	6,942	10.2
1971	72,100 2/	7,631	10.6
1972	76,360 2/	10,883	14.3
1973	91,307 2/	11,652	12.8
1974	76,241 2/	10,949	14.4
1975	96,202 2/	13,715	14.3
1976	145,189 3/	19,237	13.3
1977	125,700 4/	16,996	13.5
1978	168,700 4/	22,319	15.0
1979	159,735 5/	13,345 5/	15.0 (estimated)
Total	1 1 67,830	142,716	12.

1/ Source: NHTSA NOTICES 464 (FY 67-74) and Computer Runs RIC 47 (FY 75-77). All available in Room 5117.

2/ Includes funds appropriated for both NHTSA and FHWA Highway Safety Standards.

3/ Same as 2/ but also includes Interim Quarter Funds.

4/ Excludes funds appropriated for FHWA Highway Safety Standards.

5/ Not all FY 79 Funds have been obligated

Mr. CARTER. I have to say you have been very helpful in my area. I am very thankful. I have one other question, Mr. Chairman. Would you please elaborate on HEW's rationale for recommending that the EMS training authorization not be continued?

Dr. LYTHCOTT. I will ask the expert on training to respond to that, but in general, sir, it has to do with the phasing down to the program that we have suggested. It has to do with the fact that, as I said before, we are faced with certain considerations to make with respect to where the dollar goes. And as this program winds down we would hope and we are reasonably certain that with the experience that we have had over the years State and local areas would continue to provide this kind of training for their local constituents.

Mr. CARTER. I believe you said that some 17 regions had not been able financially to participate. What about them?

Dr. LYTHCOTT. I didn't say they were not able to participate. I tried to make a point that some 17 regions just were not interested in getting into EMS, and they don't want to be involved. We have encouraged them. I just want to say that there are also a certain number of people who will not get on a good thing. Their reasons were not always dollars, as I remember.

Mr. CARTER. We think EMS is a good thing in the State of Kentucky. We want it continued.

Thank you, Mr. Chairman.

Mr. WAXMAN. Ms. Mikulski.

Ms. MIKULSKI. Thank you, Mr. Chairman. I think all of us involved and concerned about health care are impressed with what really is probably one of the true dazzlers of HEW. You cannot be from Maryland and not know what that helicopter means.

One of the reasons that I am so taken with this program is not only because of the lives it saves, but I think it is an appropriate role for the Federal Government to take, in which, No. 1, you are a catalytic factor, you help with training, you help with programmatic design, but you leave it to the States, No. 1, to design a program to meet their own community. And No. 2, you move them to community self-sufficiency.

One of my concerns though is that when Federal dollars do run out, will regions be able to sustain themselves. If they do, it will be the first time States did not come back, asking for continuation of funding. If you had been able to do that, I am going to talk about six or seven other things.

Dr. BOYD. We have a lot of firsts in this program. We have States cooperating with local government. We have physicians putting in their time and we have many good projects. In administration of the program we have gone to each State and asked them to establish a lead agency within their government to coordinate all of their resources and pull the EMS programs together.

We have asked them to prioritize and develop models that we can use elsewhere.

It is too early to tell, but the 17 programs that came off of the Federal funding last year are at the same level of activity and have not diminished their activity whatsoever. We anticipate that 20 of the finished programs this year will do the same. We do not have a program in the country so far that has not continued the program

on whatever level, or that has diminished their services or the public support.

So our track record is very good in this area.

Ms. MIKULSKI. Dr. Boyd, why were they able to do that? Is it because of the nature of the reimbursement insurance, State commitments?

Dr. BOYD. I think there are basically two reasons. I realize we are having more difficulties in the wilderness areas where there are large park services and nontaxable land, and less difficulty in the taxable areas. There is a variation of problems. I think the attitude of the program and the intent of Congress that this be a 5-year, time-limited program with a built-in sundown clause and a requirement for a plan, to implement 2 basic years and 2 advancement years makes everybody realize they have got to get on the horn and get the local support necessary from their State or local regional entities, because it won't be long-term funding of their program. Everybody understands that.

The way we have approached the program is not to buy into any of the operational elements. This is true for poison control and other components. We are not buying into the ambulance service; or dispatch services. These are all local governmental operations. Our program has been able to bring together those regional entities to cooperate with mutual aid and to share operational costs. There is no incremental cost after the program ends.

Only the bare necessities for coordination support, continued technical assistance, review, monitoring, and maintaining of training levels at much lower levels will be necessary. But the problem we see is that county commissioners do not have the dollars to buy very expensive equipment. They don't have the incentive to buy on a cooperative basis. We have by Federal funds a regional communications network on a matching basis. After we leave, the entities operating these EMS programs will be able to continue without any further support.

Ms. MIKULSKI. Dr. Boyd, would you say that the rapidity of transportation is the key to your program. People can get to the help they need quickly, and that in some ways we have saved locales, these communities, because they have not had to duplicate expensive units in terms of special cardiac units, special limbing severage units. In particular let's take a burn unit, you might have one or two in the State rather than each little county trying to come up with one.

Dr. BOYD. I think we have done that with each one of our 50 States.

Ms. MIKULSKI. So you maximize your accessibility to expensive.

Dr. BOYD. There are basic, essential access, transportation, and primary care requirements to every unit of our operation in every one of our 6,000 counties. But when you go beyond that, there is the process of maximizing by cooperation and consolidating resources. I think in every one of our 15 components, starting with the public safety element on to hospitalization categorization and critical care units, we have truly regionalized the services so that one institute for trauma, such as Dr. Cawley's unit, in Baltimore, is the supervisor and supports the whole State. There are now other trauma units in Baltimore to take care of their local areas and

certainly Salisbury, Hancock, and Cumberland do their own thing and transport patients down to the burn centers and pediatric trauma centers, as necessary, based on program plans and physician understanding of what is going to happen with apriori transfer agreements and triage measures now set in place.

That is the whole gist of the Emergency Medical Services Act, and it is the way we have been able to improve patient care, in distribution cases with effective results, and to get a handle on cost control.

In Chicago, by linking with the EMS systems there, we are able to get 250 spinal cord patients into the center within 6 and 24 hours. They were out of first care hospital stay by 20 days with 62 percent of these people going back to their previous employment or schoolwork, and with a $3 million cost saving to that unit per year.

Ms. MIKULSKI. Do you have time for just one more question? I am very much oriented to the family approach to medicine and the social and psychological means in issue here. We are all familiar in emergency medical services in the use of technology to save lives. Is the key component when you encourage States to do the kind of family counseling or aftercare followup necessary? Let's take this spinal cord injury. Let's take a paraplegic. That is an awful lot of family readjustment and everything: the patient's own emotional need, the needs of his or her family or——

Dr. BOYD. Our legislation instructs us to look at prevention, first response, secondary response, critical care, and rehabilitation. I think we have to be honest and say that in the first 4 years of the program we are mostly involved in crisis situations trying to get very sick patients into the care units. As the smoke appears to clear in some areas, like poisonings, we are now truly into prevention and home informational kind of services.

In the spinal cord injury program alone we are providing the patients that get into the system, and probably only 1,000 of the potential 10,000 get into this kind of service, the special designated centers that are expensive and need lots of resources to operate; they do in fact provide total family rehabilitation services, as well as good surgical techniques.

Ms. MIKULSKI. Well, as you begin to phase out, I would just hope that you take a better look at it. I have seen some of the so-called comprehensive bottom line rehabilitation centers, and there is not one that is what we are talking about. I am not criticizing you. But I think again as you phase out that could use catalytic assistance.

Dr. BOYD. I think that in the maturity of the program right now—it is in its fifth year—we are starting to look at that in hard detail. We have been so much in the business of reacting to trauma and cardiac attacks that we have not been able to build that part of the program.

The area of trauma we are certainly looking at rehabilitation services. The States of Maryland and Illinois programs are working in the area of prevention. In the poison control area we are definitely into that in a large way. It takes a certain maturation of program stability before you can respond to those kinds of very important issues.

Ms. MIKULSKI. Thank you, Doctor.

Mr. WAXMAN. Mr. Lee.

Mr. LEE. Mr. Chairman, I would like the record to reflect, first, my interest to be associated with the enthusiastic support which Congressman Mikulski and Dr. Carter have given to this excellent service and also to emphasize the critical need to expand the opportunity for the emergency medical training, which I think is sad to hear that HEW is recommending that we phase back in that particular area.

Gentlemen, I have two or three items. No. 1, if we look at the classifications of emergencies which occur in these EMS service areas, what is the frequency of incidents to the poisoning classification?

Dr. BOYD. There are projected some 10 million poisonings per year, of which 5,000 die.

Mr. LEE. But how does it stack up, sir, in terms of the other kinds of emergencies that we are experiencing?

Dr. BOYD. There are 600,000 cardiac deaths. There are 17 million disabling accidents, of which 400,000 are permanent. There are 110,000 trauma deaths, of which half comes from the highways. We think that some 3 to 6 percent of the babies born in this country should be under intensive care observation. Our EMS program moves the high risk infants into centers, especially in rural areas.

All of these have different parameters. The poison problem is a significant problem in children and we can control it. In the major programs that we have now we can almost stamp out that disease by home intervention and early care with the mother being the first responder and care provider.

We have seen the diminished utilization of emergency departments. In San Diego it has gone down from 6.1 to 1.9 percent, a 79 percent decrease in the use of emergency departments for poison control intervention, a cost saving to that community of over $400,000 a year.

The program costs about $250,000 to run. In Omaha we have seen the decrease from 500 visits a year for poison in children down to 200. Besides doing this in terms of cost control, early intervention, and less morbidity, we are developing a data bank.

My colleague, Peter Benzinger, from Illinois, with me, could use the kind of information we are collecting on drug overdoses in our systems right now. By having regional poison control systems with the consumer access and expert provide consultation to the doctor's office, the emergency department, the critical care unit, we can better control this disease.

We are also developing an operational data base, not at extra governmental expense but on an operational basis where prevention, intervention and criminal actions kind of activities can be developed.

Right now there are some 10 at least different Federal agencies—Consumer Product Safety, LEA, DOT—that needs some of this information. This information is generated from patients' incidences. A drug on a counter does not cause anybody trouble. But when a patient takes a drug illegally or illicitly, and has a reaction, it is capturable in the poison information control system. This information could be of great utilization to the various Federal agencies.

Mr. LEE. What I am trying to focus on, I think, is are we truly matching the limited dollars that we have against the priorities, the emergencies that we are trying to treat?

Dr. BOYD. I think we can say that we are. In addition to defining 300 regional areas within all of the 50 States, we have targeted in on the key problems of emergency medical services. That is, heart attack, trauma, burns, spinal cord injury, the high-risk infant, and poisonings and behavioral emergencies.

I think poisoning is a significant problem. It is not being well-handled now when every hospital or every pharmacist that is open maybe until 5 o'clock at night having been designated some time before, answers the phone to a critical patient or a potentially critical patient at home.

In the State of Illinois we had 106 of the 634 poison control centers. We surveyed the first five. They did not remember that they were poison control centers.

By truly regionalizing and providing some mechanism for support for a medical director, a pharmacologist on call, seven nurses trained to answer the patient and mother at home, consult with physician using standard treatment protocols for the area, we can almost eradicate poisonings of children. We know that. We can control costs. We can develop a data base. We can provide these services over wide geographic areas, with 2 to 4 million populations.

I think in San Diego it costs 3 cents per capita to run the system, a cost savings for 1 year of at least $400,000.

These are the kinds of effects that we can generate from this kind of a program. A little different approach is used for the seven critical areas. We have picked these because they are significant problem areas, and so we can look at emergencies of the total 75 million patient population problem in different ways.

Poisoning is a different technical and professional application, with limited people being involved in the system—a medical director, a toxicologist—expanding their service and expertise in a large area to every other physician, paramedic, and nurse provided in that area.

It is a very cost-effective program when you look at it that way.

Mr. LEE. Another area, what has been the experience in terms of the cooperation between the EMS development in the health system areas, the SHA areas? Has there been a high degree of cooperation between the health services areas and EMS design and development?

Dr. LYTHCOTT. As an agency, sir, we work very closely with health systems agencies because we are involved with emergency health care. And it is pro forma for us to be involved with the health system agencies. They sign off on the original proposal and so forth.

Mr. LEE. So the cooperation has been excellent?

Dr. LYTHCOTT. It has been good. It is spotty in areas, but we certainly try to do our best.

Dr. BOYD. I think we could say that for this program and because physicians are realizing their role in planning we have had probably a better cooperative effort with HSA than many other programs.

In the State of New Jersey right now there is a very major involvement with the State health planning agencies in developing these kinds of programs.

Mr. LEE. One last question, Mr. Chairman, if I may. Of the participating States in the EMS system, how many cases are we aware of where the matching money or moneys may have been provided by the local and State governments, only not to have it available because of the Federal shortage of dollars?

Dr. LYTHCOTT. None. If we understand you correctly, sir——

Mr. LEE. I have a case in my own district currently where the local matching commitment has been made, but the message transmitted from Albany, in this case the State of New York, was that it would not be approved because of the fact that there is a shortage of dollars.

Here is a prime example in this particular case of a brandnew hospital which is about to come online next month, to be precise; so I was curious to know if there were other examples across the Nation that fall into this category.

Dr. LYTHCOTT. I think our answer is no. I am not sure I understand the question. If you could give it to me in writing, we could respond to it. We have surveyed the States for several years now, and the match to our grant dollars after division of the grant dollars is 1 to 1. And at the local level it is 2 to 1.

We have seen EMS ordinances and tax levies again, even in hard times, in the last 5 years, when other such programs have had difficulties.

Mr. LEE. It is very simple where it is a system that has been designed for a local hospital area where the local commitment has been made to provide the financial resources, and the response being given is that the State has not made, or the Federal dollars are short, and consequently the system is not going to come online come April 1.

Dr. BOYD. We see $80 million worth of requests every year for our available funds. We cannot grant all programs' requests.

Mr. LEE. That is the thrust of my question. How many are in this category where there is a community interest, it has been designed, ready to come, but we have insufficient dollars?

Dr. BOYD. We see a 3 to 1 demand on our dollars every year. For this year we don't have our requests in yet, but we see at least $80 million worth of requests for the available money, $27 on to $33 million so far appropriated.

Mr. LEE. Thank you, gentlemen. Thank you, Mr. Chairman.

Mr. WAXMAN. Mr. Preyer.

Mr. PREYER. Thank you, Mr. Chairman, it is good to see you. I apologize that I was not here. I appreciate the testimony.

Mr. WAXMAN. Mr. Dannemeyer.

Mr. DANNEMEYER. Dr. Lythcott, this $184 million that was appropriated for 1979, has any of that money gone for the providing of the service, the medical service itself?

Dr. LYTHCOTT. No. We sort of build the system, the matrix if you will. It has not gone to the services.

Mr. DANNEMEYER. Is there any regulation in the building of this system for providing for its coming into existence that would sug-

gest that when it is provided to the ultimate consumer that the consumer does or does not pay for the service?

Dr. LYTHCOTT. What is your question, sir?

Mr. DANNEMEYER. I am just curious as to whether or not in the Federal regulations, or matrix, as you have described it, has been created; is there some regulation that speaks as to whether or not the ultimate consumer of the service would pay or would not pay for the service that the consumer was getting?

Dr. LYTHCOTT. In general, for those programs for which my agency is responsible, persons who cannot afford to pay do not pay. Persons who can pay, pay on a sliding scale. Nobody is rejected.

Mr. DANNEMEYER. That is in the regulations.

Mr. CARTER. If the distinguished gentleman would yield, I am quite familiar with this from my States' application of it. I have seen it work with one of the managers of an area here today. Actually every person is charged. Some of them cannot pay, as he said, and sometimes—they complain about the charges which can be fairly high. But it is a customary thing, to render a charge.

Dr. LYTHCOTT. Let me just answer your question specifically. EMS reulations prohibit involving our dollars in patient care.

Mr. DANNEMEYER. Is there a match that the State must put up or the county must put up; and if so, what are the rough percentages?

Dr. BOYD. There is no match on the initial planning grant, section 1202. There is a 50–50 match required on the first 1203 and first 1204 and a 25–75 match on the second 1203 and second 1204. To clarify another issue, our law as written cannot restrict anyone to any level or access to care because of inability to pay. Operationally, many of the programs in the voluntary sector are free because they are a community service. It varies quite a bit in terms of ambulance service and hospital service. But we have not found or had any cases pointed out to us where any restrictions because of any situation relating to payments. We would have to take disciplinary action which we have never had to do.

Mr. DANNEMEYER. When you look at this program, as I see, it started in 1973 and examined its potential for eliminating human suffering, anybody with a semblance of conscience has to say that it has its merit. But we are Members of a body that has to spend other people's money, raised by taxes. When we are looking at a deficit of $29 billion online and $41 billion if you include the off-budget items, judgments have to be made someplace along the line as to whether or not it is prudent to continue to go down the road of funding programs on ad infinitum, when it has led to the point that we have 29 States in the Union beating down the door of the U.S. Congress to demand that the Federal Government balance its budget.

Someplace along the line we in the Congress are going to have to start asking these hard questions on these terribly meritorious programs, as frankly can we afford it?

Dr. BOYD. Congressman, in this program we have already asked the question. We have put a limitation to how many grants can be funded.

Mr. DANNEMEYER. Yes; but somebody is suggesting that we spend $40 million for the next 3 years on it.

I have no further questions. Thank you.

Mr. WAXMAN. I have just a few questions to cover some areas that might not have been completely expanded. We all had this question raised by Mr. Dannemeyer about the need for these programs to be continued and the administration is proposing that we phase this one out. If we stopped funding EMS, would mean that we will spend more money on long hospitalization, resulting from disabilities that might have been avoided or limited by prompt emergency care. That is the question I think we have to ask.

Dr. LYTHCOTT. Mr. Chairman, we are not phasing EMS out on the premise that it will go the way of all flesh. We are phasing it out because we have a reasonable certainty that it will be continued because it is a dynamite program and it has attracted the attention of a number of States and local administrations. So yes, what you say is true, if we have no more EMS, we will spend money doing things that EMS might do. But we are not supposing that that is going to happen. That is where we are coming from, sir.

Mr. WAXMAN. Seventeen areas could not participate in the program. Do you know whether those 17 have some other provision for emergency medical care?

Dr. BOYD. I would like to correct that. It is 13 regions. Every State in the United States of America and most territories have participated in some way. Some 294 have participated in the planning or implementation or whatever. I think we can say that we have at least one good model region in the EMS system, many more now in each State. It is 17 regions that so far have not been able to obtain a planning grant or an implementation activity.

Mr. WAXMAN. Does that mean that there are 17 regions without any kind of emergency care to give?

Dr. BOYD. I wouldn't say that. There is a general movement to improve these types of services. I think there has been a ripple effect to our program. I think that to put the total system together, however, where you have coordinated services, where you have area-wide dispatch, where you have hospitals categorized, where you have a control and evaluation mechanisms so you can prove the case, that it works, does not occur where the EMS dollars have not been. Where we do not have the EMS-funded programs, we might have a good EMT and an ambulance program, but I couldn't assure you that that patient that needed a burn center would get there. Nor could I tell you that the proper treatment for poisoning by that paramedic would be applied. I cannot assure you of that.

Mr. WAXMAN. In the 17 regions that have chosen not to participate in the program, are they in effect saying they would rather do it on their own without governmental help?

Dr. BOYD. I don't think they have said that. I would have to survey that.

Dr. LYTHCOTT. A few haven't wanted to be involved in the program. We have evidence to bear that out. We can give you a rundown, sir, of those regions and their reasons for not doing it for the record, if you would like.

Mr. WAXMAN. I think that would be helpful. We will keep the record open for that purpose.

[The following information was received for the record:]

Emergency Medical Services

Q. Could you list the 22 EMS regions that have not received funds to plan an EMS system?

A. The 22 regions are spread over 15 States and Territories. They are:

State	Region	Principal City
New Hampshire	Part of Region I	Hanover
	*Part of Region II	Concord
	*Part of Region III	Portsmouth
New York	Region IV	Binghamton
Puerto Rico	*Undesignated area	
Georgia	Region I	Rome
	Region II	Gainesville
	Region IV	LaGrange
North Carolina	*Region V	Fayetteville
South Carolina	*Region III	Florence
Tennessee	Region IV	Nashville
Indiana	Part of Region I	Fort Wayne
	Part of Region II	Muncie
Minnesota	*Part of Region VI	Appleton
Ohio	*Part of Region III	Lima
	*Part of Region V	Columbus
	*Part of Region VI	Cambridge
Wisconsin	*Region V	Eau Claire
Louisiana	*Region V	Lake Charles
California	Region IX	Fresno
American Samoa	Region I	Pago Pago
Alaska	Region II	Barrow

*Indicates those Regions that have applied for a planning grant (Section 1202(a)) for F.Y. 1979.

Mr. WAXMAN. Do any of the members of the subcommittee have additional questions?

Mr. CARTER. Yes, Mr. Chairman, I have one or two questions if I might.

Mr. WAXMAN. Yes.

Mr. CARTER. It was mentioned by one of my good friends on my left here about balancing the budget. As it happens the hardest thing that one does in the Congress of the United States is to vote for taxes. I happen to be one of the men who voted for every tax that has come in order to balance the budget, and I have voted against excessive spending. Yet, spending on EMS is worthwhile because it saves lives. I would like to ask you Doctor, how many lives, you think were saved by this program last year, and what percentage of deaths from heart attack last year were diminished.

Dr. LYTHCOTT. Speaking especially to you, we do not have the hard data that would tell us all the things that you are asking. We will definitely get that data together. We have, clearly, data coming out of our ears. We have stacks and stacks of it—impact statements from all over the country; every hamlet that you can think of, says just exactly what you said, that there is a reduction in all of these things.

Mr. CARTER. A reduction in strokes and poisonings?

Dr. LYTHCOTT. Yes.

Mr. CARTER. All right, sir, then it has been cost-effective up until this time is that not true, more than cost effective? I would like to make one other statement about the emergency rescue helicopter service provided by the Army. I don't know if any representative of the Army is here, but I have had personal experience with this service, and I think it is extremely effective. It has been helpful in my area, and I want to commend the cooperation of the medical corps. I suggest that these trained men might be used in other ways.

That is the extent of my questions. Thank you, Mr. Chairman.

Mr. LEE [presiding]. Thank you, Dr. Carter. I want to thank all of you for coming before the committee. I am sorry the chairman was not here for your full testimony. Thank you.

[Whereupon, at 12 noon, the subcommittee recessed to reconvene at 1 p.m., the same day.]

AFTER RECESS

[The subcommittee reconvened at 1:15 p.m., Hon. Henry A. Waxman, chairman, presiding.]

Mr. WAXMAN. The subcommittee will come back to order. My apologies to my colleagues on the subcommittee and those of you who have been waiting to testify or are here to hear the testimony for my lateness in coming to start the meeting after the time scheduled for our reconvening.

Congressman Mollohan, we are very interested in hearing your comments on emergency medical services. I know the role you have played in the initiation of this legislation and how you have consistently monitored it.

We would like to have your views as we now look at the administration's proposal to phase out the program. Some of us are concerned that may not be the best way for us to proceed.

STATEMENT OF HON. ROBERT H. MOLLOHAN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF WEST VIRGINIA

Mr. MOLLOHAN. Thank you very much, Mr. Chairman.

Approximately 8 years ago in my office, we became alerted to, because of some of the conditions that exist in my State and I do not think my State is much unlike many others, the very great need for an emergency medical services program. We went into about 2 years' of rather exhaustive research independently of any committee action, to determine just what the situation was.

We came before this committee 5 or 6 years ago and presented our findings. It is largely attributable to the responses of this committee and to the leadership as provided by this committee that we have an EMS program today and I am very grateful indeed for that.

Today, I just want to talk to you about what I think our situation is at the moment with respect to what you have referred to, the administration's proposal as well as what I think the needs really are.

I would like to make a very brief statement and would appreciate being able to submit a more detailed statement for the record which I have already made available.

H.R. 2212, the bill I have introduced this year, basically provides for a very simple extension of the program. It includes $140.2 million of budget authority over the next 3 fiscal years.

If we were to continue the program at the fiscal year 1979 level of authorization, then our 3-year budget authority would amount to $255 million. This bill in effect represents a cut of $115 million in reduced budget authority over last year's.

H.R. 2212 authorities are more in line with actual appropriations levels in the past. It is our hope that by reducing the budget authority we can impress upon the Appropriations Committee our intention and desire and commitment to be fiscally responsible and to encourage that committee to fully fund the program at these somewhat more astute levels.

The administration is proposing a 3-year continuation with declining authorizations and unfortunately, program termination in fiscal 1982.

Mr. Chairman, I am unalterably opposed to that proposal. We actually need 6 years to complete the Federal commitment to emergency medical services with funding at or near the levels in H.R. 2212. Ending the program in fiscal 1982 when we will be so very near to fulfilling the laudable objectives of the act would be in my considered judgment, unconscionable.

H.R. 2212 proposes to provide the Secretary with discretion to make a section 1203 first year implementation grant for a period of 24 months. This is in line with the request from EMS experts in my State.

My bill contains budget authority to continue section 1205 in the EMS research program. I have grave reservations about that sec-

tion. I am not at all convinced that research conducted up to this point addresses the legislative mandate established by the Congress, nor am I convinced that it is yielding broadly useful information that can help improve the delivery of emergency medical care.

When I find that $1 million of these limited funds have gone to one institution and the results are questionable at best and that over $18 million of a total of $184 million or 10 percent has been used for research, I begin to wonder whether we are funding useful research or merely paying for costly overhead.

It is my fervent hope that this subcommittee will closely examine and have oversight over this section and will at the very least insist that the intent of the Congress be followed in its administration.

I really believe more meaningful use can be made of that money.

H.R. 2212 also substitutes new language in section 1221 to provide for a Burn Fellowship training program in lieu of the existing burn injury authority.

Section 1221 funding is presently being used to conduct a major inquiry into the status of burn care in America. We expect this study to be completed late in 1980 and a final report is due in early 1981. It is my belief that Congress should examine at that time the results and decide what the appropriate Federal response may be and should be.

In the interim, there appears to be general agreement that there is a critical need for more physicians trained in burn care. Thus, this legislation provides a moderate fellowship program over the next 3 years to address that concern.

This bill does not include new budget authority for section 789 training. There are important policy issues to be resolved with respect to that section.

Is it genuinely needed for physician training? Should this authority provide for continued federally funded training of emergency medical technicians and paramedics for an EMS regional system whose title XII eligibility has expired?

Should federally funded EMS training continue after title XII itself has expired? Are there special training needs for volunteer EMT's and paramedics in rural areas that will require Federal assistance after title XII ends?

I have addressed these issues in greater detail in the statement which I have filed with the committee and for the record.

I wanted to call attention to this matter because it is one that will, in my considered judgment, require difficult but necessary decisions on the part of this committee.

In summary, Mr. Chairman, I am as strongly in support of emergency medical services now as I was in 1971 when I first introduced legislation on this subject and appeared before this committee.

I believe the program is proving its merit and is paying for itself many, many times over in lives saved and resources spared.

Timely and early renewal of budget authority for it will be important so we can continue to put in place the 304 regional systems we envision as being necessary to provide adequate and critically needed emergency medical care to the American people.

46-142 O - 79 - 7

We speak of the results that have been achieved and I know one member of this committee being from Maryland is very much interested in the statistics that are in my larger statement.

Ms. MIKULSKI. Yes; I found the school that got the $1 million.

Mr. MOLLOHAN. That was not really what I was going to say.

I am interested and we are all interested in results. We are all interested in getting something for the money which we stand up and appropriate here and we are interested in that.

Let me say to you that in 1968, 70 percent of the seriously injured accident victims in Baltimore were either dead on arrival or they died in the hospital. With the emergence of good EMS and a highly respected shock trauma unit in that community, more than 80 percent of seriously injured accident victims now are surviving. I think this is a highly significant statistic and there are others.

In Charlottesville, Va., we have a 26-percent decline in prehospital coronary death rate because of the immediate availability of EMS and trained personnel.

Mr. Chairman, I appreciate very much the opportunity of appearing before you and sharing my thoughts. I know there are some people on this committee who are just as dedicated and devoted and far more knowledgeable than I in this field of emergency medical services.

I can assure you there is none more committed to it and none who have been closer to the results that have been achieved. I urge you to continue.

I personally hope instead of an extension of 3 years, that the committee will in its judgment extend the program for 6 years, during which period of time we can finalize the entire program and perform the function which we had outlined and committed ourselves to do in the early days of the program itself and then have a very high level of expectancy that it will be turned over to State and local entities to assume responsibility for its continuation.

Some mention was made earlier about the ability of local entities, including States, to assume responsibilities such as this. They have as much capability as we have.

In my State very recently, we reduced taxes, within the last 30 days, by approximately $56 million. In Maryland, we have just announced that we have a $300 million surplus. In California, they were able to absorb a $5 billion reduction in property taxes without a deep breath.

I can only tell you that States have the same authority and the same capability in large part to raise taxes as we do. They have business and occupation taxes, income taxes, sales taxes, severance taxes and innumerable other taxes which they can levy if the local need is great enough and the urgency to appropriate funds and to raise taxes, or raise funds through taxes, is strong enough.

This is a program which I believe that the people will demand local support for.

[Testimony resumes on p. 102.]

[Mr. Mollohan's prepared statement follows:]

STATEMENT OF HON. ROBERT H. MOLLOHAN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF WEST VIRGINIA

MR. CHAIRMAN, I appreciate this opportunity to provide detailed comments on extension of the Emergency Medical Services Amendments of 1976. I have maintained a continuing interest in this program since I introduced the first EMS legislation in 1971. Generally, I am pleased with the progress that has been made and firmly believe the program should be extended so that we can continue to improve the quality of emergency medical care throughout our country.

Although coordinated EMS systems have been "on the street" for several years, recent statistics are revealing that improved emergency care can lower death rates. The prehospital coronary death rate declined 26 percent in Charlottesville, Virginia, after an EMS system was operational there. In 1968, 70 percent of the seriously injured accident victims in Baltimore were either dead on arrival or died in the hospital. With the emergency of good EMS and the highly respected Shock Trauma Unit in that community, more than 80 percent of seriously injured accident victims now are surviving. Similar dramatic improvements are being noted in burn and spinal cord injury victims in many parts of the country where regional EMS systems are functional.

These kinds of vivid, life-saving results are generating the level of public support that will be needed to keep EMS systems developed with Federal Aid operating when Federal dollars no longer are available. In San Diego County, California, for example, local leaders threatened to let the EMS program die. But public pressure convinced officials to use local money to continue this service. Not long thereafter, voters in the City of San Diego approved funding needed to keep EMS operating after Federal funding eligibility had expired.

The Federal EMS program envisions 304 regionally-coordinated systems of emergency medical services in every state and in all U.S. territories. To date, 282 of these regional systems have received some assistance under the program. At the end of Fiscal Year 1978, 96 systems covering 67.2 million people were planned or being planned; 169 systems serving 118.3 million citizens were in some phase of operational development; and 17 systems covering 26.2 million people had completed eligibility under the program. Grants have been made in every state and territory, except American Samoa.

Since 1974, when the first EMS grants were made, a total of $147,160,000 has been awarded to regional EMS entities. However, funding of the program consistently has been below authorized levels. Thus, in 1978, requests for funding exceeded available appropriations by 52 percent. The Department of Health, Education and Welfare (H.E.W.) reports a current backlog or interruption of funding for 165 systems previously funded. Development, therefore, has been slower than we'd like, but the program is on firm footing and remarkable progress is being made in every section of the country.

Good EMS requires more than shiny ambulances and sophisticated gear. It takes trained personnel, cooperation from the medical profession and hospitals, and a commitment from local and state leaders. These ingredients are among the requirements that must be met by all successful EMS applicants. It takes a minimum of five years of Federal funding to get an EMS region on its feet; after that, each system is expected to support itself with non-Federal revenues. I did not envision in 1971, nor do I envision now, a Federal EMS program in perpetuity. The objective is to make Federal resources available to help state and local authorities establish good EMS and to have them understand from the outset that the ultimate responsibility for operating and maintaining what has been developed is one they must assume.

H.E.W. has stated in its 1978 annual EMS report that another $327,125,000 would be needed to fund remaining years of eligibility under the program. At this time of severe budget pressures, we must look very carefully at these figures and endeavor to make available the funding levels necessary to insure continuation of EMS. H.R. 2212, which I introduced February 15, authorizes $140,250,000 over the next three fiscal years. Based on projections provided by H.E.W., I would anticipate that continued funding in this range in Fiscal Years 1983 through 1985 would be required to complete the Federal mission and terminate the program.

I might note that H.R. 2212 contains reduced budget authority in keeping with the tight fiscal situation facing our Government today. FY 1979 EMS authority was $85 million. If we reauthorized the program at that level for the next three years, total budget authority would be $255 million. Thus, H.R. 2212, in effect, represents $115 million in reduced budget authority. It is my fervent hope that by authorizing at more realistic levels we can impress upon the Appropriations Committee our intention to be fiscally responsible and encourage that Committee to fully fund the program at this more austere level. Total appropriations for EMS over the past three fiscal years have amounted to $116 million. Thus the authority in H.R. 2212 is in line with past appropriations, with a small increase to adjust for inflation.

The Administration, on the other hand, is proposing a three-year continuation with declining authorizations and program termination in Fiscal 1982. Mr. Chairman, I am unalterably opposed to that proposal. Based on figures supplied at my request by the Department of Health, Education and Welfare (H.E.W.), six more years of authority (FY 80-85) will be needed to complete the Federal EMS commitment. Ending the program in Fiscal 1982 when we will be so near to fulfilling the laudable objectives of this Act would be unconscionable.

If we were to accept the Administration's plan, only 25 percent (75 of 304) of the regional systems would complete the five-year Federal funding cycle with fully developed advanced life support (ALS) systems. Another 179 systems (59 percent) would be forced to stop development with basic life support (BLS). The remaining 50 systems (16 percent) would either receive no assistance or would be stymied at the planning stage. In short, under the Administration's plan, 75 percent of the regional EMS systems we envision as being necessary would be left undeveloped or underdeveloped. Clearly this is not in the best interests of the American people nor does it make any sense in view of the Administration's admission that this is a successful program that is saving lives and helping hold down medical costs.

The Committee may be asked in the course of its hearings on EMS extension to add $30 million in new budget authority for trauma units and $25 million in new budget authority for a system of regional poison control centers. However, it is my firm belief that it would be unwise for several reasons to add these authorities at this time. First, I do not believe we can afford to take on new budget responsibilities, particularly when we are finding it very difficult merely to meet the most basic funding requirements for development of regional EMS systems under Title XII. In addition, I do not believe adequate information has been put forward to justify a Federal expenditure for these activities, as worthy as they may appear to be at first blush. Finally, in the absence of adequate justifications to the contrary, it

it is quite possible that development of trauma and poison centers may be a more appropriate responsibility of State and/or local jurisdictions.

Following is a more detailed analysis of the provisions of H.R. 2212. I realize that the Subcommittee may have before it other proposals with respect to the continuation of Title XII but trust this explanation of my legislation will be helpful in the Subcommittee's consideration of extension legislation.

SECTION 1203 (FIRST-YEAR GRANT)

H.R. 2212 provides the Secretary with discretion to make a Section 1203 first-year implementation grant for a period up to 24 months. This modification grew out of suggestions made by several grant recipients in my State who contend that it is not always possible for a grantee to complete all necessary work in first-year implementation within the normal twelve-month period. In justifying this modification, the Director of the Office told me in a letter dated January 15, 1979:

> "This standard approach would preclude a regional program being forced at a more critical stage in its development to step aside for a year to 'catch up.' The best time for this in terms of system development would be in the initial startup period. The cost of a 'delay year' at a later stage (second year of system expansion) would be more expensive in terms of progress and real dollars required for the process at such point in time."

Added the Project Director of the Appalachian Emergency Medical Services, Inc., of Huntington, West Virginia:

> "I heartily support twenty-four months for 1203(1). One year is just not enough to accomplish all that is required under the guidelines, plus developing a new organization that must organize internally and initiate contracts with the agencies involved in the system. We were fortunate to have that extra year, even though we were financially insecure."

The Director of Emergency Medical Services for Region VI/VII in the northern sector of West Virginia wrote:

> "I feel that this innovation will permit a more balanced approach to the type of systems development that Title XII mandates. I think that it could easily be said that if this type of opportunity were available, then systems development in North Central West Virginia would have been easier."

These comments are from EMS professionals who have completed Section 1203(1) funding and have nothing to gain by the change proposed. They are merely sharing with us their experience, which leads me to believe that this alteration has merit.

SECTION 1203/1204 FUNDING RATIO

H.R. 2212 amends both Sections, which authorize implementation grants, to remove the "hardship clause" which permits

H.E.W. to grant up to 75 percent Federal funding for system development. This authority has been rarely used and, furthermore, does not well serve the objective of securing a strong local funding commitment to insure a proper fiscal foundation for operating and maintaining an EMS system once Federal funding has ended. Under provisions of H.R. 2212, first-year grants under Sections 1203 and 1204 would be 50 percent Federal and 50 percent State and/or local. Second-year grants under both Sections would be 25 percent Federal and 75 percent State and/or local.

SECTION 1207 AUTHORIZATION OF APPROPRIATIONS

(1) H.R. 2212 authorizes funding for Sections 1202, 1203 and 1204 in the amount of $40 million for Fiscal Year 1980, $43 million for Fiscal Year 1981, and $46 million for Fiscal Year 1982. Budget authority has been, as I mentioned earlier, lowered to approximate past levels of appropriations.

(2) H.R. 2212 also authorizes $3.2 million in Fiscal Year 1980, $3.5 million in Fiscal Year 1981, and $3.8 million in Fiscal Year 1982 to continue grants and contracts under Section 1205 (research).

(3) H.R. 2212 prohibits funding of Section 1202 planning grants after Fiscal Year 1981 on the premise that no new starts should be initiated that cannot complete funding under the Act prior to the anticipated September 30, 1985, termination of Title XII. This has the added advantage of alerting those regions that have not yet initiated EMS activity that time is running out and they must make a "go" or "no go" decision with respect to EMS development in their areas. Unless we draw a line like this one, there will no doubt be requests for continuation of Title XII beyond 1985.

SECTION 1205 RESEARCH

While my bill provides renewed budget authority for Section 1205 research, I must state frankly that I am not enamored of this Section, the research that has been funded under it, or the way in which it has been administered. I've been associated with Government for more than 40 years. I have learned that there is "good" research and "bad" research, to use greatly simplified and perhaps pejorative terms. "Good" research yields practical results or new innovations of great merit. "Bad" research can involve an idea that doesn't pan out or the support of someone's program overhead costs under the noble guise of "good" research. In my considered judgment, we've seen far too much of the latter under Section 1205.

The law presently states:

> "The Secretary shall give special consideration to applications for grants or contracts for research relating to the delivery of emergency medical services in rural areas...."

Yet, in reviewing the 31 research projects receiving Section 1205 assistance in Fiscal 1978, only one contains objectives specifically directed at rural emergency medical services problems. On the other hand, more than $1.6 million has been sent to one researcher at Johns Hopkins to evaluate issues with major significance only to the Baltimore area. At the same time, another Johns Hopkins researcher has received about $400,000 to study another problem.

I realize that research applications are evaluated through the "peer review" system. However, it is certainly within the purview of the administrator of these grants to make certain the reviewers are fully cognizant of the legislative mandates and to reject peer review recommendations for grants that do not address these requirements. At the very least, I would hope the Subcommittee might insist upon more stringent administration of this program and require more faithful compliance with the intent of Congress and the mandates of law.

SECTION 1221 BURNS

H.R. 2212 strikes existing Section 1221 language having to do with burn injuries. Substituted is language establishing a training fellowship program in burns. The existing Section 1221 authority has been used to launch a major study on the status of burn care in the United States and a report due in 1981. It is my belief that the Congress should await the results of this study before taking further definitive action on any future burn treatment or capital expenditure programs. However, both H.E.W. and the American Burn Association have agreed that there is a critical need for more physicians in burn care. Thus, during the period that the Congress is awaiting and evaluating the burn study report, the fellowship program could be implemented to provide a larger number of trained physicians who can help give us the kind of high quality burn care we all envision as being necessary and appropriate.

Under H.R. 2212, $250,000 would be authorized for burn training fellowships in each of the next three fiscal years. Each fellowship would be for one year in an amount up to $15,000 that may be supplemented with non-Federal funds. No more than two fellowships may be awarded to any one eligible institution in any single fiscal year. It is intended that eligible institutions include those with "special expertise" in providing burn care and that they be recognized as having such capabilities by the Department of Health, Education and Welfare and the American Burn Association as of December 31, 1978.

SECTION 789 TRAINING

H.R. 2212 does not include reauthorization of Section 789 of the Public Health Services Act (Training in Emergency Medical Services) primarily because I believe there are important policy issues to be addressed and resolved with respect to possible continuation of this Section.

The Administration has proposed termination of Section 789 authorities; and, earlier this month, we in the House voted on an Administration recission request involving the $6 million appropriated for the current fiscal year under Section 789. The Administration proposed recission of the total appropriation. The House approved a $3 million recission.

I recently asked Dr. Kenneth P. Moritsugu, Director, Division of Medicine, Bureau of Health Manpower, to brief me on the Administration's position with respect to Section 789. Under this Section, H.E.W. presently is funding EMS training in three major categories -- physicians, nurses, and EMT (Ambulance)/EMT (Paramedic).

PHYSICIANS: H.E.W. currently is funding 29 programs for emergency medical physician traning. Seven are residencies,

14 are continuing education, and eight are undergraduate education.

The Administration position is that EMS physician training in a hospital setting is reimbursable through the free structure. Dr. Moritsugu noted that H.E.W. has certified 37 EMS physician residency programs; yet, only seven have asked for Federal assistance. The Administration asserts that this underscores its position that there is sufficient demand for this type of "specialty" to provide for training under the "free market" system. In other words, it's an attractive and lucrative field and the Federal Government need not underwrite the cost of training for those desiring to pursue this discipline as a "specialty." Dr. Moritsugu added that there are now 5,952 trained emergency room physicians out of an estimated requirement of 15,000, although he could not provide at the time he briefed me with documentation as to who calculated the 15,000 figure and on what basis. I would agree with the Administration that residency programs in emergency room medicine may not need Federal funding help.

The Administration believes continuing education training for physicians is the responsibility of the professional and that doctors, who are highly paid, can afford to pay for continuing education on a tuition fee basis. I would not contest this view.

Although he did not state it precisely, I am given to believe that the Administration views the training of undergraduates in emergency medicine as something that should be a part of any medical school curriculum and involve rotation through emergency rooms. I accept this rationale.

NURSES: Continuing education for nurses in emergency medicine is the only nurse training activity being funded under Section 789. No degree programs are receiving assistance under this Section. The Administration's position, again, is that continuing education is the responsibility of the professional. However, I have some problem with that philosophy as it relates to nurses, particularly in rural areas where salary levels are low and the availability of training may be minimal or non-existent. The continuing education needs of nurses in emergency medical care must be more thoroughly evaluated.

EMT/PARAMEDIC: The Administration position is that EMT/Paramedic training is available on a tuition fee basis at colleges, junior colleges or similar institutions. Thus, Section 789 assistance is not needed. However, I note that FY 1978 funding under this Section provided for 20 programs that trained 10,014 EMTs and 21 programs that trained 3,265 paramedics. The Division of Emergency Medical Services in H.E.W. estimates a national need for 300,000 EMTs, 80 percent of which have been trained and a national requirement for 60,000 paramedics, only 17,000 of which have been trained. The Division of Emergency Medical Services reports that $5.8 million of the available FY 1978 Title XII funds (or 16.3 percent) were spent in EMT and Paramedic training, although the Division could not provide figures on the total numbers of EMTs and Paramedics trained under Title XII authorities. The Administration's position on continued training for these very basic and essential EMS personnel is difficult to accept, particularly when one considers the training needs of EMTs and Paramedics in rural areas. Turnover in these locations is quite high and there is an ongoing need for programs to train volunteer replacements. Very careful attention should be devoted to the training requirements of EMTs and Paramedics.

ISSUES TO BE ADDRESSED:

With this review, it is apparent that a number of Section 789 issues must be addressed now and in the years ahead. Among them:

--Is Section 789 assistance genuinely needed for physician training in emergency medical services? Should this authority be continued beyond the expiration of Title XII? Does the Government have a commitment to underwrite continuing education training for physicians? In view of the fact that emergency medicine is a growing and attractive medical "specialty," is there a genuine need for Federal funding of residency programs?

--Is Section 789 continuing education training for nurses, particularly those in rural areas, a legitimate need? Should this training assistance be continued beyond the expiration of Title XII authorities?

--Where training of EMTs and Paramedics is concerned, there are especially difficult questions to be resolved:

(1) Should Section 789 provide for continued Federally funded training in an EMS regional system whose Title XII eligibility has expired?

(2) Should Federally funded EMS training EMTs and Paramedics continue after Title XII itself has expired?

(3) Is there a distinction between the need for Federally funded EMT and Paramedic training in rural areas where the majority of such personnel are volunteers and the more populous urban areas where a large portion of such personnel are paid professionals?

CONCLUSIONS ON SECTION 789 TRAINING

(1) I would not oppose discontinuation of training assistance for physicians.

(2) Continued training of nurses in emergency medicine may be justified in rural areas, although more study is required to ascertain the extent and anticipated duration of this need. It is quite possible that this need can be met with State and/or local resources or by the profession itself, in cooperation with local education institutions and particularly in urban areas.

(3) A basic policy decision must be made with respect to continued Federally funded training of EMTs and Paramedics beyond the expiration of Title XII. For the paid professional, tuition fee training or programs sponsored with State and/or local funding may be justifiable. Very serious consideration, however, must be given to the special training needs and problems of volunteer EMTs and Paramedics.

In summary, Mr. Chairman, I am as strongly in support of Emergency Medical Services now as I was in 1971 when I first introduced legislation on this subject. I believe the program is proving its merit and is paying for itself many times over in lives saved and resources spared. Timely and early renewal of budget authority for it will be important so we can continue to put in place the 304 regional systems we envision as being necessary to provide adequate and critically needed emergency medical care to the American people.

Mr. WAXMAN. Congressman Mollohan, I want to thank you for your testimony and for your leadership in this area. You were with this issue from the very beginning. I know the members of this subcommittee are very interested in the views you have expressed and in looking at your complete statement in addition to hearing from you this afternoon.

We will look forward to consulting with you further as we move along on this legislation. I hope your leadership will inspire us to keep this program going.

Mr. MOLLOHAN. Thank you.

Mr. WAXMAN. We next have a panel on emergency medical services in rural areas composed of Dr. Richard E. Benoit, president of Central New York Hospital Association; Dr. Philip K. Bobo, project medical director of West Alabama Medical Services Inc. and chief of emergency services for Druid City Hospital, Tuscaloosa, Ala. and Mr. Randall B. Herron, executive director for Lake Cumberland Emergency Medical Service System in Cambellsville, Ky.

Will the witnesses please come forward.

I know you may have written testimony you would like inserted into the record in its entirety and we would be happy to receive it at this time.

I would ask you, if you would, to summarize the testimony and try to keep as close to 10 minutes as possible so we can get more of a discussion with the members of the committee in the question and answer period.

Dr. Benoit.

STATEMENTS OF RICHARD E. BENOIT, M.D., PRESIDENT, CENTRAL NEW YORK HOSPITAL ASSOCIATION; PHILIP K. BOBO, M.D., PROJECT MEDICAL DIRECTOR, WEST ALABAMA EMERGENCY MEDICAL SERVICES, INC. (TUSCALOOSA); AND RANDALL B. HERRON, EXECUTIVE DIRECTOR, LAKE CUMBERLAND (KY.) EMERGENCY MEDICAL SERVICE SYSTEM

Dr. BENOIT. Mr. Chairman and distinguished members of the committee, my name is Richard Benoit and I am president of the Central New York Hospital Association. Our organization represents 50 hospitals in 16 counties in the central part of New York State.

We currently have a grant under section 1203 of the Emergency Medical Services Act for initial implementation of basic life support in 11 of these 16 counties. These 11 counties cover 30 hospitals and 12,000 square miles of geography.

We have the problem in Central New York of addressing the delivery of emergency medical care in both urban areas as well as very sparsely populated rural areas including the heart of the Adirondack Mountains.

In the testimony this morning and the questions regarding the rural emphasis, I can truly say this is a rural program as well as tied into an urban program which any effective overall emergency medical system must do.

We represent hospitals with over 500 beds and hospitals that only have 25 beds. We have 144 different ambulance services that bring patients to these hospitals and move patients around within the area.

My summary is probably longer than my detailed statement because my statement is quite brief but I will try to summarize it for your benefit this afternoon.

I believe our program is very unique. I believe it is the only program in the country that is actually being implemented under the aspices of a hospital association

During the first year of funding, the program has solicited the input of over 170 volunteers on the various committees and has benefited from the active involvement of approximately 75 physicians in issues that relate to hospital categorization, the care of the injured and so forth.

In our area, an application was made and the project failed a couple of years ago but not because of the lack of interest but because of the lack of coordination of the people who really needed to be involved in this.

Last year when the application was put together again, our association and our board decided we would be willing to be the applicant because we felt that if up front we could involve the hospitals and the physicians, that we could move much faster in this program than some new or outside agency coming along and trying to develop a system and then say, here, Mr. Hospital, here Mr. Doctor, is a program we would like to have you participate in.

I think that has proven to be successful. We started a little bit late because of a staffing situation last summer. In 5 months of active programing, we have already developed an initial categorization of hospitals. It has had 100 percent participation by all of the hospitals in the area and the active participation of 75 physicians.

Dave Boyd came up to our area last November in one of our first major snow storms of the winter and we had over 50 physicians at that first meeting, all giving their time on a stormy day to come and listen to what this was all about. Even though some of them were perhaps looking at some turf protecting and all the rest of it, we feel that effectively they have come together as a team to try to accomplish this job which we feel is so vitally important.

We are aware that these areas of hospital categorization and developing a medical control system by other programs neighboring us right in the State of New York have failed. I believe it is primarily due to a lack of real participation at the development stage by those who are going to be the ones that provide this system, namely the hospitals and the physicians.

We feel we present a rather unique prospective on the EMS program both locally and at the Federal level.

I know other approaches have taken place. Some have failed. Dr. Boyd and others have already referred to that in previous testimony.

We feel the legislation recognizes that it is going to take at least 4 years to change the EM system in any given area by the fact that there is section 1203 (1) and (2) and section 1204 (1) and (2).

The data is just now beginning to come in to show what works and what does not work. It is obvious that the extension of the EMS legislation is essential; to only extend it for 3 years, in our opinion, would not permit the public to benefit from the investment that has already been given over the last 6 years.

We feel in addition to the 3 years that serious consideration should be given to some point within that 3 year period to extend it at least another 3 years and thus allow some of these other regions perhaps who have tried and failed to become reactivated in the program or some of these other 17 regions to start up their programs in order that we might accomplish this most important task.

We feel, for example, the model we are sitting up may be of help to some of these areas so they can move more quickly and come to the point of developing a full system in a faster way.

There is one point that has not been mentioned in testimony I have heard today to any great degree which I would like to emphasize.

We seem to hear rumblings in the hospital industry about a subject called cost containment. I know this committee is going to be addressing that very seriously in the next few months and we welcome the opportunity to participate in that dialog.

I feel personally, having been in the health field now for 15 years or more, that an effective EMS program that is allowed under this program is one of the most effective ways for us to look at the cost containment issue.

There is no question that the highest cost of the delivery of health care is centered in the critical care areas that we are addressing, the seven critical care areas of trauma, burns, and all the rest, and all the sophisticate equipment, the CAT scanners, the electronic equipment and all the rest of it is centered in these areas.

I have found in my observation in the 6 months we have been working with these hospitals and physicians on this that there is a more concerted coordinated effort in trying to develop a system that really works for the whole area than there is when each hospital or each physicians' group says, we need this piece of equipment for this reason or that. I believe an effective EMS system is one of the best ways to coordinate where that equipment is needed so we have a system that is sensible and will help in the long run to contain the cost of health care.

For example, one of the research programs in burns has been granted to the Research Foundation in the State of New York and has been delegated out to the State University Hospital and Upstate Medical Center in Syracuse. We are a subcontractor with this group to try to provide some input to this burn demonstration project. As a result of that and local input and local money and fund raising, just within the last 2 months the Upstate Medical Center in Syracuse has opened the first burn care unit in New York State.

Just this morning on my way to the airport I heard of a gentleman down in Congressman Lee's area, north of his area, in his district, who was severely burned in a house fire this morning, 90 percent of his body. He was taken to the Upstate Medical Center and there is a sophisticated burn care unit to take care of that family today that was burned.

We are able to divert the people and put them into the right place with this categorization scheme.

I still say and would like to emphasize that I believe it is one of the strongest areas of cost containment that we can have as an EMS system.

I would like to address briefly the idea of volunteers. As I have already said, we have 144 ambulance corps. The volunteers and the EMT's and those who have given their service and time is something that is legion as far as the amount of it is concerned and yet if taxpayers were required to pay for these services because volunteerism in this effort dried up, it would be more costly than any EMS legislation that we are talking about.

We feel this legislation enables us to provide these with the essential support that they need. The attrition rate with EMT's and others is very high because there does not seem to be the incentive for them to keep going.

I would like to quote very briefly from two letters we received from ambulance services.

For the first time since the EMS program was started, we are seeing enthusiasm among the paraprofessionals in our area. We are also seeing a great deal of cooperation between the hospital professionals and the EMT's in the field. In closing let me say that I am finally seeing a Federal program in the North country that is actually a benefit for the people who live and work here. Keep up the good work.

The other quote:

I believe there is a local commitment for the program. Many individuals have contributed time and in some cases money for the advancement and upgrading of emergency medical skills in the area. Most of the work is done on a volunteer basis but volunteerism can only go so far. The use of your program has helped convince us that we are not alone in the improvement of medical services. I hope this help can continue for without it, improvement will come about so slowly.

We as hospitals are more aware of this by being involved in this program.

Just one final word about poison control services, we are in favor of the proposal to establish these regional centers but do express serious concern about the long-range funding of these centers. Whereas, as Dr. Boyd and others have testified, the EMS program is designed to be the catalyst to develop a system which I believe in our area and many other areas of the country will carry on poison control centers if they are funded for a period of 3 years without some long-range financing commitments at the beginning and initial stages of them which will perhaps cause them to collapse at the very time when people begin to realize the benefits from them.

We would encourage that you address the issue of long range continuing financing, not through the Federal program but some commitment by some group to carry on these poison control centers.

Article 30 was passed in New York State a number of years ago establishing a mechanism to provide improved training and communications in New York State with emergency medical services.

I am happy to say that this year Senator Lombardi is introducing legislation which hopefully will start to fund these agencies.

I believe this is an example of the commitment on the part of our State to get involved and continue to be involved in emergency medical care which will help as we phase out the Federal program.

We strongly encourage you to consider that further extension than just the 3 years.

Thank you for the opportunity of presenting these views.

At the appropriate time, I would be happy to answer any questions.

Mr. WAXMAN. Thank you very much. We appreciate the views you have given us from your own experience.

Dr. Bobo.

STATEMENT OF PHILIP K. BOBO, M.D.

Dr. BOBO. Thank you.

Six years ago when Congress was drafting the EMS Act, west Alabama's emergency medical care consisted of simply "you call, we haul," "grab a body and run." The ambulances were operated out of funeral homes. They would come in with the purple chenille bedspread on the patient as if he were already dead and many times he was.

We are rural. Everybody looked and said, there is really not a lot you can do in rural areas for EMS. It is just not feasible because these are poor areas.

We were a little stubborn and we persisted. We said you could. We have a 7-county area and a population of 223,000 and 5,000 square miles.

Two of the counties are designated as poverty areas and four of the others are just above that level.

We began in 1974 with a planning grant. We have gone through the full cycle of 5 years' funding. We are in our last year now. We have in place an advanced life support system that I would put as a model for any rural region in the United States. It does work.

We started off by just simply improving. We had one county with no ambulance service at all. The adjoining counties would have to come in. They now have an ambulance service with paramedics and it is one of our better ones with well-trained people.

We have a lot of rescue squads. These are volunteers as were talked about earlier; our State law exempted these people from having to meet the requirements of training and equipment on the vehicles. All of our rescue squads have been encouraged by us and have been trained by us and they now all meet the requirements of training and equipment.

We added eight more ambulances to our region through the Office of Highway and Traffic Safety. We have not used just EMS funds. We have managed to secure financial funding on a local and State basis.

We are receiving $50,000 from our county governments and $267,000 from the State from a special education trust fund for training for our region.

For the whole State of Alabama we will receive $1.5 million in commitment this year, we hope, for training.

We could not get them to fund the state office 3 years ago. The only money they had to operate on was what we got out of Federal grants and through EMS and DHEW.

All this tells you is how we put it together, and how we developed the system. I could go into great detail but I do not think I want to bore you with all of this.

We did develop a few things that we are proud of and one of them is our rapid responder network which is in areas where you

have a population base of 250 or less or in areas that are 30 minutes or more from ambulance service. It is not feasible to put an ambulance service there. We have a trained group of volunteers who went through 60 to 80 hours of training. We gave them some basic equipment and put them on an alert system.

When a call comes in through our central dispatches, we have an all seven counties' dispatch and a toll free access number. These people respond, treat the patient and stabilize prior to an ambulance arriving with more advanced trained personnel.

That is the only thing people have in these areas. It is a coal mining area. We have a lot of timber and farming in the area. Without rapid responders, they would not have anything. This is all done by volunteers.

If we paid for all our volunteer services, all we have gotten from DHEW would not even touch the top. We operate basically on volunteers.

Transfer agreements which are documents hospitals sign and a medical staff signs saying what they will take care of; in other words a hospital states, "How can I take care of major head injuries, I will transfer," and the regional center says, "We will accept." This way is the way we categorize our hospitals. It is a self-categorization. As it turned out, it did allow the EMS effects right down the line. This has been in place for 3½ years.

We have a radio/telephone switching station telemetry system which I think is going to be a model for all rural EMS. It is a very cost effective system where it takes UHF radio. I think the best way to describe this would be if you all have seen "Emergency" on television. This system was designed by Mr. Ned Butler who is the State telecommunications consultant and also Mr. Tim Thomas of Fort Worth.

This takes your little orange box with the radio on the street with the patient, it goes into a particular repeater, the UHF signal goes into a switching station in each county. This in turn switches it into existing phone lines. It has conference call capability.

The way our system works, we control seven counties out of the emergency department at Druid City. All the people in the field and all the ambulances call medical control. Say they are 90 miles away, they call me, I give orders, and then I call the local hospital or the physician in that area they have to go to and tell them what has been done and they are on their way and please meet them, et cetera. I tell them we would be glad to accept and transfer either directly or come through them, whatever they want.

This probably is the only system in the United States where you have total medical control. We do not have standing orders. Everything we say is all recorded and it is all reviewed on a monthly basis.

You do not have to use dedicated phone lines. You do not have to use repeaters. The total system cost about $300,000 to put in and that is for seven counties. We were fortunate and got a telecommunications demonstration grant to pay for about half of it. The remainder was funded through the EMS division of HEW.

All of this sounds good but I would have to tell you what really happens and what effect it has had on patient care in our area and I think that is the key.

The response time for ambulances has dropped. In 1976 it was 12.5 minutes; in 1977, it was 7.7 minutes and in 1978 it was 5.5 minutes. This is a combination of rural and urban areas. Of all the ambulance runs last year, 70 percent had paramedic-staffed ambulances. This is in a predominantly rural area.

The paramedics encountered 24 cases of ventricular fibrillation. That is where your heart stops and you are considered dead. They converted 14 of these in the field back to a normal rhythm, bringing them back to life. That is 14 people back on the street hopefully working. I know many of these people personally and they are working and they are functioning and their brains are not quashed.

In the area of trauma, we have had problems of evaluating the impact. For example, last Thursday we had a piece of metal that fell 2,000 feet down a coal mine shaft killing one man instantly and pinning another man for 4 hours. He would have been dead had he stayed there for 4 hours without care. We sent two of our skinniest paramedics, one which we had to recruit, down the shaft on the same cable that broke; they stayed with him 3 hours and gave him 3,000 cc's of fluid, kept his body temperature normal, stopped the bleeding, and the boy came to the top with a normal blood pressure and alive. He had two children and a wife. That is one more citizen who, in about 1 year from now after recuperating from his injuries, will be out working again paying taxes.

If this has impact, this is where the area of impact is, in keeping people from dying and putting people back on the street to work and pay taxes.

It can be done in rural America. I am here to demonstrate that it has been done. If you are ever in my region and you are unfortunate enough to have an accident, just feel safe to know that you will get the best care possible in rural EMS.

Thank you.

[Testimony resumes on p. 119.]

[Dr. Bobo's prepared statement follows:]

STATEMENT OF PHILIP L. BOBO, M.D., PROJECT MEDICAL DIRECTOR, WEST ALABAMA EMERGENCY MEDICAL SERVICES, INC. (TUSCALOOSA)

Before The

HOUSE SUBCOMMITTEE ON HEALTH AND THE ENVIRONMENT

March 21, 1979

Six years ago, when Congress was drafting the original Emergency Medical Services System Act (P.L. 93-154), West Alabama's pre-hospital emergency care was in many respects the old "You Call-We Haul" ambulance operation by funeral homes using poorly equipped vehicles, inadequately trained personnel, and no ambulance to hospital communications capababilities. Emergency aid in some cases consisted of a high speed run to the nearest hospital.

Today, thanks to the foresightedness of Congress, things have changed for the Citizens of the seven-county rural region. From the old "Grab the body and run" operations, West Alabama has developed a sophisticated regional EMS system that we feel is a model program for rural regions throughout the nation. The dramatic accomplishments achieved during the past five years will culminate in the next few days with the presentation of an award by Region IV, Department of Health, Education and Welfare, to West Alabama EMS, Inc., as the exemplary EMS system in the eight-state region.

West Alabama's Cinderella story is more amazing when one considers the nature and economic conditions of the region. The seven-county region encompasses a 5,384 square mile area and a population of 223,000. More than 75 percent of the

46-142 O - 79 - 8

geographical region is rural, and accounts for 43 percent of the total population. Some 55 percent of the population have less than a high school education. Two of the seven counties--Greene and Hale--have been designated as poverty areas by federal agencies. Four other counties--Bibb, Fayette, Pickens and Lamar--have median family incomes only slightly above the level required for this designation.

The West Alabama EMS story actually began in 1974 when the West Alabama Comprehensive Health Planning Council applied and received a planning and feasibility study grant under the newly enacted EMSS Act (P.L. 93-154).

Under the grant, resources and needs were inventoried. A plan for implementing a regional EMS system was formulated using national guidelines. Alabama EMS, Inc.--was formally organized in early 1975. This organization is governed by a 16-member board representing consumer and provider interests from the seven counties.

A formal application was submitted in early 1975 for funding to implement a basic life support system under the EMSS Act. This effort was successful and on July 1, 1975, West Alabama became the first region in Alabama to receive DHEW funds to establish a regional EMS System. Since that time, we have been continually funded and we are now in our final year of funding eligibility.

During the period from July 1, 1975 to June 30, 1977, West Alabama EMS, Inc., concentrated its efforts on building a strong basic life support system to serve the seven-county area. Key

elements of the implementation strategy were to assemble existing resources into a coordinated, functional basic life support system, and to create high visibility for the project.

Public access was improved. The myriad of emergency numbers were consolidated into a countywide toll-free number in each of the seven counties for any fire, police or medical emergency. Countywide central dispatch centers were established in each county to receive these emergency calls and to dispatch the necessary response units. Training was provided for the dispatch operators.

Hospital emergency facilities were improved through equipment furnished through the two basic life support grants. Through involvement of the regional physicians, model standing orders were developed and adopted for implementation in community hospitals. Inservice training on the protocols was provided for the rural hospital nursing staffs.

Transfer agreements between all of the community hospitals, the regional hospital at Tuscaloosa and the tertiary care centers located outside the region were implemented to assure that a critically ill or injured patient reached the proper level of care.

Ambulance service was upgraded. During the first two years, the number of ambulances operating in the region was expanded by eight. Most of these ambulances were obtained through Office of Highway Traffic Safety matching grants to municipalities or counties. Rescue squad ambulances, exempted by Alabama law from meeting the state requirements for training and vehicle standards,

were persuaded by West Alabama EMS to voluntarily comply. Where these rescue squads had operated ambulances with no certified emergency medical technicians before, each now operates with licensed EMT's on each run as a result of training provided by EMS. And, where most of the rescue squads had no VHF communications prior to July 1, 1975, all now have VHF radios. Greene County, a poor, predominantly Black county that had no ambulance service, initiated an ambulance operation with licensed EMT's.

Medical control was defined and implemented, and pre-hospital and inter-hospital protocols were developed and subsequently signed off on by local physicians. All of the hospitals were categorized. Types of emergencies that could be treated locally and those requiring transfer to a higher level of care were defined by the rural community hospitals.

County disaster plans were developed and tested, and a regional disaster plan was put together with assistance of the seven civil defense directors. Mutual aid agreements were signed by all county and municipal governing bodies in the region.

Coordinated recordkeeping systems were developed, public education programs were launched, and seminars and training programs were held for physicians, nurses and emergency medical technicians.

On July 1, 1977, West Alabama EMS began an expansion and improvement program to move from basic life support to advanced life support. Paramedics were trained to serve as physician extenders in the field. An innovative UHF telemetry system

which interfaces radio and telephone capabilities through microprocessor switching stations was developed for West Alabama. This new system, which is expected to be a model communications system for the nation because of its cost-effectiveness and virtually unlimited range, has just been installed regionwide, making West Alabama one of the few--if not the only--region in the nation with true regional medical control. This unique system has a conference call capability that allows a paramedic 90 miles away to talk with medical control at Druid City Hospital in Tuscaloosa, and also with the community hospital in which the call is originated.

In cooperation with the City of Tuscaloosa, a surplus Huey helicopter has been secured and equipped as an advanced life support unit to provide secondary transport for critically ill or injured victims in the region.

Specialized training programs for physicians, nurses and paramedics have been conducted, and additional equipment for upgrading the critical care capabilities of the regional hospital's emergency department has been made possible through EMS grants.

Within the next three months, we will have completed our funding eligibility under the EMSS Act. During the last four years, we have received more than one million dollars in DHEW funds under the EMSS Act, more than sixty thousand dollars in Appalachian Regional Commission funds, and $127,000 through a Telecommunications Demonstration Grant. Last year we received $17,000 in cash support from the seven counties for operation of the system. This year, we are scheduled to receive more than

$50,000 from the seven counties and $267,000 from the State Special Education Trust Fund.

We have implemented a complete system which we feel is a model for the nation. And at this point, I want to express my appreciation to Congress for making it possible. I would also like to express appreciation for the leadership role provided by Dr. David Boyd, national EMS director, and his staff in providing direction for the national program.

I think one of the keys to our success is heeding Dr. Boyd's admonishment that for a program to be successful, it must have medical direction and physician involvement within the region.

We are also pleased that some of our innovations have been picked up on the state, regional and national levels. These include:

Rapid Responders, a network of trained volunteers in rural areas, who can be on the scene of an emergency in a matter of minutes and provide basic life support until an ambulance arrives. These units are established in areas where ambulance response time may take up to 30 minutes.

Transfer Agreements, which are category specific and specify types of cases that may be treated at the initiating hospital and those that will be accepted by the receiving hospital. The document further defines the limitations, if any, of both the hospital initiating transfer and the receiving hospital. This document has been adopted for statewide use in Alabama, and West Alabama has received requests for copies of the agreement from EMS regions from all over the nation.

Radio-Telephone Switching Station Telemetry System. This system was designed for West Alabama by Mr. Ned Butler, director of telecommunications in Alabama, and Mr. Tim Thomas of Fort Worth, Texas. This system, alluded to earlier in this presentation, was determined to be the most economical for the rural area. Cost-containment, plus virtually unlimited range, are salient features of the system. Pre-programmed assignment of medical channels for the paramedic eliminates the necessity for maintaining a manned channel control center. It also eliminates the costly process of establishing and maintaining micro-relay stations to amplify the UHF signals.

Public Education. West Alabama has developed a comprehensive public education program with a major thrust toward public recognition of true medical emergencies, self-help measures that may be used until professional help arrives, and public awareness of measures to prevent many types of emergencies.

West Alabama EMS strongly believes that prevention education is a vital part of a good EMS system. We have developed a sub-regional poison control center for West Alabama and have been heavily involved in promoting poison prevention.

We believe that a national poison control program should be made a part of the EMSS Act. Based on the San Diego experience that a poison control center receives 60,000 calls per million population, the concomitant decrease in emergency room visits helps contain health costs. However, poison control centers are expensive and frequently beyond the financial ability of local and state governments to establish. Therefore, we would

recommend that federal matching grants be set up to establish 60 regional poison control centers across the nation. The matching grants would provide seed money for establishing these centers.

I have said much about the establishment of a model EMS system, but very little about how the system has impacted health care in the region. The results have been dramatic.

Ambulance response time for urban areas, for example, dropped from 12.5 minutes in 1976 to 7.7 minutes in 1977 and 5.5 minutes in 1978, and approximately 70 percent of all ambulance runs in the region last year had a paramedic on board to provide advanced life support capability.

Of the 577 coronary cases admitted to the regional hospital during 1978, 280 were transported by advanced life support ambulances. Of this number, 31 were dead on arrival at the hospital and one died in the emergency room prior to admission to the coronary care unit. The paramedics encountered 24 cases of ventricular fibrillation and 14 of those cases were successfully converted in the field.

In the area of burns and trauma, we have found 100 percent compliance in burns and spinal cord injury victims being transferred to the respective specialty care centers within the first 24 hours of occurrence. This is greatly impacting patient cost and length of stay. A study by Spain Rehabilitation Center in Birmingham, which serves as the spinal cord referral center for West Alabama, shows that patients reaching the center early stay an average of 56 fewer patient days than those reaching the

the center after 30 days or more. Average costs total about $13,000 less for those coming in early than those coming in after 30 days from date of injury.

Our study also shows that neonates are being progressively moved from the community hospitals to higher levels of care. The number of neonate deaths from West Alabama occurring in a Comprehensive Level 3 (highest level) Neonate Center was 27% in 1974; 34% in 1975; 37% in 1976, and 62% in 1977. Since these involve the most critical infants, the death rate increase follows an anticipated pattern.

The important aspect of these compliance studies is that the patient is reaching the proper level of care.

Because of limited expertise and limited funds, we could not do finite evaluation of trauma. It would be in order to have 10 trauma sites across the nation where epidemiological studies, using injury severity index scales, could be conducted to determine whether trauma centers are effective.

We are constantly trying to improve our evaluation efforts to more effectively document decreased morbidity and mortality. Physicians throughout the region report that patients arriving in the emergency rooms by ambulance reflect the improved pre-hospital patient care. The neurosurgeon at the regional hospital reports that he is seeing more cervical fractures without spinal cord injury than in the past as a result of proper patient handling in the field.

We can see patients walking the streets today in West Alabama who under the same circumstances five years ago would have

been dead. Therefore, we know the system is working, and we know the value of the federal EMS funding.

In Alabama, as across the nation, there are regions that have yet to be funded for implementation of EMS Systems. Therefore, we feel that it is most imperative that Congress extend the program for at least the next five years in order that the stated goal of 300 "wall-to-wall" regional EMS systems across the nation can come to fruition.

It has worked in West Alabama and it will work across the nation.

In closing, let me again express my appreciation to Congress for its establishment of the EMSS Act, and to Dr. Boyd and his staff in the Department of Health, Education and Welfare for providing the leadership and guidance for West Alabama in setting up a system of which we can be proud. We hope that if you are traveling in our region, you never have to use our EMS system. But if you do, you can be sure that you have the best of treatment available.

Thank you.

Mr. WAXMAN. Thank you very much, Dr. Bobo.
Mr. Herron.

STATEMENT OF RANDALL B. HERRON

Mr. HERRON. Thank you very much.

Mr. Chairman and members of the committee, I appreciate the opportunity of being with you. I do have a lengthy statement I would like to have inserted into the record. I will try to summarize my comments.

Mr. WAXMAN. Your full statement will be inserted into the record.

Mr. HERRON. I am director of the Lake Cumberland EMS System. It is located in rural southeastern-south central Kentucky.

The population of the Lake Cumberland region is approximately 157,000 people in a 3,613-square-mile area. There are 10 local units of government or 10 counties in our region.

We have one other significant factor and that is the major fluctuation of population which does occur due to in the two major recreational lakes that are located there. We might on any given holiday weekend double our population.

The system is somewhat unique in that we do provide in addition to training and coordination, direct patient delivery services. I think this is somewhat unusual with regions across the country. We feel our program is truly a regional program. We are presently in the DHEW level 1204-2 funding.

I think the best evidence to support the need for continued legislation is the figures the administration presented this morning.

I believe there are only 17 regions that have completed the grant cycle to date; I also believe that with the addition of 12 regions that we added this year, there will be a total of 29 regions or 11 percent of all the present EMS regions of the country who will complete the grant cycle after fiscal year 1979.

The projection under the phaseout plan would indicate to me that there is serious deficiency in the total number of advanced care capability systems that would be allowed to exist.

I believe the figure was 25 percent in the 1204-2 or advanced levels of care.

I strongly believe, and I do represent a rural region as Dr. Bobo does, that rural communities certainly deserve the same levels of care as the metropolitan areas. I think as Congressman Waxman indicated earlier, there is a four times greater chance of death for patients involved in critical emergencies in areas such as ours.

For instance, the transportation factor is certainly significant in these rural areas.

We are very proud of our region and the advances we have made. We do have an advanced paramedic program. We have a central communications system. We have a categorization of facilities and many of the other things the other two witnesses previously mentioned.

We feel a great deal has been accomplished in our region.

As the different levels of funding did transpire, we have had evaluations which were conducted through grants with DHEW. In

our region, those evaluations were conducted by the University of Pennsylvania and the Arthur Young Co. of Washington, D.C.

I think one significant thing that the evaluations brought out was that as they went to the local funding authorities and asked them what impact Federal moneys or Federal legislation had upon the EMS program in that area; the answer in all cases came back that there would not have been an EMS program in our region had it not been for the DHEW Federal funding.

I think this is evident that even though the local participation is very strong—I would like to mention that the per capita asessment for EMS in our region is $.80 per capita which I think is one of the highest around. The local participation is very strong but I think we still must have Federal programs throughout this country to afford all areas with the same opportunity.

I would like to talk for just a moment about the training programs. I feel very strongly about the training programs. I sit on two committees in the State of Kentucky with regard to training, the EMT Training Advisory Committee of the Department for Human Resources and the State Board of Medical Licensures Paramedic Advisory Committee.

I think the contention that paramedic training should be accomplished at the junior college level for tuition simply is not a fact that will occur in many parts of our country.

Paramedic training in Kentucky, and I believe this is true in many other States, has been established very closely linked with medical control and certification of the individuals under a particular health care program to which the paramedic is employed.

The recent State legislation in Kentucky that enacted the authority under Medical Licensure Board for paramedic legislation, tied the certification of paramedics to their employment within the region or with a provider of services that was able to afford the necessary essentials for a true paramedic program: Proper equipment, proper supervision, true medical controls.

This provision would make it very difficult for the junior colleges to adequately provide this type of program unless they had a significantly effective working arrangement for clinical experience as far as the program itself is concerned. I also think they would need to secure employment for their graduates on a long-range basis.

This would be very good and I certainly support it. We have a career ladder concept in the State of Kentucky and we are proceeding along that line. At the present time, through many parts of our country, without funding programs under section 789 for EMS manpower training, it simply would not be a fact of existence.

The EMT basic training program, in some instances has been cast aside as nonimportant in the day of affluent paramedics but I feel very strongly about the basic program. I think it is a logical advancement in the career ladder concept.

I think if we say this program will carry on in the same category as a first aid course and I have heard it described in that manner by a number of individuals, then I think we are certainly missing the opportunity and it leaves the quality of the program in grave doubt.

Qualified instructors must be secured and properly compensated for this program. Many of our States have increased the original 81 hour DOT program to 87, 90, and even 100 hours because additional training has been shown to be very effective.

The problems of EMS are many throughout the country. I would like to mention one that I do not think anyone has touched upon this morning or this afternoon and that is the fact that funding of the EMS regions throughout the country are faced with a significant decrease in manpower resources brought about by CETA and the CETA legislation that is presently in effect or is being proposed.

In the State of Kentucky and in a good many other States very close to 40 percent of the EMS personnel is funded through the CETA program. You might wonder why I mentioned CETA in context with this committee but I think it is relevant since there is going to be a great turnover of personnel and the training is very important and should be continued.

Many of you might say that CETA has been abused and that is why the regulations have been changed and that is why this next year the proposal says some 79,000 public service positions will be reduced from the CETA manpower rolls.

Originally, CETA was set up for two things; to provide needed public service employment on the one hand and second, to provide training that would lead to permanent employment.

It seems to me that we have now totally forgotten the first with the total emphasis being placed upon training.

The second problem that I think EMS is faced with in a rural area is the very low reimbursement rate for third party payers, medicare, medicaid, or public assistance. It is very low in the State of Kentucky. If you want to get into that, I would certainly be happy to discuss it with you as to the rates.

I think the gist of this is as far as funding, that all of our communities are faced with a very low amount of money that is available to provide EMS resources. Although the local effort is being brought forth in many cases, there is still a great deal of need for additional seed money to provide for an advanced level of care.

There is one additional thing that a great many people involved in EMS feel is extremely important. The cycle of 1202, 1203, and 1204 grant programs provides for a normal sequence of events that will go from basic life support to advanced life support.

The match moneys that were available at a particular time or the fact that a particular region might have entered the program very early leaves a great many gaps in certain areas that I think certainly needs to be addressed.

A system, for example, under 1204 might have determined their basic need in the area was for communication equipment or telemetry equipment. They might have determined their need was for training. As they proceeded along and knowing that there is only a certain amount of local match moneys available for these programs and certain priorities have to be established. After the 1204-2 cycle was completed, they saw the need for a mobile intensive care vehicle, for example.

Under the present legislation, those particular regions are prevented from going back and applying for any additional funding.

I would suggest that perhaps the committee would consider and I note that it was addressed on a couple of occasions this morning when we talked about poison control and if this properly distributes the limited amount of funds that are available. If the committee could possibly consider a block grant allocation to those regions who have completed 1204 funding to fill in the gaps, to fill in needs and new developments which might come about.

I think there are always going to be new developments and technical assistance will be needed in these fields. I am not suggesting to the committee that this block grant section be utilized for replacement of anything that had previously been purchased under grant funds but simply to fill in areas that were not properly addressed during the normal 4-year cycle of the grant program.

I certainly support your particular proposal, Dr. Carter, and all the programs you have indicated you support in EMS and we welcome any questions the committee might have.

[Testimony resumes on p. 131.]

[Mr. Herron's prepared statement follows:]

STATEMENT OF RANDALL B. HERRON, EXECUTIVE DIRECTOR, LAKE CUMBERLAND (KY.) EMERGENCY MEDICAL SERVICE SYSTEM

Mr. Chairman, members of the committee, I appreciate the opportunity to appear before you in support of HR-3039 and its' extension of EMS legislation.

I am Executive Director of the Lake Cumberland Emergency Medical Services System, Inc. This system is located in rural southeastern, southcentral portions of the Commonwealth of Kentucky. The population of the Lake Cumberland EMS Region is 157,000 (in a 3,613 square mile area) as recorded by the 1976 census, comprised of ten (10) local units of government or counties. This is Kentucky State EMS Region 8. The Lake Cumberland EMS Region is 100% rural area with a population density of 39 persons per square mile as compared with the state average of 78 persons per square mile. The largest incorporated city in the Lake Cumberland EMS Region is Somerset, Kentucky, located in Pulaski County, with a population of 15,500. Major fluctuations of population (up to 100% of the resident population) do occur with the region due to an influx of tourist attracted to two popular state parks (Lake Cumberland State Park and Green River State Park) located within the EMS region.

The Lake Cumberland EMS System, Inc. was formed in 1975 as a private non-profit corporation of government, medical and consumer representatives as mandated with the development of a regional EMS system. The system is presently in DHEW level 1204-2 funding.

NEED FOR THE PROGRAM

I believe the best evidence to support the need for continuing EMS legislation is the statistical figures that were presented by the administration's testimony relative to the status of funded EMS regions to date. Today, we have only seventeen (17) regions that have completed the grant cycle out of a total three hundred four (304) EMS regions in this country. I understand that with the proposed fundings of this fiscal year, an additional twelve (12) regions will complete the cycle for a total of twenty-nine (29) regions or eleven (11) per cent of all the present

EMS regions. The projection under the phase-out plan also would indicate to me, a very serious deficiency of programs that have been completed and fully utilized the advanced care capabilities that are needed in many parts of our country. The projection obviously indicates that only twenty-five (25) per cent of 1204-2 regions would have completed their project funding by fiscal year 1982 under the administration phase-out plan. These figures that have been supplied to you, I think, clearly indicate that many parts of our country will be deprived of needed emergency care services if the administration plan is allowed to be implemented and utilized in the funding of EMS systems.

As indicated previously, I represent a rural EMS region that is faced with many problems, including, availability of manpower, training, and sources for funding. I believe that the rural communities deserve an opportunity to have access to advanced care services that have previously only been available in metropolitan areas. The death rate is four (4) times higher in a rural area for patients involved in critical emergencies as it would be in more populated communities. This points the need to even greater need for the availability of advanced training and advanced programs for rural areas. In many instances, facilities and more highly trained professionals are not available to render care to victims of serious injury and illness. This requires the transportation of emergency patients to a distant point for care and treatment. This lack of qualified care readily available means the difference many times between life and death to those involved in in these situations.

Our region in rural Kentucky, has emerged since 1974 from a period when EMS was an unknown quantity, (an area in which emergency care was provided by a funeral home with a combination hearse/ambulance and a driver whose training at best, consisted of a first-aid course), to a program involving; Basic and Advanced levels of patient care, adequate transportation and transfer protocols, utilization of a

centralized communication center, universal access and medical direction, and categorization of available facilities that would allow appropriate care for all individuals throughout the region. This program could not have been made available without the EMS funding program.

With the advances we have made, much more remains to be done and I think this situation which has been demonstrated in our area, is common to many parts of this country.

In the development of our system through first and second year 1203, and first and second year 1204, we have had periodic evaluations by agencies working under contract with DHEW, specifically, the University of Pennsylvania and the Arthur Young and Company, here in Washington D.C. These reviews were quite favorable of our operation in that we were concerned with delivering the highest levels of emergency care to the people of this community at the lowest possible basis and utilizing the resources that were available to their greatest advantage. I think it was particularly significant that in these evaluation sessions, the interviewers went to the local funding authorities in our region and asked of the importance of federal monies in the development of EMS, the response in all cases was, "We would not have had EMS programs in the Lake Cumberland Region of Kentucky had it not been for the DHEW federal grant programs. EMS legislation has provided much to the health care of the people of this country, but many areas still are lacking in this most vital need to our communities.

TRAINING PROGRAMS

I would also like to address the need for additional training. Once again, I disagree with the administration's concensus that further funds for EMS manpower training are not needed. I believe that it was the contention of the administration that EMS professionals could provide their own continuing education and that paramedic training could be accomplished in junior colleges for tuition, and that Basic EMT training could be on a volunteer or no-cost basis. Gentlemen, I say to you that simply is not true. In tha paramedic

46-142 O - 79 - 9

training that has been established in Kentucky, (and I believe in many other states), certification of individuals on the paramedic level has been very closly tied to medical control and supervision of that particular Health Care program under which the paramedic is employed. I think for the good of the communities in which they serve, this is essential. It has been mandated and supported by state and federal EMS authorities. The recent state legislation in Kentucky that enacted the authority under Medical Licensure Board for paramedic legislation, tied the certification of paramedics to their employment within a region, or with a provider of services that was able to afford the necessary essentials for a paramedic to practice, specifically; medical control, proper communications, proper equipment, and proper supervision. This provision makes it very difficult for junior colleges or other educational institutions to carry on this type of program unless they have a working arrangement for clinical experience and provisions to secure employment for graduates of their program. I think this would be very good as a long-range goal, but this is simply not in effect in most of our country at the present time and unless monies are still provided to promote paramedic training programs, I think we will find a great decrease in the availability of this training. The Basic EMT training programs, we feel, is also a professional program. It is a program logically leading to the career ladder of advancement in emergency care. To say that this should be done on a volunteer random method, certainly leaves the program and the quality of its delivery in grave doubt. The program, in many areas, has been increased from the original eighty-one (81) hours to eighty-seven, ninety, and even one hundred (100) hours in some areas because the need was shown for additional training. Qualified instructors must be secured and properly compensated if the program is to retain its quality and if those individuals so certified are to receive adequate training. Monies for paramedic and Basic EMT programs have also been provided in the past through the Department of Transportation. I understand that this

agency also is in the process of de-emphasizing EMT/paramedic training in its allocation to our state and local government. I certainly think we will be in danger of creating a great void in EMT and paramedic training if we allow the elimination in Section 789, of funds for EMS manpower training.

SIGNIFICANT PROBLEMS OF EMS

This system, through the regionalization of EMS services, has attempted to provide quality emergency medical care at the lowest possible cost to all individuals in this region. These measures have included; centralized billing, centralized purchasing, establishment of price contracts for equipment and supplies, and group rates for vehicle liability, health, life, and accident insurance. These procedures have reduced the operating costs throughout the region and enabled local governments to provide the program at a lower per-capita cost.

One significant problem in EMS today, is the changes that have been brought about in the CETA program. The administration proposal for FY 80 is requesting that the public service employment through the CETA program be reduced by 79,000 positions. The limitations of time that individuals can be employed on this program has limited its usefulness in EMS.

Many regions and many communities have utilized the CETA program for the employment of these public service individuals in ambulance service. The total in Kentucky is somewhere very close to forty (40) per cent. I have attached a copy in this testimony of the annual expenses and total costs of ambulance service to each of the ten (10) county units in our region for FY 77/78. I have also indicated in this chart the amount of monies provided by the CETA program that are utilized in each county as a portion of their personnel costs. You will find that in this particular year, forty-eight (48) per cent of the personnel costs were paid through the CETA program. I think all of us will agree that the CETA program has been abused in many areas and perhaps this is the reason that a number of these changes were brought into being, the original intent of the CETA program was to provide two things: (1) Needed public service employment, and (2) To provide

training that would lead to a position of permanent employment. The present programs under Title II and Title VI of CETA have completely forgotten, it seems, the first purpose of the CETA program and total emphasis is now placed on training as the only benefit derived from the program. As is often the case, many communities, counties, and cities have integrated the CETA program into their budgets and the cutbacks in CETA funding and the restrictions placed upon the program by limiting the total weeks that an individual can serve, will substantially increase the amount of monies that EMS programs will cost throughout the country.

A second problem that EMS regions are facing is the low reimbursement rate for transporting Title XVIII and Title XIX recipients. These third-party payers (Medicare and Medicaid recipients) comprise approximately thirty (30) per cent of all patients transported today. The reimbursement rate under Medicare is eighty (80) per cent of the established average base rate for a particular area and a mileage rate determined in a like manner. In Kentucky, this amounts to eighty (80) per cent of an average base rate of $24.00 plus seventy-five (75) cents per mile to the nearest facility deemed appropriate to the patient's condition. If a Medicare pt. has not satisfied his deductible requirements, this deductible amount is subtracted from the reimbursement to the ambulance provider. Under Medicaid, in the state of Kentucky, the reimbursement rate is at a figure of twenty (20) dollars and a mileage rate of fifty (50) cents per mile after the first ten(10) miles. I am sure that you can see that these rates are far below the total cost of providing emergency medical services. We, in the Lake Cumberland Region of Kentucky, have surveyed the cost of providing our program and find that the average ambulance run costs approx. $125.00 for a local mission. The average cost for all patients utilizing our services during the past year was some $42.00 per person. You can see that if one hundred (100) per cent of all monies were collected, (actual collection rate was approximately sixty-five [65] per cent) this would in no way represent the total cost of the program.

BLOCK GRANT PROPOSAL

It is the feeling of a great many people involved in EMS, that the extension of EMS legislation should contain a new section that would allow those regions who have completed the 1204-2 program to be eligible for specific ALS grants. This would allow regions throughout the country(who may have entered the program early and have completed specific sections under the EMS act and who are now prohibited from further application)to complete a specific ALS need in their system. The match monies that may have been available when regions were in the levels of 1204-1 and 1204-2 grants, might have prevented them from acquiring some needed equipment or programs that would greatly enhance and improve the levels of care that they are able to provide. An example might be that a system, in the development of their 1204-1 and 1204-2 grant applications might have requested monies for communications and training programs and were able to secure local funding resources to match the grant requirements for these needs. After these programs were completed, a need was shown for another piece of advanced equipment,(eg., a mobile intensive care vehicle). This item would have been fundable under the 1204-2 program, but local resources and development may have not been available at the time of the grant. Under present provisions of the act, regions who have completed 1204-2 are not eligible to apply for additional funding or programs that might be needed. There are a number of states and regions that are in this category and many more will be added in the very near future. This is not to suggest that this block grant section be utilized for the replacement of any equipment or program that was purchased through previous grant funding. It should be utilized only to supplement and improve those programs and activities that are already in place. As new developments and needs are shown in the EMS field, technical assistance programs will be needed to continue to improve the levels of care that may be provided in these EMS regions. These grant funds should also be utilized to provide this type of activity.

I would ask the Sub-Committee to consider the inclusion of a new section in this bill that would permit Block Grants

to those regions that have completed the 1204-2 cycle. The grants should be made available to qualified regions on the same competitive grant application basis as is utilized for present 1204-2 programs.

I wish to thank the committee for allowing me to present this testimony, and would be happy to respond to any questions that you might have.

LAKE CUMBERLAND EMERGENCY MEDICAL SERVICE

REGION 8

ANNUAL EXPENSES FOR AMBULANCE SERVICE

FY 1977/1978

COUNTY	ANNUAL PERSONAL BUDGET	PORTION PAID BY CETA	TOTAL OPERATIONS BUDGET	TOTAL CHARGES BILLED FOR SERVICES RENDERED	TOTAL PAYMENTS RECEIVED FOR SERVICES RENDERED	COLLECTION RATE
ADAIR	$ 71,889.91	$ 38,900.00	$ 105,379.54	$ 35,139.20	$ 26.159.12	74%
CASEY	51,189.90	34,689.00	84,214.24	29.082.30	16,757.54	58%
CLINTON	48,270.81	-0-	108,769.12	49,214.58	18,143.19	37%
CUMBERLAND	83,310.90	-0-	111,388.70	20,724.97	12,097.81	58%
GREEN	36,599.47	932.80	82,626.88	35,213.63	20.787.89	59%
MC CREARY	69,080.06	39,746.00	111,657.49	34,467.34	21,057.36	61%
PULASKI	61,829.12	32,914.56	115,518.90	71,450.60	41,132.28	59%
RUSSELL	72.523.13	72,523.13	108,856.34	16,145.78	15,866.53	98%
TAYLOR	70.977.82	30,488.91	111,250.87	42,723.80	38.380.13	90%
WAYNE	42,364.13	42,364.13	75,754.75	19,631.50	10,868.32	55%
TOTAL	608,035.25	292,558.53	1,015,416.83	353,790.70	221,251.27	
AVERAGE	60,803.52	48%	101,541.68	35,379.37	22,125.12	65%

Mr. WAXMAN. Thank you very much for your testimony.

Dr. Carter, would you like to proceed with the questions?

Mr. CARTER. What has been your average ambulance charge for upstate New York?

Dr. BENOIT. Many of the ambulance services that I referred to are volunteer ambulances and actually make no direct charge for the transportation of the patient.

Mr. CARTER. The ambulance itself is equipped according to the specifications?

Dr. BENOIT. Yes; they are registered ambulances under article 30 of the State of New York.

Mr. CARTER. Who owns them?

Dr. BENOIT. They are owned by either fire departments or rescue squads or an ambulance corps established in the villages. There are several commercial ambulances but I do not know the rates they charge. The volunteer ambulances are supported by contributions.

Mr. CARTER. Your system by and large is volunteer?

Dr. BENOIT. Yes, much of the ambulance service is volunteer in our area.

Mr. CARTER. They do not submit a charge?

Dr. BENOIT. The volunteer ambulances do not if they are volunteer. I do not work directly with them. I work more with the hospitals. I know they do not make a charge.

Mr. CARTER. Do you have any ambulances in your area which do make charges?

Dr. BENOIT. Yes; There are some commercial ambulances. The city of Syracuse has one.

Mr. CARTER. Do you feel EMS training should not be continued?

Dr. BENOIT. No; I feel it should be continued.

Mr. CARTER. I am glad to hear that.

What has been your average ambulance charge?

Dr. BOBO. Again, most of our ambulances are either hospital based, volunteer, fire department. We have two private services in that seven-county region. The average charge would be around $65 counting everything for an ALS run.

Mr. CARTER. What is your average charge?

Dr. BOBO. That is, yes, sir.

Mr. CARTER. What is your average collection?

Dr. BOBO. It is probably in the neighborhood of 60 percent, very much the same as ours in the emergency department.

Mr. CARTER. Sixty percent of $65, about $39.

How do you make up the difference?

Dr. BOBO. One of the services has county subsidy and they subsidize them a certain amount each month.

Mr. CARTER. One of the counties out of the seven counties in your district?

Dr. BOBO. Yes.

Mr. CARTER. Based on your experience with emergency personnel, would you compare the need for EMT's versus the need for paramedics?

Dr. BOBO. You have to have both. I think in the rural area it may be that you need fewer paramedics. The argument in the past has been that due to the few number of cases that these people have out in the rural areas, that they will have skill decay. We

have approached it a little differently. We rotate them into the busy services in the urban area and they ride on our fire rescue in Tuscaloosa. They will rotate in from the other county services and that way keep the skills up.

I think the greatest need in trauma is in the rural areas where you are so far away from care and these paramedics are physician extenders and I think it is vitally important.

The men in the mines would be dead today. I have numerous examples. We had two police officers involved in an accident 30 miles out 2 weeks ago. We had tension in the thorax reduced in the field by a paramedic. Had a basic EMT been there, he would not have survived a 30-mile ride in an ambulance.

I think you have to have both. We still have to have our corps of basic EMT's.

Mr. CARTER. How is your EMS system financed?

Dr. BOBO. We are financed. We have received $1 million in 4 years from DHEW under the EMS Act. This year, we have received $267,000 in additional dollars and we have received $400,000 from Federal and locally, $50,000. Starting in July, we will be totally independent, no more Federal funding. We are in the process now of having some income raising areas such as prevention in the industry. It is a package we are putting together with State support and increased local support.

We will continue.

Mr. CARTER. You will continue by property tax or some other tax?

Dr. BOBO. That is one possibility. We are rewriting the State EMS Act to enable the counties to tax themselves. We are going through it with the new Governor and new legislature right now. We are hoping for that.

Mr. CARTER. What are your prospects without Federal funding?

Dr. BOBO. Our prospects are good. If we had not had Federal funding for 4 years, we would not even be in existence. We could not have gotten started.

Mr. CARTER. The phaseout of the $3 million for EMS training would not affect you?

Dr. BOBO. It makes you work a little harder. As Dr. Boyd and his staff have encouraged and preached the whole time, you must make plans starting year 1 on how you are going to survive when the Federal dollar dries up. We did that. That is why we are going to survive.

Mr. CARTER. I would like to commend you on that.

Dr. BOBO. Thank you.

Mr. CARTER. Mr. Herron, would you elaborate on your proposal to provide a block grant authority and what kinds of components you feel should, be eligible for funds?

Mr. HERRON. Mr. Carter, I feel very strongly about this and I do not want the committee to misinterpret this that I am saying a system should not carry forth their efforts within the normal cycle of events.

There are a great many States, North Dakota, Arizona, Florida, Arkansas, California, and Kentucky, there are regions in all those States who either came into the program early or during the development of those programs and I will not say through misman-

agement or through different priorities that were set at that time, that I think see the needs now that could be addressed if some type of funding was set up which would allow them to do this on a competitive grant basis.

I think the grants should be made available to qualified regions on the same competitive system as our 1204-2 program is now and allow those regions to present through the grant program, the grant cycle program, an application that would show why they need additional supplemental items to complete their ALS programs.

I think this is essential and would spread the moneys over a more useful area than perhaps targeting it to just one specific item or entity.

Mr. CARTER. Without your CETA program and without Federal assistance, could your 10-county program continue to exist?

Mr. HERRON. I think this is going to be the year of decision. I am approaching county judges and county officials. We have over some 40 percent CETA as I indicated and originally it was some 48 percent. I have included for the committee's use and research the annual expenses for our program in all 10 counties. This breaks down the total personnel costs, the total collection rate for each county and the amount that was paid for by the CETA program.

I think this is indicative of many areas where counties have implemented, if you will, the CETA program into their total county budgets. I think this not only covers the EMS but many other things.

Now that the restrictions by CETA, that an individual may only serve for a period of 18 months and also the fact that public service employment is being restricted severely is going to put a real hardship on the counties.

I think the fact that many counties have not participated in EMS to the extent that they really want to. This additional hardship of personnel is going to make it more difficult to generate that local funding because they have to take over the personnel costs regardless of any development that might occur in EMS.

Mr. CARTER. Do you think your program could exist without CETA and without Federal help?

Mr. HERRON. Yes, sir.

Mr. CARTER. You would have to involve a lot more volunteerism. It would include the passage of taxes in almost every county, would it not?

Mr. HERRON. We only have within the 10-county region, as I am sure you know, 1 county that presently has a tax. The other nine counties are supported by general revenue.

Mr. CARTER. Did one county fail to pass the tax? I am referring to Pulaski County.

Mr. HERRON. Pulaski County had the tax issue on the ballot during the last election. It was defeated. There were two other counties in a neighboring region that had the tax on the ballot. One passed and one did not.

I think it has been demonstrated not only in Kentucky but in many parts of the country that the only time the people are going to impose a tax upon themselves is if it is shown that is the only alternative to the program's existence. In Pulaski County, the

people were told that and truthfully so that they would have a system regardless of whether the tax passed or not. They might not have the refinements they would have previously had. In the neighboring regions, Barren County, Glasgow, the same type of presentation was given.

In Metcalf County, another rural county, the people were told simply that unless you pass the tax, there will be no EMS program. It was overwhelmingly accepted there.

Mr. CARTER. It was accepted in Metcalf but defeated in Barren?

Mr. HERRON. That is correct.

Mr. CARTER. Which is a wealthy county and well able to afford it.

Mr. HERRON. Yes; they tell me there were other alternatives to the funding rather than taxation.

Mr. CARTER. I have observed this EMS system and have found it quite acceptable. There is a central control there and he knows what happens in each of these 10 counties and can give immediate directions to each ambulance driver. I think this is a good program but I fear for the future if we diminish the funding.

Thank you, Mr. Chairman.

Mr. WAXMAN. Ms. Mikulski?

Ms. MIKULSKI. Thank you. Members of the panel, I thank you for the information you have brought to us today. I think the provision of health care either emergency or primary in rural America is probably one of the most significant challenges the Congress faces in terms of a national health policy.

I think your inventiveness and innovation is really to be commended.

My questions will take the direction of training. Ultimately, that seems to be the key to the delivery of services. I know Mr. Herron has talked about particular problems related to CETA and whatever but I wonder as we really take a look at this authorization, if you have any suggestions either in terms of funding or even the targeting of training which you might offer the committee.

There is so much of your work that depends on volunteers and not getting a resident through the University of Alabama but in those volunteer fire halls and so on.

I just wonder if you have any direction or guidance which you would like to share with the committee.

Dr. BOBO. I think the training probably should be continued, the funding for the training for all levels.

When I finished medical school in 1972, my training in emergency care consisted of whatever I managed to learn on my own. There was no organized approach to it.

Most physicians today, I think, have the same thing. We have a family practice residency program in Tuscaloosa and I am on the faculty. Most of these people are going out into rural areas and setting up their practices. We are trying to establish and hopefully through 789, a fellowship and residency program in emergency medicine which we think will place emergency physicians or family practitioners with the expertise in emergency care in rural areas.

One of the biggest limitations right now is teaching physicians in these areas to understand what the paramedic is doing. We physicians sometimes think that we are the smartest things on the street when it comes to health care but I do not think we always

are. This is one area in which we have lagged behind. I think the paraprofessionals have just taken off.

I think we do need to continue funding the training of emergency physicians, to continue the education of physicians.

We have continuing education programs for our physicians on a monthly basis. In the past, it has been difficult to get physicians to participate. We have a medical staff of 150 physicians who are trained in CPR and half are trained in advanced cardiac life support. Not many hospitals can make that statement.

This shows the desire to have it. It takes funds. We are not as fortunate as some States. We do not have a surplus.

Ms. MIKULSKI. Doctor, would you then say that either the legislation or the report language should show that with our training programs, we should not only pay attention to the training of medical personnel but pay particular attention to developing other paraprofessionals?

Dr. BOBO. Yes.

Ms. MIKULSKI. I have one other question relating to training and the funding of training. What has been your experience in using the funding for training in the area of affirmative action?

It has been my experience that very often when we pioneer new fields in health that we do not always have the vision to see that these are new ways to bring people who are either underemployed or have never been employed into it. I know you mentioned CETA.

I just wondered what has been your experience with women, blacks and other racial minorities.

Dr. BOBO. We have five or six female paramedics in our region. We have 3 blacks in our present class of 20. It has been slower. Greene County is predominantly black. We are seeing quite a bit of interest there.

We feel we have opened it up and we have had good participation. We are using CETA also. We have four CETA CPR instructors that give full time CPR instruction for the public.

I have not run into any areas where there was any problem with people coming from minorities, females, or what have you. There are really no problems with this. They have been a little slow to get into it. The reluctance of a female to be a paramedic was the first thing I heard and when I had one in my class, the first thing I heard was, she cannot carry a stretcher. She weighed about 220. She did a good job. They accepted her.

Ms. MIKULSKI. Some of us that weigh 120 can carry a stretcher.

Dr. BOBO. That is true. We put them through the fire college. I think we will not encounter these problems in the program.

Dr. BENOIT. I would like to respond briefly. As far as the first question is concerned, we have found in our area that the training funds for providing basic life support training have not been as necessary as we anticipated they would be.

The State of New York has come through with more training funds recently. We have been able to divert our training funds more into skill sessions for refresher-type seminars and to concentrate, as the doctor said, on the training of physicians and nurses.

We are running several seminars and skill sessions, some of which are aimed specifically for physicians and nurses.

We feel the training in the future would be more toward the advanced life support and the advanced EMT's.

In answer to your second question, most of our EMT people are volunteers; providing this to those who are underemployed as a means whereby they can get employment is very limited because the pay EMT's or paramedics working in with commercial ambulances is minimal in our area. It is more of a volunteer effort.

There are a large number of female EMT's who work very strongly and adequately on the ambulance corps and a proportionate number of minority groups that are in our area.

Mr. HERRON. We try to have the thrust and emphasis especially for the CETA employees in our training programs. We have one particular county unit in which 85 percent of the employees are female.

Ms. MIKULSKI. Is that Pulaski County?

Mr. HERRON. No; it is Cumberland County.

Ms. MIKULSKI. I will have to visit that one.

Mr. HERRON. We would certainly be happy to have you.

One other suggestion on moneys for paramedic and basic EMT training programs that I have heard made is this should be given to the Department of Transportation since they in the past have funded these training entities.

Budget cuts seem to move up and down the avenue here. The latest I hear from DOT is they are in the process of deemphasizing EMT basic and paramedic programs in their fundings to the State and local entities.

If we eliminate it here, I hear the same trend is going to move into DOT as well.

Ms. MIKULSKI. I just have one final question. In the legislation that I sponsored on family abuse, particularly in the area of battered women, the battered wife, there were many people who testified from Appalachia and other areas of rural America. They talked about the difficulty of getting either services, getting out, getting to a shelter. This is another form of trauma whether we are talking about child abuse or spousal abuse.

They felt there was no network and this is when we talked to shelter people and a variety of other people who were trying to respond to that need.

I wonder if you consider that an appropriate service for you to consider offering as part of your trauma service or emergency service?

I wonder also if you have any experience in that area.

Dr. BOBO. We are in the process of establishing an abuse shelter for children and women. There was a big argument for child abuse and wife abuse and we finally bridged the gap and got them together.

Ms. MIKULSKI. You called it family abuse.

Dr. BOBO. We think it is an integral part. We are the ones who bring them into the system, either through the ambulance attendants who get there or at the hospital. I see on the average probably 10 wife beatings a week in the emergency department. As you say, in the past and even now until we get it established, we really have no alternative, I have hospitalized many of these women just to keep them from not having to go back into the environment or

to have them beaten again that same night that the husband was still drunk.

We see a lot of it. I agree that it has not been addressed. We are trying to address it. I think it is a viable part.

Ms. MIKULSKI. Thank you, Doctor. I would like to be in touch with you after this to talk about some things later.

Thank you, Mr. Chairman.

Mr. WAXMAN. Mr. Lee.

Mr. LEE. Mr. Chairman, I congratulate the panel and will yield my time.

Mr. WAXMAN. Mr. Shelby.

Mr. SHELBY. Mr. Chairman, I would like to open it up. This committee is going to be faced with hospital cost containment and other cost containment issues on how we are going to deliver quality hospital care to everybody in America.

It seems to me that your emergency medical service is a cost prevention among lifesaving. Do any of you have any idea how much money this has saved, in other words, keeping the people out of the hospitals by your emergency medical service?

Dr. BOBO. They say trauma alone in the United States is $60 billion. If you could impact that 10 percent, you are talking about $6 billion of savings and more moneys put forth.

For instance, in the spinal cord center, we have studies in Birmingham that if a patient who has a spinal cord injury is received within the first 24 hours, his hospital stay is cut short 53 days as opposed to the people who come in 30 days later, in other words, kept in an inappropriate level of care. If we get them to the appropriate level of care, that is on the average of $13,000 per patient saved.

I cannot give you the total figures but I can say that a good friend of ours, Tommy Todd, who had a cardiac arrest, is now back functioning and working and a community leader.

Mr. SHELBY. Untold examples. I know the chairman is very interested in it and we are all faced with it. How can we keep the costs down and deliver the services, too; it seems to me what you all are interested in and are doing and have done could maybe expanded further.

Dr. BENOIT. Mr. Shelby, I mentioned cost containment for the provision of service at the hospital level but I feel as the doctor said, it is hard to put a dollar figure on it, but I am convinced that with the upgrading of the whole system of treatment protocols and EMT and the upgrading of the provider through a network of transfer agreements, that we will be able to keep the patient where that patient belongs and in many cases, the minor burn will stay out of the community hospital out in the boonies instead of as it has been in our area, where people have said, it is a burn case, shoot them to Syracuse. We end up with all the patients and the big expenses at the Syracuse Hospital with no beds and perhaps many of those cases could be cared for with a better regional program of overall emergency care.

I think the cost saving will be by a better deployment of the patient in the right facility.

Mr. SHELBY. Mr. Chairman, I do not know if this is in the papers but our area in Alabama is going to receive an award from HEW

and I would like to share that since I have my constituent, Dr. Bobo, here.

Dr. Bobo, would you tell the subcommittee about it?

Dr. BOBO. It is HEW Region 4 and the award is April 22. We have been designated as the exemplary EMS region in the eight Southeastern States.

We are proud of it.

Ms. MIKULSKI. Good for you.

Mr. SHELBY. I wanted to share that with you all, Mr. Chairman.

Mr. WAXMAN. We appreciate you sharing it with us and congratulations. I can tell that the feeling of sincerity you have about the program and the mission you are carrying out must be reflected in the work going on back there in your hometown.

Thank you gentlemen very much for your testimony. It has been very helpful to us.

And now, I would like to call Dr. R. Adams Cowley, director for emergency medical service programs, Maryland Institute for Emergency Medical Services. Dr. Cowley, we are pleased to have you with us this afternoon.

We would like, if you would, to summarize your testimony for the members of the committee. We will make any statement that you have part of the record in its entirety so the members will have the benefit of it in the record.

Dr. COWLEY. I would request my prepared statement be inserted into the record.

Mr. WAXMAN. It will be inserted into the record.

STATEMENT OF R. ADAMS COWLEY, M.D., DIRECTOR, MARYLAND INSTITUTE FOR EMERGENCY MEDICAL SERVICE SYSTEM

Dr. COWLEY. I appreciate this opportunity of coming before you. I think we have a lot to tell. There are three things we want to talk about.

One is the extension of the EMS Act; two, the development of trauma centers; and three, an institute for trauma in the NIH.

I am Dr. R. Adams Cowley, director of the Maryland Institute for Emergency Medical Services, professor of thoracic and cardiovascular surgery and a member for the past 11 years of the National Research Council's committee on shock, chairman of the Emergency Medical Services Subcommittee of the President's National Highway Safety Advisory Committee, chairman of the Mid-Atlantic Emergency Medical Services Council, and vice president of the American Trauma Society.

We have had a number of years' experience at MIEMS in the treatment of trauma, since 1960. As our program progressed, we found out that there had to be a system of emergency medical care. Much of this has already been discussed today by others.

We would like to first give our support to Dr. Boyd and the marvelous job he has done all over the country in helping to develop these programs.

However, there is still a great deal more to be accomplished. We have in our State a total basic life support and advanced life support system. We have a total communications system and a total transportation system which includes helicopters. We built a

great deal of this both by State funding and HEW funding, and I think we probably have the most sophisticated system in the country in this respect.

Therefore, should there be any more funding? I think what we are beginning to see now is that there is a problem related to interhospital care. We as physicians have gone out and taken care of the patient at the scene of the accident, in transit, and all of these things which are being developed on HEW funds. There should be extension of funding for those who have completed this to get involved with other types of emergency care which is killing just as many people, which I hate to say as a physician, inside the hospital system.

In developing an interhospital type of care system, there are several things which are required. One, the establishment of centers of excellence throughout our country in various geographical population locations which could contribute to their regions. We feel we have such a center and that it has been a model not only in our country but internationally.

With this center we have also developed in our transportation system a helicopter system which I think is a national model. Seventy percent of the emergency problems that are killing you are in rural areas and our State helicopter system has done a tremendous job in our State in getting these people to centers which will provide for their care.

In our discussion with centers of care which need further help, we have already built a regional trauma center network as part of an echelon of care system. Someone talked about cost containment and cost effectiveness. If you have an echelon of care system, the badly injured is not allowed to stay at on inappropriate facility—if he is appropriately moved up within the system he is going to survive, and that is going to save money in lost productivity.

If you have an echelon of care system, you are going to prevent duplication of services which cost a tremendous sum of money and you are going to assure the patient the very best care there is according to his needs.

We greatly support this type of care system. We have specialty referral centers at Johns Hopkins, and other Maryland hospitals. Ten years ago, we found that a university hospital cannot do all things for all people. There are even some small hospitals like Union Memorial Hospital in our State which has a hand service which manages about 180 hands a month, better than any other facility—torn off fingers, hands, and so forth which are being put back on these people who are going back to work.

We have these kind of things.

A regional program must have a total system of health care delivery as it relates to emergencies. We have found out that trauma centers work and they really save lives.

When we first set up our EMS system in 1973, through a Governor's executive order, we found out that our mortality rate for the worst kinds of trauma victims we had in our State dropped from 67 percent down to 20 percent. If you consider a life each year being worth $289,000, the figure given by the Department of Labor, you could conceive if you could save these lives and get them converted back to taxpayers, you have saved a great deal of money.

Trauma is a $61 billion business as the previous people spoke about and the cheapest thing is to let the man die. The biggest cost in the $61 billion is disability. Why? Because the person does not get into the right system and therefore if he is in the wrong system and he loses both legs because of it, you and I as taxpayers pay that 50-percent disability for a long period of time.

It is different than cancer. It is different than heart disease. These people are our ages. They are about ready to die anyway. Even though you fix them up, they are not going to live very long, 3 to 5 years.

You look at the trauma victim who is a young man. It is the biggest killer of the young people. This guy, with his disability, if there is not a system, is going to have 20 or 30 years and all of us as taxpayers are going to pay for this tremendous correctable defect in our system.

The final thing that I would like to say is in relation to research. Trauma centers established all over the country could do the things that you are asking us, do you have this or why do you not have it—"do you have cost containment and is it effective, what is the epidemiology of a disease, what can be done better?"

This could be achieved through specific centers; maybe in 10 years you might have not 10 centers but 1 for every State.

Ladies and gentlemen, if you have the best trauma system in the world right here today, you would still have trauma running right out of your ears because we live violently and our lifestyle moves at a more rapid pace. It is an epidemiological disease. There is no containment that I can see in the foreseeable and immediate future.

That brings me to looking at research. The National Institutes of General Medical Sciences is our area for specific research in NIH. They are funded at a little over $8 million. It is a pittance when you look at cancer which is funded at the rate of $800 million a year or heart disease and so forth which is funded over $450 million a year.

We are sitting here with the third overall killer, with the biggest killer of our youngsters, your wife and your family, you have a big mortgage and you have all of these problems and one minute, you are perfectly well and then you are gone or you are perfectly well and then you are dying or have a terrible disability.

There should be more money put into research.

Thank you very much.

[Testimony resumes on p. 154.]

[Dr. Cowley's prepared statement and attachment follows:]

Statement of R. Adams Cowley, M.D., Director, Maryland Institute for Emergency Medical Service System

I am Dr. R Adams Cowley, Director of the Maryland Institute for Emergency Medical Services System, Professor of Thoracic and Cardiovascular Surgery, member for 11 years of the National Research Council's Committee on Shock, Chairman of the Emergency Medical Services subcommittee of the President's National Highway Safety Advisory Committee, Chairman of the Mid-Atlantic Emergency Medical Services Council, and Vice President of the American Trauma Society.

Speaking from many year's experience in the treatment of trauma and the delivery of emergency medical services, I would like to register my support for the extension of the Emergency Medical Services Systems Act of 1973 and 1976. Although the nation has made much progress since 1973, much remains to be accomplished. The requested three years with the possibility of three more is needed, and the funds are necessary to develop basic and advanced life support EMS programs for the entire nation.

I would also recommend the development of trauma centers of excellence--ten initially, funded at $1 million each for three or more years. These centers, one in each HEW region, should serve as regional resource centers for data collection and analysis, new concepts in patient care and clinical research, professional education and technical training, basic scientific research and systems development.

There is currently such a center that serves as a national model--the Maryland Institute for Emergency Medical Services System. This center in Baltimore, established in 1969, is the hub of a comprehensive state-wide EMS system that is already an international model, visited by people from all over the world. It includes clinical specialty referral centers: Adult Shock Trauma Center, Johns Hopkins Pediatric Trauma Center, the Baltimore City Hospital Regional Burn Center, the Curtis Hand Center at Union Memorial Hospital, the Maryland State Intensive Care Neonatal Program and the MIEMSS Acute Spinal Cord Injury Program. Critically ill and injured patients from the whole state are flown by Med-Evac helicopter to these clinical care centers.

46-142 O - 79 - 10

The system is rooted in regionalization, with citizens and provider participation in regional councils. An "Echelons of Trauma Care" system assures that every critically ill or injured patient arrives at a facility most able to treat his injuries--from the local hospital emergency room, to an areawide trauma center, or a specialty referral center.

MIEMSS also operates the first statewide EMS communications system of its kind, providing voice and telemetry communication between the scene of an emergency, ambulance, hospital, helicopter, and specialty referral centers.

The Maryland State Police Med-Evac helicopter program, also a national model, has been very successful and cooperates closely with the State's excellent volunteer and paid ambulance and rescue companies to provide transportation to appropriate care facilities.

The Institute is at the forefront of developing professional educational and technical training programs and public information and education.

From our ten-year experience at the Institute, we know a trauma center-based, comprehensive, regional (in our case, state-wide) system can work, can save lives.

Since 1973, we have treated more than 6500 severely injured patients with multiple trauma. In the decade since 1969, the mortality of these near-death patients has been reduced from 67% to 20%. These are patients who previously were not treated, or if so, haphazardly--now they are treated on a uniform, systematic, successful basis. Statistical evidence of this success is available in the MIEMS 1977-1978 Annual Report

Although we know that centers such as those recommended can be effective, there are still areas in need of study. We need a national standardized data base; a detailed description of trauma's impact and incidence; medical, epidemiological, socioeconomic demographic and financial information for evaluation and further planning.

The development of regional trauma centers, built on the present model of the Maryland Institute for Emergency Medical Services Systems, would provide the national structure to gather the national data to define the unknown parameters of trauma--its incidence, prevalence, demography,

systems impact, treatment standards, rehabilitation needs and effectiveness of prevention measures.

The success of the EMS program in Maryland demonstrates that we are headed in the right direction with the development of EMS systems. But there is more to be learned; the success needs to be fostered in other regional centers. We must be able to provide citizens with the best possible trauma care according to the state of the art and not according to the severity of injury, location of the accident or personal circumstances of the victim. The trauma center concept saves lives and provides resources for further improvements in a rapidly developing national EMS system.

WHY NOT A NATIONAL INSTITUTE FOR TRAUMA

R Adams Cowley, M.D.

As members of the American Trauma Society, it is no news to you that accidents are the third leading cause of death among all Americans — and the leading cause of death among persons between 1 and 44.(1)

These are often quoted figures among those of us interested in trauma—but it may be easy to forget that the cold numbers represent our young people, our nation's potential, whose lives end prematurely—and needlessly. The other leading causes of death—cardiovascular disease and cancer—take people in their late years. But accidental deaths rob young people, their families and society of 40 or more years of productivity and possibilities. In addition to the 103,030 deaths in 1976, there were 10,300,000 disabling injuries, including 370,000 permanent impairments. Translated into human terms that means 370,000 young people, injured early in their lives will often have to live with disability for 30 or more years. Then there is the cost which cannot be measured in terms of dollars, the pain and embarrassment, which goes along with being a handicapped person. Often they must be cared for and supported—with taxpayers money—yours and mine. In addition, 9,900,000 temporary total disabled victims may require hospital care. How many of these could have been sent home earlier if we were better equipped to manage them—how many resources would have been saved.

Beyond the human suffering and the potential loss to society, the economic costs are staggering. The National Safety Council estimated the cost of accidents was $52.8 Billion in 1976. That includes $16.1 Billion in lost wages—a loss of productivity to the nation's economy—

and $6.9 Billion in medical expenses. To put that in perspective: the medical expenses incurred as the result of accidental injury are 2.5 times the entire NIH budget.

Trauma was long a stepchild in the medical community. Only when in the 1960's, emergency departments began to experience new difficulties—increases in visits for nonurgent reasons, problems of staffing, and other administrative problems—did some national organizations including the American Medical Association, the American Hospital Association, the Committee on Trauma of the American College of Surgeons, begin to look into the delivery of emergency care.(2)

Then, in 1966, the Division of Medical Sciences of the National Academy of Sciences/National Research Council published Accidental Death and Disability: The Neglected Disease of Modern Society.(3) The white paper outlined the problem, the lack of services, facilities and care for trauma and emergency victims and made specific recommendations.

In the meantime at NIH, the Division of General Medical Sciences had become the National Institute for General Medical Sciences, continuing to fund, among other programs, a surgery grant program which included burns, shock, wound healing, tissue and organ transplantation, experimental surgery and protheses, in the amount of $600,000 a year.(4)

When the white paper came out, NIGMS determined that the proportion of research was inadequate to the magnitude of the problem. At that time NIGMS seemed to be the logical Institute to support trauma

research because other programs in NIGMS had application in trauma and because the Institute supported basic and applied research in sciences basic to medicine and trauma. But to increase the commitment to the study of trauma, a group of surgeons and scientists met at a trauma workshop conference in 1966 to discuss the formation of a specific trauma research program. (4)

Following the conference, six trauma research centers in large teaching hospitals were funded. Later others received funding as did a number of individual projects on trauma. In 1978, NIGMS granted a $3.8 million to trauma research centers and $4 million to other research including program projects. Other trauma-related research is supported by other NIH institutes including National Heart, Lung and Blood Institute; National Institute of Arthritis, Metabolism, and Digestive Diseases; and the National Institute of Neurological and Communicative Disorders and Stroke.

While this research was developing, support for Emergency Medical Services systems, which deal with many types of emergency including trauma, was growing. Its first federal includion was in the Highway Safety Act of 1966 as Standard 11, which required the development of state EMS systems. Between 1966 and 1973, some work was done in developing EMT training, ambulance services and other standards by a number of organizations including the American College of Surgeons Committee on Trauma, the Committee on Injuries of the American Academy of the Orthopedic Surgeons, the American Medical Association's Commission

on Emergency Medical Services, the Special Task Force of the Committee on Emergency Medical Services of the National Academy of Sciences/ National Research Council and DOT National Highway Transportation Safety Administration.[5]

In 1973, Congress passed the Emergency Medical Services System Act[6] creating a program in HEW to provide assistance and encouragement for the development of comprehensive area emergency medical services systems. The Act was amended in 1976. The program has been steadily growing, although it still has much to accomplish.[7] In 1978, $70 million has been authorized for planning, establishment and initial operation, and expansion and improvement of EMS. An additional $5 million has been authorized for EMS research designed to describe, explain, and predict the performance of EMS systems and their components of which trauma is only one, and to prescribe necessary improvements.

Looking back, it may seem as if we have made some progress since 1966—a developing EMS system to give patients access to trauma care and a research program in trauma at NIH.

But is is not enough.

Putting aside consideration of EMS systems for the time, let us address the status of trauma research.

The amount of funding for trauma research still does not begin to approach that needed to deal with the enormity of the problem. Let me reiterate some of those statistics and compare them with a few others.

Each year:

100,000 die from accidents;

69,000 of those are under 45 and are robbed of their most productive years.

400,000 are permanently disabled, often requiring financial and medical support for more than half of their lives.

NIGMS's trauma research budget is $7.8 million.

910,000 die from cardiovascular disease.

208,000 are under 65; the vast majority are in their twilight years.

The National Heart, Lung and Blood Institute's budget is $445.6 million.

366,000 die from cancer

150,700 are under 65; 60 percent are past retirement.

The National Cancer Institute's budget is $867.1 million.

We do not deny that cardiovascular disease and cancer cause enormous human suffering and loss of life. But trauma also does--in a proportion not acknowledged by the amount of money the public is willing to put on the line. And the cost of lost potential to society and to the economy from accidental death and disability is much greater than for cardiovascular disease and cancer.

The 1966 white paper on Death and Disability, which was the catalyst for so much of what has been done, made a recommendation which I would like to propose again: the establishment of a National Institute of Trauma within the National Institutes of Health.

Not denigrating the trauma research that has been sponsored by

NIGMS, I think it is time for trauma to stand on its own and be recognized as the killer it is. The emphasis and funding trauma research deserves, requires that it be elevated to the status of a major Institute within NIH.(8) The objection which is most often made is - we cannot afford it - but at a cost for accidents of $52.8 Billion each year - a billion for each State - we cannot afford not to afford it.

A common argument against this has been that NIH focuses institutes around disease entities or organs, and trauma fits neither classification. However, there is now a precedent for a trauma institute -- the National Institute on Aging. Again, not denying the importance of studying the phenomenon of aging which affects all body systems of all of us when we are old, I emphasize the importance of studying the phenomenon of trauma which affects all body systems of so many of us when we are young.

If Congress can allocate $37.3 million to study the diseases of the old, perhaps we can convince it to allocate a fair share to what has been described as a "disease" of the young.

In the fight for the federal dollar, convincing the public and the Congress of the importance of trauma research is the key. And the American Trauma Society is in a key position. Itself, growing out of a recommendation of the 1966 Death and Disability report, the society should now mount a massive campaign to re-emphasize the need for implementing another recommendation--a National Institute of Trauma.

Just as the American Cancer Society and the American Heart

Association raised public awareness and rallied public and governmental support for the huge budgets of the National Cancer Institute and the National Heart, Lung and Blood Institute, the American Trauma Society must show Americans what needs to be done to reduce the number of victims maimed and killed by trauma.

In the political game of dividing the pie, you must convince the one with the knife that you deserve a fair share. That now is the job before us. We need to start talking to our friends on Capitol Hill—and make some new ones—reminding them that the spector of trauma will not go away with a couple of aspirin and a piddling sum for research. We should show them how, by reducing trauma mortality 10 percent, we could save 10,000 lives a year, not to mention millions of dollars. The cost decrease in disability would be inestimable.

It is not an impossible task. Within the last five years, the National Institute of Aging was established, emerging from under the wing of the National Institute of Child Health and Human Development. Its backers convinced the Congress it was worthy of its own agency. It is time that the National Institute of Trauma grew up and out of the National Institute for General Medical Sciences. Trauma also requires major attention.

The process is a legislative one, starting by telling our story to the people and to the Congress. We have natural allies in some of the other professional organizations, such as the American Association for

the Surgery of Trauma, the American College of Surgeons Committee on Trauma, the American Academy of Orthopedic Surgeon's Committee on Injuries, the National Academy of Sciences/National Research Council and others. We should enlist their support and join the battle together.

The time is ripe. With increasing awareness among the public of emergency medical services and what can be done with prehospital transportation and care, we should emphasize what we can do for the trauma victim in the hospital as well, how past research has improved care, and what more could be done.

And so much more could be done and should be done.

A National Institute of Trauma would pull together all the current trauma research from all the Institutes. It would centralize and focus the review process and facilitate information exchange. The Institute should expand the program of clinical trauma research centers and CNS injury centers now funded, so there would be a regional trauma institute in each HEW region, with satellite centers in each state.

The topics in need of trauma research are vast--the pathophysiology of the injured cell, its biochemistry, hormonal components and structural changes; single and multiple organ failure following injury; critical care for immediate resuscitation and stabilization of the trauma victim; the mechanisms of wounding and wound healing; the tremendous need for artificial blood and the problems of coagulation and transfusion; the need for understanding immunology; the complications of sepsis in the trauma

patient; the unique nutritional needs; the mechanisms and management of brain edema, spinal cord damage, peripheral nerve injury and regeneration; bioengineering in trauma; logistical problems of managing the trauma patient—the list goes on and on.

Two areas particularly which have not received the attention they warrant and which ought to be pursued are accident and injury prevention and methods of protecting the body; and the optimal methods and resources for rehabilitation of the trauma victim who will recover and the minimizing of the disability and maximizing the adaptation of the victim who will be impaired.

Training programs and research fellowships could attract more scientists to the field, enlarging the research base. The Institute should encourage the development of a new breed of surgeon—the traumatologist. The Institute's program should include education for faculty and practicing physicians to facilitate the application of new information. This in turn would influence students and residents, further spreading the clinical application of new knowledge and improved patient care.

Placing all trauma research within one Institute would integrate planning for future research and training.

And the future of trauma research and training could be bright indeed—IF we are willing to fight for it—IF we make it our responsibility to launch a massive attack on the ignorance of the devastation caused by accidental death and disability—IF we enlist the support of our colleagues

and the public--IF we are willing to buttonhole our Senators and Congressmen and explain to them the need for a National Institute of Trauma.

Since I began speaking, 4 people have been killed by accidents and about 400 have suffered disabling injury. A killer of this proportion--a killer of the flower of our nation--must be stopped. A National Institute of Trauma should be the first step.

It can be done. We can make it happen.

ACKNOWLEDGMENTS

The author wishes to acknowledge the assistance of Lynn Rutkowski and Dorothy McCaleb in preparing this article.

REFERENCES

1. National Safety Council Accident Facts Chicago, 1977.

2. Gibson, Geoffrey, "Emergency Medical Services." In Levin, Arthur, ed., Health Services - The Local Perspective, Proceedings of the Academy of Political Science, Vol. 32, No. 3, New York, 1977.

3. National Academy of Sciences/National Research Council, Accidental Death and Disability: The Neglected Disease of Modern Society, Washington, D.C., 1966.

4. Black, Emilie, "History of the NIGMS Trauma Program." In Black, Emilie and Deming, Paul, eds., The Study of Trauma Patients: A Trauma Conference Report, DHEW Publication No. (NIH) 74-603.

5. Rockwood, C.A., et. al: History of Emergency Medical Services in the United States. Journal of Trauma, 16(4):299.

6. Law of 93rd Congress - 1st Session: Emergency Medical Services System Act of 1973, Public Law 93-154, 87 Stat. 594. Washington, D.C., Nov. 16, 1973.

7. Ismech, Judy, "Emergency Medicine: How Far Has It Come, Where Is It Going?" Medical World News, March 20, 1978, p. 65.

8. National Academy of Sciences/National Research Council. Roles and Resources of Federal Agencies in Support of Comprehensive Emergency Medical Sciences, Washington, D.C., March, 1972. DHEW Publication No. (HSM) 73-13.

Mr. WAXMAN. Thank you. Dr. Carter?

Mr. CARTER. I want to commend you on your statement. It was certainly thought provoking. I agree with it and I also agree with your idea that the portion you mentioned should be funded more extensively.

In fact, I do not think funds for this particular program should be diminished but rather increased.

Mr. WAXMAN. Ms. Mikulski?

Ms. MIKULSKI. Thank you, Mr. Chairman.

Dr. Cowley, I would like to welcome you to this committee. Considering the hours you spend at your unit, I consider you living in my congressional district.

Mr. Chairman, Dr. Cowley was almost modest when he talked about the Maryland program not only in terms of what we currently call helicopter medicine which is probably the technology of it, but the emergency medical services in Maryland have done a great deal in the area of prevention.

One is the coordination of voluntary services in terms of health providers and a variety of other things.

Dr. Cowley, I wonder if you could elaborate for the committee or outline some of the things your unit has done in the area of prevention?

Dr. COWLEY. For one example, we have put on 54 nursing workshops a year in our state, from child abuse right on down the line with all the crisis intervention as to relates to somebody who is going to cause a problem or may already have a problem.

We have what we call outreach and in-house programs for physicians. Our physicians go all over our State and give lectures and talks at our own expense to these medical societies. They are also invited in to see the various specialty centers work and spend time. Some of them spend a day or two and some of them spend a month. They are welcomed there.

They are harnessed right up and made to be a part of the system and we use them.

In the way of prevention, the programs that we have put on television, we have won several awards on programs related to schools. All of our high schools now have CPR programs actually functioning.

We even took our legislature and gave them a sunbath. We laid them all out on the tables and taught them CPR and so forth in our State.

There are lots of innovative things that we have done in relation to prevention with the police in the crash programs which I did not mention.

Ms. MIKULSKI. Thank you. Doctor in addition to the immediate crisis care given, what role, if any, does your service or do you think it an appopriate role for an emergency medical service to play in providing after care supervision?

One of my concerns is we save bodies but then we do not always pay attention to what we call "saving lives." For example, I think we are both familiar with Montebellow Hospital. You have to find an after care facility which I would imagine you would have difficulty with. No. 2, the need for home health care services. No. 3,

even counseling from the family perspective both in terms of the victim of the trauma, the family of that.

There was an article in the Sunpaper where a woman was mowing her lawn and her tractor turned over. She lost both of her legs. Thanks to this unit, starting with the paramedics who got on the scene all the way through to what EMS was able to provide her, her life was saved. As you can imagine, this woman has needed a lot of psychological and other support services for her to come back into her own home and take care of her own family.

I just wonder if you see that as part of it. We usually think of all the stuff associated with surgeons and beepers like in the movies, having a helicopter coming in and so forth.

Dr. COWLEY. You are absolutely right. What we do is first of all, for example, Mr. Waxman, you could go home tonight and be dead 2 hours after this meeting or I could or all of us. The interesting thing about you and I is supposedly we are healthy.

The problem is that it is different from any other field of medicine where we are getting heart attacks or cancer or diabetes, we are getting sick. Your family knows it, everybody knows it, everybody is trying to help out generally.

Even if you are a welfare patient, your social services are trying to help.

In this, wham, you did not know it was coming and now your family has a tremendous problem. What we have done is develop a very unique family services program where the families are treated just as intensively as the patient. They have to be because they are in crisis. They do not know what is happening. They do not know how they are going to do this or any of these things. These people come back and back until they are on their feet themselves which is sort of a rehabilitation thing.

This should be done everywhere in this kind of a system. We also have this kind of a problem as it relates to the people from Montebello: Who takes care of them? We need money to go out and see what happened to all these people 1 year later, 2 years later, and 3 years later; was it cost effective, was this man still in a coma 3 years later with his injury?

They all have to looked at. As far as we can tell and we think we have something very unusual and that is around 4 percent of our head injury patients are still unable to work or still unable to do anything. We really see them crunched. They never get into that program unless they are severe multiple system injuries.

These kinds of things, as they go along, need a lot of care in order to get rehabilitated. It is one of the most lacking things I think we have. We try to do it but we do not have the funding and it has to be done.

I think every one of you at this table can see it could be you tonight and your family.

Ms. MILULSKI. Thank you.

Mr. WAXMAN. I want to thank you and commend you for your statement and for showing us all the potential we can look forward to in a very successful program.

Dr. COWLEY. I would like to say one thing and that is we have done it and we know it can be done. We know it saves lives. It ought to be everywhere and not just here. It can be done.

I think Dr. Boyd has the ways to do it. The funding has got to be continued until we have a system which works so well that all of our neighbors and so forth see it and they are starting to fund it, too, to get off of this Federal initiative and finally get back like the sewer and water systems, you just do it.

Mr. WAXMAN. Thank you very much.

Members of the subcommittee, we now have a panel, poison control centers, from different parts of the country consisting of Dr. Dan Spyker, director of Blue Ridge Poison Center at the University of Virginia, Charlottesville, Va.; Ms. Lory Fischler who will present the testimony of Dr. Barry Rumack, director of the Rocky Mountain Poison Center in Denver, Colo.; Dr. Anthony R. Temple, president of the American Association of Poison Control Centers, Intermountain Poison Center in Salt Lake City, Utah, and Dr. Alan K. Done, director of the Division of Clinical Pharmacology and Toxicology at Children's Hospital of Michigan, Detroit, Mich., and Dr. Frederick Lovejoy, director of the Massachusetts Poison Control Center.

I would ask you all to come forward, please.

I would like to ask each of you if you will summarize your testimony in approximately 5 minutes each so we can have the opportunity for questions, and so we can have the opportunity for all witnesses to present their views this afternoon.

Dr. Spyker?

STATEMENTS OF DANIEL A. SPYKER, M.D., PH. D., DIRECTOR, BLUE RIDGE POISON CENTER; LORY ANNE FISCHLER, DIRECTOR, PUBLIC EDUCATION, ROCKY MOUNTAIN POISON CENTER; ANTHONY R. TEMPLE, M.D., PRESIDENT-ELECT, AMERICAN ASSOCIATION OF POISON CONTROL CENTERS; ALAN K. DONE, M.D., DIRECTOR, DIVISION OF CLINICAL PHARMACOLOGY AND TOXICOLOGY, CHILDREN'S HOSPITAL OF MICHIGAN; AND FREDERICK H. LOVEJOY, M.D., DIRECTOR, MASSACHUSETTS POISON CONTROL SYSTEM AND CHAIRMAN, BOARD OF MEDICAL TOXICOLOGY

Dr. SPYKER. Thank you for the opportunity to address the committee. I have submitted my written testimony for your consideration.

Mr. WAXMAN. Your prepared statement will be inserted into the record.

Dr. SPYKER. I would like to present an overview of the epidemiology of acute poisoning with a word about poison control centers in general, but I want to principally address my remarks to their cost effectiveness and why this unique problem requires consideration for Federal support.

I have summarized a table on page 3 which is meant to emphasize two distinct epidemiological groups. They are basically the kids and the grownups. Poisoning is principally, in numbers, a problem of pediatric poisonings. About 5 million a year, we believe, are exposed to toxic substances.

The adults represent a much smaller group, about 10 percent. In terms of hospitalization or actual health care expenditures, they are probably of a greater importance.

At the bottom of that page, I have summarized what I think is a eal problem for the poison control centers. A 1976 survey of about 00 poison centers showed that only about 40 percent of these enters had separate phone listings; 25 percent received more than hree calls a day; only 8 percent employed full time information pecialists which I think are the critical factor for the poison ontrol center.

I have included excerpts from the criteria that the American ssociation of Poison Control Centers have suggested for regional oison control centers. It includes comprehensive poison informaion, treatment, and transportation, and so forth.

Principally I want to address the issue of cost effectiveness. I ave presented considerations of both the inpatient and outpatient are of poison patients. As the other gentlemen here can certainly estify, the very attractive feature of the poison control system is e can manage about 80 to 85 percent of the poisonings at home. his is feasible through the use of the specialists I mentioned.

I have submitted data to support cost effectiveness of this proram. The San Diego regional center did two surveys of their mergency rooms. The first was in 1972 and they found that about percent of their ER contacts, people coming into the emergency om, were for acute poisoning. Their poison center has been in eration for about 5 years during which their calls have increased om about 7,000 to about 30,000. This is typical for an established, fective poison control center.

A resurvey was done 5 years later in 1976 and it showed less an 2 percent of the ER contacts were for poisoning.

As Dr. Done will comment, it does not take much fancy math to e this is clearly a cost-effective program. If you assume only half the folks with poison come to a treatment facility and assuming 50 per person, you can expect a $500,000 saving based on the 2 illion people comprising the San Diego region as served by the an Diego Poison Center.

I have offered two figures on the last page of my testimony. They oth come from one of the oldest poison centers and that is Omaha, ebr., where they have good data for about 15 years. The top figure epresents what I think is a relationship between the number of utpatient visits for acute poisoning and the number of calls they eceived in the poison center.

I would be the first to admit that the correlation is not causation, ut there is an impressive relationship between the use of the oison center and decrease in the number of people coming to an utpatient facility for treatment.

The same center has some data which would suggest that the npatient expenses are substantially reduced over the same 15-year eriod.

The only actual payout data that I was able to obtain was from ie Memphis Blue Cross and Blue Shield Insurance Co.'s. During ie first year of operation, the amount of money that organization aid out for outpatient visits was reduced by approximately half, om $200,000 to $130,000 while outpatient visits did not exhibit the npact.

Based on these numbers, I think it is not unreasonable to assume at the difference between effective poison control centers and

their absence can be about a 50-percent reduction in outpatient costs and outpatient visits and about a 50-percent reduction in inpatient costs.

A final comment: Regional poison centers really represent a potent mechanism for assessing the interaction between people and toxic substances including what we would commonly refer to as drug abuse.

I would like to stress as I am sure my colleagues will emphasize, that this clearly is a program that reaches rural America and can effectively improve the health care of the poisoned patients.

I feel a Federal initiative toward establishing this program would be among the most cost effective and popular Federal appropriations.

I thank you for your attention.

[Testimony resumes on p. 166.]

[Dr. Spyker's prepared statement follows:]

STATEMENT OF DANIEL A. SPYKER, M.D., PH. D., DIRECTOR, BLUE RIDGE POISON CENTER

This testimony seeks to describe the scope of acute poisoning and provide a perspective on the development of regional poison control centers in the United States. Data are presented which demonstrate cost effectiveness of poison centers.

The management of acute poisoning differs from the other EMS critical care areas in that the patient is usually managed at home and no fee for service is collected. Federal assistance in the establishment of regional poison centers with an increasing match from state or other funds would decrease morbidity and mortality and reduce the cost of health care for victims of acute poisoning.

EPIDEMIOLOGY

There are an estimated 5,000,000 poisonings per year in the United States of which 5000 are fatal, and this number is steadily increasing. Poisoning is the fourth most frequent cause of accidental death, after motor vehicles, drownings, and burns [1].

Acute poisoning is the most common pediatric medical emergency, accounting for about 10% of Emergency Department contacts and about 5% of medical admissions. Ninety percent of all poisoning are accidental and involve children less than 10 years old. Most hospital admissions for poisoning, however, involve adult suicide attempts (Table 1).

There is a third epidemiologic group, principally adolescents and young adults, in whom the poisoning is frequently labeled drug abuse. Although this "recreational pharmacology" is infrequently the chief complaint, the long term sequelae of alcohol, hallucinogens, and other sedative-hypnotics are being increasingly appreciated. The understanding and management of acute poisoning is further complicated by the many thousands of medications, plants, solvents, cleaning agents, and industrial chemicals involved.

Table 1. Comparison of the annual morbidity (principally pediatric) and mortality (principally adult suicides) for acute poisoning.

	Accidental	Intentional (O.D.)
Typical age range	2 - 10 years	20 - 40 years
Incidence of poisoning	5,000,000	500,000
Hospital admissions	10,000	100,000
Mortality	150	5,000
Recurrence Rate	00%	25%

POISON CONTROL CENTERS

Recognition of acute poisoning as a major source of morbidity and mortality, particularly in the pediatric age group gave rise in 1952 to the concept of a Poison Control Center. The objective of the poison center was to provide access to centralized information on toxicity and treatment for the thousands of substances which may cause poisoning. Since that time approximately 600 centers have been officially designated by State Health Departments [2]. A 1976 survey of 595 poison centers in the U.S. revealed that of the 417 centers responding only:

40% had separate phone listings
25% received more than 3 calls/day
22% recommended treatment at home
14% claimed routine follow-up
8% employed full time information specialists
5% provided toll-free telephone service

Thus for most of these centers, the volume of calls was low and the quality of responses were inconsistant at best [3].

During the past 10 years the development of several centers with fulltime, specially trained poison information specialists answering a large number of calls, and the subsequent move to regionalization represents a major advance in the quality of the PCC service. Notable examples of successful regional programs include: Denver - Barry Rumack [4], Pittsburg - Richard Moriarty [5], Salt Lake - Anthony Temple [6], San Diego - Sylvia Wicik [1], and Boston - Fred Lovejoy [7].

The American Association of Poison Control Centers has suggested criteria for regional poison information and treatment centers [8]. Principal services to be provided include:

1. Comprehensive poison information service to the public and health professionals.
2. Treatment of poisoned patients at home when appropriate.
3. Coordination of transportation to a treatment center and inter-hospital transfer.
4. Treatment of critically ill poisoned patients including comprehensive analytical toxicologic services.
4. Education of the public in poison prevention and access to the information center.

b. Education of the region's health professionals in acute poisoning.

c. Recording and analysis of all poisoning cases to examine the epidemiology of acute poisoning and provide evaluation of poison center effectiveness.

Definition of the service region should take into consideration population, geography, patient flow and mass media patterns, as well as political boundaries. An appropriate population for a region is approximately 1 to 5 million. It may be feasible for a single center to serve a metropolitan area of 10 million or more, but there is as yet no model of this type.

COST EFFECTIVENESS

Based on reduction in morbidity, mortality, and expendatures for health care realized by existing regional poison centers, I feel the public would benefit by better outpatient and inpatient care at a reduced cost when an effective regional poison control system is implemented throughout the United States.

Outpatient Care

The central feature of poison centers with full time, specially trained staffs is the appropriate management of most (60-65%) poisonings at home. This is feasible through use of experienced professional personnel (usually registered nurses) and routine follow-up (callback at 1 hour, 4 hours and 24 hours as needed) to evaluate the patient's response to treatment.

The San Diego Regional Poison Center has been in operation since 1972. Their call volume has risen from 6,829 during 1972 to 30,244 calls during 1977. A survey of 23 San Diego and Imperial County hospital emergency room logs showed that 6.1% of the emergency room contacts in 1971 were for poisoning problems in children under 5 years of age. A resurvey in 1976 showed a 69% reduction (to 1.9%) in emergency room visits for poisonings in that age group. In 1977, 16,920 of 21,416 (79%) poisoning calls were sucessfully managed at home. Based on an average ER cost of $50, and even assuming only half of these patients would

have come to the ER, the estimated annual savings would be $423,000 to the 1.7 million people of the San Diego region.

The poison control center at Childrens Memorial Hospital in Omaha, Nebraska has been operating for 15 years during which the call frequency increased from 300 to 5500 calls per year per 100,000 of population served. During this time the frequency of emergency out patient visits decreased from 500 to 200 visits per year per 100,000. This decline exhibited a high correlation with frequency of calls to the poison control center (Figure 1).

Inpatient Care

The same regional center in Omaha demonstrated a reduction in total hospital days for poisoning from 160 days to 80 days per 100,000 people during the same period (Figure 2).

Perhaps the most relevant data on actual patient cost is from Blue Cross and Blue Shield of Memphis. Total hospital in-patient claims paid for poisonings were $202,000 and $241,000 in 1975 and 1976 respectively. In 1977, the first year of operation of the regional poison control center in Memphis, claims paid dropped to $130,000. Outpatient benefits paid to victims of poisoning did not change greatly during those 3 years ($439,000, $377,000 and $406,000).

Based on the above experience, it is reasonable to expect a 50% decrease in the number of outpatient visits and a 50% reduction in inpatient hospital days resulting from acute poisoning following implementation of effective regional poison control programs.

WHY FEDERAL SUPPORT?

Several regional poison centers have demonstrated efficacy in reducing morbidity, mortality, and health care costs, yet the great majority of the EMS regions do not have access to this quality of care.

Although the EMS program has done much to advance the planning and organization of poisoning as one of the seven critical care areas, the current EMS statute does not include operational support for regional poison centers. Poisoning is unique in that most of the consumers can be treated at home and there is no fee-for-service involved. The public education programs carried out by the regional poison centers also serves to reduce the necessity for hospital treatment.

The hospital or medical center has traditionally provided the operational support for the critical care systems. The current financial climate, however, makes it very difficult for a medical center to underwrite the $300,000 operating budget for a regional program with the principal objective of keeping people out of the hospital.

The clear benificiaries of an effective poison program, in addition to the public, are the insurance carriers. Blue Cross, Blue Shield, and other carriers have been approached for funding by several poison centers. Although there have been a few individual grants, there is not now, to my knowledge, any substantial or long term support of poison center operation.

The State and Federal governments are becoming increasingly responsible for health insurance and will ultimately benefit significantly from effective poison control. Poisoning is becoming increasingly visable and the prospects for state or other continuation of such federally initiated poison programs are excellent.

It is essential that a lead agency be designated and given the responsibility and authority to initiate such a program. The Bureau of Emergency Medical Services would clearly be the best choice to initiate the necessary regional planning, and integrate the prehospital, hospital, and critical care programs.

I feel that a federal initiative towards establishment and operational support of a network of regional poison centers would be among the most cost effective and popular of federal health appropriations.

REFERENCES

UVa citation numbers [ ]

1. [4813] Micik Sylvia : Emergency medical services and poison control. Clin Toxicol 12: 309-317, 1978.

2. [4696] Scherz RG, Robertson WO: The history of poison control centers in the United States. Clin Toxicol 12: 291-296, 1978.

3. [4812] Meester WO: Development of regional poison information and treatment centers. National EMS Symposium in Denver, Colorado, March 1, 1977.

4. [4810] Rumack BH, Ford P, Sbarbaro J, et al: Regionalization of poison centers - a rational role model. Clin Toxicol 12: 367-375, 1978.

5. [4695] Moriarty AM: Regionalization: The Pittsburgh experience. Clin Toxicol 12: 271-276, 1978

6. [4816] Temple AR, Veltri JC: One year's experience in a regional poison center: The Intermountain regional poison control center. Clin Toxicol 12: 277-290, 1978.

7. [4817] Lovejoy FH, Caplan DL, Rowland T, Fazen L: A statewide plan for care of the poisoned patient: The Massachusetts poison control system. N Engl J Med 300: 363-365, 1979.

8. [4814] Robertson WO: Criteria for regional poison control programs . Vet and Human Toxicol 20: 117, 1978.

Figure 1. Rate of Out-patient Visits versus Rate of Poison Center Calls for 1962 through 1976

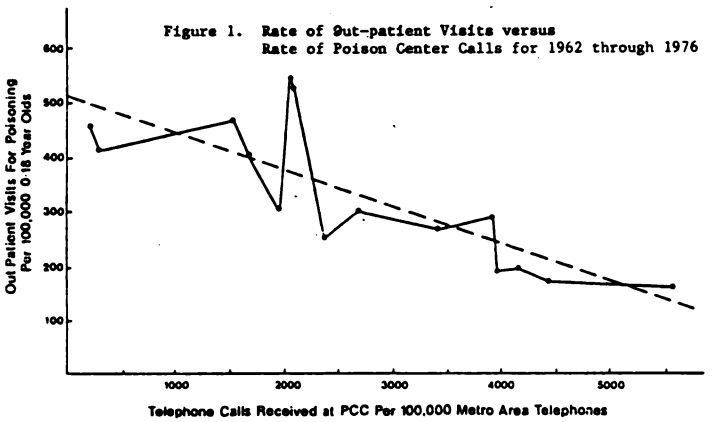
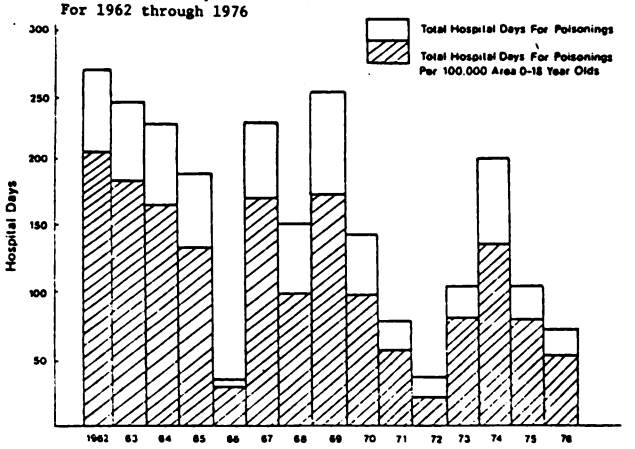


Figure 2. Reduction in Hospitalization For 1962 through 1976



Poison control and cost containment
Matilda S. McIntire and Donald K. Fry
Children's Memorial Hospital Poison Control Center
Creighton University School of Medicine
Omaha, Nebraska

Mr. WAXMAN. Thank you. Ms. Fischler?

STATEMENT OF LORY ANNA FISCHLER

Ms. FISCHLER. Mr. Chairman and members of the committee, Dr. Rumack is meeting with Governor Lamm today and was unable to be here.

I was originally going to be submitting his testimony and reading it but members of this committee will be speaking in depth about some of the issues mentioned in Dr. Rumack's testimony and have asked that I describe to you our regional program in Colorado and the Western States that we serve as an example of an effective regional poison control system and one which I would like to add was made possible largely by EMS support and the support of the States we are serving.

We serve the Western States of Montana, Wyoming, South and North Dakota, Colorado; the land mass is enormous. It is almost one-third of the country but in fact our area population is a mere 4.5 million.

Other than the Denver area, we are dealing with a rural area that is descriptive of all the rural areas in the country. We have very small populations in very remote areas.

Traditionally, the rural areas do not have access to quality medical care, a transportation system, or consultative services.

What we have developed at the Rocky Mountain Poison Center is a system whereby all of these services are now accessible to these five Western States.

In 1978, our poison center received over 38,000 patient calls and 26,500 of these calls were managed in the home instead of in the emergency room. We have calculated a cost savings in our area alone of over $360,000 in 1 year.

We are very proud of the fact that we are able to reduce costs as well as reduce morbidity and mortality in the western region.

Within our system, we have 29 subregional centers. Seven of these are located in the Denver metropolitan areas in hospitals which are treatment centers. Eleven of these subregional centers are scattered throughout the rural area of Colorado and another 11 centers are scattered throughout the 4 remaining Western States which we serve.

Our regional center in Denver is responsible for data collection for the entire area. We either give direct poison information and treatment or we provide consultative backup to our other subregionals. We provide training to our hospitals, inservice training and we also provide training programs for the rest of the country for physicians and emergency room staff.

We provide a transportation system if it is necessary to move a patient from these western region areas to the medical center in Denver. We are actively engaged in research activities. We have laboratory facilities. We provide product information to our centers, public education materials and a referral system.

These activities all go on in our Denver area office in which we have 11 poison information specialists and another staff of 30. We are probably, if not the largest poison center in the country, I think we are certainly one of the largest and probably involved in the most diverse activities.

In the region that we serve, we have several kinds of poison centers. Some of our poison centers are fairly large or well staffed community hospitals which can treat poisonings and take poisoning calls, have ICU's, have a fairly well trained staff. These centers take data, receive patients, and use us largely as a consultative service.

We provide them with public education materials. We provide them with resources and for example relating to a spider or snake bite, something that is atypical of the area.

The staff knows they can utilize us as backup. We can even provide a physician to be at that hospital if the case requires it or transfer to our center.

Another kind of center that we have in our area is isolated. They need to have a center available to their community but they are not fully equipped to be a poison center in the sense that there is not an ICU developed there, the kinds of trauma center that would be fully equipped to deal with a difficult patient.

These poison centers largely give out poison information, public education material, and refer to centers which are more equipped to handle these kind of cases.

We have been very fortunate in having very strong support from EMS and from our State government and the State governments in Montana, Wyoming, North Dakota, and South Dakota.

These other western areas came to us largely because calls were coming into us on a regular basis from physicians in these areas, without any other place to go. We began to act as a consultative service to centers where there was clearly a need.

For example, in a State like Montana, patients had no place to go. They were calling their emergency rooms and their emergency rooms were calling us. The Montana EMS Department and their State health department jointly came to us and asked us to become the Montana poison control system.

We instituted a WATS line in the State of Montana which was made public through the EMS office. All the materials were provided by us for the public there and the calls come through our center. The calls are also going to come into the local hospitals and we provided inservice training for the staff of those hospitals and they have free access to our materials and our information.

In addition, they can come down to our center any time they want for indepth training.

We have developed a very nice relationship with all of our Western States. I think it is largely because they recognized the need in these rural areas that there is no other alternative but to provide some kind of poison treatment.

A regional program such as ours is the most cost effective we can think of; Montana with a population of no more than 600,000 people would spend a tremendous amount of money for developing their own regional program. This has proved a very cost effective way for each of these Western States and also the State of Colorado, to have one system which means no duplication of effort and we have a concentrated data base to use in poison prevention.

Mr. WAXMAN. Thank you very much. We will insert Dr. Rumack's prepared testimony into the record at this time.

[Dr. Rumack's prepared statement follows:]

TESTIMONY BEFORE THE INTERSTATE AND FOREIGN
COMMERCE SUBCOMMITTEE ON HEALTH AND THE
ENVIRONMENT

Barry H. Rumack, M.D.
Director, Rocky Mountain Poison Center
Associate Professor of Pediatrics and Medicine
University of Colorado Medical Center

Lory Anne Fischler
Director, Public Education
Rocky Mountain Poison Center

March 21, 1979

"Mr. Chairman and Members of the Committee: I want to express my regret at being unable to attend these hearings. However, I am pleased to offer this statement as testimony and support on behalf of the legislation proposed here today. This week marks the anniversary of National Poison Prevention Week, and is an appropriate occasion to remark on the valuable contribution made by poison centers across the country.

The Rocky Mountain Poison Center, based in Denver, Colorado, serves a five state region with a combined population of 4 ½ million. In 1978, over 38,000 calls came into our Center regarding poisoning. With accessibility to a well-staffed poison treatment facility, over 26,500 patients were managed in their homes instead of an emergency room. If only half these patients would have otherwise been seen in an emergency room, the extra cost would exceed $662,000 per annum (at $50 per visit). The average operating budget of a regional poison center is less than $300,000 a year, resulting in a minimum annual savings of more than $370,000 in our sparsely populated area alone. Extrapolated to the rest of the country, the minimal cost-savings is at least $18,500,000 per year.

The development and expansion of such a concept is clearly pragmatic, cost-effective, and readily accomplished. Unlike the sophisticated and costly requirements of an Intensive Care Unit, Dialysis or Burns Unit, or Operating Room, a poison center requires minimal initial investment. Often housed in or around emergency rooms, skeleton staffing, resource material and medical back-up are

usually available. These elements need only to be augmented to initiate a basic 24 hour program. Training and the establishment of a data base and prevention program are elements which do not require a major investment.

However, poison centers, unlike Operating Rooms, Burns Units or Dialysis Units, do not generate income on their own. In fact, an effective program will further reduce the need for patients to be seen in an emergency room and thereby further reduce hospital revenue. Poison centers are clearly less than popular with hospital administrators when seeking financial support. Initiation of a nationwide program will therefore require federal assistance to get off the ground.

There are other factors which favor poison center implementation. Traditionally, rural communities have been neglected in most areas of quality medical care. A regional poison program with an effective telecommunications system such as a WATS line, can bring the same quality of medical care to rural areas that is available to large metropolitan areas. Expansion of service can occur as the number of patient contacts increases, so that expense keeps pace with cost-savings. Concurrently, public education programs can be tailored to the specific morbidity problems in an area, to reduce the incidence of poisoning.

As poison centers are established, the National Clearinghouse for Poison Control Centers can interface with federal groups such as the FDA, EPA, CDC, CPSC and NIOSH. The Clearinghouse, which presently resides in the FDA, has been chronically plagued by lack of funding and inadequate staffing. More effective utilization of this organization could be accomplished by moving it to the EMS branch of HEW. Under the auspices of EMS, the Clearinghouse could assist small centers by acting as a liaison nationally and coordinating sorely-needed, nationwide epidmiology.

There are an estimated 5,000,000 accidental poisonings each year. Thousands are permanently maimed, suffer long and expensive hospitalizations or die. Despite the efforts of a few poison centers scattered throughout the country, this number has not declined. The establishment of a nationwide system of treatment facilities which can knowledgeably treat poisonings, can reduce the severity and frequency of these senseless accidents.

Any legislation which saves dollars and lives should receive your support. I urge you to favorably consider the proposal being reviewed here today.

Thank you for the opportunity to address this distinguished Committee and share my views with you."

Mr. WAXMAN. Dr. Temple?

STATEMENT OF ANTHONY R. TEMPLE, M.D.

Dr. TEMPLE. Mr. Waxman and members of the committee, it is a pleasure to be here.

I am going to be providing information really representing our own opinions in our center and as the president-elect of the American Association of Poison Control Centers and the opinion of the executive committee of the Association.

Rather than go through the details of the program, which our program is very similar to that described, let me point out certain features which I think are very important to the issues at hand.

Our program is a regional center serving the State of Utah with approximately 1.25 million people. Last year, we managed about 28,000 cases.

The development of our regional center occurred in 1971 as we had a poison control program before that time but a regionalized activity occurred then. It could not have occurred at that time without Federal seed money which we received through the regional medical program.

We then were able to demonstrate the benefit of that service in our community and subsequently the basic funding for the program was picked up by the State Health Department and additional funds through the academic institutions and from private sources.

Having just spent time with our local legislature and having been faced with a statewide budget cut of 5 percent, we in effect had an increase in poison center funding of about 30 percent because of our ability to demonstrate the benefits we can provide the community in general.

The basic reason for this is that now that we have been in operation for 7 years, we have been able to show, based on cost benefit, the same things which have been demonstrated. Our budget expenditures amount to about $250,000 a year. While we estimate we save the public about $450,000 a year, in the form of decreased emergency room costs and decreased physician costs, decreased hospital stay, et cetera, in effect, we save the public 180 percent of our actual working cost of operation.

In addition to that, there is really no way to estimate the cost savings in terms of lives saved and decrease in suffering and that sort of thing which we simply cannot put a dollar figure on.

In addition to cost saving, one of the reasons our State has been eager to pick up our funding on top of the initial seed money is the regionalization concept has extended our services to the rural communities in our State. Not only that, it probably has improved the care provided in the rural communities even greater than it has in the more urban communities of our State.

Because it has made expert opinions and advice available to the public and the physicians, they simply have to pick up the telephone. Patients do not need to be transferred. People in small towns in considerable distances from where we are still get the same emergency advice, their physicians and emergency care facilities are given the same expert consultation and advice and the entire patient care is supervised just as if it were in a major

medical center. These people stay in their local communities and they are treated by their local physicians most of the time.

Patients are transferred only when the degree of severity exceeds the capability of the local institution to manage that care.

In summary, in our area, I think the important issues are one, we need the Federal funds initially to get started as a demonstration; two, it has been picked up by the State and is run by the state and by other funds, because we can show that there is cost benefit, cost savings to the State and we can benefit all areas of the State, rural as well as urban areas.

I have some comments on behalf of the American Association of Poison Control Centers. The association has been an organization for 22 years. Its function is to educate the public, to work with the public and to work with health professionals in the prevention of poisoning and elimination of poisoning as a problem. In addition, the association is concerned with development and maintenance of good poison control center capabilities around the country.

The association has formally determined that we are in support of the type of program being produced here by H.R. 3030 which would give funds, the seed money funds for the development of poison control centers.

The association has developed criteria. The issues are well defined in terms of what needs to be done for poison control. The only thing that is necessary is the development of adequate funds and training of adequate personnel. We can have those 50 to 60 major regional centers functioning in the United States without very much difficulty.

Thank you.

[The criteria referred to follows:]

CRITERIA FOR REGIONAL POISON CONTROL PROGRAMS

I. Determination of region

A. Geographical characteristics

A regional program may serve a single state, a multi-state area, or only a portion of a state. The region should be determined by local geopolitical needs, in conjunction with state health agencies, local medical societies, hospitals, and other interested health care agencies and health care agencies and health care providers. While the ultimate governmental authority for designation of a region should lie with health departments or health systems agencies, a regional poison control program--depending on its financial mechanisms--may or may not be co-terminal with such regions. Naturally, a record of discussion among involved parties should be evident.

B. Population base

A regional program should serve a population base of no fewer than one million people, in the absence of compelling reasons to the contrary. It is unlikely that a single information center or regional program could adequately serve more than 10 million people.

II. Services to be provided

Regional programs should provide the following services:

1. A regional poison information service.
2. A regional system for providing poisoning care, with at least one comprehensive poisoning treatment center.

3. An outreach health profession education program.

4. An outreach public education program.

5. Plans for regional data collection and reporting system.

Description of these services is as follows:

A. Regional information center.

Each regional program should provide a regional information center with the following capabilities:

1. Information availability 24 hours a day, 365 days per year.

2. Toll-free telephone access to the center from all areas within the region.

3. Comprehensive information resources.

4. Management protocols for initial management of consumer calls and standardized recommendations for health professional calls.

5. Adaptation of information and treatment protocols to meet appropriate consumer and health professional needs.

6. Access to regional treatment facilities for patient referral and transport.

B. Regional treatment system

Each program should provide a patient care plan that provides:

1. A system for identifying hospital capabilities for managing the poisoned patient.

2. A comprehensive poison treatment center(s) for pediatric, adolescent, and adult patients.

3. Availability of comprehensive analytical toxicology services.

46-142 O - 79 - 12

4. A patient transport system to move appropriate poisoning victims to the regional treatment center while providing adequate patient care and supervision.

C. Outreach health profession education program.

Each regional program should provide continuing education as follows:

1. Professional groups served should include:

Emergency room physicians

Other area physicians

Emergency room and ICU nurses

Paramedics and EMT's

Other professionals with interest in poison control and toxicology

2. Topics to be covered should include at least:

Services and availability of poison control center

First aid and general management of poisonings

Advances in poison information and poison treatment

D. Outreach public education program.

Each regional program should provide a general public education program covering at least:

1. Services and availability of poison control program

2. Poison prevention

E. Regional data collection system.

Each regional program should have a data collection system to include:

1. Recording of all cases handled by the regional center

2. Tabulation and reporting of center experience at least on an annual basis.

III Staffing of program.

A. Staffing of the poison information center.

1. A medical director, qualified to provide medical training and supervision, and to be responsible for medical decisions and treatment protocols, by reason of his or her training, experience, and/or specialty certification in medical toxicology.

2. Information specialists, with appropriate backgrounds, experience and training in poison control and toxicology, who would be responsible for provision of primary telephone consultations and who would be full-time "dedicated" employees assigned to the poison center program.

3. Administrative staff as needed.

B. Staffing of the comprehensive treatment facility.

Staff of the comprehensive treatment facility should consist of:

1. Appropriate board-certified physician specialists who can provide basic poisoned patient care and who can serve as an attending physician.

2. A physician-medical toxicologist, who can serve as an attending physician or consultant on admitted poisoning cases.

3. Appropriate range of other skilled health professionals.

4. Appropriate ancillary physical facilities.

Mr. WAXMAN. Thank you. Dr. Done?

STATEMENT OF ALAN K. DONE, M.D.

Dr. DONE. You have my detailed statement and my credentials. I will not repeat these except in summary.

Mr. WAXMAN. Your full statement will be inserted into the record.

Dr. DONE. I think the principal credential which qualifies me for being here is I have been in poison control center work longer than anyone else in the country, 25 years to be exact, which means poison control and I both have been around for an awfully long time.

I also started the first regional poison center in this country, the one Dr. Temple now operates. As he pointed out to you, that was started roughly 8 years ago.

I think it is interesting to note that even though poison centers have been around in this country for 25 years and regional ones beginning 8 years ago and recognizing that all of us in the field feel the most crucial single thing that needs to be done now to further improve the situation is regionalization, nevertheless there are only a handful of regional poison centers developed in this country over all of these years. All of them to my knowledge, with the possible exception of one, were able to get started either because of previous Federal programs no longer in existence or represent the few that have been able to start under EMS.

It is our feeling that a lot needs to be done in order to move us further down that track.

Yesterday in the State of Michigan the Governor signed a bill that would establish a regional program in the State of Michigan but it provides funds only for continued operation of such a facility or series of facilities. I think that is the position most of us are in. Most of us have operating funds with which we can continue such a program but it is taking that step of regionalization, and what it means in terms of laboratory backup, what it means in terms of personnel and so on; this is the part that now needs the boost.

Why should it be Federal support? I think it should be Federal support for a number of reasons but the most important ones that I would like to point out are first of all, relative to the point I just made, in our hospital, for example, some $200,000 is given by the hospital to support the operation of our center. You could not ask our hospital to now develop a regional center for the seven county area which is the one they have been assigned when in fact their patients will not even come from those areas.

You have to realize that one of the peculiar things about poisoning relates to what Dr. Spyker said a moment ago. Because you can handle 85 to 90 percent of these people over the telephone it means that 85 or 90 percent of what you do cannot be paid for directly by the patient or a third party carrier or anybody else.

You have to remember that very often that third party carrier is medicare or medicaid. The saving there is a direct one for the Federal Government. I think that is a very important reason why the Federal Government should be paying for this and I will mention what our figures are about cost containment in a moment.

I would emphasize that we are not looking for continued operating funds. We are looking only for these first step startup funds that will allow us to set up the types of units that my colleagues here have described.

For this reason, I think it is a Federal public health issue clearly. I cannot think of anything that would better qualify it for that.

A second reason why I think the Federal Government should take this step is that there is a jurisdictional problem. In Los Angeles, for example, it is probable that there should be two regional poison centers plus their network of subcenters. In New York, there probably should be two or three. In the State of Massachusetts, they operate with one. There are some areas of the country, like Dr. Temple's, where really one center ought to handle several States and the question is, who would pay for it within that kind of system?

Continued paying for operation is quite a different matter than taking that step of the regionalization program. I think we can collect from these member institutions, member States and member hospitals as indicated.

The third reason I think it is appropriate and essential that there be Federal support for this is there is a great deal of duplication in this country among Federal agencies which need toxicological data but none of whom share this data, none of whom benefit from one another's knowledge. They overlap, they repeat one another's efforts. I think this is entirely ridiculous.

If we had the kind of Federal coordinating agency, be it EMS or someone else, that would be needed to make a regional national poison center program function efficiently, this could also be the catchall agency for all toxicological information needed by all the various Federal agencies, EPA, FDA, OSHA, et cetera, who now have to go out on their own and try to get their own information often through the same computer systems but with overlapping expenses.

We feel our problem of needing regionalization of poison centers exists independent of EMS but because EMS is there and because we will require some of the same backup that EMS requires, some of the transport capabilities, et cetera, we think it makes sense for it to be part of EMS, and EMS in fact is incomplete without it.

I would add my strong vote to those expressions made earlier that the stopping of EMS now or even soon would be a tremendous loss to this country and we feel our program can and should be attached to that one.

My final point and I bring this up even in spite of my colleagues having brought it up, because I do actually have some figures. In my quarter of a century of running poison control centers, I have gotten to the point now where I can treat 90 percent of the people at home. I have also discovered in the process of visiting many of the smaller centers in the country and having been at a smaller center myself at one point, that they are admitting between 50 and 60 percent of their patients or at least sending them to a doctor or emergency room.

If you calculate the average costs—and all of the arithmetic is in my paper so I will not repeat it—we can show that for our center alone, we save seven times what our budget is just on the basis of

people not having to go to a doctor or emergency room for care, and that says nothing at all about how many lives may be saved or how many days of hospitalization may be saved or anything else.

Our place costs us $200,000 a year to operate. We can save $1.4 million just on that basis alone.

Finally, I think it is important to comment that we do have a very striking shortage in this country of the medical toxicologists who are needed to run these master centers. There are only 39 people in the world presently certified as medical toxicologists. We estimate that a few hundred are needed. There are only three or four presently in training because there are no funds available to fund training programs.

While this is a separable issue, I think it is a crucial one to the development of this whole program. We badly need some training money from someplace in order to provide additional training slots.

Thank you very much for allowing me to be heard.

[Testimony resumes on p. 188.]

[Dr. Done's prepared statement and attachment follow:]

Statement of Alan K. Done, M.D., Director, Division of Clinical Pharmacology, Children's Hospital of Michigan

I am Professor of Pediatrics and of Pharmacology at Wayne State University in Detroit and Director of the Division of Clinical Pharmacology and Toxicology at Children's Hospital of Michigan. In addition, I founded the second poison control center in the United States in 1954 and the first regional poison center (The Intermountain Regional Poison Control Center) in 1970. Details of my professional background are contained in a curriculum vitae which I have submitted to the Committee Staff and I shall not repeat them here. Suffice to say for purposes of these hearings that I have been involved in poison control work and its administration for the past 25 years continuously, except for a hiatus from 1972 to 1975 when I was with the Food and Drug Administration, and even then my principal responsibilities related to such poison control activities as the National Clearinghouse for Poison Control Centers and implementation of the Poison Prevention Packaging Act. Accordingly, it is fair to say that I am one of the senior citizens in poison control center work.

I shall spare the Committee a repetition of all of the arguments in favor of development of a regionalized poison center network in this country because these will be, or have been, presented by a number of my colleagues and I have summarized my viewpoint in a recent article, copies of which are attached to the transcript of my verbal testimony. I should like, however, to mention briefly just a few points that either are not contained in that article, are not often appreciated by those who consider these issues, or that bear on at least the 3 following reasons why Federal support rather than dependence upon the private sector is essential for the initial implementation of a nationwide regional poison center program: (1) there are jurisdictional problems in that some cities require more than one such regional program for optimal functioning, yet in some areas there is sufficient population base only to justify one center serving 4 or 5 states, but without the hurdle of financing this developmental stage, the various jurisdictions, their member institutions and third-party payers (convinced of the cost-containment value of such a program) can be counted upon to provide, as they are now, for service costs in the meantime and for continuing operation, (2) coordination of this effort at the national level is crucial, and as a corollary a strong national toxicology data base is needed both from and for the proposed program in order best to serve the needs of the U.S. public simultaneously thru these centers and the several Federal agencies which now are individually attempting to acquire such data, and (3) the problem dealt with by poison centers is even more of a national public health issue impacting on avoidable health-related expenditures at the Federal level than most programs currently under Federal sponsorship.

As background, it is important to understand the status quo, what is wrong with it and why other means of tackling this problem are limited in availability and value. There presently are over 600 so-called "poison centers" in the United States and they have done, I would be the first to say, an excellent job within the limitations of their's and the field's capabilities. Many of these centers are excellent, but many provide suboptimal services, and in some cases the existence of the center may actually pose more of a threat than a benefit. Among the reasons for this are the fact that there is limited availability both

of people with real Clinical Toxicology expertise and of the analytical backup that is absolutely crucial for effective management of many poisoning cases; most have had little or no financial support and so have had a limited ability to accumulate adequate case and epidemiologic data, or pursue preventive activities and, for some of the reasons mentioned previously, even to provide more than marginal informational service. In the past this mattered less than it does now because the scientific advances in the field were so limited that not much more than marginal care could be offered for many cases by any center, and there has been during the past decade or more a tremendous proliferation of very potent new chemicals and drugs that pose greater threats to the population of this country.

The average small poison center not only cannot provide the kind of expertise and laboratory backup needed to make them equal to the current task, but they do not themselves accumulate sufficient experience or numbers of cases to develop expertise. A potent new chemical is not likely to be encountered more than once, if that, by a center servicing a population of less than about one million people, while the regional center may see several such cases in one year; even when they do see such a case they are not likely to be in a position to study it adequately in a way that would maximally benefit everyone in the field as well as the patient himself.

One of the peculiarities of the Toxicology among the various fields of medicine is that there are more chemicals than diseases out there that can make people ill, but we teach little about these in medical schools, provide virtually no training with regard to them subsequently except in clinical toxicology training programs (which are practically nonexistent in this country because of lack of funding), and the poisons with which we must deal change by the thousands or scores of thousands every year while diseases almost uniformly remain similar unless they happen to diminish.

Another peculiarity of the poisoning scene is that most of the cases the centers deal with could be handled over the telephone, if the center has the expertise, and so there is no way of receiving direct compensation either from the patient or from third-party sources. So 90% of our work is done free, even aside from the preventive efforts that are an essential part of any good poison control program. Thus, most of the centers are a drain on their hospitals or communities, and indirectly on third-party carriers (<u>including Medicare and Medicaid</u>), but in a way that other patients are paying for the poisoned ones.

The obvious solution to which most poison center directors, and certainly our organizations subscribe, is to develop regional networks of poison centers having in each region a master center that can serve as backup to the other treatment and/or informational facilities. Each of these master centers would have the expert guidance of a medical toxicologist, the necessary laboratory facilities, the ability to accumulate and transmit rapidly experiences of themselves and of all of their associated centers, would provide important preventive activities including the acquisition of potentially lifesaving early-warning information about newly emerging hazards, and in general would upgrade the services provided by all of the centers with which they are associated. But the question is who would fund these activities, and it is this question that has prevented us from going any further than we have in that direction, though the criteria have

been developed for designating such regional centers and there has been considerable study of the numbers of regions needed and the services that they should provide. Funding is needed for the initial development of regionalization, not for continuing services, in much the same manner as has been true for some other emergency medical problems for which the Emergency Medical Services legislation was developed. Because, however, the number of regions for which master poison centers are needed is (indeed, needs to be) less than the number of EMS regions -- 60 or 70 as opposed to about 300 -- this in a sense is more of a national public health issue than are the other elements of Emergency Medical Services. Others have testified far better than could I about the accomplishments of the Emergency Medical Services activity and I would certainly add my plaudits, even though I would prefer to confine my remarks to the poison center issue because that is the only portion with which I am intimately familiar. I would say, however, that in my opinion the failure to continue the EMS program longer and with additional provisions for inclusion of poisoning and of trauma would leave a superb job only partially completed. Our needs for the development of a regionalized poison center program exist independent of EMS, but in my opinion it would certainly make sense to attempt to meet our goal through the EMS program. For one thing, part of the backup which the master or regional centers need to be able to offer to their satellites is the same medical expertise and transport facilities that are required for the present programs of EMS; further, EMS could be the needed coordinating agency as it is for other medical emergencies.

The final attribute of poisoning work that I would like to single out for emphasis as being different from most other clinical services is that we have probably the very most to offer in terms of cost-containment of medical care. It can truly be said with regard to the program for which we are seeking legislation that it clearly will save several times more money than it will cost. Needless to say, along with that would be great improvements in patient care, with the expected reductions in human suffering and loss of life. In that regard, we should not forget that a high percentage of the cases handled by poison centers have Federal sponsorship of their medical care. Other testifiers undoubtedly will present concrete data with regard to cost and cost-containment and I will add to this only by inserting a personal estimate based on my quarter-century of experience in the field. The record of myself previously, and our Center at Children's Hospital currently, is that about 90% of our inquiries can be handled over the telephone without the need for the victim to appear either at a physician's office or a hospital or emergency room. The national experience and my own observations suggest that in less expert poison centers approximately 50 to 60 percent of the inquiries require subsequent medical intervention. This is because the individual who knows less about these problems and feels less confident is more likely to feel the need for medical intervention. If we take the difference between our 10% figure requiring physician intervention and even the 50% figure just mentioned, and apply that 40% reduction in medical intervention to the 40,000 calls we receive each year, it can be calculated that about 16,000 patients are prevented annually from such expenditures by our center alone. More than 70% of these patients would be expected to go to emergency rooms, and if the usually accepted figure of $100 for such a visit is used, they represent a figure of $1,120,000; for the remaining individuals the usual office visit would represent at least an additional $100,000. Thus, as a minimum, we can project that our Center is saving $1,200,000 per year just on patient visits alone. That ignores completely the saving effected by the preventive and educational efforts

in which we are also actively engaged. The total budget for our Unit presently is $180,000 a year, or just 1.7 the projected saving. As mentioned previously, these phone inquiries are not directly compensable through any existing mechanisms from third-party payers or from patients. But we do not handle all cases from our immediate population area of over 4 million people, much less our entire region, so that the projected savings for the area generally would be absolutely horrendous if we were able to develop the kind of back-up capability for all of the other centers of the region that is requested as part of the proposed legislation.

Two final points. One is that there presently are only two or three Clinical Toxicology training slots available in the entire country, with an estimated need eventually for at least a few hundred individuals certifiable as medical toxicologists to add to the 39 worldwide that have thus far been so certified. Thus, it is crucial that provisions be made somehow, through this or other legislation, for earmarked funds to establish more such training programs. The final point is that there is a strong need, in any such regionalized program, for a responsible federal agency to provide the necessary coordination; one through which rapid exchanges of information can take place, and that can provide the toxicologic information needed by each of several federal regulatory agencies including FDA, CPSC, EPA, OSHA, CDC, EPA, Agriculture, etc. At present there is much overlap, little exchange of information, and there is real merit in having one centralized toxicologic information source that can develop the necessary expertise with regard to all areas of toxicology. The cost saving in this development, to say nothing of the improvement in services that could be provided to everyone concerned, would also be appreciable.

I appreciate this opportunity to present my views before this group, and would be most happy to answer any questions or to provide any requested assistance in the future.

By Alan K. Done, M.D.

THE TOXIC EMERGENCY

THE CASE FOR REGIONALIZING POISON CENTERS

IN MY JANUARY column, I presented a listing of the various poison centers that have been designated to the National Clearinghouse for Poison Control Centers by state health departments, along with a very brief discussion of what a poison center is. I touched very lightly on the question of whether a particular hospital or similar facility should or should not get on the poison center bandwagon. I'd like to expand this latter question and relate it to what should be the key issue—regionalization of centers.

Proliferation of, and publicity about, poison centers puts at least some implicit pressure on hospitals to take on such a designation. It's quite likely, in fact, that our listing of the existing centers—even with some perhaps inadequate qualifying remarks—may have such an effect. If so, I would certainly like to counteract it. There is a new and growing tendency to abandon the proliferation of new centers in favor of more centralized programs and I strongly believe this tendency should be encouraged. Far too few hospitals have seriously considered—much less reconsidered—what their role should be in the system and those that have attempted to do so have often missed some points that may be crucial to such a decision. Furthermore, as some of us have attempted to push for a more centralized system we have found it necessary to develop our arguments on the spot before legislators, administrators, etc., since very little background information has been published in the general medical literature. To some degree, therefore, I hope that this column will serve as a sort of "position paper" for those who may be fighting this battle in the future. Space doesn't allow me to cover such aspects as the activities and attributes of each type of center—this has already been done admirably by Tony Temple in *Annual Review of Pharmacology and Toxicology* (Vol. 17, p. 215) and Fred Lovejoy and Joel Alpert in *Pediatric Clinics of North America* (Vol. 17, p. 747) and I listed other references and discussed such details earlier (see EM, November 1973)—but I would like to present some perspectives that are either basic to the question or often neglected when the subject is being discussed.

What's the attraction?

I have already observed that there are more than 600 poison centers in this country, with over 100 in one state (Illinois) and one or none in some other states; some cities may have several facilities that list themselves as poison centers. For reasons we'll go into later, there's no way that all of these outfits can provide the kind of service they should, so it's logical to ask why they try: What is the incentive for becoming involved? I think this is an important question to consider as a preface to any efforts to change the status quo.

The poison center movement in this country started nearly a quarter of a century ago as a reaction to the fact that the growing availability of potentially toxic materials and the accompanying increase in the incidence of poisoning was not matched by any significant improvements in the identification of potentially dangerous constituents of products, for which only brand names were often available, or in the availability of information about effective treatment—a subject that was then, and still is, badly neglected in medical training. So a number of centers began to accumulate as much information as they could from manufacturers about what was in their products and from the literature about the toxicity of these constituents and the known methods of treatment. They also began to equip themselves to treat poisoning cases when they arose. There were more than 100 such facilities by the time we met in Chicago in late 1957 to form what is now the American Association of Poison Control Centers. In the meantime, the Public Health Service established the National Clearinghouse for Poison Control Centers, which is now a part of the FDA, to receive reports from the various centers and develop a cumulative experience from them.

All of the reasons why proliferation of poison centers continued beyond what was probably optimum are not clear but some relevant observations can be made.

In the first place, many physicians and administrators decided that being prepared to treat the poisoning cases already coming to the hospital entailed as much effort as the development of a "poison center," so why not become one; and some hospitals, perhaps, hoped to attract some patients

who might otherwise go elsewhere. That there is a difference is suggested by the fact that while the vast majority of poison centers are located in hospitals, a great many of them provide information only and no treatment at all. And many of those that do treat consist of the same emergency room that existed all along, now provided with perhaps a little additional information and a new title. The number of poison centers that arose as a result of a real change in activity or a new endeavor was, and still is, relatively small.

Another problem is the attractiveness of "poison control" work as a cause. There was at the time the poison center movement began—and still is to a somewhat lesser extent—a tendency for physicians to panic and deem themselves more ill equipped to handle poisoning than almost any other problem. In part, this was probably related to the fact that there are more poisons than diseases that may afflict humans and yet almost all medical training is focused on the diseases. At the same time, nothing has better public relations value than poisoning and poison control because (1) more than three-fourths of the episodes involve children, though adult suicides account for roughly 90% of the deaths; (2) these emergencies conjure up an aura of drama that has always surrounded poisoning; and (3) they have generally been handled so poorly in the past.

Hospitals found very early that nothing would get them public support more quickly than the stories and statistics that can be gleaned from a poison center and there are still very few problems from which you can get as much PR mileage. This, incidentally, is a practical point to emphasize with legislators when you're seeking their support for the improvement through centralization of the poison center functions. For the hospitals there was also the element of fear that because nearly everyone seemed to be getting into the act they were somehow not providing full services if they did not make themselves into poison centers.

The mystique about poisoning, while it frightened some physicians, had an attraction for many others because of the challenge of operating with little guidance in an unusually emergent and dramatic situation. It was a situation in which the lack of information and expertise was at once a drawback to all and a boon to some because it was relatively easy to be an expert in a field where so little was widely known and there were no recognized criteria for expertise. In my opinion, this had a lot to do with what I perceived to be disproportionately little real advancement—based on excellent research—in clinical toxicology until recent years when it finally began to be recognized as an endeavor worthy of the attention of good scientists. There is now an accreditation in medical toxicology, though it's not yet an "officially" recognized specialty partly because of the lack of an adequate training program for it.

Pitfalls for a poison center

The institution that provides poison center services at less than an optimal level—even allowing for *intentional* differences in the services offered—is contributing to a national problem. But more than that, and closer to home, it may do great harm to the patients and the public it serves—and to itself as well. While there still is a place for other than "master" poison centers, as dictated by geographic or other logistic considerations, there is no longer a place for the amateur or "fly-by-night" poison center. These institutions must recognize the potential medicolegal hazard, even though it can only be surmised at this point because it has not actually received the acid test in court. Now that clinical toxicology and poison center functions have become better defined and recognized, there is every reason to expect that institutions choosing to designate themselves as poison centers will be held to a standard of care beyond that to be expected of a similar hospital not so designated. I have no doubt that this issue will soon be tested in the courts and even less doubt about the outcome. I know of one case, still in litigation, in which a hospital was listed as a poison center by its state health department and the National Clearinghouse though the physician listed as director of the center denied any knowledge of the designation.

And quite apart from the threat of litigation and the underlying moral or ethical implications, the inconvenience of providing service that even *might* be marginal or unacceptable far outweighs any advantages. There are practically no poison centers that have any sources of support other than their own hospitals, much less serving to attract funding to the parent institution. And since they've lost much of their novelty, they usually don't even pay off anymore in PR when you really look at the costs and the efforts involved, unless the service that is being provided is truly adequate. There is nothing more burdensome than having to handle the informational calls or the extra patients—most with inconsequential ingestions—when there are no personnel specifically assigned to these tasks so that the ER intern or a busy nurse or pharmacist must take them on to the detriment of their major duties. Any notion that this may add to a training program or enhance the experience of the attending practitioners is nonsense if the cases are being handled by someone not really capable of teaching the subject, much less caring for the patients adequately.

Most important of all, of course, is the welfare of the patients. There is

nothing more pathetic than the scene, so often observed in my travels, of someone handling an informational call who knows little more than the caller and passing out advice that either dangerously misleads when the problem is really serious or unnecessarily alarms when it's inconsequential. As just one example, a recent survey in Michigan indicated that fully half of the poison centers in the state advocated the use of the so-called universal antidote though it's well known to be entirely worthless.

The need for centralization

As I have said before, there can be different types of poison centers serving different functions and nothing I am about to say is intended to alter that. It is important, however, that at least the prescribed functions be carried out adequately. It is my view, shared by most of the leaders in the field, that the existence of a great number of centers not only makes it improbable that all of them should do an adequate job but also inhibits optimal operation of those centers that do have the capability.

Clearly what is needed is the development of a relatively small number of regional or master centers and a number, again relatively limited, of satellite, subregional, or secondary centers that can relate to and be served by the major centers. But this is not possible in the present climate where the meager available support goes mainly to individual hospitals that have neither the inclination nor the responsibility for servicing other than their own clientele. The major centers and at least the satellite ones must be funded from sources that will promote regional distribution of services. In a highly populated state, one or more major centers or satellite centers might be needed just to service its residents and then the funding would appropriately come from the state or, in some cases, even a populous county. Interstate centers should be federally funded.

The haphazard development of poison centers has numerous problems but I will discuss only a few that seem to be of special importance, particularly to the individual trying to effect change. In the first place, there's the axiom that output—the services provided by the center—can be no better than the input. Perhaps the most important input is collective experience and without it no real expertise can ever develop. By collective experience I mean accumulation of cases that present such an array of possible responses and problems that those treating the patients or handling the inquiries develop not only greater knowledge but also such intangibles as anticipatory skills and a "feel" for the various problems.

Collective experience is important even for relatively common toxicities because any one professional is otherwise likely to see only a handful of any particular kind of poisoning case in his or her entire career. But someone with experience in a good poison center can, for example, "smell" a bad or poorly responding aspirin overdose. For less common toxic episodes, experience is even more crucial and this applies not just to the real rarities. Phencyclidine poisoning, for example, is an important current problem not likely to be seen by the average practitioner—or certainly not more than once—while we've seen dozens of cases in the past few months. When it's an even rarer problem, such as the very serious paraquat poisoning, even a poison center is not likely to see enough cases to develop expertise unless it happens to be among the larger—or more rural, since this is a herbicide—centers. It's difficult enough for a center that fields dozens of calls a day to stay on top of everything likely to present itself; it's impossible for a center that receives only an occasional call—and some receive as few as one or two calls a week.

Adequate input also comes from taking optimal advantage of the opportunity to study the various types of poisoning that are presented. This requires not only accumulation of adequate numbers to make the findings of such a study significant but also an investigational expertise not possessed by the personnel of many centers—even if they had the time, equipment, and money to pursue these opportunities. This is not to say that extensive research is an integral part of the operation of *every* center but rather that an important aspect of centralization is that it provides enough cases for such studies to those centers equipped to carry them out. This means not only collecting additional information about well-known toxic problems but obtaining the earliest possible characterization of the problems and treatments of substances new to clinical toxicology so that information necessary for adequate treatment can be made available to all centers and to the medical profession at large as quickly as possible.

There is also the related issue of laboratory diagnosis, which I discussed last year (see EM, February 1977); it has more relevance to the adequacy of services than to input per se but I bring it up here because our ability to learn much about poisonings is inevitably limited unless we can quantify the severity of an overdose objectively —with blood or urine levels of the drug, for example.

Not every poison center needs a full-fledged clinical toxicologist and that's fortunate because the number of such experts is still small. A center can function adequately if it at least has ready access to a toxicologist—but there is a vicious cycle or two that must be interrupted before even simple access will be readily available to these centers.

First of all, a top-notch clinical

toxicologist would be attracted only by a center that could provide sufficient clinical material and resources and, of course, only a major poison center could justify or afford him. But here we get into the chicken-or-the-egg problem: you can't get the personnel without the center and you can't develop such a center without the personnel.

Furthermore, the scarcity of trained toxicologists is perpetuated by the limited availability of centers in which adequate training can be offered. There are only a handful of training fellowships in clinical toxicology available throughout the entire country. But here again we have a cycle in that the programs cannot be developed without money and the money will not be appropriated unless the programs are available. We recently applied for a training grant for our new program here at Wayne State University, for example, and were told that we would have to prove the capability of this particular unit to provide adequate training before the funds could be given that would make such training possible!

In addition to clinical toxicology experts to run the major poison centers, we must have personnel with some expertise in fielding poisoning inquiries—and the time to devote to it—to staff the satellite centers. While not every type of center will need a full-time staff, the fact is that there are pitifully few centers now that have *any* personnel primarily concerned with poisoning, however badly they may be needed and can be justified by the volume of cases. Certainly, consultants can provide backup but the issue is who's to decide when they're needed—if they're called on nearly every case, they might as well answer the calls directly—and how is harm to be prevented when they are not called. The most important person actually is the one who answers the telephone; he or she should be able to devote full time to this task, someone who does not have to be sought when a frantic call comes in, who does not have duties more pressing than these potentially urgent emergencies, and who is trained enough to give adequate advice. Again it does little good to have a poison information service if the solution to all or most problems is referral of the caller to a physician or a hospital.

The sources of information now available to poison centers constitute one area of great improvement but utilization of many of these sources cannot be justified by centers that do not have a great enough volume of business and funding. There are various microfilm-microfiche systems, a number of texts on poisoning (see EM, November 1973, p. 287), manufacturers' data, medical journals, reprint files, card files available from the National Clearinghouse or set up by the centers themselves or other sources, and even on-line computer and communications capabilities among the various informational resources. Not every center needs all of these but the notion that a single system—even microfilm-microfiche—is the ultimate and needs no supplementation is also erroneous. While such a system may handle the bulk of the problems faced by those centers that can afford them, there is still a need for backup by master centers with more extensive informational resources and specialists with extensive expertise and experience in the field.

A poison center also needs coverage of specialties that are particularly relevant to poisoning problems, such as anesthesiology, endoscopy, and nephrology; such specialized techniques as hemodialysis and hemoperfusion are also particularly relevant, as are advanced life-support systems. And even a major medical center may not provide adequate backup if the special services and the individual specialists are not coordinated or do not have special experience in the treatment of poisonings.

There must also be adequate provisions for transporting patients, both from home to hospital and from hospital to major center. The development of emergency medical services programs has brought this need to the fore. Some such system should be an integral part of any poison center program but this can only follow a coordinated effort that includes some degree of centralization.

A very important aspect, particularly worthy of the attention of legislators and others who might be instrumental in obtaining necessary funding for regionalization programs, is the issue of containing the rising costs of medical care. There probably is no place where more health care costs could be eliminated than in the field of poison control. The number of cases that occur each year is not precisely known but it's certainly near a million at least and is estimated by some to run as high as 5 million or more. This is not to say that there are that many actual poisonings but rather that the question of exposure arises that often. The bulk of poisoning cases, in fact, are not of great consequence and do not require more than home treatment, if that. But this is a judgment that often can be made only by an expert and the more expert he is, the more secure he can be in deciding that no further measures or medical care is required. In my experience, poison centers that are really well manned can handle over 85% of their cases by advising on home measures alone—my own figure is over 90%—and only a small number of callers need to appear at a hospital or doctor's office. On the other hand, I would estimate that an inferior center probably refers closer to about 80% of its inquiries either to an emergency room or to a private physician. The costs of a visit to an emergency room have been estimated to be as high as

REFERENCES: 1. Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ. 2. Dement WC: Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ. 3. Dement WC, *et al:* Long-term effectiveness of flurazepam 30 mg h.s. on chronic insomniacs. Presented at the 15th annual meeting of the Association for Psychophysiological Study of Sleep, Edinburgh, Scotland, Jun 30-Jul 4, 1975. 4. Frost JD Jr: Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ. 5. Kales A, *et al: Arch Gen Psychiatry* 23:226-232, Sep 1970. 6. Kales A, *et al: Clin Pharmacol Ther* 18:356-363, Sep 1975. 7. Kales A, *et al: J Clin Pharmacol* 17(4):207-213, Apr 1977. 8. Kales J, *et al: Clin Pharmacol Ther* 12:691-697, Jul-Aug 1971. 9. Karacan I, Williams RL, Smith JR: The sleep laboratory in the investigation of sleep and sleep disturbances. Scientific exhibit at the 124th annual meeting of the American Psychiatric Association, Washington DC, May 3-7, 1971. 10. Vogel GW: Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ.

TOXIC EMERGENCY *continued*

$150 per visit but whatever estimate you wish to use for that or for a visit to a doctor's office—costs that often are not adequately covered by third-party carriers—it doesn't take much fancy arithmetic to determine what this represents in terms of potential cost-containment. Even after a patient is seen at a medical facility, the question of hospitalization often hinges on either the expertise of the available physicians or the adequacy of the laboratory diagnosis or both. Again, the experts admit far fewer patients, while the solution for the physician whose knowledge of poisoning is relatively limited and who cannot obtain adequate laboratory data is often to admit the patient for what turns out to be an unnecessary period of observation. Again, a sizable but unknown quantity of money could be saved here. Thus, a legislator can be told in all honesty that a well-conceived program of poison center regionalization could effect a medical cost-containment far exceeding the expense of the system. I can think of nothing more salable than a plan that will greatly improve medical care, reduce morbidity and mortality, and actually save money at the same time!

And finally, there's the important subject of prevention, which again can be implemented most effectively in a centralized poison control system. We need good public information and prevention programs, but these can be launched and adequately developed only by centers that have the necessary expertise and funding and serve a large enough public to make the effort worthwhile. Cost-containment enters this picture in two ways: there is money to be saved by preventing poisonings in the first place, of course, and also by making prevention programs themselves more cost-effective. In part this latter goal can be achieved by better communication among the regional programs and some sharing of ideas and materials as well as personnel.

Although it is not the same as prevention efforts, follow-up of cases can make an important contribution if it includes efforts at preventing a repetition of the episode either in the same child or in other members of the family. I mention it here because these efforts can usually be carried out by the same people who do the public information and preventive education work. Needless to say, adequate follow-up is most important also in terms of gaining further knowledge of the problem. Another important function that will certainly be enhanced by both centralization and adequate follow-up is the gathering of statistics so that problems can be identified and any indicated public health measures taken.

There are probably other considerations that I could and perhaps should have brought up but these are the points that I feel need emphasis and have not always received as much as they should. □

Mr. WAXMAN. Thank you very much for your testimony. Dr. Lovejoy?

STATEMENT OF FREDERICK H. LOVEJOY, M.D.

Dr. LOVEJOY. Mr. Chairman, Dr. Carter, I appreciate the opportunity to come before you. I come before you in two capacities, one as the director of the Massachusetts Poison Control System and second as chairman of the Board of Medical Toxicology, as Dr. Done just referred to concerning the certification of toxicologists in the country.

Regional poison centers will need to have certified toxicologists that have the necessary credibility to carry out that which will be needed. It is a separate issue but a very important issue of what we are discussing.

We have a different problem in Massachusetts than I think has been outlined by the other States and that is a smaller geographical area with a high density population and even perhaps more importantly, a high sophistication of medical care offered by multiple institutions which results in competition, which results in not necessarily the best form of medical care being offered.

It was on that factor that the Massachusetts Poison Control System became operational and I would submit because of the support and the push from the emergency medical services at the local level in our State.

I would like to just briefly describe to you what we have done there in terms of coordinating these resources to carry that out.

The Massachusetts Poison Control System became operational January 1, 1978, and coordinates the care of the poisoned patient throughout the State of Massachusetts. It exists only because of the coordinating function and start up financial support of a Federal/State agency specifically the Office of Emergency Medical Services.

It presently serves as a model of the public and private sectors working together to implement a system of care in a specific health-care area, that of poisoning.

It serves as an example of Federal dollars having successfully seeded a system that is now financially and operationally independent of that initial source of funding.

Prior to 1978, six poison centers existed in Massachusetts, all located in emergency rooms, all inadequately staffed and all inadequately funded. Under the coordinated leadership of the Office of Emergency Medical Services with the full support of the Massachusetts Department of Public Health and all existing poison centers, Massachusetts State law which had been passed in 1971, that there should be one poison center for the whole State of Massachusetts and a system there contained, was implemented.

Five programmatic areas are now operational; poison information; professional education; public education; treatment and data collection and research. They are now operational. Poison information is offered for the poisoned patient and hospitalized overdose 24 hours per day, 7 days a week at a rate of 130 calls per day or 45,000 calls per year for a population base of approximately 6.1 million. Calls are handled by a full time staff of 12 information specialists (nurses and pharmacists). Faculty from and supported by three medical schools and one school of pharmacy serve in the

capacity of consultative back up for the severe hospitalized overdose. The system carries out public education, statewide through a committee comprised of the medias, newspapers, Blue Cross/Blue Shield, and educators; professional education, through workshops and management protocols and monthly scientific reviews transmitted to hospitals and physicians throughout the State; and research and data collection, on all calls to the information center as well as from hospitals statewide.

The system is the responsibility of the Massachusetts Department of Public Health and is directed by professionals representing institutions contributing financially to the system, specifically maternal and child health, the Office of Emergency Medical Services, the State of Massachusetts as a line item budget, three medical schools and/or their accompanying major teaching hospitals, Harvard, Tufts, University of Massachusetts, and the Massachusetts College of Pharmacy and representatives from the 88 contributing acute care hospitals throughout the State.

All institutions cooperatively offer programmatic, faculty and all financial support to the system.

The cost to run the system is $200,000 per year. One-half is derived from public support and one half from private support.

For this year's budget, $60,000 is from maternal and child health; $25,000 from the State of Massachusetts and $15,000 from the Office of Emergency Medical Services.

Of the other $100,000, $25,000 is derived from 88 acute care hospitals throughout the State. They all make a contribution to the system for services rendered that they received. $25,000 is from the consortium institutions that give faculty into the system, Tufts New England Medical Center, Harvard Medical School, Massachusetts College of Pharmacy and $50,000 from the Children's Hospital Medical Center, that institution that by contract with the Massachusetts Health Department has fiscal and legal responsibility for the system.

Additional moneys for specific educational and research projects have been derived from foundation and drug company support.

Emergency medical services funds will cease after this year. Because of the broad based public and private financial involvement, alternative sources of funding are clearly available to replace this initial start up funding.

Clearly Federal dollars have successfully seeded a system that is now financially and operationally independent of that initial source. The Massachusetts Poison Control System, I think, represents a model that is reproducible nationwide.

Mr. WAXMAN. Thank you.

Dr. Temple, an earlier witness, while indicating the need for poison control programs, expressed the belief that we must be sure of ongoing community support when the Federal role is phased out.

Do you think this community support will be there? Can rural areas handle this? Poison control centers are not particularly expensive in comparison to trauma units, for example. Do you think the commitment will be there in the community to continue the support of poison control centers after that phase out of Federal funds?

46-142 O - 79 - 13

Dr. TEMPLE. The basic answer is yes. I think each one of us have pretty much talked to them. We all have had programs that have had seed money support of know of programs that have gone on and had basic local support.

There is a tremendous amount of interest and support in the local area, once you demonstrate what the service is and what you are providing to your public. We have a tremendous amount of support in our major areas and in our rural areas as well for this project.

I think it is going to be there; it is just the question of getting a program going that people can see and relate to.

Mr. WAXMAN. Dr. Done?

Dr. DONE. Mr. Chairman, I think it is important to realize that because we have plenty of centers, in fact, too many, no one here is proposing the development of any new centers. We are proposing that some of the existing ones be made into better centers that can back up the others.

There really is no change in the coverage of the rural verus urban area or anything of the kind. We are really only talking about improving what is already out there and everything that is out there now is already being funded by someone.

It is for that step of pulling us all together in a more organized and better fashion that we need the Federal support.

Mr. WAXMAN. As you know, I have proposed additional authorizations for poison control in this emergency medical services bill. I would like to ask you, do you think we need that additional authorization or can we go ahead with the funds which are already in the program to use to create poison control centers?

Dr. DONE. I am sure Dr. Boyd could answer that better than I. I do not see there could possibly be enough there to do that without injuring other programs.

As I mentioned, our need exists independent of EMS but we would like very much to be part of it but we do not want to hurt it in the process.

Dr. TEMPLE. I think my perception of what is going on in poison control in the country is a little bit different than Dr. Done's. There are plenty of places in this country where while there may be a poison center in the terms of the number, the operational budget for that center is absolutely negligible, there are just no funds being put in. It is in the thousands of dollars at the most.

There are moneys in EMS, as I understand and again Dr. Boyd may be able to clarify that but having worked with them in our area, there are not funds that could be reallocated in that sense within the program and the new funds which you propose are essential to the development of these regional centers.

Mr. WAXMAN. Dr. Lovejoy?

Dr. LOVEJOY. In addition, I think funding serves as more than just moneys. It serves as an impetus to pull together the existing capabilities that exist in a State. When there are multiple professional groups that are able to do a particular thing, they sometimes need somebody that can pull them together and say, let's pull together for the common good here. I think those moneys help to accomplish that in many of these States where there are multiple medical schools or multiple institutions that are able to do it.

Mr. WAXMAN. In my own district in Los Angeles, there is an excellent poison control group that initiated their own existence out of a vacuum as part of Children's Hospital. As you are aware, so many poisoning problems are poisoning of children. They have the highest rate of accidents.

It was part of the Children's Hospital yet they had no funding for the program. Several of you mentioned the fact that there is no third party payer for a poison control center that is giving information over the telephone to a mother in order to provide information which will keep the child from having to come into the emergency room and using the services of the emergency room.

Here is a program that is having difficulty having the hospital support it. I do not know how many other situations around the country are like that, but if we had some seed money to get something started, then as I understand what you all are saying in your testimony, that seed money can establish something beyond just a filling of a void that will give a community a program to keep in existence after the Federal seed money is used up after 3 years.

Dr. Done?

Dr. DONE. Mr. Chairman, to use your specific example of Los Angeles, one of the difficulties there is that there is no way one regional center can handle 10 million people. It simply cannot be done, even with the best of backup. Los Angeles really does need two centers.

The center you mentioned has done the best they possibly could. They have done an excellent job. They have never had the kind of medical backup we are talking about or the kind of laboratory backup we are talking about.

They have not been able to provide the service that we are talking about either. In spite of that, I am ashamed to say that Los Angeles has among the worst poison control center care of any major city in the United States. They are one of the least well equipped for its population of any in the country.

Mr. WAXMAN. Dr. Lovejoy?

Dr. LOVEJOY. To elaborate on the points of the seed money, one thing that has been able to be accomplished in Massachusetts is having contribution by individual hospitals throughout the State, as Dr. Boyd talked about, as a kind of tithing. One needs the seed money to become operational, to do the job right, to build the credibility and that credibility can be built among the professional community. There is that as another source of funding that can be ongoing to support what we are saying.

Mr. WAXMAN. Do you find the expertise required for people involved in poison control centers is different than what is already available in most emergency wards of hospitals?

Dr. TEMPLE. There is no question that it is different. There are two levels of people who operate centers. One is the physician, medical toxicologist who acts as a physician liaison and then there are the people who are actually taking the calls and provide that sort of initial consultation. These are either pharmacists or nurses. All of those people need skills to be able to operate on a full-time basis around the clock.

You cannot simply have a phone in the emergency room and be trying to suture up a laceration or do something else and come in and provide a sophisticated answer.

In addition, the centers provide ongoing monitoring and backup and followup, calling back at regular intervals to insure that these people who they treat at home can stay at home.

It requires people full time, dedicated and better trained than we have, except in a few places that are available now.

Mr. WAXMAN. Are the centers providing information to providers as well as to the patients?

Dr. TEMPLE. Absolutely.

Mr. WAXMAN. Dr. Done?

Dr. DONE. I think one has to realize that there are a lot more poisons out there than there are diseases. The difference is those change by the scores of thousands every year. Diseases never change except to decline for the most part. Just keeping on top of all of those, just the changes which occur every year, much less getting on top in the first place, is a full time job.

You cannot ask that of an emergency room physician. Emergency room physicians are the people that call us first of all people, not because they do not want to treat the people but to have that kind of specialized toxicologic knowledge is way beyond them. They have too much else to have to worry about.

Mr. WAXMAN. Dr. Carter?

Mr. CARTER. I just want to compliment the gentlemen for what they have said here. I believe you stated that some of the EMS money has been used in part to help support poison control centers and to serve as seed moneys, is that correct?

Dr. DONE. Yes, sir.

Mr. CARTER. How much money per center would be needed to achieve a good regional network of poison control centers?

Dr. TEMPLE. We put together some data which suggests that an operational budget for a poison control center to be fully operational would be around $250,000, assuming some proportion of that was matched by the local people to have them demonstrate their interest and willingness.

It is going to need around $125,000 per center to really get them up and running.

Dr. DONE. It is not the same for all centers. Some already have their equipment. Some already have their staffs.

Dr. TEMPLE. Almost all of that budget is operational staff and it is ongoing operational costs. Our budget is 80 plus percent personnel. Equipment and supplies and things like that are minimal costs.

I think we have to be careful to differentiate in terms of providing the service that the poison center provides to all the ancillary things that a lot of people have referred to; certainly those funds could not provide the same type of scope of research and other things that are being done. That is really not part of what a poison control center operational budget is.

The operational budget is the people who answer the phones, the phone lines and the basic sort of every day operations, data collection and so forth.

Dr. LOVEJOY. I think it is important that funding not be placed too high because it is equally deleterious to put in a lot of money initially that then cannot be supported when that funding runs out. I think it has to be kept within a reasonable consideration of that which will be able to be replaced by alternative sources of funding. It is especially difficult if you do not have people who are tremendously involved in the area and activities.

Mr. CARTER. Ninety-five percent of your calls are answered without having to hospitalize your patients; is that correct?

Dr. TEMPLE. Eighty-five.

Mr. CARTER. That is a very good percentage. It saves a lot of outpatient costs and time.

I am pleased that you think approximately 37 centers would be enough. Was that the figure you mentioned?

Dr. TEMPLE. I think we really feel that in the United States, we probably need 50 to 60 poison centers. The bill, as I have seen it, has authority for 37.

That is the way I read it today which is the first time I have seen it.

Mr. WAXMAN. There is no specification of numbers in the bill.

Mr. CARTER. I thought there was. As I understand it, the poison control center would be linked up with the regional EMS system.

I know how difficult it is to treat the different kinds of poisons youngsters or anyone might ingest. I also realize how much a good toxicologist must know about poisons and that he must be on top of the potential risks at all times. As a physician, I have had to wrestle at times with these very problems and fortunately, I got through it even though I had to pump shoe polish out of a youngster's stomach. I hope I got all of it.

One of them strangely enough a full year later developed leukemia.

It is an area where you must keep on top of all poisons and the antidotes thereto. It is a very sophisticated field.

I support this amendment, Mr. Chairman.

Mr. WAXMAN. Thank you very much. I am pleased to hear that.

Dr. Boyd wanted to offer some information to us.

Dr. BOYD. We have not seen the authority under the existing Emergency Medical Services Act which gets into the operations of dispatch centers or poison control centers. It is an administrative decision and we did not think we had the legal authority to get into operations of programs. It was to plan, implement, and expand the systems.

We have provided funds for programs in poison control helping them to develop linkages, prevention packages, public education, whatever the 15 components allow us to do.

We did not feel we had the authority in this act to get into any kind of operations and administrations when we made that decision. The kind of amendment you are talking about is different from what the Emergency Medical Services Act will allow us to do as we read the law.

Mr. WAXMAN. It will then allow you to go forward with establishing these poison control centers over and above the authorization you now have under the law.

Mr. CARTER. Mr. Chairman, I would assure you it would have been much easier for me to call one of these gentlemen in the poison control centers rather than going to the treatment and toxicology information books to find the particular poison and antidote thereto. With a center like this, diagnosis would have been much better and referral would have been quite quick.

We have a helicopter which we use in Kentucky for emergency transport under an arrangement with the 101st Division there.

Thank you, Mr. Chairman.

Mr. WAXMAN. Ms. Mikulski, do you have any questions?

Ms. MIKULSKI. I have one question, Mr. Chairman.

I would like for the committee to note and the record to show that the director of the Maryland Poison Information Center is in the audience, Dr. Gary O'Dera, who has been present and available for consultation. I think we have an excellent program.

I have one general comment, Mr. Chairman. When we think of the number of phone calls or the number of inquiries responded to and the lives where possible brain damage or other types of damages have been saved by these centers. I think their work is really outstanding.

Most of us go home at the end of the day and wonder what we do with ourselves. You can go home and honestly say that you really saved life in a very concrete way.

That brings me to a question I have concerning liability. Very often when we start about setting up innovative health delivery services or forming cooperative relationships with businesses or industry, there is always the question of liability.

I wonder how, because I note in many instances the actual information services are provided by nurses, pharmacists and other than by traditional doctors, and I just wondered if the liability issue is a problem and how you have dealt with it.

Dr. LOVEJOY. I might start by responding to that.

Ms. MIKULSKI. That is not a bad question by a nonlawyer, you have to admit.

Dr. LOVEJOY. We struggled with this issue when we were starting up the Massachusetts system. We sought legal counsel. Even though to date poison centers have been remarkably free from difficulty in this regard, it all hangs over our head as a spectre.

To pursue malpractice insurance coverage, as we did in Massachusetts, it turned out to be a very expensive item to an independent. That was a reason for inserting the poison control center under the aegis of a hospital setting and falling within their malpractice coverage which they were willing to assume for the staff within the center. I believe this is the way many poison centers are today.

Dr. TEMPLE. In our center, the staff, the nonphysician staff, are all covered by a blanket policy by the hospital and with the maximum limitation by the State. They are State employees. I have to pay my own malpractice insurance as a practitioner to cover above and beyond that so I assume sort of ultimate liability for the care that goes on in the center.

Ms. MIKULSKI. Your hospital carries a separate blanket insurance policy?

Dr. TEMPLE. For those people, yes.

Ms. MIKULSKI. In any of the States, do you know whether there is any type of State legislation that granted a good samaritan clause that kind of exempted this kind of on the scene information?

Dr. TEMPLE. There is not that we know.

Ms. MIKULSKI. Doctor, are we covered in Maryland that way?

Dr. O'DERA.[1] I am not that familiar with the legislation. I think we are. I think we fall under the Good Samaritan Act of Maryland.

Ms. MIKULSKI. That would be something for you all to think about. We all know liability would be an issue and malpractice insurance is horrendous. There might be some State legislative remedy that would give a good samaritan break.

Dr. LOVEJOY. One other sort of mechanism of guarding against that is most centers have developed protocols of callback mechanisms, calling back 2 to 4 hours following the ingestion in an effort to sort of address that issue.

Dr. DONE. I might just say that the liability situation, whatever its extent may be, would greatly improve with the regionalization program. In effect, the regional centers would be setting a standard for care in that particular area of medicine and that is the measuring stick by which these things are decided.

We have 600 centers out there right now on their own with no one to whom they can relate. We can do nothing but improve in that regard.

Ms. MIKULSKI. Thank you.

Mr. WAXMAN. I want to thank this panel for the information you have given us. It has been very helpful.

Mr. CARTER. I would like to ask about the Good Samaritan Act. I would like to know about it.

Mr. WAXMAN. If you will yield to me, in the State of California and a number of States throughout the country, the legislatures have adopted laws which provide that any person treating another in the course of an emergency would not be liable for any negligent acts that may be determined at a later point and the standard of care that was rendered. This is an important piece of legislation in order to encourage people to give that emergency care which is needed without the fear the emergency care which is given may be the subject matter of a lawsuit later on in which that individual responding to the emergency would be liable.

Mr. CARTER. I recently did this procedure for a woman who was choking at a local restaurant. Fortunately, she coughed up the beef, and I did not break any ribs.

Mr. WAXMAN. I must admit that I do not know what the laws are in the district. I am sure whatever you did, you did not only with the appropriate standard of care but with a great deal of success for which the woman is grateful.

Mr. CARTER. She was really very fortunate.

Mr. WAXMAN. Thank you.

This concludes our hearing.

[The following statements and letter were received for the record:]

---

[1] Dr. Gary O'Dera, director, Maryland Poison Information Center, was in the audience.

TESTIMONY OF THE UNIVERSITY ASSOCIATION FOR EMERGENCY MEDICINE

CONCERNING

EMERGENCY MEDICAL SERVICES AMENDMENTS OF 1979

(H.R. 3039)

BEFORE THE

COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE

SUBCOMMITTEE ON HEALTH AND THE ENVIRONMENT

U.S. HOUSE OF REPRESENTATIVES

MARCH 23, 1979

The University Association for Emergency Medicine is an international organization of physician-educators with more than 400 members in the United States and Canada. The Association's major goal is to improve the quality and accessibility of emergency medical care by assuring that effective programs of education and research are organized and maintained. We are in our ninth year of working collectively to collect, analyze and disseminate information regarding the delivery of cost-effective, patient-oriented emergency care.

This is the third time that representatives of UA/EM have presented testimony to Congressional committees, beginning in 1972. Much progress has been made, due in great measure to the understanding and support we have received from a succession of concerned and responsive Congresses. But, gentlemen, the EMS problem has grown almost as rapidly as our ability to cope with it. In 1972, for example, the emergency services in our country handled just under 50 million visits. The most recent statistics indicate

that in 1977, a smaller number of emergency departments saw more than 77 million visits.

I will not regale you with any more statistics about the magnitude of the problem. We have had ample evidence in the past that you are aware of the need. However, we in the field of emergency medicine are deeply concerned that the momentum we have built toward resolving problems of education and research will be braked just as we are making real progress.

EMERGENCY MEDICAL SERVICES TRAINING PROGRAMS

In this time of concern over rising health care costs and accelerative rates of inflation, how can we retreat from programs that will increase the number of skilled physicians and allied health personnel who devote their careers to the field of emergency medicine? Is there any question that health care delivered by skilled practitioners is the most cost-effective care? As in any field of endeavor, the higher your level of skill, the less time it takes to do the job and the less support is needed from others, and the more accurate your performance.

Mr. Chairman, quality emergency care requires residency-trained emergency physicians. Currently, we have 48 residency training programs that are training emergency physicians. A well-trained emergency physician is the professional who supervises and helps train other allied health professionals who form an effective, life-sustaining emergency care team. Properly trained emergency physicians provide two-fold benefits: they personally deliver improved patient care; and they provide more effective direction and leaders to the EMS system in which they serve.

In emergency care, as in most activities, skilled leadership influences the performance of all who are involved in the system. We believe the most efficient way to upgrade the quality of care, particularly in underserved

areas, is to increase the skills of emergency physicians who serve these areas.

Now is not the time to reduce our efforts, not when the impetus for success is accelerating. We encourage the Committee to recommend extending for three years Section 789, Title VII of the Public Health Services Act at least at its current level of funding so that programs can continue for the training of all health care professionals in emergency medical care.

RESEARCH PROGRAMS IN EMERGENCY MEDICAL SERVICES

Mr. Chairman, the University Association for Emergnecy Medicine is dedicated to the development of appropriate research efforts in our field. Perhaps no other area of Emergency Medical Services requires greater support than research into the design of treatment protocols: the improvement of methods for measuring results, and the collection, analysis and distribution of data concerning traumatic injuries and life-threatening medical problems.

We have made significant progress with the support of previous federally-funded programs. But, we will lose the momentum for continued success if there is no support for new research initiatives, especially, perhaps, those new initiatives in trauma which will permit us to study the influence of systems on mortality and morbidity.

Fluctuating levels of support for research create a situation which hinders research productivity. Sound scientific research is incompatible with on-again, off-again financial support. This is especially true in EMS and trauma, where system impact may not be felt until one or two years after implementation.

A corollary of both research and planning is the accumulation, interpretation and accessibility of reliable data concerning Emergency Medical Services. We need to know more about the persons who use EMS systems, the providers of those services, and the outcome of the services provided. It

is essential that we have information about the morbidity and mortality of patients who enter the system. There must be a centralized arena for the accumulation of data relevant to the incident.

We are still guessing and estimating such critical information as:

- the total number of physicians, nurses, allied health personnel involved in EMS
- the types of facilities and equipment that are available to emergency patients
- the profile of educational backgrounds and on-the-job training represented by professionals who provide emergency care.

Certainly no single organization in the private sector and, perhaps, no consortium of such organizations, can be expected to undertake such an awesome task without the financial support of the Federal government.

We appreciate your past support, one example of which is the EMS Research Conference that was initiated last September through a grant from the National Center for Health Services Research (HS 03274).

This research program was aimed at designing and validating the performance of EMS systems and their components. This type of research will be invaluable to the directors of EMS systems in their efforts to provide accessible, responsive, and cost-effective services to the American public.

The results of this conference are still being analyzed but the methodology used indicates that valuable information will be forthcoming. The conference participants were practitioners from every segment of the EMS system, medical and non-medical. The results were impressive: more than 46 research problems were identified and prioritized; each problem was defined in detail; and recommendations were developed for research approaches to resolve the problems.

Now the providers of emergency care had a unique opportunity to help focus the attention of researchers on the problems that most need resolution. Not surprisingly, one of the major problems mentioned was that federally supported research was not aimed at problems considered top priority by those who provide emergency care.

Mr. Chairman, we who are involved in Emergency Medical Services programs of education and research commend your Committee for its past support. But, we are concerned that, in its desire to reduce the rising costs of health care, the Congress may nip in the bud a flourishing growth of programs that will ultimately provide real, lasting answers to questions about how to provide cost-effective emergency care. We encourage you to continue, at the highest level possible, your support of educational and research programs in EMS. Such support will provide for the continuation and improvement of research programs; the development of reliable and accessible data; the expansion of training programs for emergency physicians and allied health personnel; and the introduction of innovative concepts of emergency care that will benefit all Americans.

In addition, we strongly support an extention of the EMSS Act at a level of $50 million dollars for each of three years, with a gradual phase out thereafter so that federal funding ends with FY 1985.

We thank you and the Committee for this opportunity to comment on the important matters under consideration. The University Association for Emergency Medicine stands ready at any time to assist you in your deliberations in what ever way we can.

STATEMENT OF GEROLD K. V. KLEIN, M.D., AMERICAN TRAUMA SOCIETY

Mr. Chairman: Being active in private surgical practice in Maine and a Founding Member of the American Trauma Society, I have been deeply concerned with national security and survival as a prerequisite for my family's and my patient's survival when their lives should be threatened by trauma, which to me means sudden disruption of an individual's normal life process with the possibility to restore it by immediate medical action.

I have testified to that before this Committee in January of 1976, and I was deeply impressed by having federal authorities in this, my adopted country, not only allow me as a concerned citizen to present my concerns but also immediately act upon them. I so witnessed proudly in the subsequent years, as active participant as well as recipient, the implementation of the Emergency Medical Services Systems and Burn Demonstration Programs for which I had testified. I saw them produce in a very short time more positive results than any other program that I know or can remember.

Being confronted now with the sudden suggestion of our federal administration to phase out their support for these programs leaves me at loss to understand the motive for this action in a time when national security and survival seem to be in need of increasing safeguard against threatening instabilities in many parts of this globe.

I fully appreciate as a tax payer the urgent need for a balanced budget. However, the survival of a family is in jeopardy when the bread-winner is suddenly eliminated by trauma and insufficient steps are prepared or taken to restore his function by immediate medical action. So is the survival of a nation in jeopardy when the restoration of life

46-142 O - 79 - 14

Gerold K. V. Klein, M. D.
March 21, 1979

and function of its citizens threatened by trauma is limited by priority-ignoring budget concern. The best budget plan is useless when there is a decrease of people who keep the purse of the budget filled, or worse even, when the people for whom the budget was designed are gradually eliminated by trauma.

I cannot conceive that this basic fact of priority should not be understood by our administration which I proudly see proclaiming preservation of human dignity as a supreme law and which therefore should be aware of the highest priority in health care being preservation and restoration of life and function and relief of suffering. Quality and dignity of human life can only be preserved and improved if human life itself is protected against extinction by trauma. Trauma care, therefore, seems to me justified as one, if not the top priority, in health care.

What then may lead our administration to interfere with trauma care by trying to phase out support for Emergency Medical Services and Burn Programs, instituted in the first place to take care of such priority?

Could it be the belief that these programs have accomplished their goals? Certainly I witnessed great accomplishments in these fields in the past years.

In my home State of Maine, just some four years ago, we were frustrated by not being able to get an Emergency Medical Services System going or D.H.E.W./EMS grant approved until Dr. David Boyd came to Maine and explained the program to the Health Planning and Provider Community.

Not by written guidelines only mailed from his Washington office but by dynamic personal on-site advice and guidance to the point of personally participating and critiquing in demonstrations of the implementation and advantages of an Emergency Medical Services System did he give indispensable technical assistance on successive occasions and even went out and recruited dedicated and competent physician -and other professional- leadership. The result of this sound federal and state cooperation is that we now have in Maine probably one, if not the best, rural Emergency Medical Services program in the country as documented in the attached fact sheets submitted by the outstanding Director of the State of Maine Emergency Medical Services, Dr. H. Alan Hume. The entire Emergency Medieal Services community, including a dedicated corps of volunteers, as well as a highly successful coordinated cooperation of all agencies connected with emergency medical care -such as the Department of Transportation to mention only one as an example of the equally acting other agencies- are pulling together with Emergency Medical Services Systems being the lead agency in the State of Maine to provide the best possible medical emergency care to our citizens. This story I know has been replicated across the country and can be used as a baseline for a National Health Care built on a selfless cooperation of all national agencies concerned with emergency medical care with the federal office of D.H.E.W./EMS as a lead agency responsible to the highest federal authority for cost-containing utilization as well as immediate life preserving action capability in daily medical emergencies of individuals everywhere in the country but also indispensable to guarantee national security and survival in case of mass catastrophes and international crises.

But I also know that in spite of this progress, the job is far from being completed in the State of Maine as well as in certainly other areas of the country. Probably only a third of the nation can now see day-to-day a sound effective Emergency Medical Services Systems in their communities. In fact, the hard part is yet to come: more difficult rural, wilderness, and urban communities must be provided. The same grants, technical assistance, and other opportunities are in need if the intent of Congress is to achieve a truly national Emergency Medical Services program, a now obviously obtainable goal.

Could the proposal of the federal administration to phase out assistance for Emergency Medical Services programs then be induced by a belief that the different states and communities can now continue these programs under their own responsibility?

From my observation, I firmly believe that in spite of all the positive results obtained in a shorter time period than any other program I know, the nation-wide implementation has not yet far enough progressed to be sure that the different states and communities are capable to maintain and continue on their own a guarantee of life preservation for their citizens in case of emergency medical need on an excellency level outlined by a national Emergency Medical Services program and, to my knowledge, firmly accepted by the Congress of the United States as a necessity to assure national security and survival. Until firm and responsible state and county commitments, based upon realistic economic projections have been established, phasing out federal help would probably

not only stop completion of many programs started in the past years by federal help, but eliminate much of the so-far reached accomplishments.

Besides that, phasing out federal guidance would undermine one of the now evolving basic advantage of a national Emergency Medical Services Systems in safeguarding national security and survival, i.e. serving as lead agency for all -and I am told, more than twenty- federal agencies involved in emergency medical care. Proper coordination of these agencies by an Emergency Medical Services lead agency with authority to coordinate action as well as funding, and accountable to the highest office of this country, could assure the most excellent performance of all these agencies in case of national emergencies as well as the most economic cost containment in the daily delivery of emergency medical care in the country.

From my observation, the national Emergency Medical Services program has brought together every professional and consumer group into a cohesive voice and action for emergency medical services of a highly sophisticated level. Emergency rooms, critical care units and organizations, physicians and surgeons, health care planners, governmental health personnel and consumers, are brought together into a massive volunteer effort to confront this major national health problem of trauma and emergency medicine. The testimony of the American Trauma Society documents these facts so well that repetition here is not needed.

Let me add just one personal recent observation. I have just returned from the American Burn Association annual meeting in New Orleans where the Burn Demonstration Programs were one of the major discussions at all professional levels. As you may remember, these Burn Demonstration Programs were funded three years ago in a firm stand of Congress against the

administrations lack of support. This approach of Congress to take a first-hand look at the national burn problem in terms of medical needs, clinical effectiveness of existing treatment facilities as well as overall cost data, was the center of many discussions, with the accuracy and importance of this first-hand data documentation, being considered by a large number of physicians and nurses as to be an effective pilot program for a similar approach in all other health care fields, to start with in the field of trauma care in its top priority for national survival. The emerging impact of such an approach on cost containment of medical care seems to me to be worthwhile to be applied to the entire national health care in a time when health care costs seem to be interpreted as uncontrollably spiralling. An accurate documentaton such as in the Burn Demonstration Projects may very well clear some of the many controversies and may so prove one of the main leads to medical cost containment. Therefore, the completion of the present Burn Demonstration Programs and their application to a trauma demonstration program with additional emphasis on public orientation and education in the trauma problems and an organization of national continued education of physicians and nurses in trauma management seem to me to be at this date a worthwhile step to be taken into consideration for federal funding as suggested and outlined in the testimony of the American Trauma Society.

Mr. Chairman, as in my testimony before this Committee in January of 1976, I again express my deep graditude for asking me to present my concerns and thoughts, which I can assure you are the concerns of all my patients and friends and which I am sure are your and our administrations concerns. Your willingness as well as -I am sure- the willingness of our Executive Branch to listen to me as a private citizen assures me that indeed the basis on which my chosen country is built -utmost regard for the individual- will induce the administration to take another hard look at its proposed "phasing out" of Emergency Medical Services funding and on the advice of Congress will continue to help building a nationwide network of emergency medical service and trauma facilities as one of the, if not the first priority, of national health care to insure national security and survival.

Thank you.

MAINE EMS

Basic Life Support services available as percent of regional population:

Region 1 - 100%
Region 2 - 100%
Region 3 - 100%
Region 4 - 100%
Region 5 - 98%

Advanced Life Support services available as percent of regional population:

Region 1 - 37%
Region 2 - developmental stage
Region 3 - 75%
Region 4 - 5%
Region 5 - developmental stage

Physicians and nurses certified in ACLS as percent of total available personnel (est. as total practicing personnel need):

Region 1 - 28% ED physicians/80% ED nurses
31% ICU/CCU nurses
Region 2 - 32% ED physicians/44% ED nurses
43% ICU/CCU nurses
Region 3 - 11% ED physicians/84% ED nurses
67% ICU/CCU nurses
Region 4 - 5% ED physicians/19% ED nurses
16% ICU/CCU nurses
Region 5 - 22% ED physicians/37% ED nurses
40% ICU/CCU nurses

Citizens trained in CPR as percent of regional population:

Region 1 - 3.4%
Region 2 - 2.4%
Region 3 - 5.6%
Region 4 - 3.6%
Region 5 - 2.2%

and/or Advanced First Aid

Public Safety Officials trained in Crash/Injury Management as percent of regional population:

Region 1 - 24%
Region 2 - 7%
Region 3 - 48%
Region 4 - 19%
Region 5 - 44%

Ambulance personnel trained as EMT's:

Region 1 - 54%
Region 2 - 51%
Region 3 - 66%
Region 4 - 53%
Region 5 - 45%

Total Basic EMT's trained to advanced level ([illegible]) as percent of total EMT's:

Region 1 - 23%
Region 2 - 7%
Region 3 - 21%
Region 4 - 2%
Region 5 - 0%

Ambulance runs staffed by EMT's as percent of total runs:

Region 1 - 75%
Region 2 - 85%
Region 3 - 97%
Region 4 - 65%
Region 5 - 88%

Total number of ambulance services/ambulance vehicles:

Region 1 - 70 services/99 vehicles
Region 2 - 21 services/43 vehicles
Region 3 - 24 services/31 vehicles
Region 4 - 38 services/57 vehicles
Region 5 - 10 services/26 vehicles

Ambulance services centrally dispatched as percent of total services ([illegible]):

Region 1 - 63%
Region 2 - 57%
Region 3 - 58%
Region 4 - 66%
Region 5 - 13%

Average response times of ambulance services in minutes for urban/rural areas:

Region 1 - 7 min. urban/27 min. rural
Region 2 - 7 min. urban/27 min. rural
Region 3 - 5 min. urban/15 min. rural
Region 4 - 10 min. urban/30 min. rural
Region 5 - 8 min. urban/14 min. rural

Availability of 911 as percent of regional population:

Region 1 - 2%
Region 2 - 6%
Region 3 - 43%
Region 4 - 2%
Region 5 - 0%

Utilization of Statewide run reports as percent of ambulance services representing percentage of regional runs:

Region 1 - 88% services/98% runs
Region 2 - 89% services/88% runs
Region 3 - 100% services/100% runs
Region 4 - 90% services/78% runs
Region 5 - 90% services/59% runs

Medical Care Development, Inc.
Emergency Medical Services Project

MZ:al

3/12/79

1976 ADMISSIONS, TRANSFER RATE, MORTALITY RATE

ICDA-8 Code	Trauma 800-803 850-854	Spinal 806	Burns 940-949	Poison 965.4 970.0-983.2	Behavioral 290-302 303, 304	Cardiac 410	Neonate V21 777
Southern Admissions	679	14	125	39	1,833	994	236
Transfer Rate	2.5%	7.1%	4%	10.3%	9.0%	8.1%	16.5%
Mortality Rate	4.4%	0%	0.8%	0%	0.2%	19.0%	7.6%
Tri-County Admissions	325	5	66	9	928	429	131
Transfer Rate	2.8%	20.0%	1.5%	11.1%	9.4%	6.1%	18.3%
Mortality Rate	2.5%	0%	1.5%	11.1%	0.6%	20.7%	7.6%
Kennebec Valley Admissions	415	6	75	10	1,046	448	137
Transfer Rate	2.9%	16.7%	2.7%	0%	4.7%	4.0%	24.1%
Mortality Rate	1.9%	0%	1.3%	0%	0.3%	23.4%	5.8%
Northeast Admissions	523	10	83	21	1,463	722	162
Transfer Rate	3.1%	0%	2.4%	4.8%	4.5%	9.0%	22.2%
Mortality Rate	3.1%	0%	1.2%	0%	0.3%	21.1%	10.5%
Aroostook Admissions	219	3	46	3	674	280	55
Transfer Rate	4.1%	0%	4.3%	0%	6.7%	7.1%	23.6%
Mortality Rate	1.8%	0%	4.3%	0%	0.1%	18.2%	9.1%

EMS: AN ECONOMICAL APPROACH FOR MASS CASUALTIES

To insure national security and survival in case of local, national, or global disasters, emergency medical care should be available immediately in a system functioning nation-wide, even if certain geographic regions should be destroyed. Maintaining a system of dormant facilities in anticipation of this casualty influx is not economically reasonable. Only preparation of existing daily functioning health care facilities which could be mobilized either in part or completely as trauma burn units with multi-purpose facilities for critical care and with nation-wide coordination within the national EMS system could economically offer an immediately available nation-wide system of life and function-preserving critical care facilities. For this system, it is mandatory to upgrade continually all presently functioning private health care delivery units with regard to facilities, communication, transportation, and equipment. This would enable them to instantly transform into components of a national system of trauma/burn units within the national EMS system. This above all means maintaining in each of the nation's health care facilities a staff of dedicated physicians, nurses, and allied health personnel who commit themselves voluntarily to be instantaneously available if necessary and to continuously reacquire and maintain up-to-date knowledge and skill in multi-disciplinary care capabilities in life-preserving medical actions. At the same time, this system would facilitate continuous upgrading to the highest standards in the daily delivery of emergency medical care. A pilot program has been conducted for the last half-year and has proven so far successful in stimulating volunteer commitment of physicians in organizing this system.

Gerold K. V. Klein, M.D.
President
Maine Division
American Trauma Society

Parkview Professional Bldg
Upper Maine Street
Brunswick, Maine 04011

TESTIMONY OF THE AMERICAN COLLEGE OF EMERGENCY PHYSICIANS

CONCERNING

EMERGENCY MEDICAL SERVICES AMENDMENTS OF 1979

(H.R. 3039)

BEFORE THE

COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE

SUBCOMMITTEE ON HEALTH AND THE ENVIRONMENT

U.S. HOUSE OF REPRESENTATIVES

MARCH 23, 1979

The American College of Emergency Physicians (ACEP) was formed in 1968 by a group of physicians responding to the growing public clamor for improved emergency medical care. Last year, as ACEP celebrated its first decade of service, our membership passed the 9,500 physician mark.

The primary goal of ACEP is the improvement of the practice of emergency medicine throughout the United States. We seek to accomplish this through a variety of aggressive, innovative programs primarily in the area of education. The College sponsors national and regional scientific meetings, conferences, and seminars for the exchange of professional information with leaders in community emergency medicine. ACEP also makes available informed representatives to the local and national councils of government to assist in governmental efforts to formulate national policy.

The strengthening of the nationwide EMS system is another guiding objective of ACEP. We strongly supported the passage of Public Law 93-154, "The

Emergency Medical Services Systems Act of 1973," and presented testimony when the law as amended in 1976.

We are here to speak again in support of this legislation.

Public Law 93-154 was enacted by Congress to meet a desperate need for improved emergency medical services. The objective was to make the benefits of improved emergency medical service available to citizens throughout this country. This was to be made possible through an arrangement of personnel, facilities and equipment in a coordinated and effective manner within and between logical geographic and demographic regions. We believe in, and are the strongest supporters of, this objective. We believe that the EMS system must be easily accessible to patients without financial, geographical or temporal barriers.

In some parts of the country this objective has not been reached. The basic groundwork must still be completed and in other areas development of sustained EMS capability is at a crucial point. A gradual phase-out of federal support starting in 1980 would be premature. We therefore ask the committee to consider favorably a proposal to extend for five more years the provisions of the EMSS Act with funding at a level of $50 million each year for the first three years. We support a phase-out in the final two years with federal funding ending with FY 1985.

In the six years since Public Law 93-154 established a federal agency to assist in the development and coordination of EMS systems, we have watched with increasing hope as communities have moved through successive stages of the development of this EMS capability. We are pleased with the progress reported which shows that 75 of the 300 EMS regions will have achieved advanced life support levels in the next three years. An additional 176 regions will be providing a basic life support level of service in this same period.

However, these same figures show that 225 regions of the country will not have reached what we would consider the optimal level of EMS. Even more ominous is the fact that 49 regions will not meet even basic life support standards.

This is unacceptable and Congress cannot begin closing out its involvement in EMS at this stage and consider the six years and $200 million spent to date a record of success.

We believe that the target proposed by various EMS planners for the achievement of advanced life support level in 85 percent of the country's EMS regions by FY 1985 to be reasonable and an appropriate goal for this committee to consider as it decides on authorization level and the term of the EMSS Act extension.

ACEP urges you to vote favorably on a five year extension.

In the process of reaching for these goals, we believe the physician has been and will continue to be the hub. The emergency patient is commonly undifferentiated, has little or no available medical history, and frequently is at a crisis juncture with his or her medical problem. This places the highest premium on the physician's skill to rapidly and accurately diagnose the problem.

In the EMS system this skill must be available via radio and telemetry to the emergency medical technician. It must be available to community planners who are responsible for the overall design of an effective and efficient EMS delivery program for the community. It must be available to train the public and other professional participants in the EMS system. Above all, this medical skill must be available in the emergency department, or other sites that might be developed in the future, to provide diagnosis and treatment.

We are proud of the part emergency physicians, in particular ACEP members, have played in bringing the nationwide EMS system to the current level of maturity. This has been accomplished by physicians who by-and-large have achieved their level of skill in emergency medicine through years of experience

and repeated exposures to the undifferentiated, crisis-state patient. The practice-training route is a time-consuming and inefficient approach to providing the EMS system with the kind of skills a good emergency physician can provide. How much better it would be to condense this experience to the extent possible into a concentrated training program. This was the reasoning which led to the opening of the first emergency medicine residency in Cincinnati in 1970.

This Committee played an important role in the development of emergency medicine residencies when it added provisions for training in emergency medical services to the Emergency Medical Services Systems Amendments of 1976, (PHS, Section 787 Title VII). This provided training money for the three major manpower components of EMS - emergency physicians, emergency nurses and emergency medical technicians.

We are here to ask the Committee to again include provision for funding of training in emergency medicine services as part of this legislation.

Section 789 authorized ten million dollars in training funds for Fiscal Years 1977, 1978 and 1979. In each of these years, Congress has seen fit to appropriate six million dollars. Others will be able to report on the positive impact of funds for training emergency nurses and emergency medical technicians. I am pleased to bring the Committee up to date on the approximately four million dollars appropriated during the last two years that have been used directly or indirectly for training emergency medicine specialists.

In total, 29 programs received funds for training. In fiscal year 1978 alone these programs were made available to 4,618 trainees in medical school, emergency medicine residencies and physician continuing education. This means that almost 5,000 physicians were exposed to some aspect of emergency medicine training as a result of federal funding during the past year. Of special

interest are the seven residency programs with 77 residents which received funds during this past year. They are of special interest because it is the residency-trained physicians to whom we are looking to take the leadership positions in emergency medicine in the years to come.

These 77 residents will eventually be added to the 408 who have graduated from residency programs since 1970. These specialists will take key positions in the EMS system where their contributions can be maximized in the steady upgrading of the system. These specialists will, of course, contribute their knowledge and skills in diagnosis and treatment. But equally important, they will lend their expertise to the upgrading of skills of the nurses and EMTs, who are the key partners of medicine in the provision of EMS, and to the upgrading of skills of the many other physicians, who are directly or indirectly involved with EMS.

But, a total of 408 residency-trained physicians today does not nearly meet the need for these skilled practitioners in emergency medicine.

Based on rough projections, there are at least 20,000 physicians who practice either full-time or part-time emergency medicine or who fulfil medical staff responsibilities in the emergency department.

These are the physicians who the public views as the "first line" of medical treatment in the event of medical crisis. These are the physicians who will be asked to treat the patient in crisis for whom there is little prior knowledge, often with the complication of drugs or alcohol, and for whom immediate life-and-death decisions must be made.

Many of these physicians are simply not equipped to meet the public's expectations or the standard we who have committed our careers to emergency medicine believe ought to be an acceptable level of capability.

46-142 O - 79 - 15

In those hospitals that choose to staff their emergency department with medical staff on a rotation basis, crisis patients are in the hands of physicians who are highly trained in narrow aspects of medical specialties but these same physicians may frequently be at a distinct disadvantage in the treatment of many common emergency conditions.

Great strides have been made in introducing these physicians and others who have chosen emergency medicine as a second career to the methods and skills of dealing with emergencies. However, ACEP feels continuing medical education is not the solution. ACEP believes that the best solution is placement of residency-trained emergency physicians in strategic positions throughout the EMS system, primarily in emergency departments.

It is not our intention to set as a target the placement of residency-trained physicians in every position of every emergency department in the country. This is impractical and, further, we believe the profession is enriched by the flow of physicians from various specialties through the emergency departments. However, the College has established some targets which we feel will assure the emergency medicine patient the most dependable and consistent quality of care that is possible within the limits of cost effectiveness.

One of the College's long range targets is the placement of residency-trained physicians in each position of the emergency departments that have or can support 24-hour physician coverage. We calculate that in 1979 this works out to 1,283 hospitals. Based on patient volume in these hospitals, full-time physician work force of 8,366 is needed for adequate coverage. We believe that each of these positions should eventually be filled by residency-trained physicians.

However, this first target deals only with 1,283, or approximately 25 percent of the 5,238 emergency departments across the country. These are the emergency departments that are by-and-large in urban areas. The remainder are lower volume emergency departments that, while they perhaps cannot support 24-hour dedicated physician coverage, still are a vital link in the delivery of EMS. These emergency departments must have access to the leadership and skills contributed by residency-trained physicians.

ACEP has selected as a second target the placement of a residency-trained physician in at least one of every three of the 3,955 emergency departments whose volume cannot support 24-hour full-time physician coverage. We calculate that in 1979 this works out to a manpower need of 1,318 additional residency-trained physicians.

These 1,318 physicians will serve as directors of emergency departments and the principals in their hospitals' EMS programs. They will also serve as the focal point in critical locales for the nationwide EMS network. We believe they will be vital to the continuation of a coordinated nationwide EMS system once federal participation that currently serves as the glue is withdrawn.

A third target has to do with manpower needs for federal hospitals. Of the 77 million visits to emergency departments in 1977, 4.5 million were seen in federal hospitals. Despite this figure which accounts for six percent of all emergency department visits there are no residency-trained emergency physicians practicing emergency medicine in any federal hospital. This area of medicine cannot be neglected. ACEP has calculated that in 1979 there is a manpower need of 500 residency-trained emergency physicians to provide adequate emergency medicine specialist service in the 217 federal hospitals.

These targets alone yield a projected manpower need of 10,184 residency-trained emergency physicians to satisfy minimum standards of service for 1979.

How will these needs change over the next few decades? These are the years we must be considering as we plan training programs. Everything points to change. Some factors may work to decrease the need for emergency medical specialists but the weight of evidence leads us to anticipate a growth in need.

(a) Population growth by itself is certain to increase pressure on emergency departments.

(b) Growth in the aged population will increase the demand for care through emergency departments. Figures show that the population 65 years and older requires one-third more medical care.

(c) EMS leadership positions, especially on the state and regional levels, will become more important as the federal participation is withdrawn. These should be filled by residency-trained physicians who can assume leadership in the clinical as well as system sphere.

(d) Medical education process will need qualified educators for the training of emergency medicine residents as well as medical students in the skills and knowledge of emergency medicine. These will quite naturally come from the ranks of the emergency medicine residency graduates.

(e) Consolidation of emergency departments is certain as health providers, government agencies and the public look for ways to reduce the cost of health care delivery. ACEP recognizes that some emergency departments exist only because they represent

a point of entry for hospital admissions and are maintained for economic reasons even in situations where such service is duplicative and redundant. We expect this consolidation which will result in a concentration of emergency department visits. This should increase the number of hospitals that can support 24-hour physician coverage of emergency departments. As a result we expect this to actually increase the need for residency-trained physicians.

(f) The developing phenomenon of "free standing" or non-hospital-based emergency care centers represents another way emergency medicine may change in the next decades. If this phenomenon catches on, we will see a shift from an exclusive hospital-based delivery of emergency medicine. ACEP is examining the full ramifications of this phenomenon in terms of cost and quality of care. We urge the Congress to do the same. However, we do not expect this phenomenon to have a significant impact on manpower needs.

(g) We caution against overzealous estimation of the percentage of emergency department visits that may be diverted from the emergency department as alternatives are found for delivering primary care that is often provided in the emergency department. Emergencies cannot be categorized until after the diagnosis is made. A patient determines whether or not there is an emergency and selects the site of care based on this determination. An inappropriate visit can only be one in which the emergency

department is chosen in lieu of other more appropriate, less expensive sites of care solely on the basis of convenience.

Where is emergency medicine in its efforts to generate this number of residency-trained specialists?

Since 1970 we have seen a steady growth in the number of emergency medicine residencies. By June 1978, these were 48 programs which had produced a total of 408 emergency resident graduates. The growth can be seen in the following figures:

Year	Emergency Medicine Residency Programs	Emergency Medicine Residents in Training
1970	2	3
1971	5	11
1972	7	24
1973	16	42
1974	26	72
1975	32	165
1976	39	293
1977	42	302
1978	48	399

By the year 2000 we expect to see the beginning of a major exodus of practice-trained physicians due to retirement who currently occupy most positions in emergency medicine. Projecting the current rate of resident output over the next two decades, we can optimistically hope for an output of no more than 5,200 residents. This would leave the profession with approximately 5,000 fewer than the target figure of 10,138 based on current needs.

To meet the demands for specialists in emergency medicine as we move towards the Twenty-First Century, ACEP has set its sights on increasing the number of emergency medicine residencies by five in each of the next five years. This will allow emergency medicine to reach a manpower target of 10,575 residency graduates by the year 2010.

We anticipate that about this time the total number of residency-trained emergency physicians will begin leveling off as the early residency-trained emergency physicians begin leaving practice through retirement. We further expect a stabilization of the number of residency-trained practitioners in the field by 2020 with a total of approximately 13,000 residency-trained emergency physicians.

But it is impossible to approach this target with the current output of graduating residents. ACEP is aggressively supporting the expansion and increase in the emergency medicine residency within the strict standards of quality which the Department of Health, Education, and Welfare has endorsed. We ask this Committee and Congress to join us in this effort by extending for another three years the provision of Section 789, Title VII of the Public Health Services Act that would authorize ten million dollars peryear for EMS training activities.

We thank the Committee for allowing us the opportunity for presenting our comments.

AMERICAN HOSPITAL ASSOCIATION
444 NORTH CAPITOL STREET, N.W., SUITE 500, WASHINGTON, D.C. 20001 TELEPHONE 202—638-1100
WASHINGTON OFFICE

STATEMENT OF THE AMERICAN HOSPITAL ASSOCIATION
TO THE SUBCOMMITTEE ON HEALTH AND THE ENVIRONMENT
OF THE
HOUSE INTERSTATE AND FOREIGN COMMERCE COMMITTEE
ON H.R.3039, THE EMERGENCY MEDICAL SERVICES SYSTEMS AMENDMENTS
OF 1979

March 27, 1979

The American Hospital Association, which represents more than 6,400 member institutions and over 27,000 personal members, appreciates this opportunity to present our views and recommendations on H.R.3039, the Emergency Medical Services Systems Amendments of 1979. The legislation would extend the authorizations in Title XII and Section 789 of the Public Health Service Act for another three years and authorize assistance for poison control and assistance centers beginning October 1, 1979. These authorizations provide for grant and contract support for emergency medical services (EMS) systems, research and training, as well as demonstration projects in burn injury programs and a new program for poison control and treatment centers.

The AHA has long been involved in efforts to improve emergency medical services and has provided testimony in support of both P.L.93-154, the Emergency Medical Services Systems Act of 1973, and P.L.94-573, the Emergency Medical Services Amendments of 1976.

As a result of this law, communities are beginning to pool their resources in a rational manner in order to provide prompt and complete emergency care. The AHA has encouraged hospitals to play a key role in the development of comprehensive and integrated EMS systems. Hospitals are involved in the training of emergency medical technicians and emergency department nurses, physicians and related personnel. Moreover, they provide leadership

CABLE ADDRESS: AMERHOSP

in achieving regionalized goals to form local EMS councils, to develop areawide disaster plans and to design systems for the categorization of services.

The AHA commends the Division of Emergency Medical Services of the Department of Health, Education, and Welfare for its efforts to date in the planning, establishment, and development of many EMS systems. Five years after the inauguration of the EMS program, 282 regional EMS systems have been funded by grants from the Division--a figure which will rise to 291 by the end of this fiscal year. These ptograms are in varying stages of development, and many of them need continuing support in order to become fully operational. Moreover, new programs are needed in 13 regions, in order to complete the network of services envisioned in P.L.93-154.

We strongly support H.R.3039, introduced by Rep. Henry Waxman (D-Ca.), which extends the authority for the EMS program for three years at appropriate funding levels and adds a new program for poison control and treatment centers. We believe that a three-year authorization will provide necessary time for further development of existing programs, and initiation of some new programs, while allowing for congressional oversight during this period.

In addition, a three-year extension, as proposed in H.R.3039, would allow more time for communities to address certain problems, such as the integration of services and communication systems. In order to achieve comprehensive EMS systems, all relevant public service segments of the community, including hospitals, police, and fire services; public and private ambulance services; and civil defense and relevant local governmental units, must ideally be incorporated into the system. Coordinating these disparate groups to achieve the common goal of providing comprehensive and high quality emergency medical services has often proven to be very difficult.

Front-end federal grant money has served as a catalyst to create a federal-state-local EMS partnership. However, both time and funds are still needed to overcome the inherent problem of jurisdictional divisions.

Communications and licensing are illustrative of two problem areas where full integration and coordination have not yet been fully developed. Comprehensive EMS systems require that police and fire rescue units, as well as ambulance services, join forces to assure the orderly transport of emergency or disaster victims to local hospitals. This entails the integration of radio communications and central dispatch functions. In a fully developed system, this means that complications should not result from crossing jurisdictional lines. Currently, emergency communications frequencies used in one community often interfere with those in an adjoining community. Coordinative mechanisms still need to be promulgated to resolve these types of problems. Similarly, if the goals of the EMS program are to be achieved, communities must continue to resolve problems concerning reciprocity agreements for licensing requirements. Too often, licensing requirements prevent the establishment of EMS systems that cross political boundaries. This is expecially true for emergency medical technicians who provide care to patients while in transit.

In order to determine the progress of EMS systems in attaining some of these goals, AHA recommends that funds be made available for the development of a comprehensive data collection system that will provide the basis for evaluating the problems and effectiveness of all EMS systems nationwide. At present, there is little reliable data on the results achieved by EMS systems.

Finally, the AHA endorses the provision in the legislation which authorizes a new program of poison control and assistance centers. In supporting this initiative, the AHA urges that priority be given to hospital-based centers, since hospitals in many communities

are focal points for poison control and treatment. Hospital emergency rooms are often best able to provide immediate treatment and back-up services to poison victims. In order to take advantage of their effectiveness and to avoid duplication of existing facilities, we believe a priority should be accorded to grant applications for hospitals. In the interest of improved delivery of poison control services and the encouragement of poison information dissemination, AHA recommends that the Subcommittee approve the establishment of this new program.

In conclusion, we believe that in order to ensure that EMS systems progress toward independence from federal financial support, P.L.94-573 should be extended for three years at current appropriation levels. Experience has shown that the establishment of comprehensive EMS systems requires a strong commitment from the federal government, in technical and financial aid if the obstacles noted earlier are to be overcome. Since H.R.3039 affirms this commitment, AHA strongly endorses the bill.

We appreciate this opportunity to present our views and would be happy to provide any additional information which the Committee may require.

TESTIMONY OF

THE NATIONAL INDIAN HEALTH BOARD

AND

THE NATIONAL CONGRESS OF AMERICAN INDIANS

AND

THE AMERICAN INDIAN HEALTH CARE ASSOCIATION

AND

THE NATIONAL TRIBAL CHAIRMEN'S ASSOCIATION

This testimony is presented jointly by the four major national Indian organizations listed above. Together, we represent the vast majority of Indian and Alaskan Native people on reservations, urban and rural, Indian health consumers and providers, tribal leaders, and tribal health departments. We recommend certain systemic changes in the way Indian Health Service budgets and allocates monies for Indian health services in order to promote more rational decisions and to improve the level of health care for Indian people.

Area Indian Health Boards have been providing advisory and consultative services for the IHS Director, IHS Area Directors and Program Officers since 1969. These advisory bodies represent an indispensable source of knowledge and information for IHS. In this era of Indian Self-Determination, it becomes extremely important for Indian Health Service to maintain strong relationships with Area Indian Health Boards, particularly as the need for Indian involvement in the health programs serving them increases. However, more recently, Indian people who serve on these boards feel threatened by IHS. They feel that IHS will reduce or even restrict funding for the types of services they have been providing in the past. As an added means of protection against arbitrary cessation of funding, the Area Boards are requesting a separate line item in the budget for funding their operations. Given the increased responsibilities of Area Boards, we find this request to be justified and appropriate. We further request that language be adopted in the Committee report which supports the continuation of funding for Area Health Advisory Boards.

We would also like to recommend a basic change in the way IHS submits its budget request to this Committee; that IHS be mandated to adopt the guaranteed benefit package approach that is used in the funding of Medicaid and Medicare programs. During the past year, this Committe has taken steps to rationalize the appropriations process for new hospital construction by requiring IHS to establish a professional priority list. The guaranteed benefit package approach to funding would similarly rationalize the appropriations process for basic patient care.

Persons using Medicare or Medicaid are never told that they will not be able to receive a certain medical service or procedure because of the lack of funds. This is because those programs are funded on a guaranteed benefit package approach. The Department of Health, Education and Welfare projects the number of services and procedures that will be needed by Medicare and Medicaid beneficiaries, determines the cost of each of those services, and then multiplies the two figures in order to come up with its budget. On the other hand, Indians continually are being faced with the response that they cannot get services because there is insufficient money, or that they will have to accept second-rate services because of budget shortfalls. The reason for this goes back to the way IHS prepares its budget submission. The Committee knows how much IHS received

last year and how much it is requesting for next year. But it never is told how much IHS needs to provide the basic health services and procedures to the persons served by IHS. As a result, tribes must come into Washington from all over the country to appear before this Committee and seek small amounts of funding to correct some outrageous situation in the health care services on their reservations. While this Committee is able to put band-aides on these individual situations, it is never able to get a handle on the overall picture that would obviate the need for many of these tribes to come in and testify.

If, along with its official budget submission and its hospital construction priority list, IHS was required to come before this Committee with a budget developed along the guaranteed benefit package approach, the Committee would be able to get a handle on the overall situation. For example, it would be able to see that the greatest shortfall was in the area of outpatient services (or contract care, or whatever) and focus its additions to the IHS budget in that area. But under the present system, it is almost impossible to come before the Committee and seek additional funds for a particular area of services (e.g., add money for outpatient care generally) because it is impossible to know where the most serious problem lies. Instead, the Committee is relegated to making patchwork efforts to plug holes on almost a reservation-by-reservation basis. We do not expect that all the money needed to pay for a guarantee package would become available immediately, but like the hospital construction priority list, it will give a clear picture of need and permit the Committee and the Indian community to begin making more precise decisions about strengthening the Indian health system.

We also request that changes be made in the system for allocating position slots. Each year this Committee is asked to add additional staff slots to enable a new IHS facility to open or to allow a facility to use all of the new space or equipment the Federal government has just paid for. This is necessary because the Office of Management and Budget's single-minded focus on holding down positions will allow it to accept a situation where newly built health facilities go unused or underused, thereby wasting the money spent on the unused facility or equipment. To correct this, we ask that IHS be exempted from the position ceiling and be allowed to employ as many persons as its budget will allow. The budget constraint is more than sufficient to insure against IHS overstaffing, but it will allow IHS to make rational decisions on staffing and to insure that expensive facilities or equipment do not go wasting because of lack of staff.

On this same point, we ask that the Committee provide that IHS be exempted from any position freezes imposed by the Administration. Inability to fill a position in IHS does not mean that some papers will not get shuffled; it means that some basic health services will not be provided. For example, during the present position freeze,

a number of IHS nursing positions went unfilled, endangering the lives and health of hundreds of Indians. IHS, with the support of the Indian community, eventually gets these freezes lifted for IHS; but during the the three or six months it takes to do so, our basic health care services suffer drastically.

We also ask the Committee to provide $10,500,000 to upgrade Emergency Medical Services on reservations in fiscal year 1980. Tribal governments place a high priority on EMS response and transport service. In recognition of this priority and of the critical need, we ask this Committee to support tribes in sustaining this program. Unfortunately, recent proposals by the Carter Administration threaten to make EMS funding even harder to obtain. With the passage of the Emergency Medical Services Systems (EMSS) Act of 1973, Congress made a commitment to improve emergency health services nationwide. More than $146 million has already been disbursed through the HEW Division of Emergency Medical Services because of the law, and original plans call for more than $400 million to be spent by FY1985. However, the Carter Administration has proposed that the law be phased out by FY1982, an action that could diminish future federal support for Tribal EMS programs, and destroy essential services that mean the difference between life and death in so many Indian communities today.

Finally, we request full appropriation of authorized funds for the mental health component of Title II of P.L. 94-437. Mental health related programs will alleviate the human misery and despair of Indian and Alaskan Native people on reservations and in numerous villages in Alaska, the most virulent of all diseases, the despair which accounts for alcohol abuse, suicide, family disorganization, depression, child abuse, and violence in all forms. We also support the efforts of the IHS to secure adequate funding for the development of the Carter Adminsitration's proposed Community Mental Health Systems Act and ask that immediate steps be taken to insure that Indian mental health needs are met.

In conclusion, the representatives of these organizations would be willing to work with the staff of this Committee in further defining the approaches recommended in this testimony.

AMERICAN DENTAL ASSOCIATION

WASHINGTON OFFICE • SUITE 1004 1101—17TH STREET N.W. • WASHINGTON, D.C. 20036 • PHONE 202/833-3036

March 30, 1979

The Honorable Henry A. Waxman
Chairman
Subcommittee on Health and Environment
Committee on Interstate and Foreign
Commerce
2125 Rayburn House Office Building
Washington, D. C. 20515

Dear Mr. Chairman:

I am writing on behalf of the American Dental Association to comment on certain provisions of H.R. 3124, the Emergency Medical Services Systems and Health Information and Promotion Extensions of 1979 which was developed by the Administration. We would appreciate having these comments included in the record of the hearings which you are holding on this and similar legislation.

Section 4 of this bill would increase the authorization for project grants for preventive health services under Section 317(j)(4) of the Public Health Service Act. Under this subsection grants can be made for preventive health services programs other than those for which specific authorizations are established under the law.

It is under the authority of Section 317(j)(4) that federal funding for fluoridation activities at the community level is authorized. As you know fluoridation of public water supplies at optimal levels is one of the most effective disease prevention measures known to science. More than 30 years of experience has demonstrated that water fluoridation is safe and economical and that it can reduce the incidence of dental caries by as much as 65%.

President Carter in his fiscal year 1980 budget has requested that $6.2 million be made available for fluoridation activities. This funding would be provided through subsection 317(j)(4). However,

currently the authorization limit under that subsection is $1 million for fiscal year 1980. Section 4 of H.R. 3124 would increase this authorization level to $5 million for fiscal year 1980 and the sums necessary for fiscal years 1981 and 1982. The dental profession strongly urges your Subcommittee to adopt this increased authorization level for support of a preventive health activity which has been shown to save over $30 in health care expenses for each dollar expended.

Section 6 of H.R. 3124 would delete a current requirement under the Health Professions Educational Assistance Act that at least 10% of amounts appropriated for residencies in family medicine and the general practice of dentistry be for general dentistry. While the dental profession has maintained a very acceptable balance between general dentistry and specialization the support which can be provided through this authority of the health manpower law for general dentistry residencies can have a major impact on future directions of dental residency training.

The requirement that a specific percentage of funds appropriated for the general residency program be for dental residencies was added as part of the 1976 amendments to the health manpower laws. The Administration does not challenge the appropriateness of this relatively new provision but recommends its deletion simply on the premise that this will reduce federal spending. The Congressional decision to assure a certain allocation of funds for general dentistry residency programs was and is a sound one. The Administration's proposal to delete this requirement should be rejected.

Thank you for your consideration of the Association's views with regard to these matters.

Sincerely,

William E. Allen, D.D.S.
Chairman
Council on Legislation

WEA:cs

[Whereupon, at 3:45 p.m., the subcommittee adjourned.]

DATE DUE			