AMBULANCE SERVICES IN RURAL AREAS

HEARING

BEFORE THE

COMMITTEE ON AGRICULTURE AND FORESTRY

UNITED STATES SENATE

NINETY-THIRD CONGRESS

SECOND SESSION

ON

S. 3909

A BILL TO FURTHER DEVELOP RURAL AMERICA BY IMPROVING THE DELIVERY OF EMERGENCY MEDICAL SERVICES THROUGH THE GUARANTEE OF LOANS FOR THE PURCHASE OF AMBULANCE VEHICLES AND RELATED EQUIPMENT

SEPTEMBER 16, 1974

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CONTENTS

AMBULANCE SERVICES IN RURAL AREAS

MONDAY, SEPTEMBER 16, 1974

U.S. SENATE,
COMMITTEE ON AGRICULTURE AND FORESTRY,
Edmond, Okla.

The committee met, pursuant to notice, at 9:30 a.m., in the liberal arts building, Central State University, Edmond, Okla., Hon. Henry Bellmon presiding.

Present: Senator Bellmon.

STATEMENT OF HON. HENRY BELLMON, A U.S. SENATOR FROM THE STATE OF OKLAHOMA

Senator BELLMON. This is an official hearing of the U.S. Senate Committee on Agriculture and Forestry to consider S. 3909, a bill relating to the ambulance services for rural areas. Also, we intend to discuss S. 3045. Even though S. 3045 is not officially under the jurisdiction of the Senate Agriculture Committee, it does relate to the delivery of rural health services and therefore, is pertinent to our meeting here today. Copies of both S. 3909 and S. 3045 are available in case you didn't get them when you entered. They are available at the door or available from members of my staff who are here.

I would like to begin by introducing the members of my staff and the Senate Agriculture Committee staff who are here. First, I would like to introduce Doug Jackson, from Hobart, who is a member of my Washington staff. Also, Mr. Drew Neville, from the Oklahoma City office, and a member of the Senate Agriculture Committee staff from Washington, Mr. Forest Reece.

I would like also to take note of the fact that we have a very large audience here today, and we express our appreciation to all of you who have taken advantage of this opportunity to be here. To me it shows the intense interest that exists here in Oklahoma in rural health and better ways of delivering medical service to rural residents.

I would like also to thank Central State University for hosting the Senate Agriculture Committee hearing. These bills will aid in the development of rural America by improving the delivery of medical services through the creation of associated rural health councils, and a guarantee of loans for the purchase of ambulance vehicles and related equipment.

The testimony you are going to hear this morning will not be limited just to these bills or any other pending legislation, but we hope it will bring up new ideas relating to the development of rural America by providing assistance to rural health care personnel who practice in the smaller cities and towns and rural areas.

Last year, Congress appropriated $3.1 billion for health care. Yet a complete health care system in our rural areas is presently not in existence. Lack of rural health care is a complex problem and one that is not going to be easily solved, but hopefully we have witnesses here today that can give the Congress ideas about how to go about tackling this major problem. Clearly there is not one perfect solution nor is there any simple solution, and yet the critical nature of these problems demands our immediate attention. The plain facts are that rural America faces a devastating decline in the number of physicians, and many small communities are in dire need of medical personnel, facilities, and equipment. Many country doctors are elderly or have retired, and new doctors are not replacing them in sufficient numbers. In addition many small communities cannot support a physician or a group of physicians.

One difficulty for rural areas is the lower medical care fee schedules in rural towns as compared to urban areas. This factor, along with many others, has led to a gross maldistribution of health care personnel. Adequate ambulance services have also been a problem in rural health care. Stricter Government regulation of emergency service has forced many ambulance services to discontinue their services. Migration to urban areas and increased costs have added to the decline in ambulance services. The solution offered to these problems of emergency ambulance service is simple. I'm convinced that the best way to tackle the problem is to utilize local talent and resources to the maximum extent possible. Local citizens must be actively engaged in solving this crucial problem. These within relatively close proximity to each other should be able to band together to form associated health councils for the purpose of providing emergency ambulance services. Once formed, these councils would be eligible under section 2 of the bill we are considering for Federal Government guaranteed loans that are necessary to finance the purchases of equipment and of the emergency type of facilities that would be needed.

S. 3045 deals with the problem of the declining number of doctors. Rural America is not getting its fair share of people in the medical professions. Some means must be found to end this maldistribution, and I'm hoping that our witnesses today will have some ideas to offer on this subject.

I'm looking forward to the testimony of our witnesses. We think we have about as fine a group of witnesses as can be found anywhere, and I invite them to present any ideas they may have as to how we can deal with the serious problem of providing adequate rural health care to rural America.

[Senate bill S. 3909 follows:]

[S. 3909, 93d Cong., 2d Sess.]

A BILL To further develop rural America by improving the delivery of emergency medical services through the guarantee of loans for the purchase of ambulance vehicles and related equipment

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Rural Development Act of 1972 be amended by adding at the end thereof the following new sections.

"(1) The Secretary of Agriculture is authorized to identify those communities in rural areas of the United States where emergency ambulance services are needed and to encourage the development of emergency ambulance services by

guaranteeing loans to associated community health councils for the purpose of purchasing and financing needed ambulances and other related equipment necessary to the operation of emergency ambulance services.

"(2) For the purposes of this subsection, the term 'associated community health councils' means two or more political subdivisions which have voluntarily joined together for the purpose of providing emergency ambulance services to citizens within its jurisdiction.

"(3) There is authorized to be appropriated the sum of $5,000,000 for the purpose of establishing and initiating pilot programs for implementation of subsection (1) and (2) of this Act.

"(4) Recognizing the need for emergency ambulance services in rural areas of the United States, the Secretary of Health, Education, and Welfare is authorized to suspend or otherwise modify regulations and policies with respect to ambulance vehicles and related equipment requirements to insure availability of emergency services to citizens in rural areas.

"(5) For the purposes of the subsection, the term 'rural area' means an area no part of which is within an area designated as a standard metropolitan statistical area by the Office of Management and Budget and does not contain a city whose population exceeds fifty thousand persons.".

Senator BELLMON. The first witness is a practicing family physician from Beaver, Okla., Dr. Ed Calhoun. Doctor, I would be glad to hear any testimony you would care to offer.

STATEMENT OF DR. ED CALHOUN, CHAIRMAN, MEDICAL COMMUNITY FOUNDATION, BEAVER, OKLA.

Dr. CALHOUN. To begin with I would like to give a bit of the background, not in the way of impressing anyone with what I might have done in the past, but to show you that I have been right at the base of this problem. Rural impoverishment, rural medical impoverishment in Oklahoma, as well as America, is acute. At the last rural health conference in Detroit, which I attended, a group of physicians were talking about how tough it was to take care of all the patients that came in. They said, "How do you manage this?" I said the first thing I do when I walk in the office in the morning is to say, "All those who get penicillin stand up, raise your right hand an drop your breeches." It's about that bad.

I've been past president of the State medical association. I'm presently serving as medical community foundation chairman. This is an effort to try to get young people, young medical personnel out in the rural areas of Oklahoma. I'm also a delegate to the American Medical Association from Oklahoma, working in the rural health council at the AMA level.

I can speak firsthand on the first problem here that I'll address myself to, the rural emergency ambulance service. For years, rather than let just anybody cart a patient in, I've gone with ambulances on hundreds of calls in my county to oversee the transportation of these people. I feel like this has definitely been a lifesaving measure, not that we didn't have adequate personnel, because we had better than adequate personnel, but there are just certain things that a physician knows in the transportation of an acute coronary, an acute injury, so I've done this. But it's getting to the place that I can't do it at all. We are much too busy. So there is no reason why this can't be elaborated on. Dr. Thompson, in Tulsa, who's Oklahoma's Trauma Man of the Year, and a good friend of mine, has outlined a wonderful program

on this; and I'm sure that if this could be elaborated on we would see the dire need for good ambulance service and trained personnel. I think maybe as many as 20 to 25 percent of these coronary patients might well be saved. Senator Bellmon mentioned 10 to 15 percent, I believe. I think this may be an understatement, so I can't impress too much the good of this.

But I'm going to an area now that I know more about than the emergency ambulance. I'm going to speak a little on rural medical impoverishment. I feel like, and I think I'm right about certain aspects of this, I feel like the health sciences center should and could be all things to all people. This is a multifaceted problem. I'm going to start first by saying what has brought this about. No. 1, I think the patient has, the patient's desire for medical sophistication. You can't blame people for wanting the best. New transportation and better modes of transportation have certainly given the patient the ability and capability to seek specialty care in the larger cities in the larger metropolitan areas. This has thus left the rural practitioner in somewhat of a sterile atmosphere, the medical challenge. There is plenty of calls for the 2 a.m. house call to see a sick child with a sore throat and an infected ear, but when it comes to removing their appendix and delivering the baby and doing the more sophisticated medical procedures, perhaps the patient has himself left the available facilities for a more sophisticated facility.

No. 2, let's go to the health sciences center. Sir William Osler, who was dean of all the medical peoples in America and who outlined medical practice and who outlined the ideas on how people could and should be trained in these areas, said this: "The medical student isn't best served by having a full-time medical faculty." I believe this. When I was in medical school, I look back at some of the paramount, tantamount, important things I learned were from some practitioner in Oklahoma City and other outlying areas that took his time to come in to teach the student. This isn't to say the student isn't well-taught. By the same token, he may not be as well-motivated by this type of training as perhaps a more commonsense approach as outlined by a practicing physician himself. In the desire for sophistication the Federal Government has actually vied for medical personnel positions, to wit: just recently this great amount of money that has been sent into medical centers may have dried up a bit, but the research, repetitive research has commanded too, too many medical personnel and doctors. I think this is overburdening, and I think it has taken too much away from the medical community.

The student, how are we going to get the student out in the rural areas? I have been a preceptor for 20 years in my area. The preceptorship program decrees that a student picks a town out in rural Oklahoma, comes in, visits and practices and helps you over a period of designated time, about 5 to 7 weeks. I have watched the type of student perhaps change a bit. I have watched their thinking change. I have watched their wishes as to what they are going to practice and where they were going to practice to the point that the last time I was at AMA, Dr. Carl Hoffman—immediate past president of the American Medical Association and a mighty fine person indeed—said,

Dr. Calhoun, I'm not so sure that we should not legislate in each State and maybe on the Federal level that every student that graduates from a medical

school be required to spend 2 years in a rural area sharpening his associations with people, learning and applying the talents he has learned; and then let him go back and finish his sophisticated training, whatever this might be.

Then he said,

By once having been in this community, by once having associated with these people in rural areas a good many of these will stay. They'll find out exactly what kind of a setting this is, how good and grateful and gracious these people are.

Legislation of this type may be like legislating morality. It may not be possible. I don't know. It's something to think about. I'm not advocating this. I'm merely saying this is one thing that's being thought of at the AMA level. The student sees daily in his rounds in his sophisticated medical center, he sees and is made to think oftentimes by the professor, now you can't do such-and-such surgical procedure, you can't do such-and-such obstetrical procedure unless you are adequately trained for this. True, this is sophisticated care; but I'm suggesting to you that oftentimes going into an area that often these kind of people learn by doing.

I know that doesn't sound too practical, but in medical areas in Oklahoma we are seeing a trend back to midwifery. Certainly a medically trained physician would be far superior to this, so this is a very difficult problem to solve.

But I believe that if we—I have said this too many times—if you would let me choose these medical students' wives, I could dang sure put the student someplace besides where he is all the time. These gals, they get the idea they don't want to go to a rural area and don't want to practice there. They want to be acquainted with the culture and the lively atmosphere of a metropolitan area, oftentimes turning down a much more sophisticated type of living for their children. They find out that some of these rural areas were better to raise them in.

I have merely pointed out the problem; I haven't given much effort toward solving it. But I do believe that all of these things need to be taken into consideration. I think the medical center, the health sciences center needs to direct their thinking toward a very, very positive approach—and we are doing this in Oklahoma—on a family practice level. We have set up this new medical school in Tulsa, the clinical years, and the basic preceptees being trained in Oklahoma City. These students matriculate into Tulsa. I think, this is a very good thing. They are practicing in the Tulsa hospitals with practicing physicians who daily teach them and show them. I talked to a surgical specialist the other day, and I said, "Are you going to teach this kid to take out an appendix or are you going to tell him he has to have 3 more years training before he can do that?" "No," he said, "we're going to let them, we're going to show them." I think this is the right approach.

I said to an orthopedist, "Are you going to teach this guy to set an arm, a collar fracture or a dislocation? Are you going to teach him this so he can go out in rural Oklahoma—?" That's what we are going to do.

I believe this is the positive approach. I believe this will work. I think this largely exhausts what I might have to say, and I may have said too much.

Senator BELLMON. Doctor, let me ask you a couple of quick questions. First of all, tell us for the record how large the city of Beaver is.

Dr. CALHOUN. 2,500 people.

Senator BELLMON. And does that include the rural areas?

Dr. CALHOUN. No; the county is about 7,700, Beaver County.

Senator BELLMON. 7,700 in Beaver County. How many doctors in the town of Beaver?

Dr. CALHOUN. There are two doctors serving the county.

Senator BELLMON. Two doctors for the whole county?

Dr. CALHOUN. For the whole county.

Senator BELLMON. 7,700 people.

Dr. CALHOUN. Right.

Senator BELLMON. Do you mind telling me, are they young doctors?

Dr. CALHOUN. I took offense at your statement a while ago when you said these country doctors are all getting old. I didn't know whether you were talking to me or not. We are fiftyish. There are more guys like myself than there are young people. You're exactly right. The other person there is my age, and we are trying desperately to get new personnel; but they are hard to come by.

Senator BELLMON. OK. That was the next question. Seventy-seven hundred people seem like a pretty heavy patient load for two doctors. Do you need more doctors there?

Dr. CALHOUN. Oh, definitely. We've had as high as four doctors in a period of 20 years practicing medicine there at the same time, and these men, one decided he wanted to specialize in anesthesiology, one wanted to go back and take his father's practice in Tulsa, another decided he wanted to move to another town to get away from such a heavy patient load. Here is another thing that I would like to bring up. I may not be right to talk money, but for the same surgical procedure, obstetrical case, I certainly about do it all. I'm one of the passing generation. When I went out there years ago, we had to do these things; but the same surgical procedures that a specialist in Oklahoma City might get much more money than, say, I'm allowed, to third party payee. So, here is another thing that might be an incentive.

Senator BELLMON. What you are saying is that medicare will pay more for doing the same procedure in Oklahoma City than it will in Beaver?

Dr. CALHOUN. Absolutely.

Senator BELLMON. How much difference is there?

Dr. CALHOUN. A great deal of difference. I don't know. We are not allowed to see each other's profiles, but I talk to other physicians. Perhaps I charge much the same. Doctors in rural areas have brought this on themselves, the profile that's been kept over the years by what they charged in the past; and when I went into practice 20 years ago, this was certainly a factor. You charge a couple hundred dollars to take out an appendix, the next time they would go to Dr. "X" instead of you. So we started out charging much lower fees than that. Now, then, there is not anything positive on these fees, yet.

Senator BELLMON. Does that discourage new doctors?

Dr. CALHOUN. I feel like this does.

Senator BELLMON. Now, let me ask you another question. Where were you raised?

Dr. CALHOUN. I was raised in Beaver, Okla. I probably couldn't make a living anyplace else, so I went back.

Senator BELLMON. One reason you are in Beaver is that is where you grew up?

Dr. CALHOUN. That is where I grew up, right.

Senator BELLMON. Are young men from Beaver now able to get into medical school?

Dr. CALHOUN. Yes; I have a son in medical school, and I didn't help get him there. I didn't raise a finger. I had two brothers that went through the medical school, and they have sought more sophisticated training elsewhere. One is a heart surgeon and one is a kidney surgeon, and I can't get them back out there. By the same token I think I have a couple of kids who are coming back in the next few years. We have tried—and the school has been very happy about this—we feel that a boy from a rural area is more likely to migrate back to that area than one who, say, is from a more metropolitan-urban area. But this is not statistically true all the time.

Senator BELLMON. Doctor, one other question. You mentioned the fact that the fee schedule is less in Beaver than it would be in Oklahoma City and Tulsa and this tends to draw doctors into the city areas. That's covered in S. 3045. That would stop this business of having a double standard, but what are some of the other reasons that doctors don't come to Beaver? Can they make a living there? Could they make a good living.

Dr. CALHOUN. There is no doubt that they could make a good living. You know a physician, as we used to say, doesn't have to worry about making a living; he has to worry about taking care of his health. This is still largely true. Young families will come to Beaver, for instance, and Beaver has a real nice school system and we have a good civic this and that; but they will go to other towns and they will say, "Well, maybe my child is going to be culturally impoverished. I better stay in Oklahoma City where we can go to the ballet, where we can go to the opera, where we can go to the Civic Center, et cetera." There are certain legitimate things in thinking like this. I suppose this, in itself, is as great a deterrent to going to a small area as anything, the lack of these facilities in a small town, you see.

Senator BELLMON. What about your working hours? Do people have you come into the office at 2 o'clock in the morning?

Dr. CALHOUN. You get so used to—they come to the house at night. Your life isn't your own, and you become accustomed to this. Your friends visit you and say, "How do you stand it?" This is the way you live. Your working hours are all day and all night. Not literally. People are very considerate. I said, and I still believe, that if you let people know that you are on call and will come, they are not so likely to call as if they think they can't get somebody. I think this has saved me many a night's sleep by their knowing I'm there on the other end of the telephone. I think people are very considerate. I think young doctors maybe have the false idea just how much time they would have to work in a small area. I think that even though it's a demanding life, it's a very rewarding, wonderful life; and I wouldn't change.

Senator BELLMON. Do you have any suggestions for the committee for the record as to how legislation might be tailored to help communities like Beaver get doctors when you may decide to retire or even now to add to their regular medical care in the Beaver area?

Dr. CALHOUN. You know, that's a very difficult question to answer. I do know this: I know that I'm coming to favor what Dr. Carl Hoffman said. I can visit with a specialist in the city, and I can tell you in 5

minutes if he has practiced any general medicine just by his attitude toward people. I think it might not—and I'm going to catch it from my colleagues when they hear this if this is printed——

Senator BELLMON. It will be printed.

Dr. CALHOUN [continuing]. But I think maybe we might come around to Dr. Hoffman's thinking and say, "Now, before we license this young man or young woman in this State, it's not a bad idea to send him to Turkey Trot or Possum Run for a couple of years. Let him get acquainted with people, let him learn how to get along with people, let him know the common man." This is, I think, the greatest experience that a young person can have. It mellows him, it nurtures him, and I just think it might have certain merit if anything has merit.

Then by the same token he might take this to the courts and say that this is indentured servitude. He may well do this. Certainly the lawyer doesn't have to do it. The teacher doesn't have to do it. But we might well tell this young man that he will have to do this to get into medical school. We might make this part of the curriculum. It has merit, I think.

Senator BELLMON. You are saying that you feel there might be need for legislation requiring any person to become a specialist to put in 2 or 3 years in a rural area?

Dr. CALHOUN. In a rural setting dealing with people and practicing medicine and finding firsthand the problems before he goes into these specialty areas. Both of my brothers—I have a brother who is a heart surgeon down in Texas—he spent some time in a rural area before he went into this. The other brother spent some time in a rural area, and I think this was time well spent. At that age, what is 1 year or 2 at that stage of the game. So I wonder if it might not work.

Senator BELLMON. Doctor, thank you very much. You have given us a great deal to think about. If you have any other ideas later that you might want to offer, we would certainly like to have them. I suggest you read S. 3045. It's the bill that would make it possible for communities like Beaver to join with other outlying areas and attract doctors by mutual efforts when they might not be able to do so on their own.

We will proceed to Dr. John Carson from Stilwell, Okla.

Doctor, I don't want to presume to tell you what to say, but would you start off by telling us about Stilwell and how large it is. Give us a little background about the kind of practice you have.

STATEMENT OF DR. JOHN CARSON, STILWELL MUNICIPAL HOSPITAL, STILWELL, OKLA.

Dr. CARSON. Stilwell is a small town of about 2,000 people located in the extreme eastern part of Oklahoma. It is the county seat of Adair County which has a population of about 15,000 people. Is that all you want to know about it?

Senator BELLMON. That's a beginning. Could you tell us how many doctors serve this 15,000 population?

Dr. CARSON. Up until about 2 months ago we had seven doctors. Two have left, and we now have five, two of which are in their late sixties. So you might say we have three doctors carrying most of the load.

For my part I would like to discuss some of the factors which in my opinion have contributed to deterioration of health care in many of our rural communities and also to offer some suggestions as to how improvements can be effected and without massive Federal appropriations.

For the past two or three decades, as the Senator has indicated, health care in one rural community after another has deteriorated at an alarming rate. Community after community has suddenly found itself confronted with the impossible task of attracting young doctors to replace those who have retired or who have died. Many of our small hospitals lie dormant and unused because of the lack of physicians to staff them. Where are these doctors? Our medical schools of today are turning out more doctors than ever before. What happens to them?

Statistics show that there is one physician providing patient care for every 769 people in the United States. This would seem to indicate that there are enough doctors, yet we are told by the American Medical Association that there are 104 counties representing over a half-million people that have not one single doctor.

Of course, we all know that the problem is the maldistribution of our doctors which causes some areas to be short and others seemingly overpopulated. Statistics also show that 80 percent of all patient care physicians limit their practice to a specialty. Most specialists require a population base that only an urban area can provide in order to support their specialty.

Prior to World War II the doctor population of the United States was more or less equally divided among the rural and the urban areas. Each had about the same number of doctors per 1,000 population. Since World War II the trend to an urban migration of doctors has steadily increased up to the present day. What has happened that compels most of the young doctors of today to locate in the urban areas and so few to locate in the rural areas? To find the answers to these questions we must take a look at the conditioning each medical student is subjected to, beginning with his first day and continuing on to his last day of medical school.

All classes in the medical schools of today are taught by doctors who themselves are specialists in the particular field which they teach. Most of these instructors succeed in leaving their students with the impression that without postgraduate study following medical school, the student will be competent to do little else than to refer patients to the proper specialist for treatment. Having heard this from every quarter, the student, by the time has has arrived at his senior year, has become convinced that this is probably true and begins to make definite plans to enter a specialty residency program immediately upon completing his internship.

Prior to World War II conditions were quite different. For one thing many of the faculty positions in our medical schools were held by retired or semiretired general practitioners. Dr. Calhoun, I believe, indicated as much in his presentation. They recognized that their students were receiving a better medical education than they themselves had, and they encouraged their students by telling them so. The student, by the time he had graduated from medical school, had acquired not only a medical degree, but had also acquired self-confidence and most were eager to finish their training and begin their practice as

soon as they were allowed by law to do so. After 4 years of college and 4 years of medical school, few looked forward to 3 more years of training for a specialty; and fewer still could afford it, since the most that the majority of the hospitals paid their resident students was $50 a month, and if they were lucky, they got their laundry.

With hospitals of today offering young resident doctors stipends ranging from $15,000 to $18,000 a year, financing 3 additional years of training is no problem for today's medical school graduate. Having completed his specialty training, the young doctor must locate in an area that has a population base large enough to support his specialty practice. If he has specialized in internal medicine, for instance, the population base must be 6,000. For a psychiatrist, he must have a population base of 12,000; and for thoracic surgery there must be a 125,000 population base. For a family practice specialty there must be a population base of perhaps 1,200 to 1,500 people.

Now, this last statistic, we hope, will provide one of the answers to the problem of improving rural health care delivery. Family practice residency programs must be established in more hospitals and more particularly many of our small rural hospitals. This would place doctors on the scene where they are needed the most. It would acquaint them with the people in the rural communities. It would make it possible for young doctors to practice a specialty and also have a choice between practicing in the rural and urban areas.

Along with training more doctors to function in the rural areas, steps should be taken to train auxiliary personnel, such as physician associates, and legislation enacted which will allow these to practice at their highest level of competency. Unfortunately the problem of improved rural health care is not solved by training doctors and auxiliary personnel to function in the rural areas. Health care is the end product of a delivery system composed of many factors, each of which is highly complex in nature. The more sophisticated the level of health care becomes, the more factors are involved in this delivery. Regardless of how simple or how sophisticated a health care delivery system is, all have at least two essential components. One is a hospital, and two is a group of doctors. Without a hospital a community has little, if any, chance of attracting doctors. Today's doctors are all hospital oriented. They have been taught and have learned to utilize and depend upon the facilities and services that only a hospital can provide. On the other side of the coin, most communities without doctors cannot hope to build a new hospital because of Government regulations and requirements for financial feasibility, and so on and so on.

Regarding the second factor, the doctors, the demands which are made upon the practicing physician today are so great that periodically he must take time away from his practice for rest and relaxation and study. He can do this only if he has someone who can step in and take over his duties and responsibilities while he is away from his practice. Only through group association can this be accomplished. This could be a formally organized group practice or an informal arrangement among sole practitioners who relate well to each other. Whatever the arrangement, a group of sufficient size to serve the community and to allow each of its members time away from his practice is essential to an ongoing health care delivery program. The

shortage of rural oriented doctors coupled with the monumental costs and Government redtape involved in building and staffing a completely new hospital facility makes the establishment of a health care delivery system in a presently unserved community highly unlikely. Therefore, alternatives must be employed to extend at least primary health services to people living in these unserved areas. After spending most of the day Friday with medicare auditors and my own auditors in Tulsa, talking about this problem, we finally came to the conclusion that the solution to the problem lies in strengthening the financial basis of the rural hospital. These rural hospitals must have the finances to allow them to upgrade and improve and expand their existing facilities in order that they can extend their service areas to include many unserved areas.

This can be accomplished without Federal grants or subsidies, provided changes are made in the medicare and medicaid reimbursement formula. At the present time medicare has a double standard for reimbursing large and small hospitals. They accomplish this through the use of two entirely different cost reporting forms: One of the forms is for hospitals with 100 beds or more and another form is for hospitals with fewer than 100 beds, the result being that smaller hospitals are getting from 2 to 3 percent less than their actual operating cost for each medicare patient cared for. These unrecovered costs amount to $40,000 to $60,000 for some small hospitals in Oklahoma and others across the Nation.

This, along with other unrecovered costs, such as bad debts and charity, must be absorbed by self-pay patients either by direct out-of-pocket payments or through increased insurance premiums. Apparently there are those in the medicare program who think that by cutting down on the amount reimbursed to the hospitals, they are saving money when in reality they are shifting their responsibility to other segments of society and at the same time reducing the small hospital's capabilities to deliver health care to the rural communities which they serve. It's like a family which decides to save money by not paying all of its bills.

I cannot believe that it was the intent of the Members of Congress when they passed the medicare laws that small hospitals would be required to accept less than their costs for caring for our old people. We propose that a reimbursement formula be adopted by medicare whereby consideration is given to hospitals based upon the percentage of medicare patients admitted. For example, a hopsital which has a medicare patient load of between 10 and 20 percent should be reimbursed allowable cost plus 1 percent. If the medicare patient load is between 20 and 30 percent, the hospital should receive allowable cost plus 2 percent. Between 30 and 40 percent, allowable cost plus 3 percent and so on.

Another alternative, and one which is more equitable and is simpler to administer, would be a law requiring medicare and medicaid to reimburse the hospitals for their proportionate share of hospital operating costs. This, more than anything else the Federal Government could do, would allow small hospitals to expand their service areas into many more of our rural communities.

In closing I would like to summarize and restate the basic elements which I feel are essential to not only improving but continuing rural health care delivery. No. 1, the existing small rural hospitals must be financially strengthened and provide the leadership in making health care available to unserved rural areas of our Nation. No. 2, the establishment of more family practice residency programs, particularly in our small rural hospitals. No. 3, the training of more auxiliary personnel, physician assistants, nurse associates, and the enactment of legislation which will permit these people to function at their highest level of competency. And 4, and most important, most important of all because all of the previous recommendations depend upon this, is to require medicare to reimburse the small hospitals their fair share of operating costs.

Thank you.

Senator BELLMON. Thank you, Doctor. You have obviously given this subject a lot of thought, and we appreciate your contribution.

Let me ask you a couple of questions. Let me ask you about ambulance services in Stilwell. How is this provided?

Dr. CARSON. About 2 years ago the people voted a sales tax, 1-cent sales tax, to finance the ambulance service.

Senator BELLMON. So you have an ambulance service run out of the hospital and the costs are paid for with the sales tax, or you do charge for the service of the ambulance?

Dr. CARSON. Of course, there is a lot of loss in the ambulance operation, a lot of the services are not paid for. A charge is made, and some people pay for it and some do not; but basically the ambulance service is financed by the 1-cent sales tax.

Senator BELLMON. Does this seem to be a satisfactory way of providing ambulance services?

Dr. CARSON. Yes; it does.

Senator BELLMON. Would you recommend it to other communities?

Dr. CARSON. I certainly would if they can pass the sales tax.

Senator BELLMON. You mentioned also that in Adair County with a population of some 15,000 you have had seven doctors, two of whom have recently retired.

Dr. CARSON. Dr. Cain and his wife, who lived in Westville which is a community 12 miles north of Stilwell, moved to Fayetteville, Ark.

Senator BELLMON. All right. That left them six?

Dr. CARSON. That left five, Dr. Kenneth and his wife, Dr. Laura are both physicians. The other two doctors—one is Dr. Curry who is 70 years of age. He has cut down his practice considerably, and Dr. Mahegan, who is in his sixties, has also curtailed his practice somewhat.

Senator BELLMON. So that leaves three doctors primarily carrying the load. Are any of those doctors under 40, or what age are they?

Dr. CARSON. We got a new doctor this past July just out of medical school.

Senator BELLMON. I see.

Dr. CARSON. I might add, too, that the reason that we were able to get this young man was because of the preceptive program that Dr. Calhoun referred to. He did his preceptee training in the Stilwell Hospital, and he liked the community and that's what attracted him to locate there.

Senator BELLMON. So you have one new young doctor?

Dr. CARSON. Yes; we do.

Senator BELLMON. Do you need more?

Dr. CARSON. We will probably need more when we finish our new hospital. We are building a larger hospital, and we will have enough bed capacity to support one more doctor.

Senator BELLMON. From what you have said, you have five doctors, two are only working part-time, serving a population of 15,000?

Dr. CARSON. Well, we can't include the whole county in the service area of our doctors. At the north end of the county is Siloam Springs, Ark., which has good medical facilities up there; so a good portion of the people in northern Adair County do go to Siloam Springs for their care.

Senator BELLMON. Do you have any suggestions as to other means that might be used to attract needed medical people into rural areas like Adair County or cities like Stilwell?

Dr. CARSON. I don't until we start a medical school pointing these young doctors toward the rural communities. As it is now, it's practically impossible for a young doctor to practice in a rural community. In talking with preceptees for the past 15 years we have seen a definite trend that they lack the self-confidence that the older doctors had when they graduated, 20–30 years ago. They have been subjected to this idea that they must refer patients to specialists for treatment. They are not graduating with the same self-confidence that the old doctor did. And then, too, it's so easy to go into a residency program when they pay a student $15,000, $18,000, some even $20,000 a year. To most this represents a higher standard of living than any have ever known before. So financing the additional years of study is no problem. This is one thing that has pointed our medical students toward specialty treatments. Now, with the advent of family practice specialty we feel like these family practice residency programs could be established in smaller hospitals and that there would be more doctors taking advantage of this. I think a lot of young people would like to live in rural America if it were possible for them to do so, but because of the necessity to live in the urban areas to practice their specialty, it's impossible for them to do this. So I think we need to change our teaching methods and incentives. I don't think we can legislate these people to practice in the rural areas, but I think we must provide incentives. We think the family practice residency would provide this incentive.

Senator BELLMON. Are there other incentives that rural areas might need to provide to help get the doctors to come back? I'm thinking, for instance, of a clinic a community or several communities might be able to provide the paramedical personnel and others——

Dr. CARSON. No, I don't really feel like this would help much. I don't think these young doctors want much. I think they want the opportunity to practice. I think the reason that not more of them are going into it is that they're not able to. I think if it were made possible for them to do so, I think you would see a trend back toward the rural practice. But I think situations being what they are now has contributed or caused this situation.

Senator BELLMON. Doctor, you say that young doctors aren't able to go into the rural areas. Could you be more specific?

Dr. CARSON. It is because of this feeling of inadequacy they have and the thrust and the incentives that they have to specialize nowadays.

Senator BELLMON. And once having specialized they are not going to go back to a smaller community?

Dr. CARSON. They can't. As I indicated in the instance of a person specializing in internal medicine—that's one of the specialities where they could go into a relatively small community of 6,000. But there are hardly any communities I know of, of 6,000—I mean towns—that don't have a pretty good supply of doctors. We are talking about rural communities, maybe communities of 500 people or 900 people, or things like that.

Senator BELLMON. Do you feel that communities like that need a doctor?

Dr. CARSON. I feel like they need them, but I feel like unless there is a hospital, I don't feel like they have any opportunity to get a doctor to stay there. They might get a doctor to come in and stay a while just like Westville. Westville is a nice little community of perhaps 1,000 people, and they have had a succession of doctors one right after another that comes and stays a year or so and then leaves. Unless a community has a hospital for a doctor to practice in, I don't feel like there is any hope of them keeping a doctor for any substantial length of time. That's why I'm advocating strengthening our present hospitals, strengthening the financial base that will allow them to conduct the residency programs. It takes money if you are going to pay these residents, if you are going to compete with the large hospitals and pay them $15,000, $18,000 a year, then the small hospitals have to compete to attract these doctors. It is the same thing with physician associates. If small hospitals are going to participate in training physician associates, this takes money; but it doesn't take more money than could be generated if medicare would pay its fair share of the load. This is why most small hospitals are hurting nowadays because they are having to subsidize every medicare patient that comes through the door. This represents unrecovered costs to the hospital, just like bad debts and charity.

But with the additional funds that could be generated—I'm not saying medicare should not pay a profit—the only thing we are advocating is that they pay their fair share, like any other third party payor. If they would do this, then the hospital would have enough money to carry on a residency program and also to help with other training programs, such as physician associates programs. This is the big problem in rural areas. The hospitals are underfinanced, and the incentives are directed toward taking the young doctors to the city rather than to the country. It's really a relatively simple problem when you look at the elements because there are only a few things that need to be done that would redirect the incentives.

Senator BELLMON. Those things, from what you said, are, one, the curriculum at medical school needs to be changed so there will be less specialization, for instance?

Dr. CARSON. No. I don't advocate that at all. What I say is that there needs to be more family practice residencies. This is after the student gets out of school.

Senator BELLMON. All right. More family practice residencies in the smaller hospitals?

Dr. CARSON. Right.

Senator BELLMON. Is this an area where perhaps some Federal funding might be in order?

Dr. CARSON. I don't see any need for any Federal funding. There would have to be Federal funding if medicare didn't pay their proportionate share, but we hope that we can get legislation to require medicare to do this. It's only fair that they pay their proportional share of the cost which now they are not doing.

Senator BELLMON. So then you think that would solve the problem?

Dr. CARSON. Right. I think that would solve the financial problem. I think we need to pass legislation which will enable auxiliary personnel to function to their full training capabilities. In other words, they teach these—I'm not going to say much about this because Mr. Stanhope is here and he is going to talk on the subject of physician associates—but these are a very vital part, a very vital element in the health care delivery system in rural areas. These people can be placed in remote areas from the hospital and do a wonderful service.

Senator BELLMON. Perhaps in the small towns of 500 or 900 people?

Dr. CARSON. Right. We visited last week in a little town, Labaca, Ark., a town of 500 people, and they had a physician associate there and he practiced under the direction of two physicians in Fort Smith. He is providing primary care for the people in this little town which otherwise would have no medical care whatsoever; and I understand there is such a program in this State, but I'll not say any more about that because it is going to be brought up later.

Senator BELLMON. Doctor Carson, thank you very much. We appreciate your testimony.

Our next witness we will call is Mr. Henry Capozzi, Director of Emergency Medical Services of the State Health Department.

STATEMENT OF HENRY P. CAPOZZI, DIRECTOR, EMERGENCY MEDICAL SERVICES, STATE DEPARTMENT OF HEALTH, OKLAHOMA CITY, OKLA.

Mr. CAPOZZI. Thank you, Senator. I am Henry P. Capozzi, the director of emergency medical services for the Oklahoma State Department of Health. My background is primarily one that, wherein, I spent 20 years in the Medical Service Corps of the U.S. Army, and I was directly involved with air ambulance operations, ground ambulance operations in most areas of the world.

I have read the copy of Senate bill 3909 presented by Senator Bellmon and concur fully with its concept. It addresses two matters of great concern. First, it provides the necessary link in the emergency medical services system, the ambulance. Second, it provides a means for needy rural communities to obtain ambulances and equipment by the guarantee of loans for such purchase.

In the balance of this presentation I will set forth what we in Oklahoma regard as the needs and measure existing assets against identified needs. In this way, we will best be able to present the picture of EMS capabilties as they exist in Oklahoma today as compared to what should exist if they were to have an acceptable emergency medical services system as prescribed by the U.S. Department of Transportation and the U.S. Department of Health, Education, and Welfare.

It is necessary that we all understand what is meant by emergency medical services. As defined in the Federal Register, we are discussing "* * * the services utilized in responding to the perceived individual need for immediate medical care in order to prevent loss of life or aggravation of physiological or psychological illness or injury."

As you can see this affects the victims of sudden illness as well as accident victims. Potential victims cover the entire spectrum of Oklahoma's permanent and transient population. It can be the visitor to a State resort area who suffers a heart attack—the 2-year-old who swallows a pesticide—a secretary whose automobile is struck from behind as she is on her way to work—the farmer who is crushed and critically burned by an overturning tractor—the teenage athlete who collapses minutes after a blow to the head—or the premature Indian baby who is suffering difficulty in breathing."

If Oklahoma were to have an effective EMS system, it has been estimated that more than 2,000 lives could be saved each year and the countless unnecessary additional injuries that are caused by a lack of appropriate equipment and inept handling by poorly trained ambulance personnel could be averted.

Oklahoma is essentially rural in that only four cities in the State exceed 50,000 population. As a result, all of Oklahoma is considered rural with the exception of the cities of Oklahoma City, Tulsa, Lawton, and Norman and their immediate environs.

Oklahoma, as a rural State, is faced with the realization that 70 percent of motor vehicle deaths occur in rural areas and in communities of less than 2,500 population. Documentation indicates that persons injured in rural counties are four times as likely to die of their injuries as those suffering similar injuries in urban counties. Statistics show that persons dying in rural accidents more frequently died at the scene, died sooner after injury, and of less severe injuries.

Oklahoma is faced with another finding which bears on this matter of rural health. Oklahoma has the largest Indian population of any State with a total of 98,468 American Indians accounting for 12.4 percent of the Indian population of the entire United States. Approximately three-fourths of these live in rural areas. Unfortunately, the ratio of American Indians being killed and injured in highway accidents is four times greater than that for other U.S. citizens.

The unfavorable statistics relating to the rural problem stem from what is termed the emergency medical services cycle. First, there is an incident which generates the need for emergency services. Second, someone must detect that the incident took place. Third, the person detecting must insure notification of the appropriate agency as to where and when the incident occurred, as well as the nature of the incident. Fourth is dispatch—the act which orders ambulances to the scene. Fifth is closure, the process which gets the ambulance to the scene. Sixth is action, essentially the actions taken by trained ambulance crews to stabilize and sustain the life of the victim, both at the scene and en route to an emergency medical facility. Seventh, and final, is return to station, which gets the ambulance back to its base to prepare for a repeat of the cycle.

From this cycle, we can see the interrelation of the functions as they affect rural victims and the great reliance on detection, notification,

dispatch, closure and action, in which an ambulance with required life saving equipment manned by a trained crew of emergency medical technicians becomes an extension of the hospital emergency room. These functions become more difficult of performance in remote, far reaches of rural Oklahoma. Detection and notification actions can be enhanced by public awareness, but dispatch, closure and action are made possible only through provision of adequately equipped ambulances manned by trained crews. Without proper ambulance services in required areas, the hospital extension simply doesn't exist; and there is no substitute for it!

In the moments remaining I would like to present the balance sheet of what Oklahoma requires for a complete emergency medical services system as recommended at Federal level, compared to what exists in our present inventory. I shall do this by referring to the components of an emergency medical service system as designated in Federal directives.

First is manpower—in respect to ambulances, we need a total of approximately 3,000 trained emergency medical technicians to crew the vehicles. To date the Oklahoma Trauma Research Society in Tulsa has graduated 980 emergency medical technicians who have passed the National Registry examinations. So our present deficit in respect to trained manpower to serve on the ambulances is somewhere in the area of 2,000.

I would like to add that we have an attrition rate of approximately 30 to 40 percent of our emergency medical technicians; so you can see this is a massive problem.

The second component is training. I have reported the basic training of emergency medical technicians. Additional training is also required for these men, such as ambulance driving, communications, ambulance dispatching, victim extrication, as well as courses of inservice and continuing education. We are presently working on developing these additional courses by involving and utilizing community colleges, vo-tech schools, existing continuing education centers and other agencies.

A third component is centralized communications and dispatch. The Federal guidelines in this matter suggest utilization of a 911 system, which would allow citizens to report fire and police emergencies or a medical emergency by dialing 911 on any telephone. It appears that such a system might not be presently visualized in Oklahoma due to the State being served by 50 separate telephone companies and the great expense involved in initiating such a system. Our approach would be to request funds for an engineering study which would embrace all existing capabilities in a compatible communications network by relying on a less sophisticated hardware capability, but one which would be acceptable as an interim improvement over current capabilities.

The next component requirement is transportation. Federal guidance suggests air, water, and ground capability. At this moment, we would be delighted to settle for a capable ground capability centering on the ambulances which Senate bill 3909 would provide. The ambulance picture in Oklahoma at this time is, at best, bleak. Ambulances in the State range from converted hearses or outdated station wagons up to the modern well-equipped vehicle which merits the award of the

Star of Life emblem—the award depicting the capability to deliver acceptable emergency medical services. As of today, of more than 500 ambulances of heterogeneous designation in Oklahoma, only 85 have qualified to display the Star of Life.

To provide an acceptable statewide capability, Oklahoma requires a total of 303 fully-equipped ambulances augmented by five mass casualty/mobile first-aid type buses to aid in disaster or mass casualty situations. To provide the number of ambulances required to effectively serve the rural areas of Oklahoma, we estimate that the State as a whole would require an additional 215 to 220 ambulances and, of these, 185 would be required to satisfy the rural area needs that presently exist.

There are other components of the total 15 recommended by Federal guidance. These relate to critical care units, standard record keeping, mutual aid agreements and the like. Because of time restrictions, I have limited this discussion to components that refer directly to ambulance operations. Let me assure you, however, that we, at the Oklahoma State Department of Health, are addressing all of the required components in updating our plans both at local and State level. This in turn will allow us to compete for Federal funds when they become available for the development of a statewide emergency medical services system which requires inclusion of all 15 components.

In my opinion, Senate bill 3909 would not duplicate Federal funds available for development of complete emergency medical service systems. It would, on the other hand, provide badly needed emergency ambulance service capabilities that are needed now in Oklahoma and which would eventually become part and parcel of the envisaged statewide system. In effect, it would allow rural communities to obtain the very essential transportation component at a much earlier date than would otherwise be possible.

In closing, Senator Bellmon, this measure fits into our overall State design that we are developing into an EMS system for the State. If Senate bill 3909 can provide probably the most essential component—the ambulance—we in the emergency medical services division of the Oklahoma State Department of Health can assure all citizens that the addition of an acceptable ambulance capability throughout the rural areas of the State will result in a highly significant reduction of unwarranted death and needless suffering.

I am most appreciative of this opportunity to address this meeting and to speak as an advocate for improved emergency medical services capability so badly needed even this day throughout all of the rural areas of Oklahoma.

Thank you.

Senator Bellmon. Thank you, Mr. Capozzi. I will try to be brief in my questions.

Let me ask you why, in your opinion, does the medical profession or the rural medical system that we now have not provide more adequate ambulance service.

Mr. Capozzi. Well, the missing ingredient, the principal missing ingredient, I think, is training. I think an effective patient movement, patient transfer, patient evacuation system revolves around the people conducting it. I discussed briefly the 2,000 emergency medical technicians we are short.

Another ingredient, of course, is communications. They are very necessary to tie this package of manpower, equipment, and transportation means together with the treatment facility. A big problem revolves around the cost. This is an expensive operation.

Senator BELLMON. There was a time when most of the funeral homes in the State provided ambulance service. I'm not sure how long you have been in your present position——

Mr. CAPOZZI. Two years.

Senator BELLMON. Two years. This was before you came to Oklahoma. Do these funeral homes provide any of these services?

Mr. CAPOZZI. Many of them have gone out of business primarily due to the wage and hour laws increasing the salaries of the individuals that were operating the vehicles. Unfortunately, in many cases or most cases the funeral director was providing primarily transportation; and he wasn't confronted with the salaries of a trained individual. An individual must be trained if he is going to provide any type of adequate medical service.

Senator BELLMON. So the funeral homes have gone out of the business and no one else has come into the business of providing ambulance service?

Mr. CAPOZZI. Yes, sir, and no, sir. That's a difficult point to answer. We have an excellent example of one county that was informed that the three funeral home directors were going out of business; and they were given a deadline, cutoff date. There was much scrambling and goings-on. We, meaning the State Department of Health, provided them with certain services and assisted them and gave them many alternative approaches to the problem, ranging from volunteer services to subsidized private operations to perhaps a county operation or community operation. There was a great deal of concern, obviously, by the people involved. They were to be left totally without any coverage, and they managed somehow to generate some funds. They had great difficulty, tremendous difficulty, in generating moneys to set up even a temporary sort of a transient intermediate solution to their problem.

They have gone to, and are attempting, right at this moment, to obtain a loan from the Farmer's Home Administration. It's a difficult thing and primarily again revolves around cost.

Senator BELLMON. We heard Dr. Carson from the Stilwell community testify that his community had passed a sales tax to be earmarked as the revenues to support the ambulance service. How many other counties in the State have used that sort of an approach?

Mr. CAPOZZI. I don't know the exact number, Senator, but there are very few. It's an approach that we have recommended. It's one way to raise funds to cover the cost of operating. One of the very distinct problems in providing a quality ambulance service in the rural area is that the population itself doesn't generate the need for quality ambulance service. For example, as a yardstick one person in 10,000 generates an emergency case, and this is per day. So it requires 10,000 people to generate one call a day for quality, true emergency ambulance service. You can see that no private operator can come into an area and expect to make a living by providing an adequate ambulance service under those circumstances.

Senator BELLMON. Still the ambulance service is important for that one person who needs it?

Mr. CAPOZZI. Yes, sir. There is no substitute for it. And there should definitely not be a double standard whereby if you live in an urban area, you have quality ambulance service and if you live in a rural area, you do without. This is part of the problem.

Senator BELLMON. You have generally endorsed the provisions of S. 3909. I assume it is because this bill will provide matching Federal funds and provide incentives for the rural areas to go ahead and take some action on their own as Stilwell has done. This is generally what you had in mind?

Mr. CAPOZZI. Yes, sir. We do. We have discovered that these funds are very difficult to come by and these communities just can't afford it.

Senator BELLMON. Do you see a role here for the State Department of Health in administering a program of this kind?

Mr. CAPOZZI. Yes, Senator; I do. I feel as though we, in the past few years, have collected much essential data and are responsible for the planning of emergency medical services.

Senator BELLMON. You have given us some rather shocking statistics here. You said documentation indicates that persons injured in rural counties are four times as likely to die of their injuries as those injured in urban counties. These are borne out by statistics?

Mr. CAPOZZI. Yes, sir, we have the facts to back these up. These are national statistics.

Senator BELLMON. And you attribute a lot of the problem to the fact there is not an adequate way to get emergency medical attention to people injured in rural areas?

Mr. CAPOZZI. That's right, sir. Unfortunately, I have seen criteria set whereby a 4- to 6-minute response time is an adequate response time for an urban area. In rural areas they consider a 30-minute response time as being adequate, which I don't endorse, and this again is that double standard that I mentioned a while back.

Senator BELLMON. I have no further questions, Mr. Capozzi. If you have any ideas you wish to submit to us, we would be happy to have them.

I am informed that Senator Dan Ferrell needs to make his statement and leave by 11:30, so at this time we will call State Senator Dan Ferrell as our next witness.

STATEMENT OF HON. DAN FERRELL, OKLAHOMA STATE SENATOR, CHANDLER, OKLA.

Senator FERRELL. Senator Bellmon, for the record I'm Dan Ferrell, a member of the Oklahoma State Senate, and I live in Chandler, Okla. My brief remarks today have to do with the availability or lack of availability of health care in rural Oklahoma.

I realize a lot of my remarks will be repetitive or heard earlier, but this I think, will confirm what I have to say.

Senator, I apologize if my remarks are not directly to the point of your proposed legislation. The letter from your office just arrived as I walked out of my office after a leisurely 6-day trip to Washington. I would suggest that if we solve the problem of health care in rural Oklahoma, maybe we can work on the postal service or lack of same. It may take longer than solving the health problem.

Senator BELLMON. Before you go into your statement, will you tell us about Chandler and how large a community it is so the people will know.

Senator FERRELL. Chandler is about 3,000 population. It's 50 miles east of Oklahoma City. It's the county seat of Lincoln County which is approximately 20,000 population, and I will get into the number of doctors in my remarks.

It appears the availability of health care in rural Oklahoma is on a sharp downward trend at the same time that population and the resulting need for health care in the rural part of the State is growing. One of the factors that influenced me to move to Chandler 12 years ago was the availability of adequate health care for routine and emergency needs.

In 1962 the community had four medical doctors and one osteopath and two dentists. They also had a small but modern hospital. Twelve years later we have only two medical doctors owing to one death and one retirement We still have the osteopath and the two dentists. However, three of these five health practitioners are near retirement and no replacements are in sight. If the experience of other similar communities means anything, it will be next to impossible to replace these doctors. Our hospital has ceased to operate as a hospital and is now functioning as a clinic. This was done because of difficulties in maintaining medicare accreditation. Part of this difficulty was the lack of available nurses to work in the hospital. As Dr. Carson mentioned, the reporting situation is also a burden on small hospitals. That was another part of this hospital's problem.

Now nearly all emergency health care means a trip to Shawnee or Oklahoma City. Last fall I attended a 2-day planning seminar for the chamber of commerce of the city of Seminole. The most critical need expressed by chamber leaders was for doctors for that city. Doctors already in practice in Seminole appeared to testify to the need for younger doctors to help take the load off the established doctors. Many of the calls I get as a legislator deal with the need for assistance in recruiting additional doctors. This leads me to believe the need is widespread throughout Oklahoma.

There is also an economic impact caused by this need to travel long distances to receive all but the most routine medical care. I have had numerous complaints from working mothers over the problems of obtaining treatment for their small children. A trip to the doctor in Oklahoma City means a working mother must lose a day's wages and the child lose a day in school.

From my own biased viewpoint it appears that Government assistance in the area of this problem has usually complicated the problem and quite often made it worse. For instance, it will be difficult to expand existing hospitals in our county because of the allocation of hospital beds by planning agencies. Every time a new hospital bed is constructed in Oklahoma City, the planning agencies have to take one away from a rural community. The allocation of beds by these planning agencies is a means by which Federal assistance is allocated for hospital construction.

We had fast, economical ambulance service all over our county until the Federal agencies decided that standby ambulance drivers had

to be paid under the wage and hour laws for the time they were on call. At that time the funeral home operators who had presumably been operating at a profit decided they could no longer afford to be in the ambulance business. Most of the communities in our county had to take over the ambulance service.

Now, we have a very curtailed ambulance service at a much higher cost. It's higher both to the patient, and it's a deficit operation for the cities operating these things. Because of the Federal requirements on ambulance transportation and personnel to drive these ambulances, many smaller communities cannot afford to be in the ambulance service.

In a brief reading of your bill I noticed the Secretary of HEW would be authorized to modify those requirements to take care of some communities, and I think this would be a help.

The State of Oklahoma has attempted to get more doctors into the rural areas by means of loans to medical students. If new doctors spend some time in the rural community, it eliminates the need for repaying the loans. There have been other programs, a demonstration program at Wakita, Okla., whereby doctors are brought into the rural communities. But from the discussions I have had with the residents of the small communities and some of the doctors, the doctors seem to think these short-term commitments as enforced servitude and in nearly every case they are leaving the community as soon as their commitment is up.

It appears to me that the problem boils down to one thing: We have a shortage of doctors and nurses and the obvious solution would be to increase the production of doctors and nurses. I realize while it is obvious, it is not a very simple thing to reach. There is no shortage of qualified students who wish to be doctors. The shortage is in placing them in medical classes, medical schools.

In 1957 the Russians launched the first sputnik, and as you remember, this act prompted our Nation to begin a crash program to increase production of engineering and other scientific personnel. Unfortunnately, this post-sputnik era did not produce enough new doctors to solve the health care needs of the rural areas of our Nation.

I feel we need a similar push to produce an adequate number of doctors and nurses to serve our rural areas.

And, Senator Bellmon, that's the extent of my statement. I appreciate the opportunity to come here to present these views, and I will be glad to answer any questions.

Senator Bellmon. Senator, we appreciate your comments and the benefit of your experience in this area.

You said that one of the main sources of calls that you get from your constituents is to try to help them figure out ways to recruit doctors into the rural areas. What do you tell these folks?

Senator Ferrell. You know we have got a number of fairs. It boils down to a market problem. The highest bidder gets doctors, and the problem is there is liable to be a higher bidder that comes along a litttle later and you lose the one you have. Your office has given us some assistance. The community of Prague, for instance, tried to obtain the services of a doctor, a native of India. We were not successful with the first one, but we were able to get the second one. This is the only doctor in the county that is younger than I am, if that tells you anything, and it's a problem. There are just so many out there, and, of course, it's easier to go to the larger cities than the smaller communities.

Senator BELLMON. You were impressed, you said, by Dr. Carson's story about how the city of Stilwell has put in a sales tax to help support an ambulance service. Do any communities in the area you represent have a similar program?

Senator FERRELL. I don't believe I know of any like that. Of course, the cities have so many needs, and the sales tax is used for so many different things and certainly every city that has an ambulance service uses part of their tax revenues to subsidize the ambulance service. So indirectly they are doing this.

Senator BELLMON. Do you know how many communities in your area have ambulance services supported partially by tax revenues?

Senator FERRELL. I would say that every city that has an ambulance service now has it operated by the city, and they are subsidized by tax revenues. So all of them that have ambulance services are subsidized.

Senator BELLMON. Let's take the case of Chandler. There is an ambulance service in Chandler?

Senator FERRELL. Yes, sir.

Senator BELLMON. Suppose you have a call from a person that lives in Stroud or Davenport or somewhere in a town around you, would this ambulance go and provide service for that person?

Senator FERRELL. Yes, sir, it would. For a while until we got ours set up, Stroud covered ours. We had a period after the funeral homes quit when we had no service, and we had to depend on towns 20 miles away to provide our ambulance service.

Senator BELLMON. Did that ambulance service, say from the city of Chandler to the city of Davenport, would it be provided at no cost to the city of Davenport?

Senator FERRELL. No, there is a charge made for the service, but the charge does not cover the cost of operation. That is where the subsidy comes in. Now it would be provided at a scheduled price, mileage cost.

Another facet of ambulance service that the last speaker didn't cover—we use ambulances both for emergency service and for routine transportation of patients to the hospital in Oklahoma City and other areas; so we keep our ambulances tied up on things other than emergencies. When an ambulance is out of the county, it is not available for emergency service.

Senator BELLMON. Back just a moment to the situation of a person who may live in another town in Lincoln County but not in Chandler, if the person needs ambulance service, in effect the citizens of Chandler are subsidizing the service to a person living in Davenport, say.

Senator FERRELL. That is true, but in the event of a major disaster we would be calling on their ambulance service also. There is a mutual self-help thing with all the communities that have ambulance service for the communities that do not have ambulance service.

Senator BELLMON. The point I'm getting to is this: Is there ambulance service available to all the citizens of Lincoln County?

Senator FERRELL. Yes, sir. They will answer any call.

Senator BELLMON. I see. But the cost of the service is borne partly by the taxes paid by the residents of Chandler?

Senator FERRELL. Any deficit, yes, sir.

Senator BELLMON. It's not a countywide tax levy, but just the town supports it for the whole county?

Senator FERRELL. Yes, sir.

Senator BELLMON. Which would seem to be a problem in some areas if the city didn't care to tax itself to serve the area around it.

Senator FERRELL. We are sort of a market center for that area, and I presume that some of the sales tax revenues come from residents in other communities.

Senator BELLMON. Senator, let me ask you one other question. Is the Oklahoma legislature concerned about the problem, and is it taking any action to provide better ambulance services?

Senator FERRELL. There will be a question on the ballot tomorrow which will provide a means for providing ambulance service which will tie in with your bill also.

Senator BELLMON. Could you be a little more specific?

Senator FERRELL. It provides for emergency service districts, either one community or county area, where a tax levy could be voted to provide this type of service.

Senator BELLMON. This will be an ad valorem tax?

Senator FERRELL. Yes, sir. It will be on the ballot tomorrow. I believe it is State Question 504.

Senator BELLMON. Senator, I have no further questions. I realize you have to leave, and I appreciate your testimony.

Senator FERRELL. Thank you.

Senator BELLMON. Our next witness will be Kenneth Black, executive director of United Tribes of Western Oklahoma and Kansas. Glad to have you here.

STATEMENT OF KENNETH BLACK, EXECUTIVE DIRECTOR, UNITED TRIBES OF WESTERN OKLAHOMA AND KANSAS, SHAWNEE, OKLA.

Mr. BLACK. Thank you. Senator Bellmon, I appreciate the opportunity to be here with you this morning. I represent the United Tribes of Western Oklahoma and Kansas. There are 21 tribes in Western Oklahoma and 4 in Kansas. We have had short notice on this health bill. You can be assured that a resolution of endorsement will follow;[1] however, we would like to make known to you that the tribes of Oklahoma historically have lived in the rural areas, and I need not quote to you statistics on the health of our Indian people. The municipalities which operate ambulances are far removed from the Indian people of our areas, and while they do serve, it is difficult for those people to participate in these types of programs.

We would like very much that the local municipalities with the local tribal governments cooperate in this provision of ambulance care to our rural citizens. We will endorse this bill provided that we specifically identify the local Indian communities as being participants in these areas. We find that many times municipalities will inquire about

[1] See p. 26.

the fee before they answer the call, and many of our people are on welfare, unemployed, and in this position it's difficult to discuss fee when one needs emergency care.

Be assured that our organization will assist you in helping the passage of this bill. And again I want to thank you on behalf of the United Tribes for letting us come to your hearing here.

Senator BELLMON. Thank you, Mr. Black. Let me have you go into a little more detail. From what you have just said, if an Indian citizen is ill and needs an ambulance service and calls in, let's say, the city of Chandler since Senator Ferrell is testifying, and asked that an ambulance be sent, then the first question is: Can you pay the bill?

Mr. BLACK. The first question is: Will Public Health pay this, and Public Health, of course, is charged with the service of providing health care to Indian people. In many instances there will be a shortage of funds at this particular time of the year, say in May, when we are going into another fiscal year. Then they seem to want to be assured of payment by Public Health, and I haven't found this difficulty. I pick up the telephone and I call for emergency care, why, 9 times out of 10 I have no problem in getting it out there. However, I live at Red Rock, you know, and it's a good 30 to 45 minutes before we are able to get any kind of emergency equipment out there. All Indian communities are practically in this same position.

Senator BELLMON. Do you have any occasion that the type of services that Indian citizens need are denied because of lack of ability to pay?

Mr. BLACK. Yes, sir. We have had many problems, not only in our area, but at Anadarko, various towns in this State that we do have some difficulty in the provision of medical health emergency care.

Senator BELLMON. Now, from what you have said, apparently at the beginning of the fiscal year, the Public Health Service has funds available to pay for ambulance service.

Mr. BLACK. Right.

Senator BELLMON. So the ambulance will come during that period. When you get down toward the end of the fiscal year, the money runs out and ambulance service ceases?

Mr. BLACK. Well, not necessarily. They continue to go ahead, as on a continuing-type resolution thing.

Senator BELLMON. Assuming they will be paid when the new fiscal year starts? Is that the idea?

Mr. BLACK. Yes, sir.

Senator BELLMON. You are not saying that ambulance service is denied for lack of ability to pay?

Mr. BLACK. There have been cases, where they were probably elsewhere or higher priority took them elsewhere; but, Senator, you are quite aware that emergency care has been denied to Indian people even in the hospitals. They will take them, but then on the basis that "we will do only what is necessary but we don't have any facilities and we have to transfer you to the Indian hospital." We also have much difficulty in attracting physicians to our areas for the purpose of providing health care to Indian people.

Senator BELLMON. You perhaps were here when Mr. Capozzi testified a little earlier about the very high rate of deaths among the American Indians.

Mr. BLACK. Yes, sir.

Senator BELLMON. Do you have statistics that bear this out or not?

Mr. BLACK. Yes, sir.

Senator BELLMON. The incidence of American Indians having been killed or injured in highway accidents is four times greater than that of other citizens.

Mr. BLACK. We agree with this statistic. We have met with the Public Health Service and they have provided us with these facts, that we have a high rate of death and poor health care.[1]

Senator BELLMON. Mr. Black, what would you like to see done to improve the capability of medical services to Oklahoma's Indian citizens?

Mr. BLACK. Briefly, sir, local communities must be given some type of assistance to provide emergency medical care. To pass a sales tax in Redrock wouldn't pay for the tires of a vehicle, so they must receive assistance elsewhere. And this assistance can be in the form of matched funds, but small communities like Braman, Sayre, and Redrock, and Billings, they would need some type of assistance to provide adequately. I don't agree with this gentleman about providing doctors to ride with the vehicles. You know, just to get them there in a short length of time would be better than what we have now.

Senator BELLMON. You are suggesting, then, that some of these smaller communities might band together and operate as a unit?

Mr. BLACK. Yes, sir, and providing emergency medical care to all the citizens of the community.

Senator BELLMON. Mr. Black, thank you very much.

Mr. BLACK. Thank you, sir.

[The above referred to material follows:]

RESOLUTION NO. 11-23-74/11

UNITED INDIAN TRIBES OF WESTERN OKLAHOMA AND KANSAS

A RESOLUTION ENDORSING THE EMERGENCY HEALTH CARE BILL

Whereas, the tribes of western Oklahoma and Kansas are located in rural areas, and

Whereas, the Emergency Health Care Act will benefit those communities that do not have medical facilities, and

Whereas, the Indian tribes of our country are presently suffering from inadequate care and emergency services.

Now, therefore, be it *Resolved* that the United Indian Tribes of Western Oklahoma and Kansas do hereby endorse the Emergency Health Care Act, that is presently being given consideration by the Committee on Agriculture and Forestry.

Be it further *Resolved* that the foregoing resolution will serve to notify the Senate of our endorsement.

CERTIFICATION

We, the undersigned, President and Secretary of the United Indian Tribes of Western Oklahoma and Kansas, do hereby certify that a quarterly meeting of the inter-tribal organization was duly noticed, convened and held on November 23, 1974 in Oklahoma City, Oklahoma, and that the foregoing resolution was duly adopted at said meeting.

CRAWFORD GOODBEAR, *President.*

Attest:

MILDRED C. WOOTEN, *Secretary.*

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[1] See p. 27.

SELECTED MORTALITY RATES

INDIANS AND ALASKA NATIVE IN 24 RESERVATION STATES: INDIANS IN OKLAHOMA AND UNITED STATES ALL RACES

[Calendar year 1971—rates per 100,000 population]

ICDA grouping	Causes	Indian and Alaska Native	Indians Oklahoma	United States all races	Ratio Oklahoma Indian–United States all races
008–009	Enteritis and other diarrhea diseases	4.4	0.0	1.2	0.0
010–019	Tuberculosis all forms	7.8	6.8	2.2	[1] 3.1
140–209	Malignant neoplasms	62.5	89.9	163.2	1.8
250	Diabetes mellitus	23.0	32.2	18.5	[1] 1.7
303	Alcoholism	14.8	12.7	[2]	[2]
390–398, 402, 404, 410–429.	Disaases of the heart	142.0	195.4	359.5	2.0
430–438	Cerebrovascular disease	42.8	71.3	101.1	1.4
470–474, 480–486	Influenza and pneumonia	38.6	20.5	27.7	1.4
571	Cirrhosis of the liver	45.6	35.2	15.4	[1] 2.3
740–759	Congenital anomalies	10.9	21.7	7.7	[1] 1.7
810–823	Motor vehicle accidents	82.1	45.9	26.3	[1] 1.8
	All other accidents	74.9	31.3	28.6	[1] 1.1
	Total all accidents	157.0	77.2	54.9	[1] 1.4
950–959	Suicide	18.7	5.9	11.7	2.0
960–978	Homicide	20.6	13.7	9.1	[1] 1.5

[1] Times greater.
[2] Not available.

Senator BELLMON. Our next witness will be Dr. G. Edward Shissler of Stillwater, Okla. Dr. Shissler, will you take the witness stand. You may proceed as you like.

STATEMENT OF DR. EDWARD SHISSLER, STILLWATER, OKLA.

Dr. SHISSLER. I'm a practicing pediatrician in Stillwater, Okla., and really not a rural physician. If I have any expertise to bring to the committee, it's in the field of the use of physician extender personnel in delivery of medical care. My remarks will probably be more applicable to S. 3045 but also have some bearing on S. 3909.

Doctors Calhoun and Carson have presented some ideas about recruiting doctors for rural areas, and S. 3045 is designed for that purpose also. Certainly any bill to end discrimination against rural medical practice, like the difference in medicare fee schedules, must be eliminated. But I'm not very hopeful that this is going to bring doctors out into the rural areas, mainly because of certain personal and social factors I would like to briefly mention. There are three, all of which have been at least touched on by other speakers.

One important thing is an opportunity for shop talk. Probably all of you know what I mean by shop talk, but in medicine it becomes informal consultation at coffee breaks with colleagues. This is probably more important to physicians than to most occupational groups because of the responsibility we carry and because of the loneliness that is imposed on us by the rules of confidentiality.

The second thing is a need for coverage to release the practitioner for postgraduate training and for vacation. In Oklahoma City or Tulsa all one has to do is to sign out to one or two of his colleagues

who would not necessarily even work in the same office, just somebody whose practices he knows well enough to trust him. His patients can find care; he can close his office and leave and be sure that things are OK. In rural areas he has to pay a locum tenens. This is all right if he can find one, but it is practically impossible to find one. So, he closes his office and his patients are on their own.

Third, are social and cultural factors. Physicians in general are sophisticated and educated people. Some are relatively uneducated, except in science, but generally they have a good background in the liberal arts. Their wives are also sophisticated and educated. They enjoy the performing arts, cultural group programs, clubs, even just partying with others of the same social, cultural level. I think, if you look over the population of small towns you will find that physicians are not the only group of highly educated persons who shun rural life.

While we work on ways to overcome these deterrents to rural practice, I suggest, we also do all we can to provide for effective utilization of physician extenders. As Senator Bellmon knows, I have been involved in a program at Yale, Okla., where physician's assistant, Mr. Fred Olenberger is working in a satellite clinic. We have worked out the professional aspects of the program, the quality of care problems, to our satisfaction and to the satisfaction of our State board of medical examiners. We haven't proven that the satellite clinic approach can be economically feasible where people have reasonably easy access to physician care, but I think we have already proven at Yale that quality medical care can be delivered by a PA in a satellite clinic when he is in contact with his physician supervisor by telephone and by regular consultation but the physician is not actually in the clinic. Our PA takes care of somewhere between 80 and 90 percent of the patients who are presented to him, and that's a pretty good percentage.

I think the PA is more likely to stay and work in the rural areas, mainly because as a group they will represent a lower social and educational group than the physicians and thus are likely to feel less the absence of theater, concerts, discussion groups, et cetera. They will find more in common with teachers and businessmen and others in the community whose social, economic, and education status are more nearly that of themselves.

In summary, I think the PA might be the best way, possibly the only way, to get and keep good primary care in rural areas; but I don't believe that it will be economically feasible, even where there are no physicians available, until medicare and medicaid are both paying full reimbursement. The medicare and medicaid load is heavier in rural areas than urban areas, and I just don't think any medical program can survive out there without payment from those organizations. There is a proposal in existence from the Social Security Administration for experimenting with reimbursement for physician extenders. In the first place it's way behind schedule. We need it now if we are going to get these people out where they are needed, and this, right now, is just a proposal. In the second place the current proposal I have read, and I, for one, would not participate. The way it is set up, I don't think any private practitioner could afford to participate in the program.

Senator BELLMON. Dr. Shissler, I want to ask you some more questions about Yale, but on your last comment, would you be more specific about why the physicians could not participate in this program?

Dr. SHISSLER. This proposal is about three-quarters of an inch thick, and I haven't memorized much of it; but the way it is set up, it would take a lot of physician time for data gathering. There is also a random distribution of reimbursement schedules that will go from zero reimbursement, which would mean nothing coming back, all the way to 100 percent reimbursement, which possibly would barely compensate for what I would have to put into that program. Mr. Stanhope, do you have more specific comments about that?

Senator BELLMON. Mr. Stanhope, would you care to come to the witness table and perhaps participate. Do you have any comments to make about this program?

STATEMENT OF WILLIAM D. STANHOPE, UNIVERSITY OF OKLAHOMA HEALTH SCIENCES CENTER, OKLAHOMA CITY, OKLA.

Mr. STANHOPE. I have talked to many of the program directors around the United States who have informally polled the physicians who are polling their graduates, and the consensus at this time does appear to be that it would be very difficult for the Social Security Administration to conscript very many physicians into the proposed reimbursement protocols that have been developed and are moving ahead. And as Dr. Shissler pointed out, it certainly is several months behind schedule. At this time the contract has just been let for the group that will do the actual evaluation, and I think it will be several more months before the Social Security Administration realizes how many physicians will or will not participate in this particular program.

Senator BELLMON. Could you gentlemen describe for the record how the program at Yale is operating in extending the services of physicians to a very small community. First of all for the record, how large is Yale?

Dr. SHISSLER. I think the population of Yale is between 1,300 and 1,400 people, perhaps a little over 1,400.

Senator BELLMON. Do you have a physician's assistant there? Would you go ahead and describe how this works?

Dr. SHISSLER. We have what would be a general practice office set up in Yale. The PA is there about 4½ days a week. About 75 percent or 80 percent of his time is spent in Yale seeing patients. I go to Yale Tuesday mornings so that I can see patients with him. Otherwise, I am in Stillwater, and if he needs consultation on a pediatric patient, a child, he calls me. If he needs consultation on an adult, he calls an internist who has volunteered in that capacity.

The State of Oklahoma requires that a PA's license specify who his supervising physician will be; so Dr. Tim Smalley and I are specified as Mr. Olenberger's supervisors. He comes back to Stillwater every night—he lives in Stillwater—and he brings copies of his clinical notes and discusses them with us. Thus, we know about every patient he sees. He, of course, doesn't hospitalize anybody; he sends his hospital patients back to Stillwater. In pediatrics we hospitalize very few patients, so to date all his hospital patients have been under Dr. Smalley.

Senator BELLMON. What kind of training has this person received?

Mr. STANHOPE. The individual who is working for Dr. Shissler and Dr. Smalley is a graduate of our program here at the University of Oklahoma. It is a very intensive 24-month program. During the classroom portion of the program the students take many of the classes along with medical students, and at the university, of course, all of their faculty are medical school faculty. The clinical phase of the program is 14 months in duration, and a good part of that time is spent with physicians who are in rural practices. We utilize the same preceptorship program that the university utilizes for the medical students. However, we require that at least half of the time that the students have for clinical training be spent with practitioners in rural primary care. I feel very strongly this is one of the things that has resulted in 74 percent of our graduates today going into primary care practices.

Senator BELLMON. Seventy-four percent of the graduates of the physician's associate program have gone into——

Mr. STANHOPE. Into primary care practice.

Senator BELLMON. I'm not a medical person. You say primary care—what are you talking about?

Mr. STANHOPE. There is a great deal of controversy over what the actual definition of primary care is. I think it can best be described as the family physician or person that someone goes to when they have a problem and they don't know what is wrong with them.

Senator BELLMON. Let me see if I get it straight. A person who is a graduate of the physician's associate program must first have college training, a college degree perhaps?

Mr. STANHOPE. We require for the minium requirements 2 years undergraduate education. However, the program is very competitive, and we find that the average student coming into the program has about 4 years of college, yes, sir; and we also require that they have at least 2 years of some type of previous health experience before they are acceptable for admission.

Senator BELLMON. And then for 24 months they are trained at the medical school?

Mr. STANHOPE. For 10 months they are trained at the medical school in formal classes, and for 14 months they are trained in teaching hospitals for about 7 months, practices for the remaining 7 months.

The 10 months that we have the students on campus is a rather demanding time for the students. We keep them in lectures and in classes from about 8 in the morning until 5:30 in the evening, and they also have Saturday morning classes. In addition to that we do require that the students gain some practical experience in the evenings and on weekends. So you can see that that 10 months is a very, very compact, very demanding 10 months of time.

Senator BELLMON. Then after the 24 months of training a physician's associate associates himself with a practicing physician or practicing group of physicians and is able to establish a clinic?

Dr. SHISSLER. In Oklahoma the physician's associate can only work for a physician. So, in a sense what's done in Yale I'm doing, through a graduate working as my agent. I carry the responsibility for what he does and I pay him his wages and supervise the work he does. So the physician's assistant, if he wants to operate a satellite clinic, would

just look for a physician who wants to set up a satellite clinic. It just happened that Fred and I were both interested and got together.

Senator BELLMON. What kind of treatment is your associate able to deliver at a satellite clinic without your being present? Is he able to give antibiotics, for instance?

Dr. SHISSLER. He makes recommendations; he can't prescribe. I have to do the prescribing; but he sees the patient, he takes the history. In other words, he asks the questions about the illness, he does the physical examination and he makes a decision as to what is needed, and he makes that recommendation to me. I have to be the person to do the prescribing. He can recommend over-the-counter drugs that the patient can pick up himself at the drugstore, but he can't prescribe—he can't dispense any prescription drug.

Senator BELLMON. If a person from Yale comes into the satellite clinic and your associate talks to the person, asks the essential questions and decides what the problem is, is he able to call you on the telephone and give this person a prescription as he leaves the office?

Dr. SHISSLER. This is managed by telephone.

Senator BELLMON. So a person doesn't have to wait 2 or 3 days to get it?

Dr. SHISSLER. No. It happens that the drugstore closest to Yale is in Oilton which is about 7 or 8 miles away, and I do business with that drugstore because it is close. That is where most of his business goes and they deliver to Yale. They can pick up their prescriptions within hours generally. It is just handled by telephone.

Senator BELLMON. So, in effect, the Yale person does get treatment without you ever having seen them?

Dr. SHISSLER. Yes, sir. I have to trust the findings that my PA presents to me and make the judgments on that basis.

Senator BELLMON. Mr. Stanhope, can you tell us for the record how many situations there are similar to this satellite clinic in Yale?

Dr. SHISSLER. Yes, it concerns me. I'm sure that I'm a little more at risk than I would be if I did not hire a physician's associate. But the State law covers me. I think we have a good law; it's very flexible. The man that I have hired. Mr. Olenberger, is well-trained, and he is cautious. He doesn't overstep either his professional knowledge or his legal limits. I was, of course, vulnerable before I hired a PA. Every physician is. The PA slightly increases the risk that has been with me ever since I started to practice so it isn't as if I have taken on something new. I don't really know how much increase there is in the risk. There have been some publications on this that I haven't had the opportunity to study.

Senator BELLMON. Are you able to buy insurance policies covering the actions of your associate?

Dr. SHISSLER. Yes, sir. The physician's assistant is covered by his own insurance policy, and I have a rider on my insurance policy which covers me for any act of malpractice that might involve him. In other words it is a two-way coverage.

Senator BELLMON. Mr. Stanhope, you said you didn't expect to see other satellite clinics such as the one at Yale established unless we are able to secure change in the rules so that medicare will reimburse. If we were able to obtain medical reimbursement, do you feel like there would be other satellite clinics?

Mr. STANHOPE. Yes, sir, I do. There have been several physicians in the State who have contacted our office and discussed the possibility, the feasibility of establishing such clinics, and I do believe that the State board of medical examiners has also been contacted by the key physicians around the State who are also interested in the establishment of satellite clinics.

Senator BELLMON. Now what facility does the local community need to provide to get a clinic established? What, for instance, happened in Yale? Did they provide a building, nurse assistant or anything of this kind?

Dr. SHISSLER. No. This operation in Yale is strictly a private enterprise on my part. It is not subsidized by anyone. I wish it were. There are several problems in Yale. One is that it's not really as isolated as a lot of communities in Oklahoma and other Midwestern States. The people of Yale have physicians available to them in Tulsa, Drumright, Cushing, and Stillwater, so they are not coming to my PA as much as they would if the nearest doctor was 50 miles away.

The second thing is that, as Dr. Carson mentioned, they have had a succession of physicians who have come, stayed for a year or two and left. So they are gun-shy. They are not going to transfer to us until they are convinced that we are permanent. So the traffic in the clinic is cut down because of their experience with doctors who didn't stay. Also, it's impossible to judge how much medicare has hurt us by not reimbursing. We could know, by going through our records, how much money they might have paid us on the patients we actually saw; but we don't know how many patients did not come to us because they knew medicare would not pay.

At any rate, the clinic in Yale is losing money rapidly. I think this must not be used as evidence that such a clinic will not work where there really are no doctors.

Senator BELLMON. If the clinic continues to lose money, I assume that ultimately it will have to be closed?

Dr. SHISSLER. I can only support it so long. I feel a responsibility to the community to go through this winter, and no decision has been made. It depends on how it comes along.

Senator BELLMON. But the medical reimbursement feature may determine whether or not it continues to operate; right?

Dr. SHISSLER. It's too late for that. If medicare started to remiburse now—perhaps it could build up fast enough to encourage us enough to continue just on that basis, but we have been in operation almost a year and the people are accustomed to the fact that medicare doesn't pay; and it would take a while for medicare payments to make an impact. I think the place where it is going to be very important is in a real satellite clinic where there are just no physicians available to the people. Sixteen miles is not too far; they can go to Cushing, 16 miles or 20 miles to Stillwater.

Senator BELLMON. I see.

I want to congratulate you on a very innovative approach in providing medical care in the rural areas. You haven't mentioned anything about ambulance services in relation to the satellite clinic. Do you have these services available for the person who needs it in an emergency situation?

Dr. SHISSLER. The city of Stillwater operates an ambulance program. When the standards were changed, the wage laws were changed and the funeral homes could no longer provide service, they served notice that they were going out of business. I think we had two separate subsidized private organizations trying to operate ambulances. The city was not willing to subsidize enough, and they both went out of business. The last time, the fire department took it over. We have good ambulance service, now.

Senator BELLMON. If a person in Yale became ill and needed an ambulance, then the ambulance from Stillwater would come to Yale and bring the person back to Stillwater?

Dr. SHISSLER. Or to any other hospital. I'm not sure how the relationships between Stillwater and outlying communities have been worked out. I have not been involved in it at all. But I know they do go outside.

Senator BELLMON. Mr. Stanhope, do you have any comment you would like to volunteer?

Mr. STANHOPE. The only other comment that I have is that the satellite clinics are not the only area being adversely affected by the nonreimbursement policy. The board rules as written here in the State of Oklahoma very specifically state that the physician's assistant may be paid for and may work in all areas of a physician's practice, including extended care facilities, patient homes and nursing homes. There is a very serious problem that exists as, I am sure, you are well aware. In many of the nursing homes it is difficult for physicians to find the time to make the visits to nursing homes and visits to the extended care facilities. When our program got going several years ago, it was one of the things we hoped would happen that the employing physicians would be able to use their physician's assistants to make house calls and to make frequent visits to the nursing homes and extended care facilities. However, as you know, medicare was very specific in its policy of nonreimbursement for those services as well; and so that aspiration has not come to fruition at this time. In fact, the physicians can't leave their office to the physician's assistant and go make the house calls or the nursing home visits or the extended care visits because under medicare regulations they would not then be reimbursed for the things that were going on in their office while they were at the nursing home or extended care facility.

So, I think that if we are indeed to provide economic incentives to people to provide care to rural areas, I think the medicare reimbursement issue is one of the ones that really deserves fairly rapid attention.

Dr. SHISSLER. There is a nursing home in Yale and Mr. Olenberger serves several of the patients there. He goes to the nursing home and gives them their examinations. He, of course, communicates with Dr. Smalley on them. They are adults, and that's in general donated time. Medicare is not paying, and so Yale Clinic doesn't get paid.

Senator BELLMON. Gentlemen, I have no further questions. I appreciate your comments and, again, would like to compliment you on what appears to be a very innovative health care plan for the smaller communities. I assure you I will do what I can to see that the rules of the Social Security Administration are changed so medicare reimbursement will become possible under these kinds of circumstances.

It seems a shame to deny communities medical care, and that is exactly what is happening under the policies followed if I understand your testimony accurately. Again, I say, the Oklahoma Medical Association does not have a position on this subject. Will they be taking a position?

Mr. STANHOPE. Yes; I think they will be taking a position very soon. The State Board of Medical Examiners has taken a position, and I believe a copy was sent to your office. The mails being what they are, it may never have gotten out of Oklahoma City.

Senator BELLMON. We are not having a hearing on the Postal Service today. Maybe we should do that next.

Gentlemen, thank you very much.

[The prepared statement of Mr. Stanhope follows:]

STATEMENT OF WILLIAM D. STANHOPE, UNIVERSITY OF OKLAHOMA HEALTH SCIENCES CENTER, OKLAHOMA CITY, OKLAHOMA

Senator Bellmon, ladies and gentlemen . . . I appreciate the privilege to appear before you today to speak about Senate Bill 3045.

In 1964, Dr. E. A. Stead, the Chairman of the Department of Medicine at Duke University realized that physicians from rural North Carolina were unable to attend continuing medical education programs because practice demands simply stated, that the physicians in the smaller communities had no one to assume some of the burdens of their practice so they could have time to keep abreast of new medical procedures. This problem, indeed a serious one led to the development of the physician's assistant program at Duke University in 1965. There are currently 42 programs training assistants to the primary care physician accredited by the American Medical Association.

A program similar to the original Duke program has been in existence at the University of Oklahoma Health Sciences Center since 1970. The students in the OU program receive much of their instruction in medical student classes. A majority of the student clinical training is provided by rural practicing physicians. Since 1970 we have graduated 38 physician's assistants, seventy-four percent of whom have chosen careers in primary care practices.

Recognizing that the graduates of this program would be capable of relieving the physician of many of his routine tasks, the Oklahoma State Medical Association was instrumental in developing a bill which defined the physician's assistant's role and empowered the Oklahoma State Board of Medical Examiners to serve as the regulatory agency for physician's assistants. This bill became law in April of 1972.

I will now read directly from the rules adopted by the State Board of Medical Examiners as these rules have a direct bearing on the remainder of my testimony. Section B, rule 10, as amended is the Board's definition of a P.A. Section C defines the scope of the P.A.'s responsibilities.

B. A Physician's Assistant must be a skilled person, qualified by academic and clinical training, to provide patient services under the supervision and responsibility of a physician. The physician employing the physician's assistant shall be responsible for the performance of the physician's assistant.

C. The work of the physician's assistant shall be done under the supervision of a physician who retains responsibility for patient care, although the physician need not be physically present at each activity of the assistant nor be specifically consulted before each delegated task is performed. The physician's assistant may be involved with the patients of the physician in any medical setting within the established scope of the physician's practice, not prohibited by law. The physician's assistant's service may be utilized in all medical care settings, including the office, the ambulatory clinic, the hospital, the patient's home, extended care facilities, and nursing homes. Diagnostic and therapeutic procedures common to the physician's practice may be assigned after demonstration of proficiency and competency is made by the physician's assistant.

It is evident from the degree of responsibility implied in the State Board Rules that it was the intent of the State Board of Medical Examiners that the Physi-

cian's Assistant services be used in all medical settings including the patient's home, extended care facilities, and nursing homes.

These regulations written to encourage house calls and calls on patients in nursing homes and extended care facilities have been thwarted by Medicare regulations which will not reimburse a physician for the services of a trained physician's assistant if those services are not performed in the physical presence of the supervising physician.

Physicians in rural primary care practices have told me that they cannot afford to use the physician's assistant to make house calls and nursing home visits if they cannot be reimbursed. Nor can they leave the physician's assistant in the office while the physician makes these visits because Medicare will then not reimburse for patients seen in the office while the physician is not immediately proximate to his Assistant.

These same Medicare policies of non-reimbursement for services performed by Physician's Assistants have also created a seemingly impenetrable barrier to a method of utilizing the Physician's Assistant to deliver primary medical care where it is most needed, in the many small rural communities which are currently without any medical services.

Recognizing the existence of many physicianless communities within our state, the Oklahoma State Board of Medical Examiners has moved to authorize physicians to establish satellite clinics staffed by Physician's Assistants. The first such satellite clinic became operational in December of 1973, in the community of Yale, Oklahoma.

Because this is a new approach to health care delivery in Oklahoma, several studies have been developed to assess the quality of services provided by a non-physician, the types of services provided and the acceptance of the community to receiving primary care from a non-physician.

None of these studies have been completed, however, we do have some preliminary data which may be indicative of some important trends which will have significant bearing on the ultimate success of such ventures.

An early statistical sampling of the households in the Yale community revealed that only 5.7% of the households surveyed stated they would NOT use the services provided by the clinic.

Although the median age of the community is 48, the median age of total utilizers at the time of a preliminary survey revealed a median age of 20.0 years.

In the first few weeks the clinic was operational the P.A. referred 6% of the problems immediately. Telephone consultations were necessary in 13% of patients seen in the clinic, and therefore the P.A. was able to treat 81% of problems.

It is postulated by our research group that the public knowledge that Medicare will NOT reimburse for services provided in the clinic has had a strangely negative effect on clinic utilization by the segment of the population which is eligible for Medicare.

It is felt by many that the only immediate way the rural community which currently has to do without medical care can receive the care it should have is through the establishment of similar satellite clinics. However, no individual physician or group of physicians can afford to establish such a clinic if the services provided are not reimbursable.

I feel that this paradoxical policy must be reversed before the potential of the Physician's Assistant can be realized by the citizens choosing to live in the rural areas. The social security non-reimbursement policies are indeed paradoxical as all of the 42 programs I mentioned earlier have received federal support approximately 6 million dollars in this year alone.

Senator Bellmon, I would like to recommend the following be considered for inclusion in the bill dealing with the rural manpower problem: That physicians employing physician's assistants in order to expand or to extend their services in rural areas be fully reimbursed for the services provided to Medicare eligible patients.

Thank you.

Senator Bellmon. Our next witnesses will be Mr. Kenneth Hager, the Executive Director of Oklahoma Council for Health Careers, and Jewel Matthews, the Assistant Director of Oklahoma Council for Health Careers.

Do you have statements you would like to make?

STATEMENT OF KENNETH HAGER, EXECUTIVE DIRECTOR, OKLAHOMA COUNCIL FOR HEALTH CAREERS, OKLAHOMA CITY, OKLA.

Mr. HAGER. Yes, Senator Bellmon. We appreciate the opportunity of providing testimony for your committee.

First, I would like to ask Mrs. Matthews to introduce herself, and then I will give some introduction on myself. Jewel.

Mrs. MATTHEWS. I developed the Physician Placement Service as assistant director of Oklahoma Council for Health Careers, and I have been the one that has operated that service; so I'm just here as a backup for Mr. Hager.

Mr. HAGER. In the way of some background information just briefly, Senator, I have spent 7 years in hospital administration in Oklahoma, having opened two new rural hospitals financed by Hill-Burton; spent some 3 years as associate director of the Oklahoma Hospital Association; some 7 years now I have been executive director of this nonprofit, tax-exempt corporation known as the Oklahoma Council for Health Careers; currently am also serving as associate director of the Oklahoma regional medical program which, in fact, does provide some funds to our nonprofit corporation.

As I said, it is a privilege to be here and give testimony on what the Oklahoma Council for Health Careers is currently doing to improve rural health care in Oklahoma.

Along with our efforts to recruit young people to go into the health field, we started a statewide placement service for health professionals in 1971. As an outgrowth of that activity, we conducted a statewide health job fair in the fall of 1972 and again in 1973, inviting communities to set up a booth where they could visit with soon-to-be health professionals from educational programs across the State. The first job fair established our paramedical placement service which is now averaging 40–50 placements a month for nurses, physical therapists, rad techs, medical technologists, et cetera, through the State. This is a statewide effort, giving hospitals a boost in their efforts to obtain skilled health professionals.

In evaluating the job fair of 1973, we discovered that the need for physicians was so intense in many communities that their main purpose in coming was to "sell" medical students on coming to their towns after graduation. Following the job fair, we began getting calls from these communities asking us to help them find physicians, assuming that since we helped them find other health professionals, we could help them find doctors. We learned from them how frustrating it was to conduct a physician search and that many dollars and much effort was spent with no results. They were bounced from one contact to another, with no one really able to make a concerted effort to help them.

Our office staff began brainstorming on how an effective matchmaking service for physicians and communities might be developed, and we began sharing our thoughts with the Oklahoma State Medical Association and the University of Oklahoma College of Medicine. They were most enthusiastic about the prospect of having one coordinated effort for physician placement to handle the many inquiries they received but could not handle effectively. They couldn't offer any funds

to support the service, but did offer their wholehearted endorsement of the approach.

For 3 months we worked in developing forms to collect the necessary data for matching communities and physicians. The Wilson Mahone family of Hobart were most instrumental in helping us decide what information we needed. Dr. Mahone had practiced medicine in a rural community for 25 years; Mrs. Mahone as a physician's wife had been active in recruiting physicians and working with the chamber of commerce; and their son, Kelly Mahone, was a second year medical student. They gave us much insight into the types of things a physician would want to know about a community to help him decide if he wanted to go there to practice.

At the same time, the editor of the Guthrie Daily Leader contacted our office in his frustration to help his city find physicians. He asked us to come meet with their recruitment committee to see if we could find some way to offer assistance. This was a most valuable experience and a number of items were added to our questionnaire as a result of our work with that committee.

In February of 1974 we launched our new Physician Placement Service by mailing to the 65 communities who had asked for our assistance. We also mailed to OU College of Medicine alumni of the past 5 years, asking them to complete our application if they would consider practicing in Oklahoma. Posters containing application request forms were sent to residency programs throughout the United States. As a result of these efforts, we now have applications on file from 178 physician specialists for 124 practice opportunities and 15 family general practice physicians for the 131 practice opportunities in Oklahoma.* One was the physician Dan Ferrell spoke of in Prague, one in Bartlesville, and several others. We have placed four physicians in Oklahoma communities—that we know about—and have about 15 possibilities that have not yet firmed up. We are serving 43 rural communities and 10 clinics.

METHOD OF OPERATION

A community defines their physician needs, population, proximity to other health care services, type of facilities available for a physician, possible financial arrangements, items of interest to families, recreational and cultural activities, et cetera, and who to contact for further information. Physicians complete a form telling us their specialty area, date available, size and location of community they would consider, type of practice they are interested in, special interests or needs of their families, and the factors that will help determine where they choose to practice. When we make a "match" or "near-match" of a community and a physician, the physician is mailed a copy of the community form and the community is mailed a copy of the physician form. Generally, the community contacts the physician and tries to arrange for a visit to the community. We work primarily with physicians available within the next 2 years or who are interested in moving in the near future.

We have received no additional funding for these efforts and have just now hired an additional staff person to devote full time to physi-

*See p. 45.

cian placement. We are now able to personalize our service both to the prospective physician and to the community. By telephone we are screening the lists of physicians to pull out those who are really serious about coming to Oklahoma, and we are offering to serve as their agent, at no cost, in helping communicate with those in need of their services. We are working directly with communities to organize their own recruitment efforts, analyze what might be keeping physicians from coming there, designing brochures for them, helping them analyze their most immediate need, plan for physician visits and the like.

This personalized approach is just developing, but we have determined priorities based on the urgency of the need. Our mode of operation is to (1) help relieve a crisis situation with physicians presently available, possibly from other States—I might just pause and say parenthetically the city of Fairfax lost their only physician the 12th day of this month. They have a hospital staff of 31, probably a $3,500 payroll alone, with absolutely no physician in the town. We are making every effort to help them before they totally eliminate all their resources and have to close down their hospital; (2) actively recruit physicians available within the next 2 years to bolster physicians presently in practice; (3) encourage communities to start negotiating for their long-range needs by communicating with medical students, interns, and residents who may not be available for 3 to 4 years; (4) encourage communities to assist with scholarship support for students interested in rural practice upon graduation and develop regular communication with them while they are in school.

In the area of recruitment, we are working to establish contact with all interns and residents in Oklahoma to let us know of our services. Since it is difficult to get their attention by mail, we are now setting up a plan to contact them individually at the hospitals and their wives. Our brief experience in this appears to be reaping great dividends. We are also working with interns and residents' wives and have high hopes of improving communication through them.

On the long-range view, we are working to establish our service with medical students, primarily 3d and 4th year. Periodically, we are sending them statistics comparing practice opportunities and applications in Oklahoma, and newspaper articles to sell them on the need for more family practice and primary care physicians, along with the advantages of practice in rural areas. We are also assisting them in locating community scholarships in cooperation wih the financial aids office of the Health Sciences Center and the Medical School. Hopefully, many of them will allow us to help them in selecting a practice.

Our work in physician placement and dealing with the problems of health care in rural communities leads us to the following conclusions:

1. Some communities that do not have a physician now are not going to be able to get one in the near future—and maybe, not at all. Such communities should face reality that the days of a physician practicing alone in a small community are over, and they should begin looking for alternate methods of providing health services:

(*a*) Shared physician services by a group, covering several towns, as provided in your S. 3504.

(*b*) Services of a physician assistant, working under the direction of a physician in a nearby town—such as we now have in Yale, Okla., with a physician in Stillwater.

(*c*) Emergency vehicles, purchased by a local community with aid from other sources and manned by a trained emergency medical technician for the transportation of the ill and injured to health care facilities within a reasonable distance, as referred to in S. 3909. With improved highways and transportation, this is probably the only feasible means of bringing health care to many of Oklahoma's rural communities.

2. Our conclusion is that much can be accomplished with an aggressive, coordinated physician placement activity working on the State level. Our 7 months' experience has confirmed our premise that:

(*a*) Communities need help in recruiting physicians and learning how to keep them when they get them.

(*b*) Communities that do not have physicians and have not been successful in recruiting any need to take positive measures to provide adequate substitutes, and they may need help in doing this.

(*c*) There is not a physician shortage as far as numbers are concerned, but a maldistribution of physicians and an improper balance of types of physicians. The realistic statistics that are possible through the operation of a statewide physician placement service are invaluable in communicating with medical students and medical educators the need for more students going into primary care specialties and general/family practice.

(*d*) The cost of operating such a placement activity to serve both communities and physicians does not have to be outlandish and can be combined with other health manpower activities very effectively.

(*e*) A simple plan of action can be effective and serve as a model for other States. We have visits and requests from other States, constantly wanting to copy what OCHC is doing in the areas of paramedical and physician placement. The only reason we can give for this is that we define the problem to be solved and find a direct method to solve it with the least possible effort and expense—this is in direct contrast to the way HEW and most Federal agencies usually attack problems and the way they are now attacking rural health care needs, by financing "studies" by educators and collecting data to be stored in warehouses. I have often said many Government academicians sit around and contemplate their navels until they get paralysis by analysis.

(3) Physicians going into general and family practice must be increased by some method. Our current report shows that we have 15 physician applications from 43 counties listed for 131 practice opportunities for general and family practice physicians. More family practice residency positions must be made available and in locations outside the metropolitan areas, as proposed by Dr. Thomas Lynn of the University of Oklahoma College of Medicine. This plan is now under consideration by the Board of Regents, and adequate funding will be a problem in establishing such a plan which could dramatically ease our physician problem in Oklahoma within the next few years.

In conclusion, I would like to say that our services are available to your committee for any further assistance in developing legislation to solve the rural health care problems in this country and we would be happy to serve as a model program for helping other States develop a coordinated physician placement service if you so desire.

And again, Senator, thank you for the privilege of testifying.

Senator BELLMON. Thank you, Mr. Hager.

You may have covered this point, but if you did, I missed it. How is the Council for Health Careers funded?

Mr. HAGER. By voluntary contributions from health professional associations, i.e., the State Medical Association, the Hospital Association, and from individual hospitals, the dues range anywhere from $100 up, and with no hospital paying more than $1,000 a year. We have 121 dues paying members that generate in the neighborhood of $40,000 per year. We have a staff of six people, and we get, as I said, some additional financial relief from the Oklahoma regional medical program.

Senator BELLMON. Do you help work out arrangements such as you heard about from Dr. Shissler in the Yale area, the physician's associate-type program?

Mr. HAGER. Yes; we are in pretty constant communication with Mr. Stanhope, the director of the PA program, in passing along information as we learn it from communities or physicians who would like to have a PA.

Senator BELLMON. What about nurses? Do you help place nurses?

Mr. HAGER. Yes, sir. We recently entered a special contract with University Hospital and Clinics, and we helped them recruit some 63 nurses over a period of 90 days. We place 40 to 50 health professionals monthly around the State.

Senator BELLMON. You mentioned that there is not a physician shortage; the problem is one of maldistribution.

Mr. HAGER. Yes, that's correct; and that has been touched on by other individuals this morning. To give you some example, of the 43 communities that told us the types and numbers of physicians they needed—they reported a need for two pathologists while we have 14 applications on file. In the radiology area we have 13 applications of radiologists who want to go to work in Oklahoma and one practice opportunity reported to date. We have 39 general surgeons that have filled out applications, yet only 18 practice opportunities reported from those 43 communities. This doesn't represent a statewide poll, just those 43 communities that we are assisting. But then when you get into the area of family practice, the primary care physician, we have a need, an immediate need, for 131 just in these 43 areas; and yet we only have 15 that will be available in the next year or so. So the problem isn't that we need to enroll more medical students in the State of Oklahoma. Another interesting stat that we pulled from our records is that when we mailed out questionnaires to the 599 alumini of the past 5 years from the University of Oklahoma, we found approximately 60 percent of them were out of State. So you know there needs to be a more indepth look at the postgraduate medical education programs made available as well as their geographic distribution.

Dr. Thomas Lynn does have this in mind, and as a matter of fact, he is in the process of doing a budgetary study for establishing a residency for family practitioners in Enid, Okla. That would eventually be a revenue-producing thing. For only $109,000 startup cost for a satellite program, we could produce six additional family practitioners each year. That would make family practitioners available for the Northwest. There is no reason why Oklahoma couldn't do this [other than finances], in Lawton, Shawnee, McAlester, Muskogee, and the other larger areas.

Senator BELLMON. Do the students who are entering medical training have access to the information you have just given us here about where these shortages exist?

Mr. HAGER. Yes, we are making this available to them. As I said, we have had about 7 months of experience; but we have made several mailings to them; we have met with their organization to explain this to them. I sincerely believe that if we had a little bit more manpower available on our staff for a statewide physician clearinghouse we could be much more effective.

Senator Ferrell couldn't exactly recall where they went for assistance to get the physician in Prague which made me think we haven't communicated with him very effectively.

Jewel, would you like to comment?

STATEMENT OF MRS. JEWEL MATTHEWS, ASSISTANT DIRECTOR, OKLAHOMA COUNCIL FOR HEALTH CAREERS, OKLAHOMA CITY, OKLA.

Mrs. MATTHEWS. Yes. I would like to say, too, that we are working with the Department of Family Practice. As we get an application from a student who indicates he might be interested in family or general practice, internal medicine or something in that area or he is undecided, we forward a copy of that application to the Department of Family Practice. We have developed a little system of "rushing" the medical student so that at least they know which ones are inclined that way and they can build on that interest.

Mr. HAGER. The family practice has developed a brochure to encourage younger medical school students to enter family practice, and have mentioned our services. We have received some referrals in this way.

Senator BELLMON. You may have heard the suggestion of Dr. Calhoun that every newly graduated medical student be required to spend a couple of years in family practice before they go into their specialty training. Do you see any merit in that?

Mr. HAGER. Ideally, yes. I think it would do several things, Senator. It would certainly help to mature the young physician. It would give him a greater appreciation, I think, for the way of life and give him more insight, in dealing with the total family rather than having patients referred to him because of some specific disorder. I think idealistically it would be very sound. I think we would run into some paramount problems in trying to legislate that, however. I believe that if we would take a look at the type of residency programs. if we would take a look at screening applicants going into medical school, we would do more to sell existing physicians on existing practices. I think one of the reasons that doctors didn't go to Prague, Okla., until they did, is that they didn't know where Prague was and what was available. So a lot can be done by an intelligent, concerted "rush" on the doctor. We have made numerous referrals, and we have made some good matches.

Mrs. MATTHEWS. We have also found that physicians in other States still think that we are treated by witch doctors in Oklahoma. We have a big selling job to do on Oklahoma.

Mr. HAGER. I was in a meeting in New York, the Advisory Council of the National Health Council, and made a statement about the amount of money a physician could expect to make in a rural practice, and a physician there stood up and said, "I don't believe that." And I said, "Well, that's your choice, but it's a fact." So there are doctors outside of Oklahoma that don't know about Oklahoma, and I would like for us to go after some of our own products that we are educating and transporting out of State. If you put the pencil to it, figure it economically, we may be transporting $2 million to $4 million worth of medical manpower a year out of State.

Senator BELLMON. I would like, Mr. Hager, to thank you for your assistance in developing S. 3045, which is the reason we are here today. You haven't said much about it but the intent of the legislation is to make it possible for several smaller communities to join together and provide the kind of support that a physician might need in order to locate and serve the residents of several towns that couldn't get a doctor if acting separately.

Mr. HAGER. Yes, the concept of S. 3045 is very sound, and it would have a great impact on rural health care in the State of Oklahoma, particularly when you consider the fact that several subdivisions of government could band together and could do things collectively that none of them could do individually. Our organization would be able to be of assistance to any of those subdivisions in assisting them and helping to sell their concept to physicians who have never heard about it. As you well know, a great problem is that of communicating the services that are available. One of the things that I would like to address myself to in both bills that is somewhat of a detriment to our State is the exclusion of the standard metropolitan statistical area. This does some disservice, particularly when you consider the county of Osage. Osage County is grouped in the SMSA of Tulsa; and yet we find blighted areas in that large county. As a matter of fact, Fairfax, mentioned earlier is in Osage County. They had a Health Service Corps physician for a while to help them out on a temporary basis. I think the bill should be restricted to city limits with 50,000 population.

Senator BELLMON. We have had some suggestions that the language be modified, and it will be at the appropriate time. I notice, for instance, right here in Oklahoma County that it joins Choctaw, Harrah, and this whole area out in the eastern part of the county, which is very close to the metropolitan area. Yet they are medically deprived. They have a hard time getting physicians out there.

Mr. HAGER. If we had the ability and the wherewithal, the mechanism to join together some of the western and northwestern, southwestern and southeastern counties of Oklahoma where they could do business as a multicounty in the area of emergency medical services, they could be developed into true systems of health care delivery. They could recruit physicians on a multicounty basis, and I think a great deal of top-quality service could be rendered through this mechanism.

Senator BELLMON. Do you see that kind of a medical delivery system centered around a regional type hospital medical center?

Mr. HAGER. I think it is a logical breakdown, Senator, simply because the smaller hospitals—having been the administrator out there for some 7 years—have a limited number of services they can provide.

But these limited services can be provided in small hospitals very effectively and very economically; however, there must be an improved transfer and referral mechanism. So, smaller hospitals surrounding a larger medical center could form a natural satellite-type operation. Services need to be provided from the point of injury or illness through the primary care physician, and, if necessary, all the way to the best medical center.

Senator BELLMON. Mr. Hager, that is our objective, and I appreciate the counsel you have given us here. Mrs. Matthews, thank you very much.

Without objection, Mrs. Matthews' written statements will be made a part of the record.

[The prepared statement of Mrs. Matthews follows:]

STATEMENT OF MRS. JEWEL MATTHEWS, ASSISTANT DIRECTOR, OKLAHOMA COUNCIL FOR HEALTH CAREERS, OKLAHOMA CITY, OKLA.

PROGRESS REPORT

The first mailing to communities and physicians went out February 1, 1974. Of the 214 applications received to date: 29 were from physicians available now; 42 available within the next 6 months; four available within 12 months; 49 available 1975 and 1976; 20 available 1977 or later; 70 medical students seeking assistance in scholarship support, summer work, et cetera.

Thirty-three communities have gone through the arduous task of completing the 7-page questionnaire. These questionnaires are a tremendous way of introducing physicians to communities and have been used extensively for referral by our staff as physician applications are received.

AMERICAN MEDICAL ASSOCIATION REFERRALS

Physicians who apply to AMA and indicate a possible interest in Oklahoma are referred to us monthly. By return mail they receive our application. They have been most cooperative in completing our forms so that we, in turn, can put them in touch with practice opportunities for which they are suited.

FLASH ! ! !

One of our AMA referrals, a surgeon, Sabry Ali Radawi, M.D., from California, has just signed a contract with Prague and plans to begin practice on July 1, 1974 . . . so if anyone else has been in touch with Dr. Radawi, you can scratch him from your list. We are hopeful we have other placements or new placements that have not yet been reported.

REPORT FORMS

Forms are being sent both to our community contacts and to applicants this week. This is an attempt to simplify reporting on contacts that have been made and keep our records up to the minute. We don't want to give out the name of an applicant who has already made a decision or keep sending applications to communities when the positions have been filled. PLEASE HELP US!

SUMMER EMPLOYMENT

Lists of medical students interested in summer employment were sent to hospitals that indicated they would like to provide summer jobs. A number of matches have been made through this first mailing. We are now sending the list of hospitals to the students so they can make their own contacts to speed the process. Any hospital that would like to provide summer employment but did not so indicate on your questionnaire should notify our office *IMMEDIATELY*. Please remember: your contacts with these students can be a "selling" contact for the future, and their experience in dealing with you and working in your hospital can have much to do with their future direction.

OUT-OF-STATE RESIDENT PROGRAMS

We have mailed posters and reply cards to over 600 residency programs in the United States—primarily Family Practice, Surgery, and Internal Medicine.

These have just been out a short time, but response is beginning to come in from residents interested in coming to Oklahoma after completion of their training. This may turn out to be a good source of out-of-state contacts. We are asking them to complete our application and will be mailing copies of these to communities as soon as they are returned to us.

AUGUST 7, 1974—PROGRESS REPORT

Since our first mailing to communities and physicians in February, some exciting things have been taking place in physician placement. These activities have resulted in four official "placements" in Oklahoma and numerous "warm contacts" that are being developed between community representatives and prospective physicians. This confirms our opinion that "match-making" works for physicians, as well as for other health professionals.

REPORTING RESULTS OF PHYSICIAN CONTACTS

Still the most difficult part of maintaining an efficient service is the difficulty of finding out the results of the community representatives' contacts with physician prospects. Some send us carbon copies of letters or notes about each contact they make. This is extremely helpful, and we would encourage others to do the same. We are sending our lists of "deactivations" regularly (one is attached) to let you know which physicians are no longer available. Much of this information comes from the feedback of people who have contacted them and learned that they have made a decision. We also receive a listing from the American Medical Association showing those who are no longer available, and they are included in this list.

Within the next few weeks, we plan to start calling each community contact to check on the progress you have made, learn who your good prospects are and which ones you have found are no longer available, et cetera. We hope to get a closer view of your needs and how our service is working for you. Be expecting a call from Tamara soon.

AMA REFERRALS

Occasionally you will receive a copy of a very brief application used by AMA. They operate the same type of service nationally that we do for Oklahoma, and they experience the same problems in getting feedback. Some of you have told us that the physician may have already made a decision BEFORE you receive an application, and we don't know any way to prevent that except for you to notify us immediately so we won't send it to anyone else. These applications are copies and sent out within 24 hours after they are received in this office from AMA. Applicants are just neglectful in reporting to them, as well as to us.

CONSULTING CONTRACTS

We have been asked by a few communities if we would consider contracting for additional services in physician placement to assist them in their efforts. This would probably require that contracting communities underwrite the salary for a fulltime staff person to work closely with community recruitment efforts. If you are interested in developing such an approach to supplement your efforts, please contact Ken or Jewel at our office within the next week to 10 days.

GP'S/OR SPECIALISTS?

You will note the imbalance of applications between specialists and general/family practitioners on the statistical report enclosed. If you can define your physician need to include a specialty or combination of specialties, you improve your chances of locating physicians.

REFERENCES

When you are in the process of negotiating with a physician and require further information on his or her background, we will be happy to help you if you will just give us a call or write a note.

STUDENTS

We are working closely with several medical students but have not been referring their names to communities since we work primarily with physicians available within the next two years. We have assisted several students in

locating scholarships and feel we are developing a good relationship with them. Our complete files on practice opportunities in Oklahoma are available to the Department of Family Practice who make the information available to students considering family practice, so you may be having some student contact from that source. If you are interested in communicating with students relative to practice in your community or in providing scholarship assistance, please let us know.

EMERGENCY MEDICAL SERVICES

Many communities—especially those without physicians—are becoming interested in developing or improving their emergency systems. Communities without the services of a physician should consider this alternative to providing medical care for their citizens—at least in emergency situations. Anyone interested in further information on what a community can do in this area should contact: Emergency Medical Services Division, Oklahoma State Department of Health, N.E. 10th and Stonewall, Oklahoma City.

PHYSICIAN'S ASSISTANTS

We receive many calls relative to the use of physician's assistants. As general information, they must be employed by a physician and work under his direction. There are one or two from this year's class that had not been placed at our last report. If a physician in your community would like to know more about using a physician's assistant, please call or write: Physician's Associate Program, 721 N.E. 14th, Oklahoma City.

ARTICLES OF INTEREST

Occasionally we encounter newspaper or magazine articles that might be helpful to you in securing the services of a physician or understanding what is involved in recruiting and keeping physicians. We plan to pass these along to you periodically.

[The following material was referred to on p. 37.]

PHYSICIAN PLACEMENT MONTHLY REPORT—APPLICATIONS AND PLACEMENTS

	Applications 1974–76	Applications after 1976	Placements	Deactivations	Active applications
Applications brought forward:					
Anesthesiology	9			3	6
Arthritic					
Cardiology	5				5
Dermatology	1	2			3
Emergency	2				2
ENT	5	1		1	5
Gastroenterology	3			2	1
Internal medicine	37	4	1	6	34
Neurology	2				2
OB/Gynecology	15	1		4	12
Ophthalmology	3			1	2
Pathology	18	2		4	16
Pediatrics	14			6	8
Psychiatry	4			1	3
Pulmonary medicine	1				1
Radiation therapy	1				1
Radiology	21	1		8	14
Student health	1				1
Surgeons:					
General	51	7	2	12	44
Head and neck	1				1
Neuro	1				1
Orthopedic	5	1		1	5
Pediatric	1				1
Plastic	2	1			3
Thoracic	2				2
Vascular	4				4
Urology	12	2		2	12
Miscellaneous	11	2		3	10
Family/general	35	2	1	20	16
Total	267	26	4	74	[1] 215

[1] Active applications carried forward.

PRACTICE OPPORTUNITIES AND AVAILABLE APPLICANTS—PHYSICIAN PLACEMENT SERVICE—OKLAHOMA COUNCIL FOR HEALTH CAREERS

Physician specialties	Practice opportunities	Available applicants
Anesthesiology	3	6
Arthritic	1	
Cardiology	4	5
Dermatology	1	1
Emergency		2
ENT	6	4
Gastroenterology		1
Internal medicine	24	31
Neurology	2	2
OB/Gynecology	16	11
Ophthalmology	5	2
Pathology	2	14
Pediatrics	16	8
Psychiatry	5	3
Pulmonary medicine	2	1
Radiation therapy		1
Radiology	1	13
Student health		1
Surgeons:		
General	18	39
Head and neck		1
Neuro	1	1
Orthopedic	14	4
Pediatric		1
Plastic		2
Thoracic		2
Vascular		4
Urology	2	10
Miscellaneous	1	8
Total specialties	124	178
Family practice/general practice	131	15
Number of communities represented	43	
Number of clinics represented	10	

Senator BELLMON. Our final panel is made up of three individuals from Central State University, and they are: Dr. Frank Wert, Assistant Professor of Economics; Mr. Carl F. Reherman, Director of the Bureau of Local Governmental Services; and Mr. Leroy Crozier, Chairman of the Department of Political Science.

STATEMENT OF DR. FRANK WERT, ASSISTANT PROFESSOR OF ECONOMICS, CENTRAL STATE UNIVERSITY, EDMOND, OKLA.

Dr. WERT. Mr. Chairman, I am Frank S. Wert, Assistant Professor of Economics, Central State University. I thank you for the invitation to testify before this subcommittee on the proposed solutions to some of the health problems confronting rural America.

I have prepared a brief statement to present to the committee. With the chairman's permission, I wish to comment on what I perceive to be the nature of the rural health problem, and then to comment specifically on the proposed legislation that is before this subcommittee. I will then be pleased to address myself to the committee's questions.

As a layman I have little knowledge concerning the substantive nature of medical practice. As an economist, however, I am greatly concerned with the maldistribution of health care resources, and the economic inefficiencies that have resulted from America's ad hoc system of health care delivery.

More than the urban areas, the rural areas have become victims of that system. There no longer exist appropriate incentives to assure the

forthcoming of an adequate supply of health care services in rural areas. This is partly because the organization of health care delivery systems has changed little in the face of staggering advances in the nature and quality of health care services.

Both the human resources and the nonhuman resources employed in the production of health care have become increasingly specialized. We are all aware of the trends in the specialized training of our physician resources; but, in addition, the functions of medical equipment and medical facilities have also become more specialized. While perhaps improving the ultimate product, specialization also increases the interdependence of our Nation's health resources, and thereby requires a much larger scale of operation than was previously necessary.

In my opinion, this is the primary cause of the rapid decline in the quantity of rural health resources, and is responsible for the current concentration of health facilities in more populated areas. Given the sparse populations of rural America, it has simply become uneconomical to provide adequate rural health care through the traditional health care delivery system. This problem exists not only for total facility construction and maintenance, but also for the operation and maintenance of subsystems to serve specific functions—such as emergency medical service.

I believe that the most significant feature of the chairman's proposed legislation is that it provides a means to partially overcome this scale of operations problem. Both S. 3909 and S. 3045 provide for the establishment of Associated Community Health Councils that cross existing political bounds. These councils should eliminate some of the traditional barriers to resource sharing among different political entities, and thus significantly expand the market size and increase the potential for economically providing adequate rural health services. Since individual communities are currently unable to provide these services, the requirement of local and regional cooperation in order to receive Federal assistance is highly appropriate. The matching funds provisions of S. 3045, and the guaranteed loan provision of S. 3909 provide proper incentives. Basically, I am in agreement with the provisions of both proposals.

It should be noted, however, that S. 3909 provides assistance for only half of the problem—the ambulance vehicles and related equipment. The other indispensable component of emergency medical service is having the proper facilities to which to take emergency patients. There are no provisions for the expansion of EMS fixed facilities.

I would also like to comment on the provisions in S. 3045 to increase the number of physicians available in rural areas. While in many cases it may be appropriate to provide small communities with the financial means to contract for physicians' services, money is only one of a number of important factors that determine where physicians choose to practice. Thus, in addition to the measures provided in S. 3045, it is my opinion that with regard to the scale of operations problem, appropriate incentives should be developed, and barriers reduced, to attract the less specialized health professionals—in particular physician extenders—into rural areas.

The last area upon which I would like to comment is with regard to feasibility studies, demonstration projects, administration, and

evaluation programs. The problems of rural health are of such importance, and the potential commitment of the involved communities resources so great, that every effort should be made to direct control and evaluation to unbiased observers. It is in the public interest that such projects be overseen by a neutral institution. A successful program will require the cooperation and support of the medical community, local governmental officials, and the affected public. The choice of an independent institution, experienced in working with rural communities—such as the Bureau of Local Governmental Services here at Central State University—would greatly enhance the prospects for success.

I feel it is important to realize that one of the major causes of economic inefficiencies in the provision of health care results from a fairly peculiar industry characteristic. In the production of health care services supply creates its own demand.

Mr. Chairman, thank you for allowing me this time.

Senator BELLMON. Thank you, Dr. Wert. You want to go ahead, Mr. Reherman?

STATEMENT OF PROF. CARL REHERMAN, DIRECTOR, LOCAL GOVERNMENTAL SERVICES, CENTRAL STATE UNIVERSITY, EDMOND, OKLA.

Mr. REHERMAN. Mr. Chairman, my name is Carl Reherman. I am director of the Bureau of Local Governmental Services at Central State University. The Bureau is responsible for working with small communities in Oklahoma. During the fiscal year we work with many communities in the State of Oklahoma on various projects. In talking to officials at the local community level, especially the small communities, one of the major problems that kept coming home in each conversation was the fact of lack of medical care. I think both of your bills we're discussing cover the problem that these small communities are facing. I am truly sorry that the two doctors, Dr. Whinery and Dr. Lerblance, were not able to be here. Both are mayors of their communities and both have expressed some very interesting facts that I think the committee would have liked to have heard. I would like to take the opportunity to mention a couple of these for the record.

First of all, Dr. Lerblance informed me last Tuesday night he sees approximately 100 patients a day on a 6-day week basis. It's impossible to get any type of assistance in his area, more doctors, and he has, in fact, been trying for 2 years to get another doctor to come into his business. Dr. Lerblance has expressed to me the statement he cannot keep up this type of activity and what is going to happen, he is going to have to retire to save his own health; and Dr. Whinery has just been released from the hospital for exhaustion, not from working just in the medical field but also as mayor of Sayre. Both of these examples show the need of some sort of new program. We have heard from expert witnesses and we have plenty of feasibility studies to show there is definitely a need for assisting small communities in Oklahoma as well as across the State. I don't think we are going to be able to continue the traditional approach of every community having its own doctor. Herein lies the problem, how do you get a small community, say like Davenport, to accept the idea that they are not in a position to receive this kind of health care. Speaking again for Dr. Lerblance, why should

we be given second rate medical service. When we talk about medical assistance and various programs, not only your bill but other bills, one of the problems the medical association is going to have to face up to, is allowing these programs, is simply how do you get the communities to accept them. I think before any program can be developed by any medical school or profession, there is going to have to be a concerted program in educating the public in the area it is going to be set up. I can see, talking on a limited basis, unless people are sure this medical care is going to provide them the same medical care they would receive from the medical doctor, it will not be accepted. I would like to stay away from my prepared statement, because we don't have the time.

The major problem to public officials is the cost, the spiraling cost to patients, not only in their own areas, but patients in Oklahoma City. When we talk about rural, it's the same as talking about cities, the cost is becoming prohibitive and particularly to rural Oklahoma where the income is well below the national average. The number of doctors, dentists, physicians have been discussed here, so I don't need to go into this. I would like to say Central State has submitted a request for feasibility medical studies to be conducted throughout the State of Oklahoma, a series of studies to find the location where this type of activity would best be suited. It's my understanding that Oklahoma, through the medical center, has proposed the establishment of certain centers. On the surface this appears fine. But unless adequate studies have been completed, and if the public will not support this program, I see difficulty in this progress.

I would like to conclude by saying you are well aware of the family doctor concept, being from rural Oklahoma just as I am, if the political pros do not take the necessary steps to correct this in medicine, I see Members in the Congress coming out with programs that will far surpass anything we are talking; and those type of programs may be prohibitive. We may be facing political bankruptcy.

Senator BELLMON. Mr. Reherman, we would like to insert your more complete, written statement into the record.

Mr. Crozier.

STATEMENT OF LEROY CROZIER, CHAIRMAN, DEPARTMENT OF POLITICAL SCIENCE, CENTRAL STATE UNIVERSITY, EDMOND, OKLA.

Mr. CROZIER. Senator Bellmon, it is a distinct privilege for us at Central State University for the U.S. Senate Agriculture Committee to hold this hearing on S. 3909 and S. 3045 here on our campus. This has truly been a dynamic lesson in democracy for our students and our staff. Central State University is an old school and has for many years been interested in the welfare of humanity and in doing its share in building a better world.

So, Senator Bellmon, today has been a great experience for all of us. On behalf of Central State University and its distinguished president, Dr. Garland Godfrey, we wish to extend to you our deepest and most sincere appreciation.

I would like to point out, as you already know, that Central State University has established within the Department of Political Science the Bureau of Local Governmental Services as an agency through

which we can be of service to the rural communities of Oklahoma. Although only in its second year of existence the Bureau has accomplished many worthwhile projects.

So it is with a great deal of humility and pride that Central State University would like to offer its services to you, the U.S. Senate and the National Government to be of whatever assistance that we may be in developing and administering rural health service projects.

Thank you, Senator Bellmon, for coming to Central State University to share these experiences with us. You are a great American and you deserve to succeed in your efforts. As one who grew up as a farmer in rural Oklahoma and as one who has remained attached to the soil, I would like to say, thank you, Senator Bellmon.

Senator BELLMON. Thank you, Professor Crozier.

Gentlemen, as I said before, we greatly appreciate the fact that Central State University made these facilities available so we can hold the hearing here today, and we appreciate the guidance you have given us in working up this panel and the support you will give us in gaining passage of these bills in the months ahead.

I was interested in the comment you made, Dr. Wert, about matching funds. Could you be a little more specific? You feel these funds need to be vague to try to get a community to try to resolve its own problems, but Dr. Wert, do you think the work you are doing here is going to get the community awakened up to some new approaches to meet the need? Why do we need matching funds?

Dr. WERT. If I may comment, the matching funds do serve as an appropriate incentive for development of associated health councils, and as I indicated in my statement, I believe this is the most significant program to come from your legislation. There is always a problem of financing, and if matching funds can be available, that will serve as an additional increased incentive in the sharing of these associated health care facilities.

Senator BELLMON. You have mentioned the need for some other site. Both of these bills are intended to be in the nature of pilot projects to set up a system and try to find out if it works. If it does work, expand it nationally. Do you feel Central State has the necessary staffing and insight to provide the findings or offer views that are needed to administer a program like this and work out the defects?

Dr. WERT. I would like to comment on that. We do feel that we have the expertise, and I feel it is extremely important that the project be overseen by an institution that does not really have an interest, any financial interest in the continuation and existence of that particular program. Too often, as I also indicated in my statement, I feel that the establishment of health care facilities brings about a demand for those facilities that may not be in accordance with the needs in a community.

Mr. REHERMAN. Senator, I would also agree with Dr. Wert on this particular point. I would also like to go ahead and say one such study for a program of this magnitude would require assistance, quite understandably, from some of our sister universities. I don't foresee Oklahoma University doing this on their own for this program, particularly if you want to avoid what Dr. Wert has said. As you well know, too often it is easy in such a project to further the establishment of certain centers and certain programs for the purpose of continuing those otherwise unnecessary programs. I think it takes a person who

has the opportunity to critically evaluate it from an outsider's point of view. We wouldn't want someone from auditing our set of books.

Senator BELLMON. Gentlemen, thank you very much. I appreciate your hospitality and contributions.

[The prepared statement of Professor Reherman follows:]

STATEMENT OF PROF. CARL REHERMAN, DIRECTOR, LOCAL GOVERNMENTAL SERVICES, CENTRAL STATE UNIVERSITY, EDMOND, OKLA.

STATEMENT OF NEED

The health problems in the State of Oklahoma are basically the same as those outlined by many previous studies and reports, and supported by many experts in the field of rural health care. Some geographical and socio-economic areas of Oklahoma are receiving adequate, and in some cases superior, health care; while other areas are subminimal at best. The areas of the United States, and the State of Oklahoma in particular, that need the increased health maintenance are in the areas referred to in data-collecting as rural in population. In many isolated communities and farm areas of rural Oklahoma, health care is woefully substandard and out of reach of many of the citizens.

Another prime concern to Oklahomans and other Americans, is the spiraling cost of health care, even for substandard limited care. In the past, Blue Cross and Blue Shield, and other such private insurance companies, have been the major method of keeping the high cost of medical care within reach of most Oklahomans, but now even these companies are applying to the State Insurance Board for rate increases to bring the cost in line with their outflow of cash. Within the next few years the cost of private insurance programs may be prohibitive to most Oklahomans. Thus, in rural Oklahoma, the lack of services is compounded by the spiraling cost of even limited services. Because of this, new innovative programs must be created to reduce the cost to the consumer and yet maintain the high level of life support activities.

Also, the maldistribution of doctors, nurses, dentists, paramedical personnel, and medical facilities are evident across the State. The problem is a complex one which calls for evaluation of the total maldistribution. A major problem facing rural areas must be how to encourage medical personnel to accept these challenges and conditions.

It is an oversimplification to state that this imbalance is brought on by the higher salaries received in urban areas as opposed to rural. The question must be answered why do medical personnel locate in urban areas? This evaluation would be necessary for future medical programs to succeed.

Transportation and distance are issues also facing the citizens in rural areas. The distance in some parts of the State may be as high as 40 to 50 miles round-trip to a medical facility that will provide the type of comprehensive medical care necessary. Among the most tragic victims of this distance and lack of transportation are the elderly and handicapped citizens. This group, lacking the financial resources and the availability to transportation, often die a needless death because of the lack of proper medical maintenance care. In rural Oklahoma, this may be the rule, not the exception, for many elderly.

The health problems of rural America are well known and the causes have been well documented by many analyses and feasibility studies. It is likely that never again will every rural community have its own physician. It has become necessary to think now in terms of how long it will take the individual to receive the care because of the time, travel, money, and distance to the nearest facility. The need is thus for the medical delivery systems of the future to insure that every American citizen has access to proper medical assistance.

FEASIBILITY STUDY APPROACH AND SUGGESTED MODEL

The following is an outline of the functions and the goals that the proposed feasibility study will undertake. It is proposed that the feasibility study be completed within 12 months.

The primary objective of the feasibility study is to evaluate and help local councils of health construct the necessary elements for the implementation of a medical health delivery system in four rural areas of the State of Oklahoma.

The evaluation of local needs will be developed with local citizen participation from the beginning. This is necessary to insure acceptance of the program and

that all segments of that area's population are given proper consideration. At the present time most counties in Oklahoma have established health councils comprised of concerned citizens. These groups will help to form the basic inputs for citizen support and decisionmaking.

The basic model will evaluate both regional health delivery and personalized health care needs of areas that are now isolated or understaffed. At the center of the proposed model system will be a base clinic with a bed capacity to meet the needs of the area. This base clinic will serve both emergency and preliminary care, in addition to the prolonged care that more difficult cases will require. The preliminary selection should be of an existing facility that can meet the necessary standards to become a regional hospital facility. This will require up-dating of this facility to bring into use the most modern of medical technology and equipment. It is the goal for the base clinic to expand into an adequate health maintenance organization.

The feasibility study will provide for site selection and evaluation of existing facilities to insure adequate health delivery. The criteria for these factors will be developed at a later date.

Extending from this base clinic will be several "day clinics" for preliminary and emergency care; these satellite clinics will be staffed with physician's assistants and/or registered nurses. Each of these "day clinics" will need some form of emergency vehicles from ambulances to the possibility of airplane and/or helicopter airlift. The evaluation will also determine location and the types of support equipment.

The "day clinics" will provide the first line medical care that would be performed by the medical doctor. The "day clinic" personnel could provide preventive testing and early diagnostic programs that are normally conducted by medical technicians. Also, this type of medical assistance could provide the life support emergency treatment that could sustain life until the victim arrives at the base clinic.

In an attempt to insure that citizens living in areas that could not financially support the "day clinic" system, but that are still part of the region, still receive the necessary medical assistance, the model will evaluate the possible use of a mobile medical laboratory and diagnostic testing vehicle which would make regular rounds in the areas not covered by the base clinic or the "day clinic." The mobile lab vehicle could be staffed with a physician's assistant and/or lab personnel, and a registered nurse. The mobile lab could act in the manner of the old "circuit rider" in taking the care to those who need it the most—the rural poor, aged and handicapped. The visits to rural communities would be coordinated with local civic and religious groups to insure the dissemination of information. The mobile lab and the "day clinics," after testing and early evaluation, will then refer and, if necessary, transport the person to the base clinic for the proper action and evaluation. This mobile lab concept will allow for medical care to be carried to the needy.

As the attached map illustrates, that system will be multi-county and will act thus in a manner as to become more economically feasible because it will serve a larger group than current programs and will increase the amount of health care that the citizens in that area are currently receiving because of the mobile features of the plan.

To insure that the evaluation is conducted in such a manner as to gain that primary goal, the following elements will be evaluated from the medical, social, political, and economical factors. These essential features will allow for proper evaluation to provide for alternative decisions for the local leaders to act on in the establishment of a health system.

Suggested Model

I. PERSONNEL

A. Three or more physicians representing primary physician skills: e.g., family practitioner, internist, pediatrician.
B. Nurse, dentist, laboratory and X-ray technicians.
C. Health Aides—recruited from the local community.
D. Physician's Assistant and/or Nurse Practitioner.
E. Public health nurse—outreach and follow-up.
F. Social worker.
G. Administrator and staff.
H. Medical specialists, staff, visiting or by referral.

II. SERVICES—FOR ALL ECONOMIC LEVELS

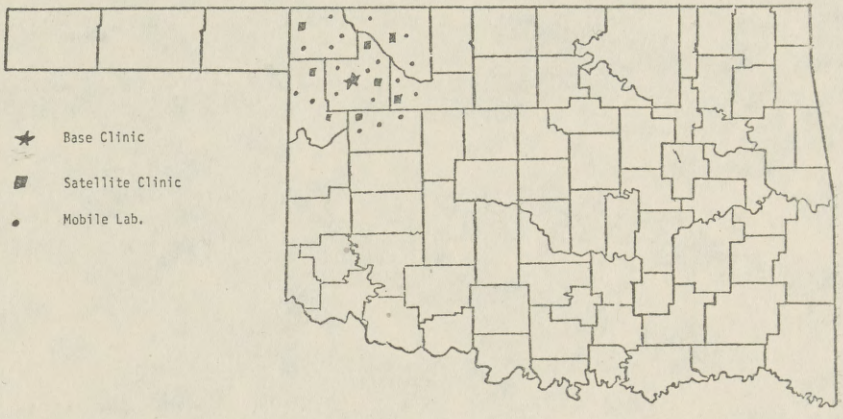
A. Preventive, curative and rehabilitative medical and dental care.
B. Social services.
C. Transportation to and from the clinic and to referral resources.
D. Outreach case finding.
E. Home care.
F. Appropriate technology.
G. Satellite clinics.
H. Mobile labs for rural community care.
I. Evaluation and medical audit.
J. Central records master, family records, established referral, and report back procedures.
K. Administration.
L. Adequate physical facilities.

III. COMMUNITY RELATIONSHIPS

A. Health council representing the total community.
B. Community college and vo-tech training for medical assistants.
C. County health departments.
D. Medical society.
E. Health planning agencies.
F. Medical schools for referral and source of students and residents.

IV. FUNDING

A. Fee for services.
B. Prepaid and/or capitation.
C. Third party.
D. Sliding scale.
E. Public funding for non-reimbursable services.



This area is used for an example only and is not one of the proposed areas for this program.

This area is used for an example only and is not one of the proposed area for this program.

[The Daily Oklahoman, Mon., Aug. 19, 1974]

OU Regents to get Rural Doctor Plan

A program designed to increase the number of doctors in rural Oklahoma will be presented to the University of Oklahoma Board of Regents Sept. 5, the OU College of Medicine announced Sunday.

Calling the plan "an important step toward significantly increasing the number of rural Oklahoma family practice physicians," Dr. Thomas Lynn, chairman of a committee studying the needs of the college in the family medicine program, said "the plan is to develop satellite family practice residency programs in several communities throughout the state."

Graduated medical students will serve residencies in moderate-sized cities in the state and also operate day clinics in surrounding "physicianless" communities, Dr. Lynn said.

He said cities the size of Lawton, Ardmore, Shawnee and Muskogee are being considered for residency sites. A similar program is already in the budgeting stages for Enid, Dr. Lynn said.

A College of Medicine study shows there is "an overall minor deficiency of numbers of physicians within the state of Oklahoma," but the major problem with medical manpower is found in rural areas where there are not enough family physicians or general practitioners, Dr. Lynn said.

The satellite residency program could alleviate this problem if the regents approve it, the doctor said.

"It is an acknowledged fact that a great percentage of doctors remain in the area where they completed their residencies. The College of Medicine faculty board feels such an increase in available family practice residencies throughout the state would play a major role in alleviating the needs for such doctors in rural Oklahoma," Dr. Lynn said.

He estimated the total costs of the program with five sites will be approximately $1.5 million. He said nearly $1 million of that expenditure could be offset by income from the clinics.

"Quite frankly, since the clinics will be generating income, this proposal provides a $1.5 million family health care program for rural Oklahoma for an investment of little more than $500,000 in a badly needed educational program," Dr. Lynn said.

[Whereupon, at 12:30 p.m., the hearing was adjourned.]

ADDITIONAL MATERIAL FILED FOR THE RECORD

BOARD OF NURSE REGISTRATION AND NURSING EDUCATION,
Oklahoma City, Okla., September 11, 1974.

Re Public Hearing on Rural Health Needs.

Senator HENRY BELLMON,
Old Post Office Building,
Oklahoma City, Okla.

DEAR SIR: We are pleased to present this information for your Hearing on Rural Health Needs.

The Oklahoma Board of Nurse Registration and Nursing Education is the state authority responsible for the licensing of registered nurses and licensed practical nurses in the State of Oklahoma and the establishment of minimum standards for approved schools of nursing and schools of practical nursing. Information concerning the nurse population and schools of nursing is being provided for your consideration.

The following material is enclosed:

1. Nurse Population—December 1, 1973
2. Progress Report
3. Annual Report—FY 74, Oklahoma Board of Nurse Registration and Nursing Education
4. List of state approved schools preparing for registered nurse licensure; and
5. List of state approved schools preparing for practical nurse licensure.

This information identifies the geographical distribution of the nurse population (employed and non-employed) and the schools of nursing. The lack of adequate health care facilities in the rural areas is a major limitation for a number of the schools. For example, the students enrolled in the associate degree program at Eastern Oklahoma State College, Wilburton, must travel to McAlester, Talihina, and Norman for clinical learning experiences.

We appreciate your consideration of this information at the public hearing scheduled September 16, 1974. Please contact me if you have any questions regarding this information or if additional information is desired.

Respectfully,

(Miss) FRANCES I. WADDLE, R.N.,
Executive Director.

Enclosures.

ANNUAL REPORT—JULY 1, 1973–JUNE 30, 1974

The Oklahoma Board of Nurse Registration and Nursing Education is pleased to provide you with the Annual Report for the fiscal year 1973–1974. This report continues to identify an increase in activities relating to nursing and nursing education in Oklahoma.

Increases in population, health care facilities and services and the demand for adequate health care have continued to increase the need for licensed nursing personnel. The changes occurring in nursing practice continue to accelerate and require the individual practitioner to utilize various resources for up-dating the knowledge and skills necessary for the safe practice of nursing.

The progress identified in this Annual Report reflects continued interest and support in the improvement of nursing education and nursing services in Oklahoma by the Legislature, Governor, State Regents for Higher Education, other governmental agencies, professional and voluntary associations and individuals.

The Board of Nurse Registration is committed to serving the people of Oklahoma. The response of the citizens of Oklahoma to needs of the future will require cooperation, coordination and leadership of all concerned with nursing and nursing education.

Board members

The members of the Board of Nurse Registration and Nursing Education for this period include:

	Term ending
Dorothy Lamb, R.N.	1974
F. Jaunita Proctor, R.N.	1975
Neila Poshek, R.N.	1976
Bernice J. Regaldo, R.N.	*1977
Helen French, R.N.	1978
Lillie Murray, L.P.N.	1974
Roxie Smith, L.P.N.	1975
Iveas Pruitt, L.P.N.	1976

*Appointed to fill unexpired term.

The staff for the BNR & NE during this fiscal year included:
Frances I. Waddle, R.N., Executive Director
Katherine Priddy, Associate Executive Director for Administrative Services
Mary Ann Thomason, Typist Clerk III
Diane Wiemers, Typist Clerk III
Marlene White, Secretary (resigned 10/73)
Margaret McNeely, Secretary
Teresa Groothouse, Account Clerk III
Judy Wisdom, Typist Clerk II
Dena Kinchion, Typist Clerk II (resigned 8/73)
Roberta Treadwell, Typist Clerk II
Marla Brooks, Typist Clerk II (part-time)

Kerr, Davis, Irvine, Burbage & Green, Inc, is retained by the BNR & NE as legal counsel. Charles C. Green, Attorney-at-Law serves as the Board's primary counsel.

The Annual Report of the Oklahoma Board of Nurse Registration and Nursing Education is prepared and distributed in accordance with Article VI, Section 9 of the Oklahoma Constitution.

In accordance with Senate Joint Resolution No. 20 (1974 Legislature), the following information concerning the approximate cost of this publication is provided. The approximate total cost including preparation, handling and mailing is $1.00 per copy or a total cost of $261.88 for 250 copies.

Meetings

The Oklahoma Nursing Practice Act requires that the Board hold two regular meetings each year and such special meetings as are necessary to conduct its business. During this period, the Board met seven (7) times; (two (2) regular meetings and five (5) special meetings) for a total of fifteen (15) days. In addition, the Board members participated in other activities which included: proctoring examinations, committee meetings, educational conferences, survey visits and consultation visits.

Nursing services

The Board is indebted to the directors of nursing service in institutions and health care agencies who have a significant role in the interpretation and enforcement of the Oklahoma Nursing Practice Act.

The Board recognizes that individual efforts are required by all employers in order to determine that nursing personnel hold a current license to practice nursing.

During this period, several directors of nursing service have assisted the Board's staff in identifying evidence necessary for hearings before the Board. There appears to be an increased interest by nurses and the public in determining that nursing practitioners are competent in their practice.

Nursing education

The Board and staff continue to participate in numerous activities relating to both developing and on-going nursing education programs. In addition to setting standards for nursing education programs which prepare for licensure as registered nurses and licensed practical nurses, the Board provides consultation at a school's written request and services to institutions and groups interested in developing new nursing education programs.

The following schools held Initial or Full Approval as of July 1, 1973:

Baccalaureate degree

The University of Oklahoma (Norman)
Oklahoma Baptist University (Shawnee)
Central State University (Edmond)
The University of Tulsa (Tulsa)
East Central State College (Ada)

Hospital diploma

St. Anthony Hospital (Oklahoma City)
Hillcrest Medical Center (Tulsa)
St. John's Hospital (Tulsa)

Associate Degree

Bacone College (Bacone)
Cameron College (Lawton)
Northeastern Oklahoma A & M College (Miami)
Oklahoma State University Technical Institute (Oklahoma City)
Eastern Oklahoma State College (Wilburton)
Northern Oklahoma College (Tonkawa)
Murray State College (Tishomingo)
Tulsa Junior College (Tulsa)
Seminole Junior College (Seminole)

Practical

Byng Vocational School (Ada)
Southern Oklahoma Area Vocational-Technical School (Ardmore)
Tri-County Area Vocational-Technical School (Bartlesville)
Western Oklahoma Area Vocational-Technical School (Burns Flat)
Central Oklahoma Area Vocational-Technical School (Drumright)
Canadian Valley Area Vocational-Technical School (El Reno)
O. T. Autry Area Vocational-Technical School (Enid)
Great Plains Area Vocational-Technical School (Lawton)
Kiamichi Area Vocational-Technical School (McAlester and Poteau/Talihina)
Northeastern Oklahoma A & M College Vocational School (Miami)
Midwest City Vocational School (Midwest City)
Indian Capital Area Vocational-Technical School (Muskogee)
Moore-Norman Area Vocational-Technical School (Norman)
Oklahoma City Vocational School (Oklahoma City)
Oklahoma State Tech (Okmulgee)
Northeast Oklahoma Area Vocational-Technical School (Pryor)
Gordon Cooper Area Vocational-Technical School (Shawnee)
Tulsa Vocational School (Tulsa)
Mid-America Area Vocational-Technical School (Wayne)
Woodward Vocational School (Woodward)

The following schools of nursing were granted Initial Approval and demonstrated readiness to admit students during this fiscal year:

Associate Degree

South Oklahoma City Junior College (Oklahoma City)

Practical

Pioneer Area Vocational-Technical School (Ponca City)

During this fiscal year, survey visits were completed for one (1) baccalaureate degree program, two (2) associate degree programs, and six (6) practical nursing programs. The Board granted Full Approval or continued Full Approval for each of these programs.

The Board appreciates the services of full-time faculty persons from Oklahoma and other states who served as "peer groups" survey visitors during 1973–74. These persons include: Dorothy Hall, R.N.; Sharron Boehler, R.N.; Lee Godare, R.N.; Carolyn Moore, R.N.; and Etta Rasmussen, R.N. Jan Harris, R.N. was selected as a survey visitor for practical nursing programs.

Consultation services are provided for institutions interested in developing schools of nursing. Services are provided by Board members and staff and may be offered at the institution or at the Boards' office in Oklahoma City.

Students in various nursing education programs have attended the meetings of the BNR & NE during this period. One student wrote, "It was my first oppor-

tunity to experience a Board meeting, which was very interesting. I didn't realize how serious and important being licensed in a profession is, but I do now. Thank you again!"

Educational Standards Committee

In 1967, the Board established an Educational Standards Committee "to serve as resource persons to the Board in the development of rules and regulations relating to nursing education," and "to assist (the Board) in interpreting rules and regulations, approval (survey) visits, etc. to faculties, hospitals and colleges." The members of the Educational Standards Committee include a registered nurse Board member who serves as chairman, a licensed practical nurse Board member and one representative from each type of nursing education program. The representatives from the types of nursing education are selected from schools which are not represented on the Board.

Members of the Educational Standards Committee during 1973–74 were: Dorothy Lamb, registered nurse Board member; Roxie Smith, licensed practical nurse Board member; Barbara Henthorn, baccalaureate degree programs; Carole Bryant, hospital diploma programs; Margaret East, associate degree programs; and Jan Harris, practical nursing programs. The Educational Standards Committee did not meet during this fiscal year since the Rules and Regulations were reviewed, revised and adopted in March, 1973.

Nursing practice

Employers and the public have increased their inquiries and reports to the Board to insure that persons are licensed and competent to practice for the public's protection. Investigations of these inquiries and reports are completed by the Board's staff, legal counsel or other governmental agencies. During its investigations, the staff has continued to emphasize the Board's commitment to the due process afforded each licensee under the provisions of the Oklahoma Nursing Practice Act and the Administrative Procedures Act.
conclusions and action shows the following:

Formal hearings were held on 34 complaints. The report of the hearings by

	Action											
	Application approved (information to be a part of permanent record		License to remain in effect		License to remain in effect with probation		Application denied		License suspended		License revoked	
Conclusions	RN	LPN	RN	LPN	RN	LPN	RN	LPN	RN	LPN	RN	LPN
567.8(a)(2)—Guilty of felony		1				1		2			2	1
567.8(a)(3)—Gross negligence											1	
567.8(a)(5)—Judicially incompetent								1				
567.8(a)(6)—Unprofessional conduct	1	1	1			2		1			4	2
567.8(a)(7)—Repeatedly violating ONPA	5											1
Application for reinstatement	1					1		1				
Application for interstate endorsement	1	3										

Note: More than 1 conclusion may be made for an individual licensee. The columns should not be totaled. RN=Registered nurse; LPN=Licensed practical nurse.

The disciplinary action by individual licensee included:

	Registered nurse	Licensed practical nurse
License revoked	4	3
License in effect with probation	3	5
Application denied	3	0

During this fiscal year, 57 investigations were initiated. In addition, 22 referrals concerning possible violation of the Oklahoma Nursing Practice Act were sent to the appropriate district attorney in 12 counties.

Of the 345 applications for reinstatement of license as a registered nurse, investigation indicated employment without licensure for 151. Letters of advisement concerning the provisions of the Oklahoma Nursing Practice Act were issued to these persons. Of the 243 applications for reinstatement of license as a licensed practical nurse, investigation indicated employment without licensure for 128. Letters of advisement concerning the provisions of the Oklahoma Nursing Practice Act were issued to these persons, also.

Licensure statistics

The Oklahoma Nursing Practice Act provides that licensure may be granted by examination or without examination (by interstate endorsement). The Oklahoma Board of Nurse Registration and Nursing Education participates in the State Board Test Pool Examination for registered nurse licensure and the State Board Test Pool Examination for practical nurse licensure.

STATE BOARD TEST POOL EXAMINATION FOR REGISTERED NURSE LICENSURE

	1st time writers			Repeat writers [1]		
	Total	Pass	Fail	Total	Pass	Fail
Oklahoma	414	359	55	55	41	14
Other States	19	15	4	2	1	1
Other countries	9	1	8	10	4	6
Total	442	375	67	67	46	21

[1] Persons repeating the examination may have been unsuccessful during a previous reporting period.

Note: 87 percent of the 1st time writers from Oklahoma schools of nursing were successful.

A review of the reports of the State Board Test Pool Examination for registered nurse licensure for the fiscal years 1969–1974 provides information relating to previous fiscal years and the projected increases in the near future.

STATE BOARD TEST POOL EXAMINATION FOR REGISTERED NURSE LICENSURE

	1st time writers	Pass	Fail	Repeat writers [1]	Pass	Fail
Fiscal year:						
1969	236	196	40	60	36	24
1970	238	203	35	47	31	16
1971	258	234	24	23	14	9
1972	267	215	52	55	29	26
1973	312	261	51	57	36	21
1974	442	375	67	67	46	21
1975	[2] 750					
1976	[2] 850					

[1] Repeat writers may have failed the examination during a previous reporting period.
[2] Projected.

STATE BOARD TEST POOL EXAMINATION FOR PRACTICAL NURSE LICENSURE

	1st time writers			Repeat writers [1]		
	Total	Pass	Fail	Total	Pass	Fail
Oklahoma	625	595	30	21	11	10
Other States	25	19	6	7	0	7
Other countries	0	0	0	0	0	0
Total	650	614	36	28	11	17

[1] Persons repeating the examination may have been unsuccessful during a previous reporting period.

Note: 95 percent of the 1st time writers from Oklahoma schools of practical nursing were successful.

A review of the reports of the State Board Test Pool Examination for practical nurse licensure for the fiscal years 1969–1974 provides information relating to previous fiscal years and the projected increases in the near future.

STATE BOARD TEST POOL EXAMINATION FOR PRACTICAL NURSE LICENSURE

	1st time writers	Pass	Fail	Repeat writers [1]	Pass	Fail
Fiscal year:						
1969	390	360	30	25	14	11
1970	424	408	16	18	7	11
1971	431	406	25	22	12	10
1972	527	516	11	20	10	10
1973	618	592	26	29	13	16
1974	650	614	36	28	11	17
1975	[2] 700					
1976	[2] 750					

[1] Repeat writers may have failed the examination during a previous reporting period.
[2] Projected.

It should be noted that the licenses may be issued during a different fiscal year period and that these results are for the examinations *administered* during this fiscal year period.

During this fiscal year, 524 registered nurses were licensed by interstate endorsement into Oklahoma. For this same period, 243 licensed practical nurses were licensed by interstate endorsement into Oklahoma. The credentials of 373 registered nurses and 203 licensed practical nurses were endorsed to other states during this same period.

A review of the endorsements into and out of Oklahoma for the fiscal years 1969–1974 shows the following:

	Registered nurses		Licensed practical nurses	
	Into Oklahoma	Out of Oklahoma	Into Oklahoma	Out of Oklahoma
Fiscal year:				
1969	495	314	179	119
1970	506	322	238	143
1971	573	279	216	164
1972	497	261	270	185
1973	543	296	231	188
1974	524	373	243	203

The records of licensees were computerized by January, 1972 and have continued to be computerized annually. The data processing services from the Information and Management Services Division, State Board of Public Affairs, are utilized. The purpose for computerizing the records is three-fold:

1. preparation of applications for renewal of license;
2. preparation of the roster of registered nurses and licensed practical nurses; and
3. current statistical information about the nursing resources in the State of Oklahoma, its regions, counties, etc.

The statistical report of the nurse population effective in December 1973 was prepared from the computer records. A copy of this report may be obtained from the Board office. It was distributed with the February, 1974 issue of the *Newsletter.*

Nurses from other countries

Inquiries from nurses in other countries continued to increase during this fiscal year. The number of applications is less than the number of inquiries re-

ceived. The number of inquiries received by country to whom applications were mailed during this period is shown below:

Bahamas	1	New Zealand	1
Canada	7	Nigeria	1
China	1	Philippines	19
England	[1] 12	Scotland	[2] 1
Ethiopia	1	Sweden	1
Germany	2	Thailand	7
Holland	1	Viet Nam	1
India	21	West Africa	[2] 5
Iran	3	West Indies	1
Ireland	10	Country Not Indicated	1
Italy	1		
Korea	15		

[1] Two licensed practical nurses.
[2] One licensed practical nurse.

Fifty-five of the 113 requests were received from nurses from three countries: India, Philippines and Korea.

In March, 1974, an Oklahoma hospital petitioned the U.S. Department of Justice, Immigration and Naturalization Service, to classify six (6) Irish nurses as "persons of distinguished merit and ability under Section 214(c) of the Immigration and Naturalization Act for employment in the hospital." This means a non-immigrant H–1 Visa. The petition of the Oklahoma hospital was denied by the District Director, Immigration and Naturalization Service "on the grounds that under Oklahoma Statutes (the Oklahoma Nursing Practice Act) the beneficiaries (Irish nurses) could not be employed as nurses prior to passing the Oklahoma State Board Examination." The hospital appealed the District Director's decision to the Regional Commissioner, Immigration and Naturalization Service.

The hospital claimed that an exemption in the Oklahoma Nursing Practice Act (59 O.S. 567.11(4) allowed the hospital to employ "non-licensed nurses" and that the Irish nurses "could legally perform all duties normally performed in a hospital by a (licensed) nurse and that the degree or supervision, pay scale and degree or responsibility given to such foreign graduate nurses in that hospital is equal and commensurate to that which is given to those nurses who are graduates of approved schools of nursing (in the United States) pending licensure under the Oklahoma Act."

In response to the Regional Commissioner, Immigration and Naturalization Service, the Board of Nurse Registration and Nursing Education included the following information:

(1) that the exception in question was intended to be a very narrow exception to the requirement that all persons practicing or offering to practice nursing in the State of Oklahoma must be licensed;

(2) that the Board has consistently interpreted the Act to require licensure of every person offering to practice nursing in the State of Oklahoma;

(3) that the Rules and Regulations support the interpretation made by the Board and the Rules and Regulations are considered by the Advisory Council to the Board of Nurse Registration and Nursing Education and are filed with the Legislature and subject to its consideration;

(4) that the Board of Nurse Registration and Nursing Education has consistently submitted information to the various District Attorneys for prosecution of persons practicing or offering to practice without a license; and

(5) that the action of this hospital in June, 1973, when it suspended or terminated the employment of 15 nurses (RNs and LPNs) who did not hold a valid license issued by the Board of Nurse Registration and Nursing Education conflicted with their position regarding nurses from other countries.

The Board of Nurse Registration and Nursing Education has submitted additional information to the Regional Commissioner, Immigration and Naturalization Service. As yet, the Regional Commissioner has not issued this ruling. Considerable resources of the Board, staff and the legal counsel have been expended in responding to this effort by an Oklahoma hospital to "in effect, raise the H–1 visa issued by the Immigration and Naturalization Service to the status of a license to practice nursing in Oklahoma." The hospital is advocating a double standard by saying that nurses from outside the United States do not need to be licensed in Oklahoma prior to practicing nursing in a hospital while nurses

from within the United States must be licensed and both the licensed and unlicensed would have *the same* responsibility and be paid *the same* salary.

The Board of Nurse Registration and Nursing Education is committed to the principle of individual licensure and accountability and will continue its responsibility to enforce the Oklahoma Nursing Practice Act and to protect the public of the State of Oklahoma.

The member associations of the International Council of Nurses continue to express concern for the drain of needed medical and nursing manpower from other countries through the recruitment efforts of the commercial agencies.

Finances

For this fiscal year period, the income for the Board of Nurse Registration and Nursing Education was $158,986.36 and the expenses total $159,889.59.

The Board pays 10% of the gross income collected through fees to the General Revenue Fund for appropriation by the Legislature for other activities of state government. In this fiscal year, the Board paid $15,886.00 to the General Revenue Fund.

The number of "dishonored" personal checks submitted to the Board for payment of fees continues to require additional service by the staff. During this fiscal year, 41 persons submitted "dishonored" personal checks for a total of $362.00. The State Examiner and Inspector's Office has required the Board to initiate a policy that personal checks may not be submitted for future payment of fees if a "dishonored" check is submitted. The Board has continued the policy that if a personal check is submitted as payment for fees that the license may not be issued for at least three weeks to allow the check to clear the bank.

The Board appreciates the cooperation and assistance it has received from the State Budget Office and the State Treasurer's Office in implementing new and revised procedures which were required as a result of Senate Bill 115 (1973 Legislature).

Advisory council

The Advisory Council to the Board of Nurse Registration and Nursing Education was created by the Oklahoma Legislature. The Advisory Council held four regular meetings during this fiscal year.

The members of the Advisory Council are appointed by the respective associations and their term is at the pleasure of the association. During 1973–74 the members were:

Oklahoma State Medical Association, Louis Speed, M.D.

Oklahoma Hospital Association, Wilson Stinnett.

Oklahoma State Nurses Association, Juanita Millsap, R.N.

Oklahoma State Association of Licensed Practical Nurses, Dorothy Thompson, L.P.N.

Oklahoma State Nursing Home Association, Jearl Smart.

Oklahoma State Dental Association, C. Scott Russell, D.D.S.

Oklahoma Osteopathic Association, James Routsong, D.O.

American Association of University Professors, James Hurley, Ph.D.

Representatives of the Health Occupations Education Division, Oklahoma State Department of Vocational and Technical Education, have participated in the Advisory Council meetings at the invitation of the Council.

Acknowledgement

The BNR & NE is indebted to many persons and groups for assistance and support during this period. A special word of appreciation is expressed to the members of the Oklahoma Legislature who indicated their interest and support for increasing nurse manpower through quality nursing education programs in the State of Oklahoma.

The Board and staff express their appreciation to licensees, schools of nursing, professional associations, other state agencies, other state boards of nursing and the public for their cooperation and assistance.

The evidence of support from individuals, district nurses associations and faculty of schools of nursing for the responsibilities of the Board of Nurse Registration and Nursing Education in establishing and maintaining standards for nursing education programs was especially gratifying to the Board.

A special note of appreciation is offered to Ms. Anna Kuba, Coordinator, State Boards of Nursing Program, American Nurses' Association, and to Ms. Lorraine Sachs, Director, Division of Measurement, National League for Nursing, for their valuable assistance and counsel.

1974 State Approved Schools of Nursing Preparing Registered Nurses

BACCALAUREATE DEGREE

East Central State College
Department of Nursing
Ada, Oklahoma 74820
Phone: 405/332–8000, Ext. 3116

Central State University
Department of Nursing
Edmond, Oklahoma 73034
Phone: 405/341–2980, Ext. 2314

The University of Oklahoma
College of Nursing
Norman, Oklahoma 73069
Health Sciences Center
P.O. Box 26901
Oklahoma City, Oklahoma 73190
Phone: 405/271–4421

Oklahoma Baptist University
School of Nursing
Shawnee, Oklahoma 74801

Clinical Division
1213 North Harvey
Oklahoma City, Oklahoma 73103
Phone: 405/236–0681, Ext. 70

The University of Tulsa
School of Nursing
600 South College
Tulsa, Oklahoma 74104
Phone: 918/939–6351, Ext. 316

HOSPITAL DIPLOMA

St. Anthony Hospital
School of Nursing
601 N.W. 9th Street
Oklahoma City, Oklahoma 73102
Phone: 405/231–1811, Ext. 2100

Hillcrest Medical Center[1]
School of Nursing
1144 S. Troost
Tulsa, Oklahoma 74104
Phone: 918/584–1351, Ext. 8422

St. John's Hospital[1]
School of Nursing
1802 East 19th Street
Tulsa, Oklahoma 74104
Phone: 918/747–4838

ASSOCIATE DEGREE

Cameron College
Department of Nursing
2800 West Gore Blvd.
Lawton, Oklahoma 73501
Phone: 405/248–2200, Ext. 63

Northeastern Oklahoma A & M College[2]
Department of Nursing
2nd and I Street, N.E.
Miami, Oklahoma 74354
Phone: 918/542–8441, Ext. 225

Bacone College
Department of Nursing
Bacone Station
Muskogee, Oklahoma 74401
Phone: 918/683–4581, Ext. 212

Oklahoma State University Technical Institute
Department of Nursing
900 North Portland
Oklahoma City, Oklahoma 73107
Phone: 405/947–4421, Ext. 60

South Oklahoma City Junior College[2]
Department of Nursing
7777 South May
Oklahoma City, Oklahoma 73159
Phone: 405/682–1611

Seminole Junior College
Department of Nursing
P.O. Box 351
Seminole, Oklahoma 74868
Phone: 405/382–9950

Murray State College
Department of Nursing
Tishomingo, Oklahoma 73460
Phone: 405/371–2371, Ext. 46

Northern Oklahoma College
Department of Nursing
1220 East Grand
Tonkawa, Oklahoma 74653
Phone: 405/628–2581, Ext. 79

Tulsa Junior College
Department of Nursing
909 South Boston
Tulsa, Oklahoma 74119
Phone: 918/587–6561, Ext. 297

Eastern Oklahoma State College
Department of Nursing
Wilburton, Oklahoma 74578
Phone: 918/465–2361, Ext. 311

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[1] Closing in 1976.
[2] Initial Approval—June 30, 1974.

1974 STATE APPROVED SCHOOLS OF NURSING PREPARING LICENSED PRACTICAL NURSES

Byng Vocational School of Practical Nursing
Route 3
Ada, Oklahoma 74820
Phone: 405/332–4282, Ext. 21

Southern Oklahoma Area Vocational-Technical Center—Division of Practical Nursing
Highway 70 East
Ardmore, Oklahoma 73401
Phone: 405/223–2070

Tri-County Area Vocational-Technical School—Division of Practical Nursing
P. O. Box 3325 East Side Station
Bartlesville, Oklahoma 74003
Phone: 918/333–2422

Western Oklahoma Area Vocational-Technical School—Division of Practical Nursing
P. O. Box 149
Burns Flat, Oklahoma 73624
Phone: 405/562–4812

Central Oklahoma Area Vocational-Technical School—Division of Practical Nursing
3 CT Circle
Drumright, Oklahoma 74030
Phone: 918/352–2551, Ext. 41

Canadian Valley Area Vocational-Technical School—Division of Practical Nursing
P. O. Box 579
El Reno, Oklahoma 73036
Phone: 405/262–2629

O. T. Autry Area Vocational-Technical Center—School of Practical Nursing
1201 West Willow
Enid, Oklahoma 73701
Phone: 405/233–4295

Oklahoma City Vocational School of Practical Nursing
521 NW. 6th Street
Oklahoma City, Oklahoma 73102
Phone: 405/235–0275

Oklahoma State Tech School of Practical Nursing
Fourth and Mission
Okmulgee, Oklahoma 74447
Phone: 918/756–6211, Ext. 311

Pioneer Area Vocational - Technical School-Vocational School of Practical Nursing [3]
P.O. Box 1418
Ponca City, Oklahoma 74601
Phone: 405/762–8336

Great Plains Area Vocational-Technical School—Division of Practical Nursing
P.O. Box 5538
Lawton, Oklahoma 73501
Phone: 405/355–6371, Ext. 33

Kiamichi Area Vocational-Technical School
(1) Division of Practical Nursing
P.O. Box 308—Vo-Tech Drive
McAlester, Oklahoma 74501
Phone: 918/426–0940

(2) Division of Practical Nursing
P.O. Box 825
Poteau, Oklahoma 74953
Phone: 918/647–4525

Northeastern Oklahoma A & M College Vocational School of Practical Nursing
2nd and I Street, N.E.
Miami, Oklahoma 74354
Phone: 918/542–8441, Ext. 225

Midwest City Vocational School of Practical Nursing
(1) High School Division
(2) Adult Division (Evening Program)
213 Elm Drive
Midwest City, Oklahoma 73110
Phone: 405/737–0661

Indian Capital Area Vocational-Technical School—Department of Practical Nursing
300 Rockefeller Drive
Muskogee, Oklahoma 74401
Phone: 918/682–5501, Ext. 292

Moore-Norman Area Vocational-Technical School—Vocational School of Practical Nursing
901–B North Porter, Box 1308
Norman, Oklahoma 73069
Phone: 405/321–8887

Gordon Cooper Area Vocational-Technical School-Division of Practical Nursing
Drawer 848
Shawnee, Oklahoma 74801
Phone: 405/273–7493

Tulsa Vocational School of Practical Nursing
P.O. Box 45208
Tulsa, Oklahoma 74145
Phone: 918/582–3798

Mid-America Area Vocational-Technical School-Division of Practical Nursing
P.O. Box H
Wayne, Oklahoma 73095
Phone: 405/449–3391

[3] Initial Approval—June 30, 1974.

Northeast Oklahoma Area Vocational-Technical School-Division of Practical Nursing
Box 825
Pryor, Oklahoma 74361
Phone: 918/825-5555

Woodward Vocational School of Practical Nursing
P.O. Box 489
Woodward, Oklahoma 73848
Phone: 405/256-5511

OKLAHOMA BOARD OF NURSE REGISTRATION AND NURSING EDUCATION

Suite 76, Lincoln Office Plaza
4545 Lincoln Blvd.
Oklahoma City, Oklahoma 73105

REPORTS OF NURSE POPULATION IN OKLAHOMA, 1973

Information about the nurse population (RN and LPN) in Oklahoma for 1973 is attached. These reports were compiled from information provided by the licensee at the time of licensure or renewal of licensure through December 1, 1973. Additional information has been included this year relating to age of licensees by county, sex of licensees by field of employment, and number of employed registered nurses and licensed practical nurses by county on a state map. Use of this information should consider that these figures have not been verified but are a compilation of information submitted by the licensees.

The summary report for 1973, 1972 and 1971 shows the following:

	1973 report		1972 report		1971 report	
	RN	LPN	RN	LPN	RN	LPN
Residing in Oklahoma:						
Employed	6,612	5,092	6,378	4,812	5,998	4,698
Not employed	1,929	1,221	1,701	1,004	1,667	939
Not reported	2	2	6	11	6	26
Total	8,543	6,315	8,085	5,827	7,671	5,663
Residing out of State:						
Employed	1,268	584	1,252	615	1,312	607
Not employed	872	281	912	291	902	261
Not reported	0	2	1	1	4	6
Total	2,140	867	2,165	907	2,218	874
Grand total	10,683	7,182	10,250	6,734	9,889	6,375

It should be noted that the information in the following tables may be less than the totals reported above and this is due to the lack of information reported by the licensee and the limitations of the computer.

Questions or comments regarding this information should be directed to: Executive Director, Oklahoma Board of Nurse Registration and Nursing Education, Suite 76—Lincoln Office Plaza, 4545 Lincoln Blvd., Oklahoma City, Oklahoma 73105.

TABLE 1.—REGISTERED NURSE RESIDING AND LICENSED IN OKLAHOMA BY COUNTY AND FIELD OF EMPLOYMENT, 1973

County	Hospital	Nursing home	School of nursing	Private duty	Public health	School nurse	Independent nurse	Office nurse	Other	Total employed	Not employed	Total
Adair	6	2			4				5	12	5	17
Alfalfa	11	8							4	19	4	23
Atoka	4	3			1				1	8	1	9
Beaver	9	1							2	10	2	12
Beckham	14	4		1	2			3	8	24	8	32
Blaine	14	6			3			1	11	24	11	35
Bryan	13	6			4	1			4	24	4	28
Caddo	20	8			3			2	7	35	5	40
Canadian	61	7	9		2	4	1	3	31	88	30	118
Carter	55	7	4		2		1	5	21	74	21	95
Cherokee	33	4	2		5	2		1	17	49	15	64
Choctaw	4	1			4	1				10		10
Cimmarron	6								1	6	1	7
Cleveland	225	13	14		18	9	4	11	101	309	86	395
Coal	4	3			1			1		9		9
Comanche	155	10	11	1	15			16	80	211	77	288
Cotton	2	2			2			1	2	7	2	9
Craig	20	2		1	3			1	5	28	4	32
Creek	36	6	2	1	3	1	1	2	13	54	11	65
Custer	43	4	4	1	2	1		8	27	65	25	90
Delaware	12	3			3				12	18	12	30
Dewey	2	4						1	1	7	1	8
Ellis	16	2							8	18	8	26
Garfield	158	17	6	2	6	5		17	71	215	67	282
Garvin	21	6	1		3				7	32	6	38
Grady	34	4	2	1	2	3		2	22	50	20	70
Grant	8	2						2	12	12	12	24
Greer	7	1			1				2	9	2	11
Harmon	6	1							1	7	1	8
Harper	14		1						1	15	1	16
Haskell	5	1							7	8	5	13
Hughes	7	4			1			1	2	13	2	15
Jackson	29	2			7	3		3	12	45	11	56
Jefferson	6	3			1				3	10	3	13
Johnston	9	2	3		1				8	16	7	23
Kay	83	8	6	3	6		2	24	48	134	46	180
Kingfisher	17	5		1	1			2	11	26	11	37
Kiowa	7	3			1			2	4	14	3	17
Latimer	12	2	1		1			1	3	17	3	20
Le Fore	25	9	7		4	2			15	49	13	62
Lincoln	12	3	1						10	16	10	26

Logan	11	7		1	2			5	14	27	13	40
Love	5				1					6		6
McClain	11	3		1	1			1	5	18	4	22
McCurtain	16	6			3	1		2	5	28	5	33
McIntosh	6	5			5		1		9	19	7	26
Major	8	4			2				1	14	1	15
Marshall	3	1			1			1	4	8	2	10
Mayes	33	7	1		2	1		4	14	51	11	62
Murray	8	4		1	1				8	15	7	22
Muskogee	138	12	8	1	14	1	1	4	63	183	59	242
Noble	10	6						2	6	18	6	24
Nowata	6			1		1		1	6	10	5	15
Okfuskee	5	1							4	6	4	10
Oklahoma	1,378	72	103	72	59	65	32	134	628	1,965	578	2,543
Okmulgee	27	8	1	2	6	2	4	1	25	54	22	76
Osage	27	5	1	2	2	3	4	5	19	53	15	68
Ottawa	29	1	5		3	3	3	3	13	47	13	60
Pawnee	20	1		1					10	24	8	32
Payne	61	14	1		5	4		13	41	103	36	139
Pittsburg	51	6	3		7	1		3	21	73	19	92
Pontotoc	47	3	5		7	1		1	12	65	11	76
Pottawatomie	51	9	5	1	5	2		1	25	78	21	99
Pushmataha	8	1	1		1	1			2	12	2	14
Roger Mills	4								2	4	2	6
Rogers	54	3	1		7				27	68	24	92
Seminole	17	4	1		4				12	28	10	38
Sequoyah	9	4			5	1				19		19
Stephens	36	7			1	5		3	18	52	18	70
Texas	17	1			2		1	3	18	26	16	42
Tillman	10	5			1	1		1	4	18	4	22
Tulsa	1,032	50	69	58	43	78	21	91	423	1,487	378	1,865
Wagoner	36	3	2	1		1			12	43	12	55
Washington	85	8	3	3	2	1	3	13	47	120	45	165
Washita	7	6	2					1	4	16	4	20
Woods	12	4	1		2			3	7	22	7	29
Woodward	28	1	2	1	2				7	35	6	41
1973 total	4,531	451	289	158	308	205	79	405	2,116	6,612	1,931	8,543
1972 total	4,290	459	243	163	287	217	89	415	1,918	6,376	1,705	8,081
1971 total	4,099	440	189	179	283	202	92	401	1,785	5,997	1,673	7,670

TABLE 2.—LICENSED PRACTICAL NURSES RESIDING AND LICENSED IN OKLAHOMA, BY COUNTY AND FIELD OF EMPLOYMENT, 1973

County	Hospital	Nursing home	Private nursing	Public health	Industry	Office nursing	Other	Total
Adair	4	6				2	1	13
Alfalfa		7						7
Atoka	8	8		1			1	18
Beaver	5	2	1			2		10
Beckham	26	16				4	1	47
Blaine	8	7		1				16
Bryan	28	14	3	1		1	2	49
Caddo	20	20	1	2		1		44
Canadian	30	23	3			5	1	62
Carter	59	27	3	3		5	2	99
Cherokee	19	10				1	1	31
Choctaw	11	7		1				19
Cimmarron	8					1		9
Cleveland	84	26	6	1	1	21	3	142
Coal	7	6	1	2		1		17
Comanche	155	37	2	4		23	4	225
Cotton	2	1						3
Craig	34	14		1		1	1	51
Creek	50	15	2	1		5	5	78
Custer	36	25				1	3	65
Delaware	18	15		1		1	2	37
Dewey	4	5						9
Ellis	14	4				3		21
Garfield	101	23	2	1		2	3	132
Garvin	23	11	1	1			3	39
Grady	25	15	3			2	1	46
Grant	2	1				1		4
Greer	9	3	1			4	1	18
Harmon	5	8						13
Harper	7	3	1			1		12
Haskell	8	4						12
Hughes	24	15						39
Jackson	21	7				5	1	34
Jefferson	3	6					1	10
Johnston	14	3		2		1		20
Kay	59	23	8			9	1	100
Kingfisher	8	1				1		10
Kiowa	16	12		1		1		30
Latimer	17	7		1			3	28
Le Flore	41	19			1	4	1	66
Lincoln	25	15				4		44
Logan	12	18	1	1		1	4	37
Love	6	1		1				8
McClain	12	10						22
McCurtain	14	15	1	1			1	32
McIntosh	1	10						11
Major	3	6				1		10
Marshall	12	5						17
Mayes	24	21	1			5	1	52
Murray	18	17			1	1	1	38
Muskogee	99	30	4	1	2	11	6	153
Noble	3	10						13
Nowata	21	10	1				1	33
Okfuskee	10	6					1	17
Oklahoma	850	121	95	13	5	55	20	1,159
Okmulgee	26	25	2			1	2	56
Osage	29	17	2	1		1	3	53
Ottawa	54	32				2	4	92
Pawnee	17	7	1	3		1	1	30
Payne	40	20	2	1		3		66
Pittsburg	71	21		1	1	2	2	98
Pontotoc	60	20		1	1	18	2	102
Pottawatomie	102	26	4	2		6	4	144
Pushmataha	12	6						18
Roger Mills	8	3					1	12
Rogers	40	4	1	2	1	2		50
Seminole	30	22		1		6	1	60
Sequoyah	16	11		1		5	2	35
Stephens	48	21	5		2	2		78
Texas	7	3	2					12
Tillman	1	3					1	5
Tulsa	400	85	42	15	10	31	18	601
Wagoner	20	4				4		28
Washington	82	16	2			12	1	113
Washita	16	10	1			1		28
Woods	7	10						17
Woodward	41	11	3			8		63
1973 total	3,250	1,128	208	70	25	292	119	5,092
1972 total	3,082	1,024	234	65	23	281	99	4,808
1971 total	3,101	879	309	67	26	265	49	4,696

TABLE 3.—REGISTERED NURSES RESIDING AND LICENSED IN OKLAHOMA BY COUNTY AND EDUCATIONAL PREPARATION, 1973

County	Diploma	AD	Baccalaureate	No degree	Baccalaureate, nursing	Baccalaureate, other field	Master, nursing	Master, other field	Doctorate
Adair	11	5	1	16	1				
Alfalfa	21		2	21	2				
Atoka	8		1	7	1				
Beaver	12			12					
Beckham	28	3	1	31		1			
Blaine	30	1	4	29	4	1	1		
Bryan	16	9	3	22	3	2		1	
Caddo	31	6	3	35	3	2			
Canadian	101	5	12	100	13	2	2	1	
Carter	65	14	16	75	16	2	2		
Cherokee	51	6	7	51	5	5	2	1	
Choctaw	8	2		9				1	
Cimarron	7			7					
Cleveland	299	17	79	282	80	11	15	5	1
Coal	8	1		6	2	1			
Comanche	203	53	31	242	37	3	3	2	
Cotton	7	2		9					
Craig	25	3	4	27	5				
Creek	57	4	4	61	4				
Custer	77	6	7	78	10	1		1	
Delaware	27	1	2	27	2	1			
Dewey	7	1		8					
Ellis	20	1	5	20	5	1			
Garfield	242	8	32	243	32	4	2	1	
Garvin	32	1	5	33	4		1		
Grady	62	3	5	60	5	3		2	
Grant	20	1	3	20	3		1		
Greer	11			11					
Harmon	7		1	7	1				
Harper	14	1	1	14	1	1			
Haskell	12	1		13					
Hughes	14		1	14	1				
Jackson	43	4	9	47	9				
Jefferson	8	4	1	11	1			1	
Johnston	13	5	5	15	5		1		
Kay	150	13	17	151	20	5	1	2	
Kingfisher	35		2	30	4	2		1	
Kiowa	17			16	1				
Latimer	12	6	2	18	2				
Le Flore	51	10	1	56	4		2		
Lincoln	21	2	3	19	7				
Logan	32	2	6	32	6	2			
Love	6			6					
McClain	17	3	2	20	2				
McCurtain	25	7	1	32	1				
McIntosh	21	4	1	24	1		1		
Major	11	2	2	12	3				
Marshall	9	1		10					
Mayes	48	12	2	57	5				
Murray	16	4	2	20	2				
Muskogee	177	57	8	218	13	6	2	2	
Noble	22	1	1	21	2	1			
Nowata	13	2		13	1	1			
Okfuskee	6	4		9		1			
Oklahoma	2,048	112	383	1,981	395	74	39	42	3
Okmulgee	69	5	2	70	5	1			
Osage	63	2	3	63	4				
Ottawa	57	3		55	3			3	
Pawnee	29	1	2	29	2	1			
Payne	114	8	17	108	27	3	1		
Pittsburg	75	8	9	81	9	2			
Pontotoc	59	10	7	65	5	3	2		1
Pottawatomie	85	2	12	80	12	3	2	1	1
Pushmataha	10	4		12	1			1	
Roger Mills	6			6					
Rogers	79	5	8	80	9	1		2	
Seminole	29	5	4	33	2	1	1		
Sequoyah	18		1	17	2				
Stephens	54	8	8	62	8				
Texas	38	1	3	37	4	1			
Tillman	17	4	1	19	2	1			
Tulsa	1,608	66	191	1,542	240	40	25	16	1
Wagoner	43	9	3	50	2	3			
Washington	150	3	12	143	15	5	2		
Washita	15	1	4	15	5				
Woods	29			27	1			1	
Woodward	37		4	36	4				
Total 1973	7,018	555	969	7,038	1,086	198	108	86	7
Total 1972	6,872	366	827	6,748	931	190	95	64	6
Total 1971	6,706	270	666	6,478	729	175	74	68	3

TABLE 4.—REGISTERED NURSES RESIDING AND LICENSED IN OKLAHOMA BY FIELD OF EMPLOYMENT AND EDUCATIONAL PREPARATION, 1973

Field of employment	Diploma	AD	Baccalaureate	No degree	Baccalaureate nursing	Baccalaureate, other field	Master, nursing	Master, other field	Doctorate
Hospital	3,622	403	499	3,831	574	81	16	15	1
Nursing home	395	31	25	400	31	14	1	3	--
School of nursing	168	7	114	76	94	16	66	32	5
Private duty	149	3	6	143	10	2	1	1	--
Public Health	231	17	60	220	65	11	5	7	--
School nurse	179	1	25	155	35	10	--	5	--
Industrial nurse	78	--	1	73	4	2	--	--	--
Office nurse	375	9	22	371	31	3	--	--	--
Other	156	4	25	135	26	13	6	5	--
Total, 1973	5,353	475	777	5,404	870	152	95	68	6
Total, 1972	5,393	324	648	5,309	733	153	88	51	4
Total, 1971	5,168	229	504	4,981	569	137	69	50	2

TABLE 5.—REGISTERED NURSES RESIDING, LICENSED AND EMPLOYED IN OKLAHOMA BY TYPE OF POSITION AND FIELD OF PRACTICE, 1973

Type of position	Hospital	Nursing home	School of nursing	Private duty	Public health	School nurse	Industrial nurse	Office nurse	Other	Total
Administrator or assistant	181	70	36	--	11	9	2	10	17	336
Consultant	8	24	1	--	15	3	2	1	3	57
Supervisor or assistant	706	217	3	3	31	15	8	27	56	1,066
Instructor	50	3	237	--	2	4	1	1	18	316
Head nurse or assistant	878	64	--	--	30	8	16	54	2	1,052
General duty or staff	2,489	68	4	146	190	158	49	309	51	3,464
Other	148	2	7	6	26	5	1	3	35	233
Total, 1973	4,460	448	288	155	305	202	79	405	182	6,524
Total, 1972	4,235	459	240	159	287	215	87	413	208	6,303
Total, 1971	4,040	436	188	177	281	200	91	401	110	5,924

TABLE 6.—LICENSED PRACTICAL NURSES RESIDING AND LICENSED IN OKLAHOMA BY FIELD OF EMPLOYMENT AND METHOD OF LICENSURE, 1973

Field of employment	Waiver	Grade of school	Total
Hospital	484	2,762	3,246
Nursing home	242	884	1,126
Private nursing	107	101	208
Public health	12	58	70
Industry	7	18	25
Office nursing	64	228	292
Other	31	88	119
Total 1973	947	4,139	5,086
Total 1972	1,025	3,737	4,762
Total 1971	1,137	3,532	4,669

TABLE 7.—REGISTERED NURSES RESIDING AND LICENSED IN OKLAHOMA, BY COUNTY OF RESIDENCE AND AGE, 1973

County of residence	20–29	30–39	40–44	45–49	50–59	60-plus	Not known	Total
Adair	1	1	5	5	3	2		17
Alfalfa	3	2	4	2	3	9		23
Atoka	1	2	3	2	1			9
Beaver	1	2		2	4	3		12
Beckham	4	7	3	4	3	11		32
Blaine	7	8	3	3	10	4		35
Bryan	7	6	1		9	5		28
Caddo	3	13	3	7	9	5		40
Canadian	30	42	13	13	8	12		118
Carter	13	27	11	16	13	15		95
Cherokee	9	20	7	6	10	12		64
Choctaw	3	1	1	2	2	1		10
Cimarron	1			2	3	1		7
Cleveland	118	135	45	30	45	22		395
Coal	2	1	1	1	2	2		9
Comanche	77	75	31	31	43	31		288
Cotton	4	3	1		1			9
Craig	7	6	4	2	7	6		32
Creek	15	15	7	11	12	5		65
Custer	21	22	7	15	15	10		90
Delaware	5	3		7	9	6		30
Dewey	3	3			1	1		8
Ellis	8	7	3	2	3	3		26
Garfield	66	51	25	44	48	48		282
Garvin	7	8	4	5	8	6		38
Grady	16	16	8	5	16	9		70
Grant	2	6	3	3	4	6		24
Greer	2	5			2	2		11
Harmon	1	3	1	2	1			8
Harper	5	6	2	1	1	1		16
Haskell	2	3	1	2	3	2		13
Hughes	1	1		3	3	7		15
Jackson	16	12	11	5	9	3		56
Jefferson	5				3	5		13
Johnston	5	4	3	3	5	3		23
Kay	29	46	13	20	45	26	1	180
Kingfisher	4	7	6	4	9	7		37
Kiowa		4	1	2	7	3		17
Latimer	4	3	2	3	3	5		20
LeFlore	16	19	4	6	12	5		62
Lincoln	7	6	4	3	4	2		26
Logan	8	6	4	5	6	11		40
Love	1	2	1	1		1		6
McClain	3	10	1	5	3			22
McCurtain	5	7	5	6	9	1		33
McIntosh	2	9	6		7	2		26
Major	6	6		2	1			15
Marshall	3	1	2		3	1		10
Mayes	14	20	5	7	12	4		62
Murray	5	2	3	2	4	6		22
Muskogee	44	48	28	27	57	38		242
Noble	2	5	5	4	4	4		24
Nowata	4	3	1	1	3	3		15
Okfuskee		4	2	1	1	2		10
Oklahoma	634	638	263	316	441	247	4	2,543
Okmulgee	9	16	8	5	15	22	1	76
Osage	10	14	8	12	17	7		68
Ottawa	10	12	8	8	10	12		60
Pawnee	8	4	5	5	1	9		32
Payne	37	44	13	11	23	11		139
Pittsburg	19	24	9	11	15	14		92
Pontotoc	16	25	10	7	17	1		76
Pottawatomie	19	27	9	13	14	17		99
Pushmataha	2	4	3		4	1		14
Roger Mills	1	1		2		2		6
Rogers	13	30	11	12	15	11		92
Seminole	8	8	1	4	7	10		38
Sequoyah	1	11	2		2	3		19
Stephens	12	12	13	8	16	9		70
Texas	5	14	4	6	11	2		42
Tillman	1	5	3	2	8	3		22
Tulsa	494	467	198	203	334	168	1	1,865
Wagoner	4	25	3	9	12	2		55
Washington	24	26	26	37	29	23		165
Washita	3	5	1	2	5	4		20
Woods	2	3	2	7	11	4		29
Woodard	7	11	4	1	11	7		41
Total, 1973	1,967	2,150	908	1,016	1,527	968	7	8,543

TABLE 8.—LICENSED PRACTICAL NURSES RESIDING AND LICENSED IN OKLAHOMA BY COUNTY OF RESIDENCE AND AGE, 1973

County of residence	Under 20	21 to 30	31 to 40	41 to 50	51 to 60	61 plus	Not known	Total
Adair	1	1	2	6	3	4		17
Alfalfa		3	3		2	2		10
Atoka	1	5	3	6	4	2		21
Beaver			1	3	5	3		12
Beckham	1	9	10	11	14	11		56
Blaine	1	3	6	8	1	2		21
Bryan	1	8	8	14	17	13		61
Caddo		17	10	9	10	4	1	51
Canadian	2	17	25	17	9	7		77
Carter	1	2	36	16	27	17		125
Cherokee		8	6	10	8	5		37
Choctaw	1	6	2	7	5	3		24
Cimarron		2		2	4	4		12
Cleveland	3	57	41	44	17	16		178
Coal		5	6	5	2	3		21
Comanche	1	75	58	61	52	25		272
Cotton		1	1	2		1		5
Craig	1	17	14	9	20	6		67
Creek	3	24	13	20	18	12		90
Custer	1	13	20	18	17	7		76
Delaware	2	8	16	7	10	3		46
Dewey		2	3	7		1		13
Ellis		3	3	6	5	5		22
Garfield	5	39	33	20	30	29	1	157
Garvin		4	13	12	12	6		47
Grady	2	5	12	7	10	15		51
Grant		2	3	3	1	1		10
Greer		2	2	5	7	10	1	27
Harmon		3	3	4	4	3		17
Harper	1	1	4	5	2	2		15
Haskell		2	6	5	2	1		16
Hughes		6	9	11	11	4		41
Jackson		11	8	6	9	10		44
Jefferson			5	5	1	2		13
Johnston		6	6	7	2	2		23
Kay	1	26	21	28	30	22		128
Kingfisher	1	4		5	1			11
Kiowa		3	8	8	8	8		35
Latimer		4	9	9	5	5		32
LeFlore		9	16	25	22	12		84
Lincoln	1	11	13	19	8	4		56
Logan	1	7	11	7	7	17		50
Love		1	2	1	1	3		8
McClain		5	7	10	2	1		25
McCurtain		7	7	10	6	5		35
McIntosh		2	2	5	2	4		15
Major	1	2	3	4	1	1		12
Marshall		3	5	5	4	5		22
Mayes		17	6	14	18	10		65
Murray	1	13	7	9	8	9		47
Muskogee	1	42	37	45	41	29		195
Noble		5	2	4	4	1		16
Nowata	1	2	10	12	8	8		41
Okfuskee		3	4	3	10	3		23
Oklahoma	42	371	284	319	244	156	1	1,417
Okmulgee	2	13	9	11	17	12		64
Osage	1	11	22	13	11	11		69
Ottawa	4	18	30	27	23	7		109
Pawnee		3	4	7	10	8		32
Payne	1	23	10	15	19	16		84
Pittsburg	1	31	24	35	22	16		129
Pontotoc	2	19	29	28	37	22		137
Pottawatomie	7	45	42	36	38	27		195
Pushmataha		2	6	6	7	3		24
Roger Mills		2	6	3	3			14
Rogers		16	21	14	14	1		66
Seminole	1	11	17	17	13	11		70
Sequoyah		7	15	5	10	4		41
Stephens		19	12	20	25	20		96
Texas		5	5	1	3	2		16
Tillman			2	1	4	1		8
Tulsa	11	199	158	134	141	101		744
Wagoner	1	9	8	12	7	8		45
Washington	4	28	40	26	28	12		138
Washita	1	3	3	14	7	9		37
Woods		8	1	3	6	3		21
Woodward	2	15	16	22	21	8		84
Total, 1973	116	1,417	1,325	1,370	1,237	846	4	6,315

TABLE 9.—REGISTERED NURSES RESIDING AND LICENSED IN OKLAHOMA BY FIELD OF EMPLOYMENT AND AGE, 1973

Field of employment	20 to 29	30 to 39	40 to 44	45 to 49	50 to 59	60 plus	Not known	Total
Hospital	1,333	1,199	492	538	672	241	56	4,531
Nursing home	55	102	45	55	111	79	4	451
School of nursing	71	92	32	32	46	12	4	289
Private duty	9	9	4	18	54	57	7	158
Public health	69	71	29	31	75	28	5	308
School nurse	13	37	31	38	64	17	5	205
Industrial nurse	4	14	10	16	29	5	1	79
Office nurse	67	111	44	50	98	33	3	406
Other	337	531	221	238	378	379	32	2,116
Total employed	1,651	1,684	708	804	1,191	489	85	6,612
Total not employed	306	482	199	212	336	362	32	1,929
Total not reported	1	----	1	----	----	----	----	2
Grand total, 1973	1,958	2,166	908	1,016	1,527	851	117	8,543
Grand total, 1972	1,876	2,006	836	1,036	1,423	759	145	8,081
Grand total, 1971	1,810	1,944	782	982	1,359	676	117	7,670

TABLE 10.—LICENSED PRACTICAL NURSES RESIDING AND LICENSED IN OKLAHOMA BY FIELD OF EMPLOYMENT AND AGE, 1973

Field of employment	Under 20	21 to 30	31 to 40	41 to 50	51 to 60	61 plus	Not known	Total
Hospital	79	804	714	771	611	270	1	3,250
Nursing home	11	225	247	245	223	175	2	1,128
Private nursing	3	26	18	23	59	78	11	208
Public health	----	8	18	15	23	6	----	70
Industry	----	2	3	8	11	1	----	25
Office nursing	2	59	83	77	54	17	----	292
Other	1	10	26	38	29	15	----	119
Total employed	96	1,134	1,109	1,177	1,010	562	4	5,092
Total not employed	20	282	216	193	227	283	----	1,221
Total not reported	----	1	----	----	----	1	----	2
Grand total, 1973	116	1,417	1,325	1,370	1,237	846	4	6,315
Grand total, 1972	86	1,300	1,165	1,279	1,211	765	17	5,823
Grand total, 1971	121	1,241	1,079	1,200	1,121	664	234	5,660

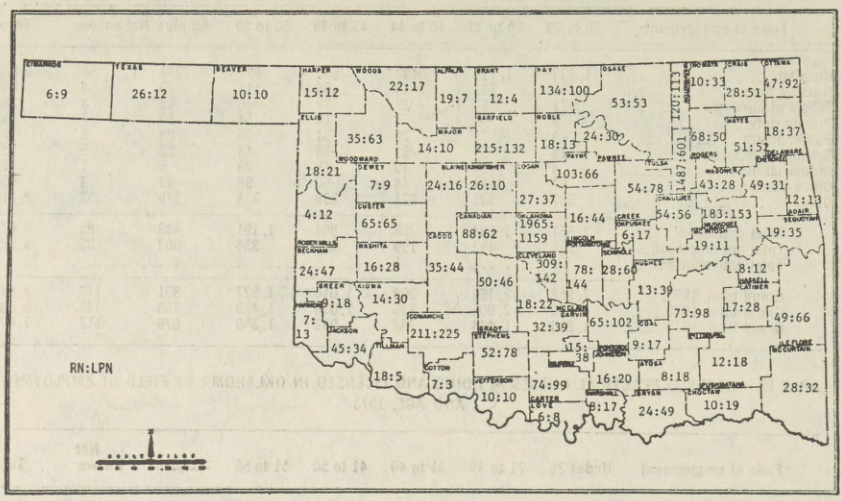
TABLE 11.—REGISTERED NURSES RESIDING AND LICENSED IN OKLAHOMA BY FIELD OF EMPLOYMENT AND SEX, 1973

Field of employment	Total	Male	Female
Hospital	4,531	103	4,428
Nursing home	451	3	448
School of nursing	289	7	282
Private duty	158	3	155
Public health	308	1	307
School nurse	205	----	205
Industrial nurse	79	----	79
Office nurse	406	2	404
Other	187	1	186
Not employed	1,929	9	1,920
Total, 1973	8,543	129	8,414

TABLE 12.—LICENSED PRACTICAL NURSES RESIDING AND LICENSED IN OKLAHOMA BY FIELD OF EMPLOYMENT AND SEX, 1973

Field of employment	Total	Male	Female
Hospital	3,250	80	3,170
Nursing home	1,128	20	1,108
Private nursing	208	6	202
Public health	70	----	70
Industry	25	3	22
Office nursing	292	----	292
Other	1,341	20	1,321
Not employed	1	----	1
Total, 1973	6,315	129	6,186

TABLE 13 ACTIVE REGISTERED NURSE TO ACTIVE LICENSED PRACTICAL NURSE POPULATION BY COUNTY, 1973



OBNR & NE - 2/74

Progress Report—Nursing in Oklahoma

The Oklahoma Board of Nurse Registration and Nursing Education periodically prepares and distributes information relating to the nurse population in Oklahoma. This progress report has been prepared to provide additional information about the nurse population in 1972, as well as indications of change from 1966 to 1972. The format of reporting by county within the planning region is continued in this report.

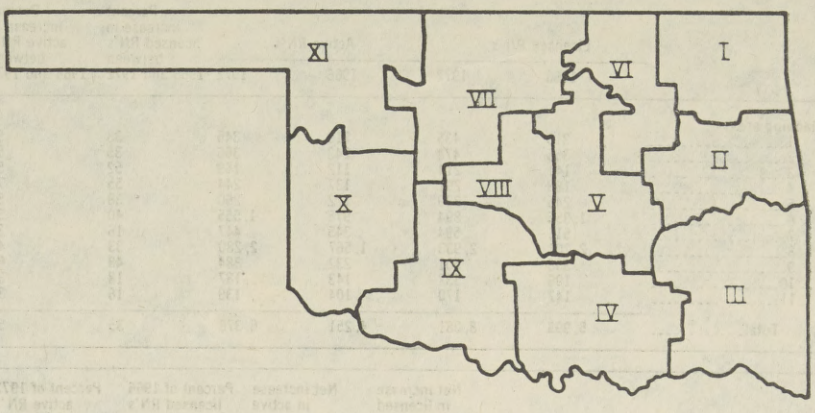
Progress, according to Webster, is "movement forward; a going or a getting ahead; a gradual betterment." The progress achieved during this six year period and the progress anticipated in the years ahead reflect the combined efforts of persons and groups responsible for and interested in providing nursing resources for the people of Oklahoma.

The Oklahoma Board of Nurse Registration and Nursing Education appreciates the assistance of the staff of the State Health Planning Agency for the statistical analysis presented in this report. Please note that Logan County has changed from Planning Area 7 to Planning Area 8 and the information is recorded accordingly.

The BNR & NE hopes that this report is helpful to you. It is intended as a resource for planning agencies, schools of nursing/practical nursing, governmental agencies, voluntary associations, and others concerned with the delivery of health care to the people of Oklahoma.

Inquiries about the report should be submitted to: Executive Director, Oklahoma Board of Nurse Registration and Nursing Education, Suite 76–4545 Lincoln Blvd., Oklahoma City, Oklahoma 73105.

PLANNING AREAS OF THE STATE



KEY

REGION I	REGION II	REGION III	REGION IV	REGION V	REGION VI
Craig	Adair	Choctaw	Atoka	Hughes	Creek
Delaware	Cherokee	Haskell	Bryan	Lincoln	Osage
Mayes	McIntosh	Latimer	Carter	Okfuskee	Tulsa
Nowata	Muskogee	LeFlore	Coal	Pawnee	
Ottawa	Okmulgee	McCurtain	Garvin	Payne	
Rogers	Sequoyah	Pittsburg	Johnston	Pottawatomie	
Washington	Wagoner	Pushmataha	Love	Seminole	
			Marshall		
			Murray		
			Pontotoc		

REGION VII	REGION VIII	REGION IX	REGION X	REGION XI
Alfalfa	Canadian	Caddo	Beckham	Beaver
Blaine	Cleveland	Comanche	Custer	Cimarron
Garfield	Logan	Cotton	Greer	Dewey
Grant	Oklahoma	Grady	Harmon	Ellis
Kay		Jefferson	Jackson	Harper
Kingfisher		McClain	Kiowa	Texas
Major		Stephens	Roger Mills	Woods
Noble		Tillman	Washita	Woodward

SEC. I. REGISTERED NURSES

1. SUMMARY OF RN'S BY PLANNING AREA, 1966 AND 1972

	Licensed RN's		Active RN's		Percent increase in licensed RN's between 1966 and 1972	Percent increase in active RN's between 1966 and 1972
	1966	1972	1966	1972		
Planning area:						
1	315	435	219	345	38	58
2	355	478	242	366	35	51
3	141	214	112	169	52	51
4	188	291	137	244	55	78
5	245	339	172	260	38	51
6	1,355	894	978	1,555	40	59
7	511	594	345	447	16	30
8	2,201	2,933	1,567	2,280	33	46
9	338	501	232	384	48	66
10	196	332	143	187	18	31
11	147	170	104	139	16	35
Total	5,993	8,081	4,251	6,376	35	50

	Net increase in licensed RN's between 1966 and 1972	Net increase in active RN's between 1966 and 1972	Percent of 1966 licensed RN's which were active	Percent of 1972 active RN's which were active
Planning area:				
1	120	126	70	79
2	123	124	68	77
3	73	57	79	79
4	103	107	73	84
5	93	88	70	77
6	539	577	72	82
7	83	102	68	75
8	732	713	71	78
9	163	152	69	77
10	36	44	73	81
11	23	35	71	82
Total	2,028	2,125	71	79

2. LICENSED AND ACTIVE RN's AND PERCENT CHANGE BY COUNTY WITHIN PLANNING AREAS, 1966 AND 1972

County	Licensed RN's		Active RN's		Percent change in licensed RN's between 1966 and 1972	Percent change in active RN's between 1966 and 1972
	1966	1972	1966	1972		
Planning area 1:						
Craig	38	36	27	30	(—5)	11
Delaware	14	33	10	24	136	140
Mayes	31	55	19	47	77	147
Nowata	7	15	6	9	114	50
Ottawa	43	58	34	49	35	44
Rogers	39	82	27	58	110	115
Washington	143	156	96	128	9	33
Total	315	435	219	345	38	58
Planning area 2:						
Adair	11	14	6	11	27	83
Cherokee	38	61	32	46	61	44
McIntosh	8	22	2	16	175	700
Muskogee	214	243	153	183	14	20
Okmulgee	63	71	37	53	13	43
Sequoyah	13	17	8	16	31	100
Wagoner	8	50	4	41	525	925
Total	355	478	242	366	35	51

2. LICENSED AND ACTIVE RN's AND PERCENT CHANGE BY COUNTY WITHIN PLANNING AREAS, 1966 AND 1972—Continued

County	Licensed RN's		Active RN's		Percent change in licensed RN's between 1966 and 1972	Percent change in active RN's between 1966 and 1972
	1966	1972	1966	1972		
Planning area 3:						
Choctaw	9	11	8	11	22	38
Haskell	10	11	7	8	10	14
Latimer	14	11	14	11	(−21)	(−21)
LeFlore	29	54	22	38	86	73
McCurtain	16	29	16	23	81	44
Pittsburgh	59	90	43	70	53	63
Pushmataha	4	8	2	8	100	300
Total	141	214	112	169	52	51
Planning area 4:						
Atoka	5	9	4	8	80	100
Bryan	15	31	12	25	107	108
Carter	46	89	35	71	54	103
Coal	4	8	3	8	100	167
Garvin	24	31	14	29	29	107
Johnston	9	17	5	10	89	100
Love	3	6	1	6	100	500
Marshall	9	8	5	7	(−11)	40
Murray	23	20	15	16	(−13)	7
Pontotoc	50	72	43	64	44	49
Total	188	291	137	244	55	78
Planning area 5:						
Hughes	22	17	17	14	(−23)	(−18)
Lincoln	12	20	6	15	67	150
Okfuskee	9	9	5	7	None	40
Pawnee	19	33	14	29	74	107
Payne	110	146	78	105	33	35
Pottawatomie	54	81	40	62	50	55
Seminole	20	33	12	28	65	133
Total	245	339	172	260	38	51
Planning area 6:						
Creek	36	66	26	55	83	112
Osage	30	67	19	51	123	168
Tulsa	1,289	1,761	933	1,449	37	55
Total	1,355	1,894	978	1,555	40	59
Planning area 7:						
Alfalfa	24	23	14	20	(−4)	43
Blaine	26	27	21	22	4	5
Garfield	248	267	176	206	8	17
Grant	16	24	4	17	50	325
Kay	140	175	95	125	25	32
Kingfisher	29	41	19	29	41	53
Major	10	15	6	12	50	100
Noble	18	22	10	16	22	60
Total	511	594	345	447	16	30
Planning area 8:						
Canadian	38	95	18	78	150	333
Cleveland	209	352	142	275	68	94
Logan	32	41	19	32	28	68
Oklahoma	1,922	2,445	1,388	895	27	37
Total	2,201	2,933	1,567	2,280	33	46
Planning area 9:						
Caddo	30	41	23	31	37	35
Comanche	184	276	127	211	50	66
Cotton	3	5	3	5	67	67
Grady	40	65	27	48	63	78
Jefferson	6	7	5	6	17	20
McClain	6	20	5	17	233	240
Stephens	50	64	29	46	28	59
Tillman	19	23	13	20	21	54
Total	338	501	232	384	48	66

2. LICENSED AND ACTIVE RN's AND PERCENT CHANGE BY COUNTY WITHIN PLANNING AREAS, 1966 AND 1972—Continued

County	Licensed RN's		Active RN's		Percent change in licensed RN's between 1966 and 1972	Percent change in active RN's between 1966 and 1972
	1966	1972	1966	1972		
Planning area 10:						
Beckham	26	28	21	23	8	10
Custer	90	91	63	67	1	6
Greer	9	10	8	8	11	None
Harmon	6	9	6	8	50	33
Jackson	33	52	27	48	58	78
Kiowa	11	17	8	15	55	88
Roger Mills	4	6	2	4	50	100
Washita	17	19	8	14	12	75
Total	196	232	143	187	18	31
Planning area 11:						
Beaver	8	12	7	10	50	43
Cimarron	8	6	7	5	(−25)	(−29)
Dewey	5	8	0	7	60	None
Ellis	17	24	13	17	41	31
Harper	11	16	9	14	45	56
Texas	22	34	16	25	55	56
Woods	35	29	23	23	(−17)	None
Woodward	41	41	29	38	None	31
Total	147	170	104	139	16	34

3. LICENSED AND ACTIVE RN's AND ACTIVITY STATUS BY COUNTY WITHIN PLANNING AREAS, 1966 AND 1972

County	Net increase in licensed RN's between 1966 and 1972	Net increase in active RN's between 1966 and 1972	Percent of 1966 licensed RN's which were active	Percent of 1972 active RN's which were active
Planning area 1:				
Craig	(2)	3	71	83
Delaware	19	14	71	73
Mayes	24	28	61	85
Nowata	8	3	86	60
Ottawa	15	15	79	84
Rogers	43	31	69	71
Washington	13	32	67	82
Total	120	126	70	79
Planning area 2:				
Adair	3	5	55	79
Cherokee	23	14	84	75
McIntosh	14	14	25	73
Muskogee	29	30	71	75
Okmulgee	8	15	59	75
Sequoyah	4	8	62	94
Wagoner	42	37	50	82
Total	123	124	68	77
Planning area 3:				
Choctaw	2	3	89	100
Haskell	1	1	70	73
Latimer	(3)	(3)	100	100
Le Flore	25	16	76	70
McCurtain	13	7	100	79
Pittsburg	31	27	73	78
Pushmataha	4	6	50	100
Total	73	57	79	79

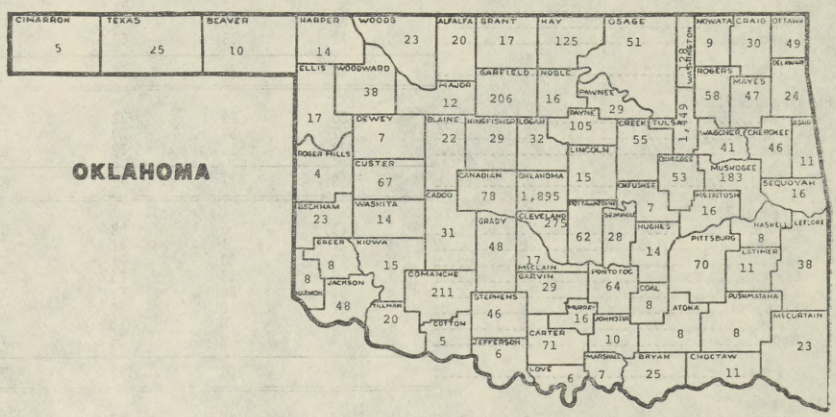
3. LICENSED AND ACTIVE RN's AND ACTIVITY STATUS BY COUNTY WITHIN PLANNING AREAS, 1966 AND 1972—Continued

County	Net increase in licensed RN's between 1966 and 1972	Net increase in active RN's between 1966 and 1972	Percent of 1966 licensed RN's which were active	Percent of 1972 active RN's which were active
Planning area 4:				
Atoka	4	4	80	89
Bryan	16	13	80	81
Carter	43	36	76	80
Coal	4	5	75	100
Garvin	7	15	58	94
Johnston	8	5	56	59
Love	3	5	33	100
Marshall	(1)	2	56	88
Murray	(3)	1	65	80
Pontotoc	22	21	86	89
Total	103	107	73	84
Planning area 5:				
Hughes	(5)	(3)	77	82
Lincoln	8	9	50	75
Okfuskee	0	2	56	78
Pawnee	14	15	74	88
Payne	36	27	71	72
Pottawatomie	27	22	74	77
Seminole	13	16	60	85
Total	93	88	70	77
Planning area 6:				
Creek	30	29	72	83
Osage	37	32	63	76
Tulsa	472	516	72	82
Total	539	577	72	82
Planning area 7:				
Alfalfa	(1)	6	58	87
Blaine	1	1	81	81
Garfield	19	30	71	77
Grant	8	13	25	71
Kay	35	30	68	71
Kingfisher	12	10	66	71
Major	5	6	60	80
Noble	4	6	56	73
Total	83	102	68	75
Planning area 8:				
Canadian	57	60	47	82
Cleveland	143	133	68	78
Logan	9	13	59	78
Oklahoma	523	507	72	78
Total	732	713	71	78
Planning area 9:				
Caddo	11	8	77	76
Camanche	92	84	69	76
Cotton	2	2	100	100
Grady	25	21	68	74
Jefferson	1	1	83	86
McClain	14	12	83	85
Stephens	14	17	58	72
Tillman	4	7	68	87
Total	163	152	69	77
Planning area 10:				
Beckham	2	2	81	82
Custer	1	4	70	74
Greer	1	0	89	80
Harmon	3	2	100	89
Jackson	19	21	82	92
Kiowa	6	7	73	88
Roger Mills	2	2	50	67
Washita	2	6	47	74
Total	36	44	73	81

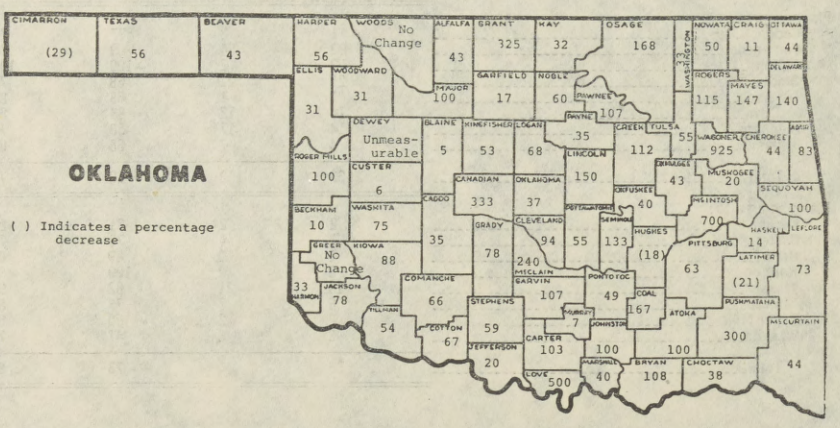
3. LICENSED AND ACTIVE RN's AND ACTIVITY STATUS BY COUNTY WITHIN PLANNING AREAS, 1966 AND 1972—Continued

County	Net increase in licensed RN's between 1966 and 1972	Net increase in active RN's between 1966 and 1972	Percent of 1966 licensed RN's which were active	Percent of 1972 active RN's which were active
Planning area 11:				
Beaver	4	3	88	83
Cimarron	(2)	(2)	88	83
Dewey	3	7	None	88
Ellis	7	4	76	71
Harper	5	5	82	88
Texas	12	9	70	74
Woods	(6)	0	66	79
Woodward	0	9	71	93
Total	23	35	71	82

4. Location of Active RNs, 1972



5. Percentage Change of Active RNs, 1966 and 1972



6. EDUCATIONAL PREPARATION OF R.N.'s BY FIELD OF EMPLOYMENT, 1971 AND 1972

	Diploma	Associate degree	Baccalaureate	No degree	Baccalaureate, nursing	Baccalaureate, other	Masters, nursing	Masters, other	Doctorate
Hospitals:									
1971	3,519	189	321	3,467	378	83	15	13	0
1972	3,604	272	406	3,678	475	86	17	15	0
Nursing homes:									
1971	401	19	13	393	22	12	0	3	0
1972	415	27	17	416	23	12	1	0	0
Schools of nursing:									
1971	113	4	70	51	61	11	44	18	1
1972	142	3	98	59	83	14	62	21	4
Private duty:									
1971	171	0	6	167	7	1	0	1	0
1972	156	4	3	151	6	1	1	0	0
Public health:									
1971	224	10	45	211	45	10	6	4	0
1972	228	10	49	211	58	9	3	4	0
School nurse:									
1971	180	2	17	164	22	7	0	0	0
1972	188	2	27	168	33	13	0	3	0
Industrial nurse:									
1971	90	0	1	81	3	3	0	1	0
1972	87	0	1	84	3	2	0	0	0
Office nurse:									
1971	379	4	17	373	22	2	0	0	0
1972	387	4	24	380	27	3	0	1	0

7. LICENSED AND ACTIVE R.N.'s PER 100,000 POPULATION BY COUNTY, 1972

County	Licensed R.N.'s	Licensed R.N.'s per 100,000 population	Active R.N.'s	Active R.N.'s per 100,000 population
Adair	14	90.3	11	71.0
Alfalfa	23	319.4	20	277.8
Atoka	9	82.6	8	73.4
Beaver	12	187.5	10	156.3
Beckham	28	181.8	23	149.4
Blaine	27	226.9	22	184.9
Bryan	31	119.2	25	96.2
Caddo	41	140.4	31	106.2
Canadian	95	281.9	78	231.5
Carter	89	232.4	71	185.4
Cherokee	61	255.2	46	192.5
Choctaw	11	71.0	11	71.0
Cimarron	6	150.0	5	125.0
Cleveland	352	409.3	275	319.8
Coal	8	142.9	8	142.9
Comanche	276	259.2	211	198.1
Cotton	5	71.4	5	71.4
Craig	36	238.4	30	198.7
Creek	66	140.7	55	117.3
Custer	91	395.7	67	291.3
Delaware	33	183.3	24	133.3
Dewey	8	140.4	7	122.8
Ellis	24	461.5	17	326.9
Garfield	267	470.9	206	363.3
Garvin	31	124.0	29	116.0
Grady	65	213.8	48	157.9
Grant	24	333.3	17	236.1
Greer	10	123.5	8	98.8
Harmon	9	180.0	8	160.0
Harper	16	320.0	14	280.0
Haskell	11	113.4	8	82.5
Hughes	17	127.8	14	105.3
Jackson	52	166.7	48	153.8
Jefferson	7	97.2	6	83.3
Johnston	17	217.9	10	128.2
Kay	175	355.0	125	253.5
Kingfisher	41	313.0	29	221.4
Kiowa	17	134.9	15	119.0
Latimer	11	127.9	11	127.9
Le Flore	54	165.1	38	116.2
Lincoln	20	100.0	15	75.0

7. LICENSED AND ACTIVE R.N.'s PER 100,000 POPULATION BY COUNTY, 1972—Continued

County	Licensed R.N.'s	Licensed R.N.'s per 100 000 population	Active R.N.'s	Active R.N.'s per 100 000 population
Logan	41	205.0	32	160.0
Love	6	105.3	6	105.3
McClain	20	136.1	17	115.6
McCurtain	29	92.4	23	73.2
McIntosh	22	176.0	16	128.0
Major	15	202.7	12	162.2
Marshall	8	103.9	7	90.9
Mayes	55	232.1	47	198.3
Murray	20	186.9	16	149.5
Muskogee	243	399.7	183	301.0
Noble	22	215.7	16	156.9
Nowata	15	150.0	9	90.0
Okfuskee	9	81.8	7	63.6
Oklahoma	2,445	453.3	1,895	351.3
Okmulgee	71	197.8	53	147.6
Osage	67	224.8	51	171.1
Ottawa	58	187.7	49	158.6
Pawnee	33	289.5	29	254.4
Payne	146	279.2	105	200.8
Pittsburg	90	236.8	70	184.2
Pontotoc	72	253.5	64	225.4
Pottawatomie	81	182.0	62	139.3
Pushmataha	8	85.1	8	85.1
Roger Mills	6	136.4	4	90.9
Rogers	82	276.1	58	195.3
Seminole	33	131.0	28	111.1
Sequoyah	17	71.1	16	66.9
Stephens	64	176.8	46	127.1
Texas	34	206.1	25	151.5
Tillman	23	181.1	20	157.5
Tulsa	1,761	428.7	1,449	352.7
Wagoner	50	221.2	41	181.4
Washington	156	367.1	128	301.2
Washita	19	157.0	14	115.7
Woods	29	243.7	23	193.3
Woodward	41	261.1	38	242.0
Total	8,081	309.6	6,376	244.3

Section II—Licensed Practical Nurses

1. Summary of LPNs by Planning Area, 1966 and 1972
2. Licensed and Active LPNs and Percent Change by County Within Planning Areas, 1966 and 1972
3. Licensed and Active LPNs and Activity Status by County Within Planning Areas, 1966 and 1972
4. Location of Active LPNs, 1972
5. Licensed and Active LPNs per 100,000 Population by County, 1972

1. SUMMARY OF LPN'S BY PLANNING AREA, 1966 AND 1972

Planning area	Licensed LPN's		Active LPN's		Percent increase in licensed LPN's between 1966 and 1972	Percent increase in Active LPN's between 1966 and 1972
	1966	1972	1966	1972		
1	263	466	197	389	77	97
2	229	370	170	305	62	79
3	185	306	138	246	78	65
4	289	483	215	407	67	89
5	290	457	208	374	58	80
6	529	860	403	723	63	79
7	203	343	140	283	69	102
8	981	1,584	737	1,300	61	76
9	299	482	226	401	61	77
10	204	302	132	236	48	79
11	117	178	85	144	52	69
Total	3,589	5,831	2,651	4,808	62	81

Planning area	Net increase in licensed LPN's between 1966 and 1972	Net increase in active LPN's between 1966 and 1972	Percent of 1966 licensed LPN's which were active	Percent of 1972 active LPN's which were active
1	203	192	75	83
2	141	135	74	82
3	121	108	75	80
4	194	192	74	84
5	167	166	72	82
6	331	320	76	84
7	140	143	69	83
8	603	563	75	82
9	183	175	76	83
10	98	104	65	78
11	61	59	73	81
Total	2,242	2,157	74	82

2. LICENSED AND ACTIVE LPN'S AND PERCENT CHANGE BY COUNTY WITHIN PLANNING AREAS, 1966 AND 1972

County	Licensed LPN's		Active LPN's		Percent change in licensed LPN's between 1966 and 1972	Percent change in active LPN's between 1966 and 1972
	1966	1972	1966	1972		
Planning area 1:						
Craig	56	62	47	46	11	(—2)
Delaware	11	37	8	27	236	238
Mayes	27	57	21	48	111	129
Nowata	18	37	10	30	106	200
Ottawa	46	88	36	77	91	114
Rogers	21	55	15	48	162	220
Washington	84	130	60	113	55	88
Total	263	466	197	389	77	97
Planning area 2:						
Adair	6	15	3	15	150	400
Cherokee	18	32	14	29	78	107
McIntosh	5	12	3	10	140	233
Muskogee	144	169	110	135	17	23
Okmulgee	37	64	28	52	73	86
Sequoyah	14	39	9	33	179	267
Wagoner	5	39	3	31	680	933
Total	229	370	170	305	62	79
Planning area 3:						
Choctaw	12	23	8	16	92	100
Haskell	3	14	2	12	367	500
Latimer	43	32	37	25	(—26	(—32)
Le Flore	30	65	21	55	117	162
McCurtain	16	33	11	25	106	127
Pittsburg	77	119	57	97	55	70
Pushmataha	4	20	2	16	400	700
Total	185	306	138	246	65	78
Planning area 4:						
Atoka	12	24	11	23	100	109
Bryan	34	63	30	52	85	73
Carter	52	114	34	99	119	191
Coal	13	21	11	19	62	73
Garvin	18	42	12	37	133	208
Johnston	11	25	10	22	127	120
Love	0	7	0	5	None	None
Marshall	9	19	6	18	111	200
Murray	40	43	25	36	8	144
Pontotoc	100	125	76	96	25	26
Total	289	483	215	407	67	89

2. LICENSED AND ACTIVE LPN'S AND PERCENT CHANGE BY COUNTY WITHIN PLANNING AREAS, 1966 AND 1972—Continued

County	Licensed LPN's		Active LPN's		Percent change in licensed LPN's between 1966 and 1972	Percent change in active LPN's between 1966 and 1972
	1966	1972	1966	1972		
Planning area 5:						
Hughes	21	37	16	34	76	113
Lincoln	21	50	15	39	138	160
Okfuskee	19	20	15	16	5	7
Pawnee	20	33	13	31	65	138
Payne	69	80	51	64	16	25
Pottawatomie	101	166	70	128	64	83
Seminole	39	71	28	62	82	121
Total	290	457	208	374	58	80
Planning area 6:						
Creek	28	77	25	69	175	176
Osage	18	59	15	48	228	220
Tulsa	483	724	363	606	50	67
Total	529	860	403	723	63	79
Planning area 7:						
Alfalfa	3	8	2	6	167	200
Blaine	9	22	7	19	144	171
Garfield	77	137	57	116	78	104
Grant	3	12	2	7	300	250
Kay	98	129	62	108	32	74
Kingfisher	1	11	1	10	1,000	900
Major	3	10	2	6	233	200
Noble	9	14	7	11	56	57
Total	203	343	140	283	69	102
Planning area 8:						
Canadian	19	50	11	40	163	264
Cleveland	64	151	43	121	136	181
Logan	35	50	23	40	43	74
Oklahoma	863	1,333	660	1,099	54	67
Total	981	1,584	737	1,300	61	76
Planning area 9:						
Caddo	21	40	14	33	90	136
Comanche	158	258	123	218	63	77
Cotton	1	7	1	6	600	500
Grady	31	43	25	37	39	48
Jefferson	8	14	6	12	75	100
McClain	4	21	3	18	425	500
Stephens	69	93	49	72	35	47
Tillman	7	6	5	5	(−14)	None
Total	299	482	226	401	61	77
Planning area 10:						
Beckham	43	58	25	44	35	76
Custer	46	69	34	57	50	68
Greer	30	24	19	16	(−20)	(−16)
Harmon	9	17	5	13	89	160
Jackson	25	37	18	32	48	78
Kiowa	28	40	17	35	43	106
Roger Mills	0	20	0	12	None	None
Washita	23	37	14	27	61	93
Total	204	302	132	236	48	79
Planning area 11:						
Beaver	5	11	2	11	120	450
Cimarron	9	9	7	7	None	None
Dewey	2	12	2	10	500	400
Ellis	24	24	15	19	None	27
Harper	12	15	8	11	25	38
Texas	10	15	9	11	50	22
Woods	9	18	6	17	100	183
Woodward	46	74	36	58	61	61
Total	117	178	85	144	52	69

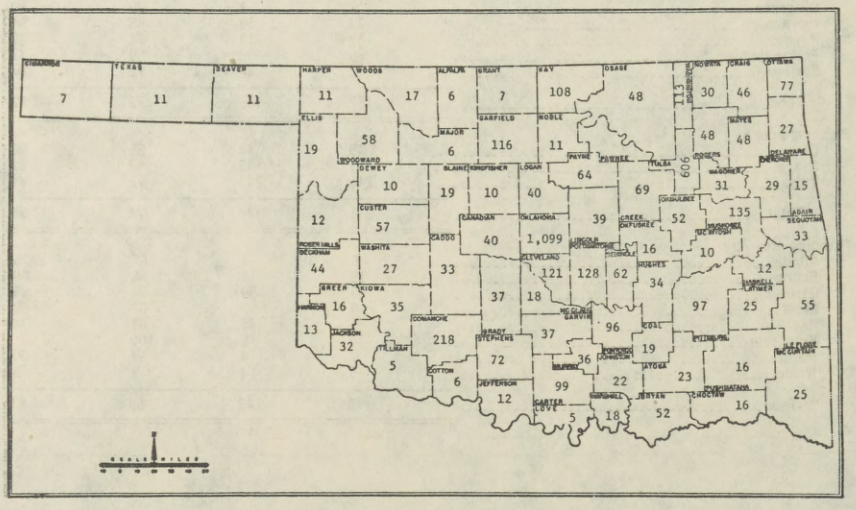
3. LICENSED AND ACTIVE L.P.N.'S AND ACTIVITY STATUS BY COUNTY WITHIN PLANNING AREAS, 1966 AND 1972

County	Net increase in licensed L.P.N.'s between 1966 and 1972	Net increase in active L.P.N.'s between 1966 and 1972	Percent of 1966 licensed L.P.N.'s which were active	Percent of 1972 active L.P.N.'s which were active
Planning area 1:				
Craig	6	(1)	84	74
Delaware	26	19	73	73
Mayes	30	27	78	84
Nowata	19	20	56	81
Ottawa	42	41	78	88
Rogers	34	33	71	87
Washington	46	53	71	87
Total	203	192	75	83
Planning area 2:				
Adair	9	12	50	100
Cherokee	14	15	78	91
McIntosh	7	7	60	83
Muskogee	25	25	76	80
Okmulgee	27	24	76	81
Sequoyah	25	24	64	85
Wagoner	34	28	60	79
Total	141	135	74	82
Planning area 3:				
Choctaw	11	8	67	70
Haskell	11	10	67	86
Latimer	(15)	(12)	86	78
Le Flore	35	34	70	85
McCurtain	17	14	69	76
Pittsburg	42	40	74	82
Pushmataha	16	14	50	80
Total	121	108	75	80
Planning area 4:				
Atoka	12	12	92	96
Bryan	29	22	88	83
Carter	62	65	65	87
Coal	8	8	85	90
Garvin	24	25	67	88
Johnston	14	12	91	88
Love	7	5	None	71
Marshall	10	12	67	95
Murray	3	11	63	84
Pontotoc	25	20	76	77
Total	194	192	74	84
Planning area 5:				
Hughes	16	18	76	92
Lincoln	29	24	71	78
Okfuskee	1	1	79	80
Pawnee	13	18	65	94
Payne	11	13	74	80
Pottawatomie	65	58	69	77
Seminole	32	34	72	87
Total	167	166	72	82
Planning area 6:				
Creek	49	44	89	90
Osage	41	33	83	81
Tulsa	241	243	75	84
Total	331	320	76	84
Planning area 7:				
Alfalfa	5	4	67	75
Blaine	13	12	78	86
Garfield	60	59	74	85
Grant	9	5	67	58
Kay	31	46	63	84
Kingfisher	10	9	100	91
Major	7	4	67	60
Noble	5	4	78	79
Total	140	143	69	83

3. LICENSED AND ACTIVE L.P.N.'S AND ACTIVITY STATUS BY COUNTY WITHIN PLANNING AREAS, 1966 AND 1972—Continued

County	Neti ncrease in licensed L.P.N.'s between 1966 and 1972	Net increase in active L.P.N.'s between 1966 and 1972	Percent of 1966 licensed L.P.N.'s which were active	Percent of 1972 active L.P.N.'s which were active
Planning area 8:				
Canadian	31	29	58	80
Cleveland	87	78	67	80
Logan	15	17	66	80
Oklahoma	470	439	76	82
Total	603	563	75	82
Planning area 9:				
Caddo	19	19	67	83
Comanche	100	95	78	84
Cotton	6	5	100	86
Grady	12	12	81	86
Jefferson	6	6	75	86
McClain	17	15	75	86
Stephens	24	23	71	77
Tillman	(1)	0	71	83
Total	183	175	76	83
Planning area 10:				
Beckham	15	19	58	76
Custer	23	23	74	83
Greer	(6)	(3)	63	67
Harmon	8	8	56	76
Jackson	12	14	72	86
Kiowa	12	18	61	88
Roger Mills	14	13	None	60
Washita	14	13	61	73
Total	98	104	65	78
Planning area 11:				
Beaver	6	9	40	100
Cimarron	0	0	78	78
Dewey	10	8	100	83
Ellis	0	4	63	79
Harper	3	3	67	73
Texas	5	2	90	73
Woods	9	11	67	94
Woodward	28	22	78	78
Total	61	59	73	81

4. Location of Active LPNs, 1972

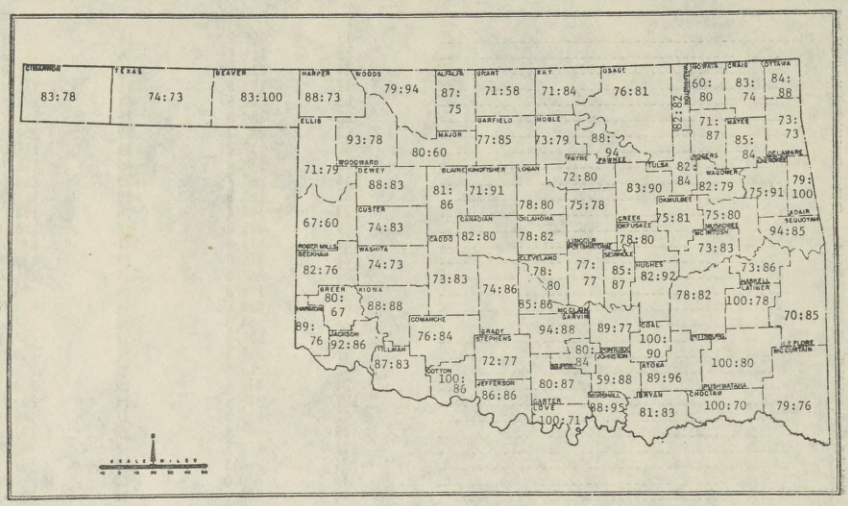


5. LICENSED AND ACTIVE L.P.N.'s PER 100,000 POPULATION BY COUNTY, 1972

County	Licensed L.P.N.'s	Licensed L.P.N.'s per 100,000 population	Active L.P.N.'s	Active L.P N.'s per 100,000 population
Adair	15	96.8	15	96.8
Alfalfa	8	111.1	6	83.3
Atoka	24	220.2	23	211.0
Beaver	11	171.9	11	171.9
Beckham	58	376.6	44	285.7
Blaine	22	184.9	19	159.7
Bryan	63	242.3	52	200.0
Caddo	40	137.0	33	113.0
Canadian	50	148.4	40	118.7
Carter	114	297.7	99	258.5
Cherokee	32	133.9	29	121.3
Choctaw	23	148.4	16	103.2
Cimarron	9	225.0	7	175.0
Cleveland	151	175.6	121	140.7
Coal	21	375.0	19	339.3
Comanche	258	242.3	218	204.7
Cotton	7	100.0	6	85.7
Craig	62	410.6	46	304.6
Creek	77	164.2	69	147.1
Custer	69	300.0	57	247.8
Delaware	37	205.6	27	150.0
Dewey	12	210.5	10	175.4
Ellis	24	461.5	19	365.4
Garfield	137	241.6	116	204.6
Garvin	42	168.0	37	148.0
Grady	43	141.4	37	121.7
Grant	12	166.7	7	97.2
Greer	24	296.3	16	197.5
Harmon	17	340.0	13	260.0
Harper	15	300.0	11	220.0
Haskell	14	144.3	12	123.7
Hughes	37	278.2	34	255.6
Jackson	37	118.6	32	102.6
Jefferson	14	194.4	12	166.7
Johnston	25	320.5	22	282.1
Kay	129	261.7	108	219.1
Kingfisher	11	84.0	10	76.3
Kiowa	40	317.5	35	277.8
Latimer	32	372.1	25	290.7
LeFlore	65	198.8	55	168.2
Lincoln	50	250.0	39	195.0
Logan	50	250.0	40	200.0
Love	7	122.8	5	87.7
McClain	21	142.9	18	122.4
McCurtain	33	105.1	25	79.6
McIntosh	12	96.0	10	80.0
Major	10	135.1	6	81.1
Marshall	19	246.8	18	233.8
Mayes	57	240.5	48	202.5
Murray	43	401.9	36	336.4
Muskogee	169	278.0	135	222.0
Noble	14	137.3	11	107.8
Nowata	37	370.0	30	300.0
Okfuskee	20	181.8	16	145.5
Oklahoma	1,333	247.1	1,099	203.7
Okmulgee	64	178.3	52	144.8
Osage	59	198.0	48	161.1
Ottawa	88	284.8	77	249.2
Pawnee	33	289.5	31	271.9
Payne	80	153.0	64	122.4
Pittsburg	119	313.2	97	255.3
Pontotoc	125	440.1	96	338.0
Pottawatomie	166	373.0	128	287.6
Pushmataha	20	212.8	16	170.2
Roger Mills	20	454.5	12	272.7
Rogers	55	185.2	48	161.6
Seminole	71	281.7	62	246.0
Sequoyah	39	163.2	33	138.1
Stephens	93	256.9	72	198.9
Texas	15	90.9	11	66.7
Tillman	6	47.2	5	39.4
Tulsa	724	176.2	606	147.5
Wagoner	39	172.6	31	137.2
Washington	130	305.9	113	265.9
Washita	37	305.8	27	223.1
Woods	18	151.3	17	142.9
Woodward	74	471.3	58	369.4
Total	5,831	223.4	4,808	184.2

Section III—Registered Nurses and Licensed Practical Nurses

1. Percent of Licensed RNs:LPNs Which are Active, 1972



2. LICENSED AND ACTIVE RN'S AND LPN'S PER 100,000 POPULATION BY COUNTY, 1972

County	Total licensed RN's and LPN's	Total licensed RN's and LPN's per 100,000 population	Total RN's active and LPN's	Total active RN's and LPN's per 100,000 population
Adair	29	187.1	26	167.7
Alfalfa	31	430.6	26	361.1
Atoka	33	302.8	31	284.4
Beaver	23	359.4	21	328.1
Beckham	86	558.4	67	435.1
Blaine	49	411.8	41	344.5
Bryan	94	361.5	77	296.2
Caddo	81	277.4	64	219.2
Canadian	145	430.3	118	350.1
Carter	203	530.0	170	443.9
Cherokee	93	389.1	75	313.8
Choctaw	34	219.4	27	174.2
Cimarron	15	375.0	12	300.0
Cleveland	503	584.9	396	460.5
Coal	29	517.9	27	482.1
Comanche	534	501.4	429	402.8
Cotton	12	171.4	11	157.1
Craig	98	649.0	76	503.3
Creek	143	304.9	124	264.4
Custer	160	695.7	124	539.1
Delaware	70	388.9	51	283.3
Dewey	20	350.9	17	298.2
Ellis	48	923.1	36	692.3
Garfield	404	712.5	322	567.9
Garvin	73	292.0	66	264.0
Grady	108	355.3	85	279.6
Grant	36	500.0	24	333.3
Greer	34	419.8	24	296.3
Harmon	26	520.0	21	420.0
Harper	31	620.0	25	500.0
Haskell	25	257.7	20	206.2
Hughes	54	406.0	48	360.0
Jackson	89	285.3	80	256.4
Jefferson	21	291.7	18	250.0
Johnston	42	538.5	32	410.3
Kay	304	616.6	233	472.6
Kingfisher	52	396.9	39	297.7
Kiowa	57	452.4	50	396.8
Latimer	43	500.0	36	418.6
LeFlore	119	363.9	93	284.4
Lincoln	70	350.0	54	270.0
Logan	91	455.0	72	360.0
Love	13	228.1	11	193.0
McClain	41	278.9	35	238.1
McCurtain	62	197.5	48	152.9
McIntosh	34	272.0	26	208.0
Major	25	337.8	18	243.2
Marshall	27	350.6	25	324.7
Mayes	112	472.6	95	400.8
Murray	63	588.8	52	486.0
Muskogee	412	677.6	318	523.0
Noble	35	352.9	27	264.7
Nowata	52	520.0	39	390.0
Okfuskee	29	263.6	23	209.1
Oklahoma	3,778	700.4	2,994	555.1
Okmulgee	135	376.0	105	292.5
Osage	126	422.8	99	332.2
Ottawa	146	472.5	126	407.8
Pawnee	66	578.9	60	526.3
Payne	226	432.1	169	323.1
Pittsburg	209	550.0	167	439.5
Pontotoc	197	693.7	160	563.4
Pottawatomie	247	555.1	190	427.0
Pushmataha	28	297.9	24	255.3
Roger Mills	26	590.9	16	363.6
Rogers	137	461.3	106	356.9
Seminole	104	412.7	90	357.1
Sequoyah	56	234.3	49	205.0
Stephens	157	433.7	118	326.0
Texas	49	297.0	36	218.2
Tillman	29	228.3	25	196.9
Tulsa	2,485	604.9	2,055	500.2
Wagoner	89	393.8	72	318.6
Washington	286	672.9	241	567.1
Washita	56	462.8	41	338.8
Woods	47	395.0	40	336.1
Woodward	115	732.5	96	611.5
Total	13,912	533.1	11,814	428.5