

Delivery of Services to Sparsely Populated Areas

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There was some discussion a short time ago about the state of Montana being the fourth largest state in the union. Be that as it may I felt a week ago that I was living in complete isolation in cold Montana. I am to explain how things are in Montana. I have just returned from St. Louis and find that people at the meeting I attended were telling it like it was in their respective areas.

If one tried to provide audiological services to a population of seven hundred thousand one could envision a large city with appropriate schools, teachers, hospitals, medical personnel, audiologists, social workers, and a college or two. If one were to distribute that same population over the area of the fourth largest state with no city over 65,000 and 35,000 native Americans on 9 reservations with the climate not good for the better part of the year, you can see the problems facing Montana.

Montana is divided into 5 regional areas and each region has at least one audiologist with the appropriate certification and is usually employed by the Office of Public Instruction. Region I is the northeast centered in Glendive, a metropolis of 6,500. Region II is the north central and is centered in Great Falls. Region III is east center of Billings. Region IV is the area of Bozeman and Region V is that area of Kalispell. The state Department of Health Environmental Sciences employs an audiologist who interacts with most of the health departments of the state. The regional audiologist serves all the age population in their district.

School audiologists are employed at Billings, Bozeman, Butte, Helena, Kalispell and Great Falls. In Missoula the high school district employs an audiologist. Identification and case location is done by regional audiologists and school audiologists. Billings has four audiologists, one who is with the Montana Center for Handicapped Children. That audiologist also serves the rural area around Billings.

We have also the Indian population which is cared for through the Indian Health Service which has two audiologists with mobile

equipment and a contract relationship with ENT specialists at various reservation centers.

Bozeman has an agricultural university and has 23,000 with much recreation in the area. The school program has one audiologist doing hearing conservation, research room, a teacher of the hearing impaired, who is also an audiologist, and their hearing impaired children are integrated.

Butte used to be a metropolis when the copper mining was there. Now it is down 18,000. They have a school audiologist as well as two from the regional services. Helena is under 20,000 and the capital and they have an audiologist.

Great Falls is the really other large area of the state. There is an audiologist there for region two. They are probably fixed up the best. There is another audiologist for the school for the deaf and blind three days a week. The school has about 100 students. That audiologist serves other areas two days a week. The city schools of Great Falls has the model special education program for the state of Montana. They have two audiologists that screen about half of the school population of about 9,000. We evaluate about a 1,000 and identify about 120 educationally significant hearing loss cases requiring medical treatment or management. Because of the proximity of the school for the deaf there are no classrooms for the hearing impaired in Great Falls. Through cooperation some deaf students attend Great Falls schools with interpreters which is cheaper than attending the school for the deaf.

Now we cross the continental divide into western Montana. Near Glacier Park we have another growing community of Kalispell where there is a school audiologist and a teacher of the hearing impaired. Also here there is a number of preschoolers. Although our State Department of Education is not aggressive, Kalispell is able to take the preschoolers into their program.

Now down to the south at Missoula. The district uses the school speech clinicians for the screening of hearing and follow-up testing performed under contract by the audiologist at the rehabilitation center in the school or by the university clinic's staff of audiologists and next year the university is going to have that contract to do the follow-up screening. They have no need to buy their own audiologist when they can farm it out. There is a regional audiologist there that serves the outlying areas. Missoula has had a self-contained classroom and/or research group for hearing impaired children in the K-8 for over 10 years. At the present time, there is an aural resource room staffed by a teacher of the deaf and one school with a self-contained classroom with a trained teacher of the deaf.

Hearing impaired students are followed audiologically by the university clinic under contract. There is also an audiologist acting as a consultant to the program. The classrooms are used as practicum locations for university students. In this program hear-

ing impaired has been defined very broadly and it is not always a necessity to refer to a loss.

The effect the state distribution has had on educational programs is very clear. The hearing impaired children have come from the regular classroom and hopefully the clinician and the resource teacher, who is not a specialist, would handle her area. Most would have follow-up help from the regional audiologist. Some hearing impaired children travel great distances, up to 40 miles one way, to special classes. We really often times ask the parents to move by changing jobs, house and so forth. This happens over and over again. Even though many travel great distances, it is known that anywhere in Montana services can be obtained within 100 miles.

One result of this, the school for the deaf has a relative large population, with children coming in at 2 years of age. The school has regional representatives who work with case location and parent outreach programs. The outreach program is based on the Utah Skyhigh Model and utilizes parent advisors who may teach clinicians or audiologists, their children, or others who are trained in this activity. A question may arise as to the training of these parents and we should be aware that many of these advisory programs are using people who may not be adequately trained. In any event an effort is being made to provide early amplification, parent guidance, and communication to the child and parent. Here again the virgin population is an added difficulty. Identification again is by a regional audiologist. How early identification occurs is more problematical. It occurs about 4 and up.

One of the facilitating factors in Missoula is that pediatricians have agreed to hearing testing of specific referrals. I am very proud of that and I think it is very important if one is going to see a significant portion of the 0 to 3 population in for hearing testing without requiring physician approval.

It has been my experience to educate the physician is a difficult task to accomplish.

One of the major results of the program attained this year is that we are really on to middle ear problems, and physician referral for follow-up after treatments. Another benefit is the increase in recognition among physicians of the number of cases in the lower age and we have accomplished this through the use of a register. Missoula has about 30,000 or so people excluding the university and is quite a medical center for the western part of the state.

In the University of Montana we have the only program in the state for training speech and hearing.