Beyond Statistics to Stories

On the Road with Public Health Nurses

In Montana and Alaska

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Health inequities exist in the United States for a number of minority groups, but the data supporting these conclusions tell only a part of the story. In order to put a human face on the statistics, I visited seven Montana county public health departments including: Lewis and Clark, Teton, Yellowstone, Gallatin, Roosevelt, Jefferson, and Lake. I also visited The North Slope Borough Public Health Programs of Barrow, Alaska. The process involved interviewing and spending time with public health nurses who work with high-risk populations. These experiences will help me tell the story of public health and illustrate the human side of health disparities.

Healthy People 2010 Objectives address the health disparities of greatest concern in the United States. Disparities occur because of "gender, race or ethnicity, education or income, disability, geographic location, or sexual orientation." (Office of Disease Prevention and Health Promotion. 2000). Two major goals for health improvement by the year 2010 are identified: 1: Increase Quality and Years of Healthy Life and 2: Eliminate Health Disparities.

Montana has health disparities. Native Americans, impoverished, undereducated and disabled residents frequently receive substandard care or go without care. Geographic isolation, weather conditions, transportation problems, and health care worker shortages contribute to the inequities in our state.

Montana

The pristine beauty of the Rocky Mountains, golden prairies, and fresh water lakes may create an illusion that Montanans have a utopian life. However, extreme climate, sparse population, and limited industry impact the health of Montanans negatively as well as positively.

A review of state biographical data provides a framework for understanding Montana's unique issues related to health and health care. Montana, known as the land of the Big Sky, is the fourth largest of the fifty states and is home to 935,670 people. (U.S. Census Bureau, 2000).

Exceeded only by Alaska, Texas, and California, Montana contains 145,552 square miles of mountains, valleys, small grain, and ranch land. Obstacles impacting health policy and care delivery are related to the inverse relationship between size in square miles and sparse population. Access to care is a problem Aaron Lessen of the Montana Prevention Resource Center has used a variety of analogies to help policy makers understand the unique challenges for Montana's people. Although Montana is the fourth largest state geographically, it ranks 44th in population size: Delaware, South and North Dakota, Alaska, Vermont, and Wyoming have fewer people. To further illustrate, Montana has a land mass equal to ten combined states. Driving from Wibaux on the eastern border of Montana to Saltese on the western border is 685 miles while driving from Washington D.C. to Chicago across five states is 699 miles.

The population density of 6.1 persons per square mile ranks Montana 48th in the nation. The only states with fewer people per square mile are Wyoming at 5.1 persons per square mile and Alaska at 1.1 persons per square mile. One major industry in Montana is cattle ranching, and because of it the state has more cattle than people; for every one person there are three head of cattle**.** (U.S. Census Bureau, 2000).

The geographic distribution of the people has challenged health, education, economic, and social systems. Ten of the fifty-six counties of this land locked state are home to over two thirds of the state residents. (U.S. Census Bureau 2000).

The 2000 census data shows that 91% of Montana's population reported themselves as white. Racial minorities include those who self identified as black, 0.4%, Asian, 0.5% and two or more races, 2.4% U.S. (U.S. Census Bureau 2000). Ethnic and cultural sub groups who are not identified in census data include Hutterite, Amish, and Mennonite citizens.

The largest non-white population is American Indian who comprise 6.1% of the population. Treaties with the United States government in the late 1800s created seven Indian reservations.

Spanning from the western borders to the eastern borders throughout the state, these reservations are home to eleven American Indian tribes. The Little Shell Tribe of Chippewa Indians, who was not granted land by a treaty, is headquartered in Great Falls. Many American Indians live in communities off reservations and receive health care in urban health clinics in Great Falls, Billings, Helena, Butte and Missoula, as well as in city-county public health clinics, from private providers or through the Veteran's Administration clinics and hospitals.

The Treasure State is truly a land of paradox. In many ways, the Montana environment does create a hospitable environment for healthy families and healthy communities. Many small rural communities are characterized by friendship and caring born of common interest and needs. These same communities are frequently stressed by poverty and isolation from urban health resources and facilities necessary for health and quality of life. Some of the health issues of women and children in the frontier, isolated regions of the state are the same as in more populated regions of the country. However, the context for care and the resources to provide the care are different.

In sharp contrast to communities such as Wolf Point, Wibaux, or Jordan is Billings. This city is classified as a standard metropolitan statistical area, (Stanhope and Lancaster, 2004) and is home to 93,000 residents. Billings is an important commercial, educational, and health care resource for eastern Montana and northern Wyoming. As a transportation and commercial hub, this community experiences problems akin to other large metropolitan areas including gang violence, drug trafficking, and prostitution. Here, the health, education, and law enforcement infrastructures are challenged in the same ways as urban communities in neighboring states.

Montana's Statistics

In a word, Montana's overall rankings related to health could be summed up as "average". The United Health Foundation ranked Montana 22 in overall health in 2006. The Foundation further

identified that health strengths include low infectious disease, high per capita public health spending, and higher than average rates of high school graduation. The report further identified that Montana had lower than average levels of obesity; however it is important to note that since 1990, the prevalence of obesity increased from 8.7 percent to 21.3 percent of Montanans. Major challenges identified in the 2006 statistics include high rates of motor vehicle accident. At 2.2 deaths per 100,000, Montana has consistently ranked as the 2nd or 3rd highest in the nation for motor vehicle accident fatalities. Occupational fatalities (12.9 deaths per 100,000 workers) and an increasing number of children living in poverty (19.8 percent in 2006 up from 16.5 percent the previous year) are other major problems. Another area, violent crime increased from 151 to 282 offenses from 1990 to 2006. Illegal use of drugs and, most specifically, production and use of methamphetamine have contributed to numerous health problems for Montana's citizens. Violent and property crimes, hypertensive cardiovascular disease, premature deaths, birth complications, and severe dental disease have all been attributed to increased use of methamphetamines. Clandestine methamphetamine labs have been a source of environmental pollution both from the manufacturing of the drug and the disposal of the toxic waste in city landfills, sewage systems, campgrounds, and national forests. Current aggressive measures in Montana through the Attorney's General Office targeting this drug are beginning to show some promise. For the first time in several years, methamphetamine related crimes are down. (McGrath, 2007).

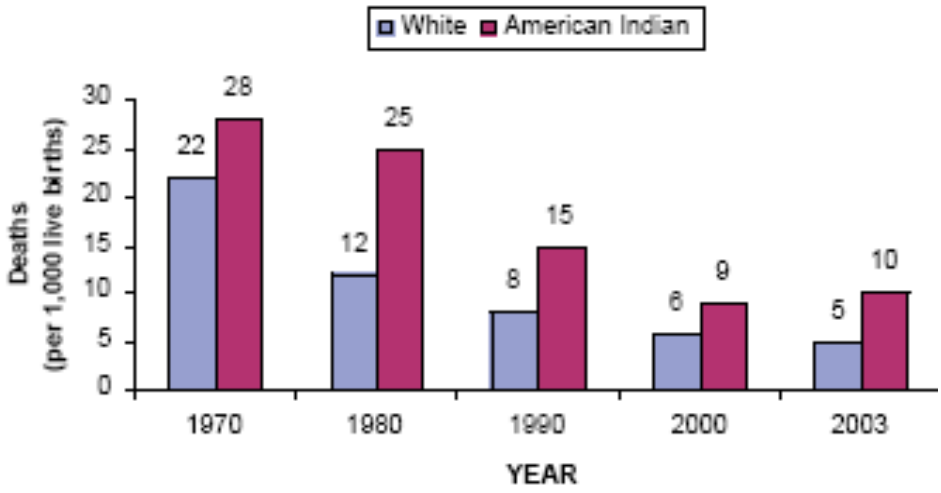
MT Incident Based Reports	
Total Meth-Related Offenses	
2004	1043
2005	1259
2006	589
Total Meth-Related Drug Offenses	
2004	544
2005	655
2006	311

Table 8. Meth-Related Crime Trends

(McGrath, 2007 p.6)

Health Disparities Related to Race

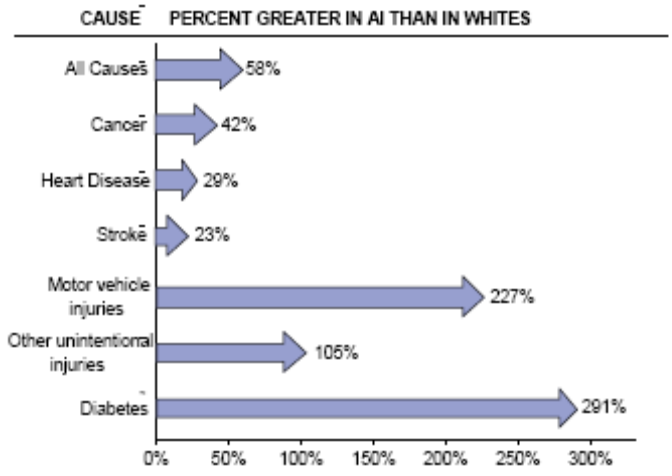
Not reflected in the overall rankings of Montana's health are disparities related to the differences seen between white and American Indians, those who live in poverty and Montanans living in geographically isolated regions of the state. Those residents who are American Indian, live in geographically isolated areas, and are poor are at very high risk for poor health. One area of concern in Montana is the disparities related to prenatal care and pregnancy outcomes. "The percentage of women who receive prenatal care varies from 66 percent among American Indians to 87 percent among whites." (United Health Foundation, 2006). Prenatal care issues are reflected in the pregnancy outcomes as evidenced in infant mortality rates:



(Prevention Resource Center. 2006, p. 4).

Death rates of American Indians compared to whites is further evidence of the health disparities that are challenges for Montana.

Figure 2: Excess death rate for American Indians (AI) compared to whites, 1990-2003



(Prevention Resource Center. 2006, p. 3).

Improvements in funding for Children's Health Insurance Program (CHIP) over the past few years have contributed to a slight decline in uninsured residents. Current efforts in the state legislature are likely to increase funding for CHIP and possibly improve access to care for more Montana children.

Putting a Human Face on the Statistics

"One death is a tragedy, a million deaths a statistic" Although I tried to find evidence to the contrary, this famous quote has been attributed to Joseph Stalin. Mr. Stalin is neither my role model nor mentor, but I do believe that his quote accurately represents the way many relate to information; one person at a time is what many of us relate to best. Bar graphs and pie charts might be the most effective tools for explaining data for large aggregates, but it is the human stories behind those bar graphs that are the rationale for why the data needs to be collated in the first place. The highly skilled public health nurse knows that program outcomes and future funding are evaluated by the numbers, but the people they serve are what keep them as advocates. Stories of these nurses and the clients they serve illustrate the triumphs and tragedies giving some insight into the reasons why we should care about the statistics. A million deaths occur one person at a time. The stories of Montana and Alaska public health have many similarities. Every story that I heard is worth telling, but I have chosen to tell a select few as they relate to the health disparities that occur because of poverty, race, distance transportation, chemical use, and access to care. In some instances, all of these themes are represented in one story. The stories were also selected because they were representative of common themes throughout both states.

Health issues related to distance are many in the state. Some reasons are obvious such as trauma secondary to motor vehicle accidents. Some reasons are less obvious. It can be a long way to drive to get care. Further, many qualified health providers are deterred from moving to small communities because they do not want to move their families to remote isolated areas. Another issue related to transportation is that very few communities have public transportation systems. Transportation systems between communities are also limited. As the fourth largest state by size

and 48th smallest population per square mile, the challenges of building and maintaining roads and providing highway safety and law enforcement personnel are ongoing.

The Stories

Distance and Creative Problem Solving in Barrow

My trip to the North Slope Borough in Barrow, Alaska was the first stop on my public health adventure. This site visit in June was planned so that I could attend the Naluktuk (whaling festival and blanket toss celebration which is a highlight of the year for the Inupiaq people. Barrow, the center of business for the North Slope Borough, is accessible only by air most of the year or by barge in the late summer when the ice pack is far enough from shore. Doreen Clark RN and program manager for the North Slope Borough toured me around Barrow in her new four wheel drive truck which had come to Barrow via a cargo plane. We went to Point Barrow hoping to see a polar bear. We didn't. We did see more species of water fowl than I could ever imagine. Looking out upon the tundra and the lagoons where the migratory birds thrived made me realize that if H5N1 mutates enough to become pandemic influenza, it will probably be the Inupiat people who will be some of the first to suffer.

There are only about 30 miles of road in any direction out of Barrow; travel further requires a plane and of course, air fare. Barrow residents made the most of summer sun. We drove past pedestrians, children on their four wheelers, and dogs. Due to the limited ground transportation, for many Barrow residents, the world may seem very small. In reality the North Slope Borough is the size of Minnesota and public health nurses from Barrow serve it all.

The North Slope Borough public health department has a three-fold challenge in providing women's health care: 1.Helping Inupiat women see their own health as a priority and 2. Creating screening programs that work for women who live in distant villages where mammograms and pelvic exams are not available and 3. Getting the women to Barrow.

The Artic Slope Native Association Screening for Life Program, under the direction of Jozieda Slatton, is meeting this challenge. Specific screening days are planned for each village throughout the year. Arrangements are made for a plane to travel to the village and transport several women to Barrow for mammograms and Pap smears. Because the screening is done in groups, it reinforces a sense of community and women caring for each other. One woman can "put the pressure" on her family and friends to catch the plane for "girls day out." The day has become a special outing for many women as they can travel to Barrow, do some shopping, and socialize with their neighbors and see family members who live in Barrow. Special activities are planned while the women are waiting their turn for testing such as manicures. Jozieda laughed as she talked about how they need to do some things differently next time. "About the time some women got their nails polished, they got called for their Pap smear!"

Montana, Mortality, Methamphetamine, and Mouths

Jami Lynch invited me to visit Lake County Health Department in northwestern Montana the first week of December. She was right when she thought that I would find the community legislative forum sponsored by the Montana Child Health Coalition of interest. Jami stood before a packed room of people poised to speak. While the crowd munched on hotcakes and sausage she explained her program. The Fetal, Infant, Child Mortality Review Program (FICMR) was her responsibility. She was proud of it and she had every right to be. Jami explained the unique relationship that existed between the twenty some members of the Lake County FICMR Team which is comprised of both tribal and nontribal members. This team is the only team in the state that meets jointly. Jami's proposal for the legislature was simple yet complicated. Jami explained, "Now that we know why our children are dying, and that so many deaths could have been prevented, we need to start funding prevention so we can make changes and protect our future. The whole purpose of the FICMR process is to prevent deaths." Whether or not funding

is increased in Montana remains to be seen. This will depend on the priorities set by the 2007 Legislature, but Jami did her part; she served as an advocate for her county.

Many county residents addressed issues which related to fetal, infant and child health. Their concerns were the same as nurses in other parts of Montana and Alaska: violence, mental illness, suicide, and substance use. Children needing services are increasing faster than communities and schools can manage. One testimony to the coalition in particular has haunted me. Arlene Templer MSW ACSW, CRC addressed the forum:

"We have known for some time about the problems with methamphetamine use in our communities but now we must also address the issues of children in our schools that have come from meth homes. These children can go from quiet and peaceful to volatile and violent in just seconds. We do not have the resources or knowledge in our schools and communities to deal with these issues. We currently have 35 meth babies that will attend local schools. I believe we only have the tip of the iceberg and we know that we will have at least six more meth born babies this year. One child has reached school age and the school provides one-on-one assistance with him. What will they do with 40+ children when they hit the school system?" Ms. Templer went on to share a story about a little boy who was adversely affected by methamphetamine in his home: "In one incident a six year old child chased his mother around the kitchen with a butcher knife begging her to take him to the dentist. We have since removed the five children from the family because the mother would not follow through with the corrective dental work on the children."

We've got to get to Missoula!

Echo DeLong is a nurse at St Joseph's Hospital in Ronan and is a life long resident of Lake County. She explained what life is like for her as a single mom traveling in western Montana. "Driving Highway 93 is one of the most deadly roads in Montana. That's why I bought myself

this Suburban. It's to keep my kids safe up here. Friday nights on the last day of the month are especially bad because several of the major payers in Lake County have paychecks ready to hand out Friday afternoon. Now it is football season and EVERYONE will be going to Missoula to party and watch the Grizz play. You really are taking your life in your hands to be on this road, but it is part of life; you can't just stay home all the time. So tonight, everyone will be headed south. It is dark, the temperature is dropping and the rain is turning to snow. There will be plenty of Bud Light on the seat. Montana does not have a primary seat belt law and most of the road has two-way traffic. It's 60 miles to Missoula, and there is a lot of time to be on the road and a lot of bars between here and Missoula. Drinking and driving up here is totally acceptable."

Where IS the baby?

Echo is one of the few nurses that I visited with that works in the hospital rather than a public health department. Echo, my former student, talked about why every nurse should have a community perspective:

"All nurses, if they are good nurses, are community health nurses. If you truly are doing your job you recognize that. For example, I was working in the ER when a young mom came in by ambulance following a motor vehicle accident. I knew she was a mom I had seen her with her kids in town. When you are a nurse in ER, you have to think about her family. Because I knew she had small children, I wondered where was the baby? Was it thrown from the back seat of the car and is lying in the grass somewhere bleeding? Are the older kids at home by themselves? Is anyone watching them? The highway patrol better go check. Someone needs to go right now! So I get the IV line in and get her bleeding stopped and her heart monitor on, but I also call the priest. She is Catholic and I know she would ask for the priest, if she could talk."

Nurses, Dentists and Other Things

I knew I would need to pack plenty of snacks to get me to Wolf Point from my home in Helena Montana. The drive to visit Becky Shuster and Nancy Demoro the public health nurses who would be my hosts in Wolf Point is 411 miles. I purposely planned this trip for early fall as I did not want to be alone and caught in a Montana blizzard in eastern Montana without cell phone service. Becky and Nancy told me myriad stories of poverty on the Fort Peck Indian Reservation. Issues related to care access, mental health, and substance use in both the American Indian and the white population. One of my current senior nursing students, Leticia Toavs, confirmed these problems. She explained that Indian people frequently have four-hour long waits in the dental office before receiving care. Nontribal citizens must drive two hours or more into North Dakota for care because the community is frequently without a dentist. The end result: "people just go without care." Health care worker shortages are a concern. When positions and funding are available, no one wants to move to Wolf Point or Poplar because of the isolation. Leticia went on to explain that it is almost impossible for the community to grow their own health care workers because there are no health professional education programs in this region of the state. Teens lack many of the secondary education prerequisites, especially in the laboratory sciences, necessary to be successful in college. Many are teen parents. The distance from family supports as well as the confidence to make it independently in a non reservation community further complicates the issue. Leticia's goals upon graduation are to return for a time to her home community to work but as a young mom, she wants to live in a community where her young son will have more opportunities the a community like Wolf Point can offer.

Today I'm not a loser

Dependence on others for rides to and from appointments, to get groceries, or even to procure and maintain employment is challenging. In order to afford even modest transportation, one

must be able to drive, find an automobile, and find credit (which is usually at very high rates) license, insure, and maintain the automobile. For many living on minimum wage jobs or disability, this can be a never-ending challenge. Frequently the car payments continue even though the car has become inoperable. Lack of dependable transportation adds significantly to the stress of those living in poverty and sense of self-worth plummets.

Kim Rodgers, a home visitor from the Lewis and Clark County home visiting program, shared this story with me about a young mom. This mom's background made it difficult for her to trust others. Kim described this woman as being hard to get to know and at times, intimidating. "In the Wal-Mart parking lot I saw one of my clients from the home visiting program. On this particular day the young mom had a different look about her. She looked happier, more confident, and just different than all of the other times I had visited with in her home. I shared my observation with her. I told her she looked like she was doing better and I wondered about what may have been the reason for the change. The young mom passed the compliment off with a shrug of the shoulders and 'oh I don't know'. By the time I called upon her for our next visit, she had gained some insight. She said, 'You know that day you saw me at Wal-Mart my friend had loaned me a car for a few days. And for the first time in a long time I could go to the laundra-mat by myself, I could go to my WIC appointment by myself; I could go grocery shopping by myself. For the first time in a long time I could take care of myself and didn't have to depend on anyone. For the first time in a long time, I didn't feel like such a loser'".

Super Sleuths Super Nurses

Sitting in the Yellowstone County Public Health Department Office with Tamalee Taylor RN and Kim Bailey RN, I listened as they shared stories of STD investigations and of following leads to find the source of a Norovirus outbreak in their community, which affected hundreds of fragile elders. They told me about nursing in the trenches: seeking out those in need of care in

city parks, adult book stores, gay bars, drug houses, abandoned buildings, cars, apartments without heat, and massage parlors. They told me about planning a mass influenza vaccination clinic for 10,000 people to insure that Billings was prepared in the event of pandemic influenza or a bioterrorist attack. They told me about angry mothers who were going to have them arrested if they didn't tell them why the health department was calling their children. What struck me most from observing them at work and listening to their stories was how they had learned to advocate for people and to live by the first skill learned in nursing school: "develop trusting relationships." As they discussed strategies for how to get a homeless, alcohol dependent American Indian man with multi-drug resistant tuberculosis to comply with his treatment plan, I pondered what incredible responsibility that they had. These nurses walk a tight rope: Give this man too much freedom, he disappears, his disease progresses and spreads to others. Give him too many mandates and his rights as a human being are violated.

Unconditional Positive Regard

Under her right arm, Tamalee tucked a plastic jar containing small blue packets, marked "lubricant." Under her left arm was an identical container with small red packets marked "fruit flavored lubricant." I really was not sure what to expect when Tamalee invited me to go on this home visit with her in downtown Billings. The drive was just a few blocks from the Yellowstone City County Health Department. Based on the direction we traveled in relation to the Rimrocks, I guessed we traveled north. During the drive Tamalee briefed me on the visit we were about to make. The women would probably be young Asian women who came to America with an American soldier and then ended up on their own for any number of reasons. She told me the story of one woman that she had met on a previous visit. The young Korean had come to America with a physician who died after they arrived in the states. Left on her own in a foreign land, this young woman had survived the ravages of Hurricane Katrina. She had found shelter in

a FEMA mobile home but lived without running water and sewer for months. Up to her knees in mud, she began looking for options. She answered an advertisement in the local newspaper for work and found a way out of New Orleans. The circuit eventually led her to Billings. Before we went into the home for our home visit, Tamalee finished explaining. There were a variety of precipitating events which brought young women to Billings, Montana, but the one common theme was most women were Asian immigrants; most needed money and all were willing to work to support themselves.

A young Asian woman in her late twenties greeted us at the door and invited us in. Another young woman about the same age as the first and a third woman who was probably twenty years their senior greeted us warmly. Tamalee introduced me to the three women who smiled politely and acknowledged my presence. I was quite surprised at the cordial welcome I received. It was apparent that the extension of trust to the stranger, me, was directly tied to the relationship of the nurse and her clients. Matter-of-factly, they turned their attention to Tamalee as she explained the "supplies" she had brought. Tamalee and the oldest of the three women scheduled a return visit. Next time she would do HIV testing and administer Hepatitis B and influenza vaccine. As we climbed back into the seat of Tamalee's SUV, I thought about what it meant to be a nurse for "massage therapists." Making a difference really is about human relationships.

Reflections

My experiences as a public health nurse have really been lived through the lives of other nurses. Many of them are my former students who I have quoted here I know consider my mentors. Working with and visiting with nurses from across the 660 mile span called Montana has taught me compassion, assertiveness, humor, perseverance and optimism. As I have listened to them tell their stories, I have learned that despite incredible odds, limited resources, professional isolation and lack of public understanding about public health, they maintain a commitment to

the work they do, compassion for the people they serve, and an unquestionable knowing that what they do makes a difference. Outcomes of public health are sometimes difficult to quantify. How does one measure whether or not a fifteen-year-old single mom is truly a better mom and healthier person because of home visits? How does the communicable disease nurse know that the contact investigation she did prevented three more cases of Chlamydia?

Perhaps if more of us middle Americans chose to live, listen and relate like public health nurses, health disparities in Montana or anywhere else in the world would not be such an issue. I have also learned patience. We can make a difference one day at a time, one event at a time, one person at a time. My colleague Kim Garrison teaches "Unconditional positive regard." How can we go wrong with that whether we are testifying at a hearing for new legislation, holding the hand of a meth addicted mother who wants to kill herself, or helping a newborn baby learn to nurse at her mother's breast? Educators teach that nursing is more than science. It is also art. Sometimes one must stand back, and look at the whole picture to see the beauty and to see the art.

It was an honor and a privilege for me to be a guest of public health nurses in Montana and Alaska. There is no question public health nurses know the meaning of advocacy for the vulnerable fragile women and children that are the silent victims of health disparities. Public health nurses are truly my heroes.

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