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Ethnic Differences in Cesarean Delivery in New Mexico

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Abstract

Objective: To examine cesarean delivery rates in New Mexico's non-Hispanic, Hispanic, and American Indian women.

Methods: Live birth certificate data (1994) from the New Mexico Bureau of Vital Records and Health Statistics were used to analyze cesarean rates by ethnic group. Demographic, prenatal, and intrapartum factors were examined to determine the relationship to cesarean delivery according to ethnic group.

Results: Cesarean section rates were highest in non-Hispanic white women (19.6%) and lowest in American Indian women (12.0%). The variation in cesarean delivery was associated with socioeconomic factors, but not with medical conditions before or during labor.

Conclusion: Compared to cesarean section rates in the general population of the US, we found lower rates of cesarean delivery among the American Indian population in New Mexico. Additional research evaluating the reasons for this low rate may be useful to reduce the cesarean rate nationwide.

Introduction

During the 23 year period 1965 to 1988, the cesarean delivery rate in the United States increased fivefold, from 4.5 per 100 deliveries in 1965 to 24.7 per 100 deliveries in 1988.[1] Studies have shown that maternal age,[2] parity,[3] socioeconomic status,[4] insurance coverage,[5] and physician factors[6] influence cesarean delivery rates. The roles of race and ethnicity as contributing factors are less clear. According to one study, in 1990, white and black women had the highest cesarean rates, while American Indian women had the lowest.[1] Compared with non-Hispanic white women, Hispanic white women have lower rates of cesarean sections.[7] While some studies have evaluated the factors contributing to the high cesarean rates in black and white women, relatively few studies have evaluated the lower cesarean rates in Hispanic and American Indian women. Examination of the reasons for these low rates may suggest prevention strategies to lower the cesarean rates in other population groups.

The childbearing population in the state of New Mexico is primarily comprised of non-Hispanic whites, Hispanic whites and American Indians, and therefore provides a unique opportunity to examine the relationship of ethnicity to cesarean delivery in these three groups. The authors assessed demographic, prenatal, and intrapartum factors to look for associations with ethnic differences in cesarean delivery rates in New Mexico's ethnic populations, using live birth certificate data for births that occurred in the state during 1994.

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Materials and Methods

The authors utilized the 1994 live birth certificate database compiled by the New Mexico Bureau of Vital Records and Health Statistics. All study variables evaluated were classified based on the birth certificate information. After comparing New Mexico with U.S. population characteristics, we excluded live births of other races (Black, Asian/Pacific Islander, and others) as these accounted for only 3.2% of the New Mexico births.

Variables of interest were demographic characteristics (maternal age, parity, education, marital status), prenatal variables (initiation and adequacy of prenatal care, smoking, weight gain), and intrapartum data. The latter included delivery outcomes (route of delivery, infant birth weight), technical procedures (electronic fetal monitoring, labor induction and augmentation), and complications (hypertension, diabetes, and other labor complications).

Race and ethnicity were assigned according to classifications on the birth certificate. Mother's race was identified on the birth certificate as white or American Indian. Mother's ethnicity was coded Hispanic or non-Hispanic on the birth certificate. We classified women as non-Hispanic white if the mother was identified as white but not of Hispanic ethnicity, and Hispanic if the mother was identified as white and of Hispanic ethnicity. Marital status was classified as unmarried or married. Unmarried status included mothers who were single, widowed, or divorced. Route of delivery was classified as vaginal or cesarean. Vaginal deliveries included those after prior cesarean, and forceps and vacuum deliveries. Cesarean delivery included primary and repeat procedures.

Site of delivery and type of hospital (private, public, etc.) were recorded on the birth certificate, but these variables were not available for analysis by agreement with the New Mexico Bureau of Vital Records and Health Statistics (BVRHS) who provided the data set.

Early prenatal care was defined as care that began in the first trimester. Level of prenatal care was classified using the Kessner Index.[8] The Kessner Index combines the number of prenatal visits with the month prenatal care was initiated and assigns classifications of none, low, medium, and high levels of prenatal care.

Electronic fetal monitoring included external or internal methods. Diabetes included gestational and pre-existing diabetes mellitus. Pregnancy-induced hypertension (PIH) was defined as hypertension that developed during the pregnancy, and excluded chronic hypertension.

We combined labor and delivery complications that have been associated with route of delivery. For this analysis, labor and delivery complications included one or more of the following: meconium, placental abruption, placenta previa, long labor (defined as labor duration of greater than 20 hours), malpresentation (including breech), cephalopelvic disproportion, umbilical cord prolapse, and fetal distress. The presence of these complications was determined as indicated on the birth certificate.

Because complete population data for a calendar year were used, the need for probability testing is in question. We used software from the SAS Institute (Statistical Analysis System, Cary, North Carolina) on a personal computer for statistical analysis. First, New Mexico live births were compared with US live births for 1994[9] using frequencies of all variables of interest.

Next, recognized and potential risk factors in the New Mexico live birth data file were examined by ethnic group and by route of delivery (vaginal or cesarean), with statistical significance for the difference in proportions assessed by Chi-square testing. Significant differences in the distribution of risk factors by ethnic group and also route of delivery indicated potential confounding in the data and the need for further analysis.

Risk ratios and 95% confidence intervals (CI) for the relationship of ethnic group to route of delivery were calculated utilizing stratified analysis.[10] Crude risk ratios of cesarean delivery by ethnic group were compared with those adjusted for categories of the established and hypothesized risk factors of interest for this study.

Results

Table 1 compares New Mexico live births (n=27,585) with all US live births for the same year (n=3,952,767). New Mexico's childbearing population was younger and less well educated than all US women. In New Mexico, women were less likely to be married, and the majority were members of minority groups. New Mexico women began prenatal care later and received fewer visits than all US women. Smoking rates in New Mexico were lower, and total weight gain in pregnancy was higher. The use of technologic procedures in labor was similar, but rates of hypertension and diabetes in pregnancy were marginally higher in New Mexico.

Table 2 shows the data reflecting demographic, prenatal, and intrapartum variables in the three major ethnic groups in New Mexico. Significant differences across ethnic groups were observed for all variables except labor and delivery complications. Teen births were more common in New Mexico Hispanic and American Indian women. New Mexico Non-Hispanic white women were more likely to be married and had more formal education than either Hispanics or American Indians. This group also began prenatal care earlier and received more visits. American Indian women had fewer low birth weight (<2500 grams) and more high birth weight (≥4000 grams) infants than the other groups. They were least likely to smoke during pregnancy. Labor induction and augmentation were more commonly used in non-Hispanic white women. Rates of pregnancy-induced hypertension and diabetes were higher in American Indians, however labor complications were consistent across all ethnic groups. Cesarean delivery was highest in non-Hispanic white women and lowest in American Indian women.

Table 1. Comparison of 1994 New Mexico and US live births

Variable	New Mexico births (n=27,585) %	US births (n=3,952,767) %
Age		
<20 years	18.0	13.1
20-29 years	53.9	52.9
30-34 years	18.6	22.9
35+ years	9.5	11.1
Education		
<High school graduate	27.4*	22.9
High school graduate	37.4	35.1
Some college	19.1	21.7
College graduate	13.5	20.3
Marital status		
Single	40.9*	32.6
Married	56.2	67.4
Race/Ethnicity		
Non-Hispanic white	36.8	62.3
Hispanic white	46.5	16.9
American Indian	13.2	1.0
Black	1.9	15.8
Other	1.6	4.0
Parity		
Nulliparous	33.3	41.0
Parous	66.7	59.0
Type of delivery		
Vaginal	82.1	78.8
Cesarean section	17.9	21.2
Level of prenatal care		
None	2.0*	1.3
Low	8.9	4.3
Medium	34.5	24.0
High	50.9	70.4
1st trimester prenatal care	68.9	80.2
Alcohol use during pregnancy	1.8	1.7
Smoking during pregnancy	9.8	14.6
Birth weight		
<2500 grams	7.8	7.3
4000 + grams	7.5	10.4
Weight gain during pregnancy		
0 - 24 pounds	28.3	36.1
25 - 35 pounds	39.9	34.1
36 + pounds	31.8	29.8
Labor induction	12.4	14.6
Labor augmentation	15.8	15.2
Electronic fetal monitoring	82.1	80.0
Pregnancy-induced Hypertension	4.2	3.2
Diabetes	3.2	2.6

* These New Mexico variables do not add to 100% because of missing data.

Proportions of all study variables according to route of delivery are presented in Table 3. Significant differences according to type of delivery were observed for all variables except medium/high levels of prenatal care, labor induction, and fetal monitor use. Risk factors for cesarean delivery were nulliparity and advanced maternal age. Factors linked with socioeconomic status (marriage, education beyond high school, and receipt of early prenatal care) were also associated with cesarean delivery. Cesareans were more common at the extremes of infant birth weight and when maternal complications were present (PIH, diabetes, or complications in labor and delivery).

Stratified analysis was performed utilizing non-Hispanic white women as the reference group, since they had the highest rate of cesarean delivery. The crude risk ratio for cesarean delivery was 0.91 (95% CI, 0.86-0.96) for Hispanic women and 0.61 (95% CI, 0.56-0.67) for American Indian women. Risk ratios adjusted for categories of the control variables (those found to be significantly different in both Tables 2 and 3) were consistent with the crude risk ratios, demonstrating an absence of confounding in the data.

Table 2. Demographic, prenatal, and intrapartum variables by ethnicity for New Mexico live births

Variable	Non-Hispanic White (n=10,181) %	Hispanic (n=12,867) %	American Indian (n=3,645) %
Demographic			
<20 years	10.8	23.6	18.7
≥35 years	12.6	6.8	10.4
>High school	53.0	20.2	22.8
Married	76.6	51.2	30.2
Nulliparous	42.8	40.8	32.4
Prenatal			
Early prenatal care	77.0	63.4	51.1
Medium/High prenatal care	94.1	87.3	79.0
Smoking	15.5	7.6	2.3
Weight gain >35 pounds	32.7	27.6	23.4
Intrapartum			
<2500 grams	7.5	7.5	6.2
≥4000 grams	8.8	6.2	9.4
Labor induction	14.5	11.0	12.0
Labor augmentation	17.9	15.3	11.3
Fetal monitor	83.9	84.3	69.6
Pregnancy induced hypertension	4.6	3.6	5.8
Diabetes	2.5	3.1	5.5
Labor and delivery complications*	17.1	17.9	17.3
Vaginal birth after cesarean	2.7	2.9	3.7
Primary cesarean delivery rate	13.2	11.4	8.0
Repeat cesarean delivery rate	6.4	6.4	4.0
Overall cesarean delivery rate	19.6	17.8	12.0

* Differences not statistically significant at p<0.05

Discussion

Our data show that New Mexico's non-Hispanic white women had the highest cesarean rate, with marginally lower rates for Hispanic, and substantially lower rates for American

Indian women. Cesarean delivery was strongly associated with

Table 3. Demographic, prenatal, and intrapartum variables by route of delivery for New Mexico live births

Delivery Type	Vaginal (n=21,978) %	Cesarean (n=4,715) %
Demographic		
<20 years	19.1	13.1
≥35 years	8.6	13.6
>High school	32.4	36.9
Married	56.8	63.3
Nulliparous	39.6	44.0
Prenatal		
Early prenatal care	66.1	71.2
Medium/High prenatal care*	88.3	91.0
Smoking	9.5	11.8
Weight gain >35 pounds	28.3	32.3
Intrapartum		
<2500 grams	5.9	14.1
≥4000 grams	6.8	9.8
Labor induction*	12.4	12.5
Labor augmentation	17.4	8.3
Fetal monitoring*	82.6	80.0
Pregnancy induced hypertension	3.5	7.9
Diabetes	2.7	5.7
Labor and delivery complications	10.6	49.8

* Differences not statistically significant at p<0.05

socioeconomic factors, but not with medical complications before or during labor. Socioeconomic status is known to be a strong and reliable predictor of an individual's health.[11] Even though lower income and minority women have excess obstetric pathology,[12] these women are at lower risk for a cesarean birth, in New Mexico and elsewhere.[4]

Hispanics are recognized as a heterogeneous population,[13] but generally their health status is more similar to non-Hispanic whites than to other minority groups with whom they share numerous social and economic characteristics.[14] In the New Mexico data, the rate of cesarean delivery for Hispanic women was closer to that of non-Hispanic whites, although demographic and prenatal risk factors (age, education, marital status, pattern of prenatal care, gestational weight gain) were more like those of American Indian women. A recent study[7] in California found somewhat lower cesarean rates in US-born Hispanic women compared with non-Hispanic white women.

Pregnancy outcomes of American Indian women are not well studied, and little published data exist. In New Mexico, American Indian women had a 12% cesarean rate, a rate similar to countries in western Europe,[15] and well below the US Public Health Service goal for the year 2000.[16] The majority (60%) of American Indian women in New Mexico are delivered in Indian Health Service (IHS) facilities (personal communication, Tony Ortiz, Statistical Program Manager). The IHS is a federally supported program that guarantees access to care for pregnancy and delivery. No financial incentives exist for IHS providers to perform cesareans. Most women are attended in labor by certified nurse-midwives who encourage ambulation and upright positions, and epidural anesthesia for pain management in labor is not routinely available (personal communication, Jonathan Steinhart, MD, Alan Waxman, MD). As no published reports exist about the management of American Indian women in labor at IHS or other types of facilities, we can only hypothesize that the above factors may play a role in the low cesarean rate. Other, unmeasured factors may also play a role.

This study has several limitations. We used vital records data and were limited to the variables reported on live birth certificates. Many birth certificate variables (maternal race, marital status, route of delivery, infant birth weight,) are known to be reliable items when compared with medical record data.[17,18] Other variables (number of prenatal visits, month prenatal care began, alcohol use during pregnancy, obstetrical procedures, and medical complications), however, are known to be underreported.[17,18] Reporting of medical complications may be biased by type of delivery (overreporting with cesareans) or by ethnicity. Some misclassification of maternal race or ethnicity is also possible, but is unlikely to bias our results in a predictable direction. Site of delivery and type of hospital were not analyzed because these variables were not available in the data set we received from the New Mexico BVRHS. Finally, we did not include data on payment source for delivery. Prior research has shown that insurance status plays a role in cesarean delivery rates. In New Mexico, 48% of all deliveries are to women in the Medicaid program.[19]

Reducing the rate of cesarean deliveries is a major public health priority in the United States. *Healthy People 2000* set the national goal for such deliveries at 15% by the year 2000,[16] a rate which is very unlikely to be met. Numerous strategies to lower the cesarean rate have been studied in recent years including external cephalic version of breech presentations,[20] peer review of physician decisions to perform a cesarean,[21] active management of labor,[22] and increased use of certified nurse-midwives.[23] Each of these has focused on a single contributing factor to the overall cesarean rate, and none has made a significant impact on the overall rate nationally. Our report suggests a need for broader, ecological analysis of systems which maintain a very low cesarean rate, such as that operating for American Indian women in New Mexico. Understanding factors that encourage the normal progression of labor, resulting in vaginal delivery will require methods which can assess multiple variables. Expectations of both patients and providers, availability of technology, use of specific intrapartum care measures (ambulation, emotional support, and nonpharmacologic measures of pain relief), collaborative care, and medico-legal liability must all be evaluated to understand

their roles in the cesarean delivery rate. □

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COMMENTARY □

Cesarean Deliveries Within the Indian Health System

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Introduction

In 1995 more than one baby in five (20.5%) in the United States was born by cesarean section.[1] This increase from the rate of 5% in 1970 has been sparked by many factors, including an increase in the diagnosis of "dystocia" and a heightened fear of medicolegal repercussions for adverse fetal outcomes.[2] These medicolegal pressures coincided with the development and widespread use of electronic fetal monitoring. Unfortunately, this technology was accompanied by considerable variation in the defining threshold for fetal distress; hence there were increased rates of c-section for this indication. Fear of litigation fueled the trend away from vaginal delivery of breech presentation as well. Furthermore, until 1978, cesarean delivery was the norm for women who had previously given birth by cesarean section.[3,4] In 1981 the National Institutes of Health convened a task force to study the escalating rates of cesarean section.[5] Cesarean delivery is associated with higher morbidity, longer hospital stays, and slower convalescence than vaginal birth.

One of the national health promotion and disease prevention objectives for the year 2000 is to reduce the rate of cesarean sections to 15 per 100 deliveries.[1] As Drs. Schiff and

Albers observe in their paper in this month's *Provider* (*The IHS Provider*, Vol 24, No. 2, pp17-21), the cesarean section rate among American Indian women in New Mexico already meets — and exceeds — that target.[6] Their study, based on birth certificate data, does not distinguish births at Indian Health Service hospitals, nor do their data reflect the activities of facilities elsewhere in Indian country. In this commentary, I'd like to share self-reported data from IHS and tribal health facilities, comment on regional variations, describe a program that has successfully kept c-section rates down, and comment on the role of vaginal birth after cesarean (VBAC).

Cesarean section rates in IHS and tribal hospitals

In FY 1997, seventeen IHS and three tribal hospitals provided full obstetrics services including cesarean deliveries. Prior to an August 1998 meeting of IHS, tribal, and urban obstetrician/gynecologists and certified nurse midwives, each facility was asked to report certain workload statistics including the number of deliveries and cesarean sections. C-section rates ranged from 9.2% at a larger hospital with close to one thousand births, to 36.1% at a smaller facility with fewer deliveries. There was wide regional variation within the system, with lowest rates in IHS and tribal hospitals in the southwest and Alaska (range 9.2% to 12.8%), mid-range in hospitals in the northern plains (14.5% to 15.6%), and highest in the facilities of the south central US (16.4% to 36.1%). Interestingly the aggregate c-section rate of the IHS facilities in New Mexico with full obstetrical services was 10.7% — lower than the 12.0% rate for New Mexico American Indian women in 1994, reported in Drs. Schiff and Albers's study.[6]

Why is there so much variation within the Indian health system?

How do we explain such wide variation in c-section rates within the Indian health system? Indian health hospitals with full service obstetrics and gynecology departments across the country have equally high risk patients. The ob/gyn specialists are similarly trained across the system and rely on the same national standards. It has been noted by some that provision of care by certified nurse midwives may be associated with lower c-section rates.[7] No correlation was found, however, between the use of midwives and c-section rates in this IHS and tribal sample. Rates of repeat c-section may be influenced by regional differences in patient expectations and by the market forces that now influence the practice of medicine. Patient expectations can be modified by education, but in some areas of Indian country, patients who prefer repeat c-sections take their business to those hospitals more likely to honor their choice. Patient preference for repeat c-section has been shown to affect c-section rates in communities outside of Indian country as well, prompting calls for patient education on this issue.[8]

One IHS hospital's experience

One IHS medical center with a low c-section rate based on the 1997 data has, since the early 1980s, emphasized obstetrics practices that help to keep c-section rates low. All patients with breech presentation are offered external cephalic version at 37 weeks. Women presenting in labor with breech presentation are evaluated for suitability of vaginal breech delivery (although few have taken this option). All cesarean sections are subject to peer review in a monthly departmental meeting. Cases are critically discussed, and indications for c-sections must be justified, yet the obstetrician is held accountable for excellent maternal and neonatal outcomes. While such peer review has been shown to be efficacious in decreasing c-section rates,[9] it is difficult in small service units with only one obstetrician. Lastly, all women presenting with previous c-sections are evaluated for safety of VBAC. Those with a single, low transverse uterine scar are encouraged to labor, and the option is generally held open to those with two previous c-sections. The community expectation favors vaginal delivery, and 89% of those who opt for VBAC are successful. The experience at this large IHS facility is not unique. Many of the practices have been implemented with varying success at most IHS and tribal hospitals.

Vaginal Birth After Cesarean (VBAC)

Finally, a few words about VBAC are in order. Successful vaginal birth after a prior cesarean section is associated with lower maternal morbidity, shorter hospital stays, and usually no greater neonatal complications than delivery by elective repeat cesarean section.[2] It is the 20 to 30% of women who attempt VBAC unsuccessfully who experience increased maternal and neonatal morbidity.[10] The pendulum of obstetrical care, which swung away from routine repeat c-section in the early 1980s, has recently begun to make adjustments toward fewer VBACs. Renewed caution about the safety of VBAC has been largely sparked by the rare but sometimes catastrophic occurrence of uterine scar separation. While usually occurring as asymptomatic dehiscence, catastrophic uterine rupture may occur, which may lead to serious maternal morbidity or neurologic complications, or death of the infant.[11] Rupture occurs in 5-8 per 1,000 women attempting VBAC.[3] Rates increase with two or more prior c-sections or with vertical uterine incisions, especially those extending into the muscular myometrial tissue of the uterine corpus. Risk of rupture can be reduced, though not eliminated, by carefully selecting candidates for VBAC. Operative reports from previous cesarean sections should be reviewed for type of uterine scar. Risks and benefits of VBAC versus elective repeat cesarean section should be thoroughly discussed with the patient, with good documentation. VBAC should not be offered at facilities that cannot provide rapid cesarean section and hysterectomy if needed. Women electing VBAC should be encouraged to present early in labor, and electronic fetal monitoring should be employed. Nonreassuring fetal heart rate tracings should be acted upon promptly. Documentation of prior cesarean section should be clearly identified in the medical record, and medical and nursing staff should be alert to the fact that this is a potential risk factor in

pregnant women.

Conclusions

While the year 2000 objective for c-section rates is to decrease it to no higher than 15%, in truth, there is no evidence-based "ideal" rate. The balance of vaginal delivery versus cesarean section is determined on a case by case basis. Factors that put the infant at risk must be weighed against those that could endanger the mother. Every pregnancy can test the science and the art of obstetrics. Certain measures can be taken to tilt the scale toward vaginal delivery. These include the use of rigorous definitions of fetal distress and failure to progress in labor before turning to cesarean delivery, and the use of external cephalic version of appropriate infants in breech presentation or allowing selected breech cases to deliver vaginally. Most women with prior low transverse c-section scars can safely labor in settings where emergency surgery can readily be provided if needed. As Jason Woo, MD, of the Phoenix Indian Medical Center, observed at the August 1998 ob/gyn clinicians meeting, however, the best way to lower the rate of repeat c-sections is to lower the primary c-section rate. □

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Palliative Medicine: Facing the Challenge of Care Beyond Cure

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All Native American age groups experience certain diseases and injuries for which there is no cure; however, the growing population of Native American elders is carrying the greatest burden of chronic illness and pain-related symptoms. In the United States, public opinion and academic medicine are beginning to face the challenge of "care beyond cure": those comfort measures offered when a disease process is not responsive to curative treatment. The emerging field of palliative medicine is generating increasing dialogue in medical societies, clinical journals, foundations, and consumer advocacy organizations.[1]

Elements of the Dialogue

Definition. Currently, a standard definition of palliative medicine is still evolving. To palliate, literally, means, "to cloak." Beginning in England in 1973,[2] the term "palliative medicine" was used to describe an array of hospice services that were provided for the dying. As research and clinical experience have expanded throughout the world, palliative medicine has come to encompass "terminal care," "comfort care," "supportive care," "pain management," "end-of-life care," and "hospice care."[3] This fledgling field has attracted clinicians from diverse backgrounds: surgeons, internists, pediatricians, anesthesiologists, ethicists, geriatrics specialists, family practice physicians, oncologists, cardiologists, and those in the field of public health, each with their own goals, values, and definitions.

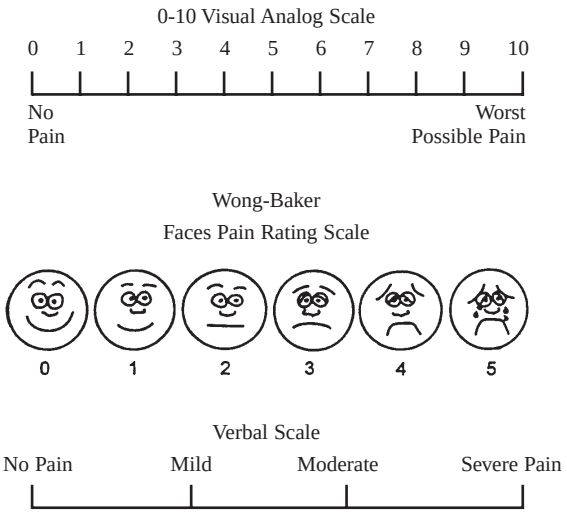
However diverse their approaches, their shared vision focuses on the desire to alleviate pain and suffering when a disease process shows no further potential for response to curative treatment. This goal has lead to a central tenet of palliative care: to **assess pain as a fifth vital sign.** If one does not routinely assess and document pain as a fifth vital sign, along with blood pressure, respiration, temperature, and pulse, then the opportunity to prevent prolonged suffering may be missed.

From the outset, palliative medicine has defined itself as a *family oriented, interdisciplinary, team approach* centered on its responsiveness to the needs and values of the patient. The effect of this view has been to flatten the hierarchical working relationships that exist between the patient, physicians, nurses, social workers, ethicists, pharmacists, clergy, nutritionists, behavioral health care workers, and alternative and complementary healers.

Palliative Care Settings. As the definition of palliative medicine has evolved, it has come to embrace more diverse settings. Palliative care services are currently provided in patient's homes, free standing and hospital-based ambulatory clinics, inpatient hospital units, hospital-associated residential hospices, and in the offices of alternative and complementary healers, among many others. Patients who seek palliative services present with a wide spectrum of disease processes, such as advanced cancer, chronic obstructive lung disease, congestive heart failure, degenerative muscular and neurological illnesses, osteoarthritis, rheumatoid arthritis, fibromyalgia, diabetes, sickle cell anemia, vascular ailments, chronic headaches, AIDS, dementia, and chronic back pain.

Assessment and Management of Pain and Other Symptoms. Tools for the assessment of pain are readily available. These tools may use a numerical scale, a series of faces demonstrating changing expressions, colors to depict increasing levels of intensity, or a combination of any of these elements. Such tools are used to help the patient communicate his or her self-reported level of pain. This assessment of pain will allow the patient and provider to develop a therapeutic alliance.

Pain Rating Scales



Algorithms for the assessment and management of anxiety, agitation, poor appetite, ascites, bladder spasm, bowel care, candidiasis, depression, diarrhea, dyspnea, pruritus, sleep disturbance, nausea, vomiting, chronic pain, and opioid induced nausea, sedation, and constipation have been developed.[4] Nonpharmacologic approaches are integral elements of palliative care. These include, but are not limited to, acupuncture, relaxation techniques, biofeedback, massage, music, art therapy, transcutaneous electrical nerve stimulation (TENS), and spiritual counseling.[5]

What Can We Do in the Indian Health Service?

Develop an Area Policy. The Albuquerque Area IHS (AAIHS) has developed and will be implementing an Area-wide policy for a pain management and palliative medicine program. The pain management/palliative medicine program will institute pain assessment as a fifth vital sign, allowing for the integration of awareness of chronic pain and related chronic disease symptoms into ongoing clinical care. The policy states:

> The AAIHS will promote/provide a standardized approach to the patient with intractable pain that emphasizes a nonjudgmental, multimodal, individualized care plan. Such a plan should increase access to known therapies, improve continuity of care, and maximize provider communication for the relief of pain and suffering in all forms of chronic pain in all stages of a person's life.[6]

The IHS Elder Initiative will seek to implement this policy on an IHS wide basis.

Collaboration with Medical Schools, Palliative Medicine Centers, Hospice Networks, and VA Hospitals. To further the goal of integrating palliative medicine into clinical care, the Albuquerque Area IHS is collaborating with the University of New Mexico Medical Center under a Robert Woods Johnson grant to participate in a network of rural New Mexico hospices to enhance palliative medicine training for IHS providers. The grant supports the development of a Zuni tribal home health hospice service with linkages to the Zuni Public Health Service Indian Hospital. One nurse and one physician from Zuni IHS will receive training toward certification in palliative medicine. In addition, the Regional Veterans Administration Hospital in Albuquerque will become a partner in improving outreach palliative medicine services to Native American veterans who wish to receive care in IHS facilities.

Seek Training for IHS/Tribal Providers. The resource list accompanying this article is a good start in accessing available information and training in palliative medicine. In 1999, the content of the board certification examination in Internal Medical will include 10% on Geriatrics and 10% on Palliative Medicine.

Increase Community Awareness. We can all promote discussions about the philosophy of and services available under palliative care programs when we interact with health boards, tribal leadership, and elder groups. We may feel constrained by the cultural norms in the communities in which we serve with regard to the ways we talk about death and dying. We need to recognize and respect the guidance given to us, our patients, and the community leaders by these cultural values.

As we learn how to talk to each other about these difficult issues, we will be able to work together toward the common goal of alleviating suffering.

Conclusion

In conclusion, palliative care is a growing medical field. As IHS and tribal providers, we have the opportunity to enhance care to those in pain, and to reduce suffering from chronic illness in the elderly. Collectively, our Indian health care system can continue its innovative public health tradition by institutionalizing care beyond cure. □

Resources

Written References:

Palliative Medicine, 2nd Edition, Robert Woodruff, MD

Oxford Textbook of Palliative Medicine, Revised 1997 (paperback), Derek Doyle, MD

Topics in Palliative Care, Volumes I, II, and III, Russell Portney, MD

Managing Pain Before It Manages You, Margaret Caudill, MD

Symptom Management Algorithms for Palliative Care, 1st Edition, Linda Wrede-Seaman, MD

Books can be ordered at Growth House: *www.growthhouse.org*, or Mentor Books: *www.mentorbooks.com*

Journal of Palliative Medicine
Mary Ann Liebert, Inc.
2 Madison Avenue
Larchmont NY 10538-1962
(914) 834-3100
e-mail: *info@liebertpub.com*

Clinical Practice Guidelines from the Agency for Health Care Policy and Research (AHCPR)
Cancer Pain: (800) 4-CANCER
Acute Pain: (800) 358-9295
www.ahcpr.gov

Primer of Palliative Care
Unipac: Self Study Program, Hospice/Palliative Care
American Academy of Hospice and Palliative Medicine
e-mail: aahpm@aahpm.org

Internet Sources:

Growth House, Inc.
www.growthhouse.org
e-mail: *info@growthhouse.org*

The Edmonton Palliative Care Program
www.caritas.ab.ca/~palliate

Wisconsin Cancer Pain Initiative
www.wisc.edu/polmorph/wcpi
e-mail: *wcpi@facstaff.wisc.edu*

The MAYDAY Pain Resource Center
e-mail: *mayday-pain@smtplink.coh.org*

Center to Improve Care of the Dying
www.gwu.edu

The American Geriatrics Society
www.americangeriatrics.org

American Academy of Hospice and Palliative Medicine
www.aahpm.org

Last Acts
www.lastacts.org

Organizations:

Wisconsin Cancer Pain Initiative
1300 University Avenue, Rm. 4720
Madison, WI 53706
Phone: (608) 262-0978

National Hospice Organization
1901 N. Moore St. Suite 901
Arlington, VA 22209
Phone: (703) 243-5900

National Chronic Pain Outreach Association
7979 Old Georgetown, Suite 100
Bethesda, MD 20814-2429
Phone: (301) 652-4948

The MAYDAY Pain Resource Center
1500 East Duarte Road
Duarte, CA 91010
Phone: (818) 301-8941

The American Geriatrics Society
770 Lexington Avenue, Suite 300
New York, NY 10021
Phone (212) 308-1414

Americans for Better Care of the Dying
2175 K Street NW, Suite 820
Washington, DC 20037-1803
Phone (202) 530-9864

Veterans Administration End of Life Initiative
810 Vermont Avenue NW, 114
Washington, DC 20420
Phone (202) 273-6488

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1. Billings J. What is palliative care? *Journal of Palliative Medicine*. 1993;1(1):73-81
2. Mount BM. The Royal Victoria Hospital Palliative Care service: A Canadian Experience. In: Saunders C, Kastenbaum R, eds. *Hospice Care on the International Scene*. New York: Springer; 1997:73-35
3. Bascom PB. A hospital-based comfort care team: consultation for seriously ill dying patients. *American Journal Hospice Palliative Care*. 1997;14:57-40
4. Wrede-Seaman L. *Symptom Management Algorithms for Palliative Care*. 1st Ed. Yakima, WA: Intellicard; 1996
5. Caudill M. *Managing Pain Before It Manages You*. New York: The Guilford Press; 1995
6. Albuquerque Area IHS. *Policy on Pain Management/Palliative Medicine Program. 1999*

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