BARENTS GROUP HEALTH CARE

KPMG Consulting

Disparities in Health Status and Use of Services: American Indians Enrolled in Medicare Managed Care Plans

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Background and Objectives

Background

American Indians and Alaska Natives represent less than one percent of the U.S. population and live in diverse circumstances. Over half (60 percent) reside on or close to tribal reservations, with the remaining Indian population spread across the U.S. in urban and rural areas. Health care for those who live on or near reservations is provided primarily by the Indian Health Service, or through tribal government health arrangements funded by the I.H.S. It has been estimated that about 37 percent of American Indians have coverage for health services only through the I.H.S., 47 percent have employment-based insurance, 9 percent are covered by Medicare, and 20 percent are covered by Medicaid (Cox *et al.,* 1999).[1]

The Indian Health Service collects detailed health status and use of services data for the Indian population that uses I.H.S. services. These data indicate that the health status of the I.H.S. user population is considerably worse than the health status of the U.S. population as a whole. In 1994-1996, the infant mortality rate for American Indians and Alaska Natives was 22 percent higher than the U.S. All Races rate. The age-adjusted mortality rate (all causes) for American Indians and Alaska Natives was 39 percent greater than the U.S. rate. The Indian age-adjusted mortality rate for diabetes was 3.5 times the 1995 All Races rate, while the mortality rate for tuberculosis was 6.3 times the All Races rate (I.H.S., 1999).

Indians are also more likely to die at earlier ages than the pattern for the U.S. population as a whole. Life expectancy at birth, in 1992-1994, was 71.1 years, compared with 75.5 years for All Races. Because of mortalities at earlier ages, the elderly American Indian population (age 55 and older) comprised only 11 percent of the Indian population compared with 21 percent of the U.S. All Races population (I.H.S., 1997).

Despite the considerable data on health status, morbidity, mortality, and health services use available through the Indian Health Service, the I.H.S. data are limited to users of I.H.S. services. About 1.4 million Indians and Alaska Natives used I.H.S. services in 1997 for all or some of their health care. Some of these users may have obtained additional health services through other providers and approximately one million American Indians and Alaska Natives did not use any I.H.S. services in that year. There is little information available on the health status and health services use of those who are not in geographic areas served by the I.H.S. or who have employment-based or other health insurance that permits them to seek care outside of the I.H.S. Because of this lack of data, we do not know the extent to which these health indicators are reflecting primarily the health status of

[1] **Percentages sum to more than 100 because some individuals have more than one source of coverage.**

Indians who reside on or near tribal reservations, and who may be disproportionately poor and less educated, or whether Indians who live away from tribal reservations are healthier or exhibit the same health patterns as those who reside in I.H.S. service areas.

The lack of data on health status, health conditions, and health services use of American Indians outside the I.H.S. service areas is due, primarily, to the fact that this population comprises less than one percent of the U.S. population. Most national surveys designed to collect information on health-related topics do not have sufficiently large sample sizes to permit separate analysis of the health of American Indians who are not receiving services through the I.H.S. The Medicare Managed Care CAHPS survey, conducted annually since 1997, is one exception. MMC CAHPS collects data from over 150,000 Medicare beneficiaries enrolled in managed care plans each year. Since (with a few exceptions) the questions are identical each year, it is possible to combine years of survey data to obtain sufficiently large sample size to permit detailed analyses of demographics, health status, health conditions, and use of services by American Indians who, for the most part, reside outside of I.H.S. service areas. In addition, since all of the respondents are enrolled in Medicare managed care plans, the MMC CAHPS allows us to assess differences between American Indians and Whites in health status and health services use that are independent of health insurance arrangements and financial barriers to access to services.

Objectives

This study examines the health and health care use of American Indians who are covered by Medicare and are enrolled in Medicare managed care plans and compares these indicators to those of the White non-Hispanic population enrolled in Medicare managed care plans. Specific research issues addressed include:

1. **Are American Indians enrolled in Medicare health plans similar to or different from White non-Hispanics in self-reported health status, changes in health status from the previous period, and health conditions?**
2. **Are there differences between American Indians and White non-Hispanics in the pattern of health services use, overall and for specific health conditions?**
3. **Are there differences between the two groups in changes in health status from the previous year, for specific health conditions?**

To the extent that differences are found, they may reflect underlying differences in health status and propensity to use services between American Indians and the majority population. They may also reflect, however, differences between these groups in the ability to effectively access health care services, cultural issues that may require specific efforts by managed care plans and providers to ensure that necessary and appropriate care is provided to this population, or disparities in treatment patterns that should be examined further.

Data and Methodology

The data source for this analysis is three combined years of the Medicare Managed Care (MMC) CAHPS survey. The MMC CAHPS surveys have been conducted annually since 1997 for the Centers for Medicare and Medicaid Services (formerly the Health Care Financing Administration) to obtain information on the experiences and satisfaction of Medicare health plan enrollees with various dimensions of plan performance. The sample design for the MMC CAHPS survey requires the selection of 600 enrollees per health plan, with post-survey weighting of the data for national aggregated estimates.

The MMC CAHPS contains questions on health status (excellent, very good, good, fair, or poor), and on changes in health since the previous period (much better, somewhat better, about the same, somewhat worse, much worse). Respondents are asked to indicate if a doctor ever told them that they have: heart disease, stroke, cancer, chronic obstructive pulmonary disease (COPD), or diabetes). The survey also asks questions about use of health services in the six or twelve month period prior to the survey, including: doctor's office visits, specialist visits, hospital inpatient use, emergency room use, prescription drug use, special medical equipment use, special therapy use, and home health care use.

Response rates for the MMC CAHPS surveys have been high: 75.3% in 1997, 81% in 1998, 82% in 1999, and 82.7% in 2000. The total number of survey respondents in each year has increased through 2000. In 1997, there were 89,800 responses; in 1998, 138,400; in 1999, 166,100; and 180,000 responded to the survey in 2000.

Even with the high response rates and large sample sizes, there are inadequate numbers of observations to permit detailed examination of very small subgroups of the population. To address this issue, we combined the 1997, 1998, and 1999 survey data sets. Since some people were surveyed in more than one year, we included the multiple year respondents in the combined data set for the last response that they submitted, and excluded their responses in previous years.

The combined year MMC CAHPS data set, after excluding multiple responses, consists of 326,747 individuals. The MMC CAHPS survey questionnaire allowed respondents to indicate whether or not they were of Hispanic/Latino origin. This information was used to classify all persons of Hispanic origin into a separate category. In this paper, we study non-Hispanic American Indians only, which are subsequently referred to as "American Indian" for the sake of brevity. The number of individuals who indicated "American Indian" in their response to the survey question about their race is 865.[2] By comparison, the number of White non-Hispanic respondents was 244,030. The distribution, by gender and other characteristics, of American Indian respondents and White non-Hispanic respondents is shown in Table 1.

[2] **Another 2867 respondents indicated their race as Indian and one or more other races. These respondents were excluded from the analysis, since it was not clear to which group they should be assigned. A related research effort is underway that will include examination of multi-racial/ethnicity respondents.**

Table 1. Number of American Indian and White Non-Hispanic Respondents and Characteristics for Each Group						
Population	Total Number	Percent				
		Male	Female	Age Less Than 65	High School or More	Medicaid Buy-In*
American Indian	865	53	47	15	54	11
White Non-Hispanic	244,030	44	56	6	75	2

Source: MMC CAHPS Surveys for 1997, 1998, and 1999 unless otherwise indicated
***Based on MMC CAHPS Surveys for 1998 and 1999**

Interestingly, there are more males than females in the American Indian health plan enrollment. Since the mortality rate for males among the I.H.S. population is considerably higher than for females, and the I.H.S. reports that 52.3 percent of its user population is female, it is not clear why the proportion of males in the Indian enrollee population of health plans is so high. It may be that economic or cultural factors make it more likely that American Indian males leave the reservations.

More than twice as many Indian enrollees in Medicare health plans are under age 65 (i.e. eligible for Medicare due to disability) than White non-Hispanic enrollees. And, 46 percent of American Indian enrollees did not complete high school, compared with 25 percent of White non-Hispanic enrollees. American Indians are over five times as likely to receive assistance from the States and federal government through Medicaid buy-in programs that cover some or all of Medicare-associated costs.

The distribution of American Indian MMC CAHPS respondents across Medicare health plans is very dispersed. On average, American Indians represent about 0.3 percent of health plan enrollments. Thirty percent of health plans did not have any American Indian enrollees responding to the survey. In 13 percent of health plans, American Indians comprised one percent or more of enrollment, with the highest percent (3.8 percent) in a health plan in New York State. Of the health plans with one percent or higher Indian enrollment, nine are located in California, five in Oklahoma, and Texas, Colorado, Arizona, and Oregon each had three plans with one percent or higher enrollment.

Given the dispersion of American Indian respondents to the MMC CAHPS survey across health plans and across states, the analysis conducted in this paper should not disproportionately reflect health conditions or treatment patterns in only a few states and health plans. And, the results can reasonably be expected to be representative of the health status, health conditions, and health care use patterns of non-reservation-based American Indians who are covered by Medicare, relative to the majority White-non-Hispanic Medicare beneficiaries.

Findings

Health Status and Health Conditions

When asked to rate their own health status as 'Excellent', 'Very Good', 'Good', 'Fair', or 'Poor', 32 percent of American Indians and 34 percent of non-Hispanic Whites reported that their health was 'Excellent' or 'Very Good'. However, American Indians were much more likely to rate their health as 'Fair' or 'Poor' than Whites – 38 percent versus 27 percent, respectively (Table 2).

Table 2. Self-Reported Health Status and Changes in Health Since Preceding Year, American Indians and White Non-Hispanics Enrolled in Medicare Health Plans

	American Indian	White Non-Hispanic
Health Status	**Percent**	**Percent**
Excellent or Very Good	**31.7**	**34.4**
Good	**30.3**	**38.5**
Fair or Poor	**38.0**	**27.1**
Limited Independence	**27.0**	**17.1**
Health Changes	**Percent**	**Percent**
About the same	**52.1**	**64.4**
Much Better or Somewhat Better	**26.4**	**18.8**
Somewhat Worse or Much Worse	**21.5**	**16.8**

Source: MMC CAHPS surveys for 1997, 1998, and 1999

Indian respondents were more likely to report that their health was "Much Better' or 'Somewhat Better' than in the preceding year than were Whites – *26* percent versus 19 percent, respectively. However, Indians were also more likely than Whites to report that their health was 'Somewhat Worse' or 'Much Worse'. Twenty-two percent of Indians and 17 percent of Whites said their health was worse than in the preceding year.

The American Indian group was also more likely to report that a doctor had told them that they had specific health conditions, with one exception. Twelve percent of Indians and 16 percent of Whites said that they had been told that they had cancer. There was only a small difference between Indians and Whites in the percent reporting heart disease – 27 percent versus 25 percent. However, the rates at which Indians report having had a stroke is over 60 percent higher, 50 percent higher for COPD, and nearly *80* percent higher for diabetes (Table 3).

Table 3. Self-Reported Health Conditions and Effect on Work and Independence, American Indians and White Non-Hispanics Enrolled in Medicare Health Plans		
	American Indian	White Non-Hispanic
Heart Disease	27	25
Cancer	12	16
Stroke	13	8
COPD	9	6
Diabetes	25	14
Condition that Interferes with Work	47	27
Condition that Interferes with Independence	27	17

Source: MMC CAHPS Surveys 1997, 1998, and 1999

With worse health status and the higher probability of having serious health conditions, Indians were much more likely to report that they had health conditions that interfered with work or with independence. Forty-seven percent of Indians, but only 27 percent of Whites, said they had a health condition that interfered with work; 27 percent of Indians and 17 percent of Whites said that they had a health condition that interfered with independence.

These data suggest that American Indians who are enrolled in Medicare health plans are comparable to American Indians who use Indian Health Service facilities for their health care, in terms of health status and higher rates of serious health conditions. The frequency of reported cancers for the Indian population enrolled in health plans is lower than that reported by White non-Hispanic enrollees, which is also the case for Indians who use I.H.S. services. The rates for stroke, COPD, and diabetes are substantially higher for American Indian health plan enrollees than for White non-Hispanic enrollees, comparable to the I.H.S. reported mortality data, which indicates that diabetes, respiratory, and circulatory diseases are more frequent causes of death than for the majority population.

<u>Health Services Use, Overall and for Those with Specific Health Conditions</u>

American Indians enrolled in Medicare health plans are more likely to rate their health status lower and more likely to report having a serious health condition than are White non-Hispanic enrollees. The extent to which health plans are able to meet the greater health care needs of American Indian enrollees is examined in this section. Reported health services use is presented for American Indian male and female health plan enrollees and for White non-Hispanic male and female enrollees, overall and for three health conditions, in order to assess whether there are differences in patterns of services use. In addition, changes in health since the preceding period are also presented for each group, by health condition.

Overall

Overall, American Indian respondents were less likely to have seen their primary doctor, less likely to have seen a specialist physician, and less likely to have used prescription drugs than White respondents. However, they were more likely to report inpatient

hospitalization, using ER services, needing special medical equipment, needing special therapy, and needing home health care than Whites (Table 4). American Indian males were least likely to report having a doctor's office visit, followed by American Indian females, White males, and White females. American Indian females were least likely to report any visit to a specialist physician, followed by American Indian males, White females, and White males. By contrast, American Indian males and females were more likely to report a hospital inpatient episode – 27 percent of Indian females compared with 17 percent of White females, and 23 percent of Indian males compared with 19 percent of White males. Emergency room use was 21 percent for Indian females, 19 percent for Indian males, and only 13 percent for White males and females.

Table 4. Percent Reporting Health Services Use, American Indians and White Non-Hispanics Enrolled in Medicare Health Plans, by Gender

	American Indian		White Non-Hispanic	
Type of Service	Male	Female	Male	Female
Doctors Office Visits	71.4	76.5	78.5	79.8
Any Visit to a Specialist	49.0	47.6	59.1	53.5
Any Hospital Inpatient Use	23.3	27.1	19.4	17.2
Any Emergency Room Use	18.7	20.6	13.2	13.0
Any Prescription Drug Use	69.0	77.7	79.6	84.2
Any Special Medical Equipment Use	18.6	16.9	10.5	11.4
Any Special Therapy Use	9.3	14.5	9.1	10.5
Any Home Health Care Use	7.2	10.3	3.9	5.7

Source: MMC CAHPS surveys for 1997, 1998 and 1999

These findings raise the question of whether lower use of primary care and specialist physician services by American Indian enrollees is causally related to higher rates of hospital inpatient use and emergency room use. Health plans generally coordinate and manage care for enrollees to avoid hospitalization and ER use, which are more costly than physician services. The fact that American Indians are less likely to see a primary or specialist physician, particularly given the greater prevalence of serious health conditions, suggests that there may be differences in the health plans' or providers' treatment approach or cultural differences that result in less care-seeking or compliance with provider recommendations.

Heart Disease

When we examine services use patterns for these groups, looking only at those who reported having a heart condition, similar patterns are evident (Table 5). White non-Hispanic males and females were more likely to have visited their doctor, and white males were most likely to report having visited a specialist physician. Hospital inpatient rates for Indian males and females were much higher than for Whites, with over 50 percent of Indian females and 34 percent of Indian males having been hospitalized in the preceding six months. Emergency room use was also higher for Indian males and females, with over a third of Indian females reporting an ER visit, compared with 21 percent of White females.

American Indian enrollees with heart disease, both male and female, were both more likely to report that their health had improved in the past year and more likely to report that their health had worsened. However, the differences between Indians and whites were greatest for worsened health; 30 percent of Indian males, versus 21 percent of White males reported that their health was worse (significant at the p<.05 level); and 35 percent of Indian females, versus 27 percent of White females.

Table 5. Percent Reporting Health Services Use, American Indians and White Non-Hispanics with Heart Disease

Type Of Service	American Indian		White Non-Hispanic	
	Male	Female	Male	Female
Visits to the Doctors Office	83.0	83.9	86.9	87.9
Any Visit to a Specialist	63.6**	68.4	71.1	66.3
Any Hospital Inpatient Use	34.3	51.2***	31.3	30.9
Any Emergency Room Use	23.5	33.7***	19.5	21.0
Any Prescription Drug Use	83.0***	91.0	91.4	93.5
Any Special Medical Equipment Use	24.6***	25.6*	14.6	18.6
Any Special Therapy Use	10.5	15.3	12.1	20.3
Any Home Health Care Use	8.2	13.6	6.0	10.3
Change in Health Status:				
Improved	27.3	29.5	22.1	22.9
Worse	29.8**	34.6	21.4	26.5

Source: MMC CAHPS Survey 1997, 1998, and 1999
***p < .01 for difference between races for a given gender**
****p < .05 for difference between races for a given gender**
***p < .10 for difference between races for a given gender**

COPD

Somewhat different patterns are observed when we examine health services use and changes in health status for those with chronic obstructive pulmonary disease (COPD) (Table 6). There is less difference among the groups in the likelihood of seeing a primary doctor, although Whites were slightly more likely to have seen their doctor. Indian males and females with COPD, however, were more likely to report seeing a specialist than are White males and females. Females, both Indian and White, were less likely to have seen a specialist than their male counterparts. Hospital inpatient use was substantially higher for Indian females with COPD than for Indian males or Whites with the condition. Similarly, Indian females were most likely (44 percent) to report ER use. And, American Indian males with COPD were significantly less likely to report any prescription drug use (p<.01).

Table 6. Percent Reporting Health Service Use, American Indians and White Non-Hispanics with COPD				
Type Of Service	**American Indian**		**White Non-Hispanic**	
	Male	**Female**	**Male**	**Female**
Visits to the Doctors Office	**87.5**	**86.4**	**88.9**	**90.5**
Any Visit to a Specialist	**75.7**	**70.0**	**73.0**	**68.6**
Any Hospital Inpatient Use	**40.4**	**52.2***	**37.0**	**34.3**
Any Emergency Room Use	**27.7**	**43.5****	**24.0**	**23.4**
Any Prescription Drug Use	**81.6*****	**89.5**	**92.7**	**94.5**
Any Special Medical Equipment Use	**52.2*****	**27.3**	**31.6**	**34.9**
Any Special Therapy Use	**17.0**	**18.2**	**14.7**	**17.0**
Any Home Health Care Use	**19.2****	**18.2**	**8.8**	**13.1**
Change in Health Status:				
Improved	**7.7***	**20.0**	**19.7**	**20.9**
Worse	**46.2***	**40.0**	**33.0**	**34.3**

Source: MMC CAHPS Surveys 1997, 1998, and 1999
***$p < .01$ for difference between races for a given gender**
****$p < .05$ for difference between races for a given gender**
***$p < .10$ for difference between races for a given gender**

Indian males with COPD were much less likely to report improved health status than Indian females and Whites (8 percent, versus about 20 percent for the other groups). Indian males and females with COPD were much more likely to report that their health had worsened, relative to White males and females with COPD. Differences in change in health status, both positive and negative, between Indian and White males are significant at the p<.10 level.

Diabetes

There is less difference in the likelihood of having seen a primary care doctor among the four groups, when those with diabetes are examined, although the pattern of somewhat less use persists for Indians compared with Whites (Table 7). Indian males are over 10 percentage points less likely to report seeing a specialist than are White males (p<.05), but the difference is *about* one percentage point for females. Again, Indian males and females with diabetes are more likely to be hospitalized than are whites, and are more likely to use the ER.

Table 7. Percent Reporting Health Service Use, American Indians and White Non-Hispanics with Diabetes, by Gender				
Type Of Service	**American Indian**		**White Non-Hispanic**	
	Male	**Female**	**Male**	**Female**
Visits to the Doctors Office	**83.8**	**86.4**	**87.3**	**88.6**
Any Visit to a Specialist	**57.1****	**64.2**	**67.8**	**63.1**
Any Hospital Inpatient Use	**30.0**	**34.3****	**26.7**	**25.4**
Any Emergency Room Use	**21.2**	**28.0****	**17.5**	**18.3**
Any Prescription Drug Use	**84.9****	**89.5**	**91.8**	**93.5**
Any Special Medical Equipment Use	**24.3****	**22.7**	**16.6**	**18.7**
Any Special Therapy Use	**7.8**	**14.6**	**11.9**	**13.3**
Any Home Health Care Use	**6.8**	**12.9**	**6.3**	**9.9**
Change in Health Status:				
Improved	**33.3****	**34.7*****	**22.6**	**23.1**
Worse	**22.6**	**25.3**	**21.8**	**24.3**

Source: MMC CAHPS Surveys 1997, 1998, and 1999
********p* **< .01 for difference between races for a given gender**
*******p* **< .05 for difference between races for a given gender**

All four groups are more likely to report using any prescription medicines than are all enrollees (Table 4). Since treatment for diabetes often requires insulin or insulin-enhancing medications, it is understandable why this would be the case. However, 15 percent of Indian males, compared with only 8 percent of White males, reported no prescription drug use.

When we examine reported changes in health status since the preceding period, a very different pattern is observed than for COPD. American Indian enrollees – both male and female – are significantly more likely to report that their health has improved than are Whites (p<.05). Conversely, all four groups are relatively similar in reporting that their health had worsened since the preceding period. However, females were somewhat more likely to report worsened health than were males.

Changes in Health Status, All and Those with Specific Conditions

To examine the relative performance of health plans for American Indians compared with White non-Hispanics, we constructed a ratio of reported changes in health status for all American Indians and White non-Hispanics, and for males and females in each population group who reported heart conditions, COPD, and diabetes. This ratio provides a qualitative view of how well health plans are performing for their American Indian enrollees relative to their White enrollees.

Table 8: Ratio of American Indian Enrollees' Changes in Health Status to White Non-Hispanic Enrollees, Overall and By Specific Health Conditions

Type of Change	Overall	Heart Disease		COPD		Diabetes	
		Male	Female	Male	Female	Male	Female
Improved	1.40	1.24	1.29	0.39	0.96	1.47	1.50
Worsened	1.28	1.39	1.31	1.40	1.17	1.04	1.04

Note: The ratio presented in each cell is percentage of American Indian group reporting specific change in health status divided by percentage of White non-Hispanic group reporting specific change in health status.

Overall, American Indian enrollees in health plans are 40 percent more likely to report that their health improved over the preceding year than are White enrollees. However, they also are 28 percent more likely to report that their health had worsened. When we examine these ratios by specific health conditions and gender, the results are mixed:

- **American Indians with heart conditions are more likely to report improved health than White non-Hispanics with heart conditions, but they are even more likely to report that their health had worsened.**
- **American Indian males with COPD are much less likely to report improved health and much more likely to report deteriorated health than are White non-Hispanic males with COPD; a similar, but smaller, difference is observed between Indian and White females with COPD.**
- **American Indian males and females with diabetes are about 50 percent more likely than White non-Hispanics with diabetes to report that their health had improved, and only slightly more likely to report that their health had worsened.**

For American Indians with diabetes, the improvement in reported health status, relative to the White population with diabetes, is even higher than the average ratio for the entire Indian population in health plans, relative to Whites. For American Indians with heart disease and COPD, however, the opposite is the case. Indians with these two conditions are less likely than all Indian enrollees to say their health has improved and more likely to report that it has deteriorated.

Discussion

Results of the study include several interesting findings that may provide direction for additional research, including:

1. **American Indians who live away from tribal reservations appear to be similar in terms of health status and health conditions to American Indians who live on or near reservations and receive their health care principally through the Indian Health Service. Both groups exhibit a higher frequency of serious health conditions than the majority population, and the evidence that the American Indian populations enrolled in Medicare health plans disproportionately rate their health status as 'fair' to 'poor' – and are much more likely to be eligible for Medicare due to disability – suggests that**

this group faces many of the same health risks that are evidenced in the higher mortality rates reported by the I.H.S.

2. **American Indians who are enrolled in Medicare health plans are less likely to visit a doctor or see a specialist physician than are White non-Hispanics, even for those who have serious health conditions. The reasons for this lower use of physician services is unclear, and may be due to cultural or other differences between the two population groups. However, the lower use of physician services may imply less management of serious health conditions by physicians for the American Indian enrollee. In turn, this may contribute to the higher rates of hospital inpatient use and more frequent emergency room use observed for American Indian enrollees.**

3. **Overall, American Indian enrollees in Medicare health plans are more likely to report that their health has improved over the preceding year *and* are more likely to report that their health has deteriorated than are White non-Hispanics. Fewer Indian enrollees report that their health is stable.**

4. **A higher proportion of American Indians with heart disease and COPD report that their health has deteriorated over the preceding period than do White non-Hispanics with these conditions. For COPD, Indian enrollees are also less likely to report improvements in health status than Whites with COPD.**

5. **For diabetes, however, the pattern is strikingly different. American Indian enrollees are nearly 50 percent more likely than White non-Hispanics to report improvements in health over the preceding year and are only slightly more likely (4 percent) to report deteriorations in health.**

Given these results and the fact that there are so few American Indians enrolled in Medicare health plans, it is unclear whether there are any policy implications that can be drawn for this specific population. The patterns of lower use of primary care and specialist physician services, overall and for those with serious health conditions, could have substantial implications for effective clinical management and health outcomes for this population. However, it is not clear whether the patterns of use observed are the result of failure to follow-up and to refer to specialists, disproportionately for Indian enrollees, or whether there are cultural or other differences between Indian enrollees and White non-Hispanics that are associated with differential care-seeking and compliance.

What is clear is that the American Indian population, whether living on reservations and receiving their health care through the I.H.S. or living away from reservations and receiving services through Medicare health plans, are more likely to experience serious health conditions with profound consequences for functioning and life expectancy. Neither Medicare health plans nor the I.H.S. can necessarily solve the underlying conditions and problems that contribute to the health problems of the American Indian population. Early intervention, outreach and education, healthier lifestyles, and amelioration of the economic and social problems facing American Indians in the U.S. may be necessary before additional improvements in the health status of this population can occur.

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