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Uninsured & Underinsured Status affects Healthcare Utilization & Health Outcomes

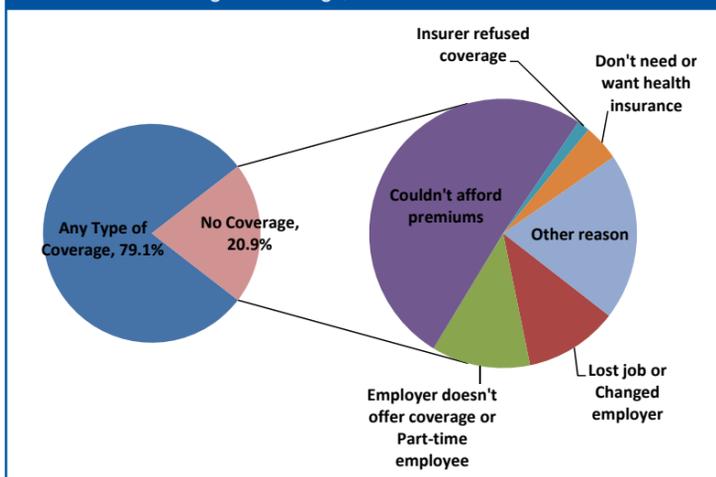
2008 Montana BRFSS findings

Health care coverage, including private health insurance, prepaid plans such as HMOs or government plans such as Medicare, is critical to ensuring that individuals are able to access needed health care services. Health care expenditures across the nation and in Montana steadily increased by about 9% between 1980 and 2004 topping at 16.7% of Montana's gross state product.¹ The level of health care expenditures in Montana was much higher than the national average (13.3% of the gross nation product) only four states had a higher level.¹ Yet, the proportion of adults 18 to 64 who report having no health care coverage in Montana is also high, ranking 42nd among US states and territories.²

Health care coverage is perhaps one of the most critical modifiable determinants of overall health. In fact, the Institute of Medicine estimates that 18,000 people die unnecessarily each year because they are uninsured.³ Further, uninsured adults are less likely to receive preventive services and screening tests on a timely basis; they are less likely to receive appropriate care for chronic conditions including diabetes, cardiovascular disease, end-stage renal disease, HIV infection and mental illness resulting in poorer health outcomes.³ Those whose health is most affected by being without health insurance are adults who: are chronically ill, have severe mental illness, are members of some racial and ethnic minority groups, or are persons with lower socioeconomic status.³

As such an important determinant of health, health care coverage questions have a long history on the Behavioral Risk Factor Surveillance System. In 2008, the Montana BRFSS included the four core health care coverage questions plus three state-added questions. The core questions cover a range of health care access measures including asking the respondent whether they: have any health care coverage, have a personal health care provider, are limited in health care access due to cost, and last had a routine check-up within the past year. The state-added questions delve further into the issue asking the respondent the main reason for no health care coverage, type of health care coverage they have and their usual place of care. Together with the health risk and outcome measures also captured by the BRFSS, these health care coverage questions offer an opportunity to further understand the interaction of health care coverage and the overall health of Montana adults.

Figure 1. Percent of Montana Adults 18-64 with No Health Care Coverage & the Main Reason for Having No Coverage, 2008



Uninsured & Underinsured

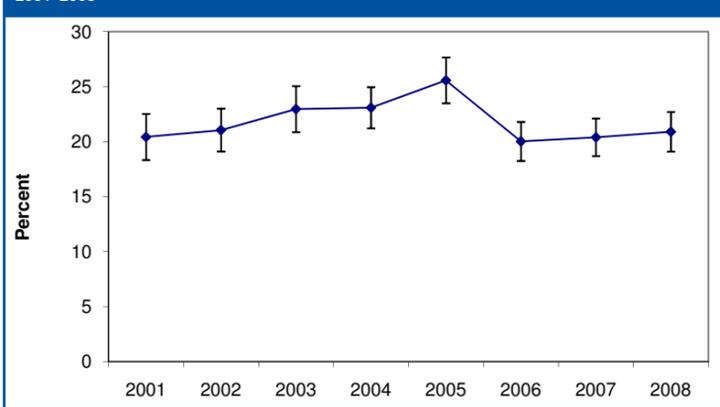
Approximately 17% of American adults aged 18 to 64 reported being without any kind of health care coverage in 2008. Being without health care coverage was even more prevalent among Montana adults aged 18 to 64 affecting about 124,100 (21%) Montanans.

An additional 48,300 (7%) Montana adults with health care coverage reported not being able to see a health care provider because of cost in the past 12 months, defining the term "underinsured" in this report. The majority of uninsured Montanans (51%) cited inability to afford insurance premiums as the main reason for having no coverage, with the next most prevalent reasons being employer related (≈12%) (Figure 1). While health care reform remains a hot topic among policy makers in Montana and throughout the nation the prevalence of uninsured adults in Montana has remained relatively stable since a sudden drop in 2006 (Figure 2).

Several demographic characteristics are strongly related to the likelihood of Montana adults being uninsured or underinsured (Table 1). There is no significant difference in the prevalence of uninsured and underinsured between males and females. The prevalence of uninsured increased with decreasing age with 31% of 18-34 year olds being uninsured compared to less than 18% for adults aged 35 to 64. Similarly, adults aged 65 and older (3%) were least likely to be underinsured compared to nearly 9% of adults aged 35 to 44. Race was another important risk factor for uninsured with American Indians (38%) being significantly more likely to be uninsured than Whites (19%). Similarly non-white or Hispanic Montanans (11%) were more likely than either American Indians or Whites (<7%) to be underinsured. Montanans with a disability were no more likely than those without a reported disability to be uninsured but were more than twice as likely to be underinsured (12% vs. 5%).

The prevalence of uninsured varied significantly among persons in different employment, income and education categories (Table 2). Montana adults with a college

Figure 2. Montana Adults (age 18 to 64) with No Health Care Coverage, 2001-2008



degree (9%) were less than half as likely to be uninsured as those with lower educational attainment (ranging from 20%-38%). However, no such relationship can be seen between education and underinsured, adults of all educational attainment levels were equally likely to be underinsured. Both uninsured and underinsured increased with decreasing income. Forty-seven percent of adults from households earning less than \$25,000 a year were uninsured compared to only 4% of adults from household earning \$75,000 or more a

year. Similarly, those from households earning less than \$75,000 a year (>5%) were more than twice as likely to be underinsured as those earning \$75,000 or more (2%). Montana adults that reported being self-employed (31%) and out of work or unable to work (33%) were more likely to be uninsured than any other employment categories (<26%). Adults that reported being out of work or unable to work (16%) were the most likely to be underinsured.

Table 1. Health Care Coverage by Demographics, Montana Adults, 2008 (with 95% confidence intervals)

	No Health Insurance † Adults aged 18-64			Underinsured ‡ All Adults		
	Pop. Est.	Wt.%	95% CI	Pop. Est.	Wt.%	95% CI
All Adults	124,100	20.9	19.2 - 22.8	48,300	6.6	5.8 - 7.6
Sex:						
Male	10,800	18.0	14.4 - 22.2	20,200	5.6	4.3 - 7.2
Female	30,800	22.7	19.5 - 26.2	28,100	7.6	6.5 - 8.8
Age:						
18 - 34	20,700	31.1	25.9 - 36.8	13,400	6.5	4.5 - 9.3
35 - 44	14,100	15.5	12.2 - 19.4	10,300	8.8	6.7 - 11.4
45 - 54	8,500	18.1	14.0 - 23.1	12,400	8.2	6.6 - 10.2
55 - 64	1,600	16.8	10.3 - 26.3	7,600	6.5	5.1 - 8.1
65+	N/A			4,400	3.3	2.5 - 4.3
Race/Ethnicity:						
White, non-Hispanic	35,800	19.2	16.6 - 22.2	41,800	6.3	5.4 - 7.3
AI/AN*	5,800	37.7	29.5 - 46.8	2,200	6.9	4.4 - 10.8
Other or Hispanic**		NSD		3,400	11.0	6.6 - 17.8
Disability:						
Disability	7,400	20.3	15.3 - 26.4	21,200	11.8	9.8 - 14.0
No Disability	37,500	21.1	18.4 - 24.2	27,100	5.0	4.1 - 6.0
Region:						
1- Eastern MT	3,900	22.2	14.6 - 32.2	4,200	7.4	5.0 - 10.8
2- N Central MT	8,100	23.4	17.9 - 30.0	5,300	5.2	3.5 - 7.6
3- S Central MT	9,200	19.9	14.4 - 26.8	10,200	6.9	5.1 - 9.1
4- Southwest MT	8,000	15.9	12.2 - 20.4	10,600	5.6	4.0 - 7.8
5- Northwest MT	15,000	23.8	18.9 - 29.3	17,300	7.7	6.2 - 9.5
MMSA-Billings	5,400	16.8	10.4 - 26.1	7,100	7.0	4.8 - 10.1
MMSA-Bozeman	2,900	15.7	10.5 - 22.9	3,300	6.0	3.9 - 9.2
MMSA-Butte	1,300	23.1	15.6 - 32.8	1,100	5.2	3.5 - 7.8

* American Indian or Alaska Native only
** All other non-White (including multiracial) or Hispanic
† Total Sample Size=4600
‡ Defined as reporting having some type of health care coverage and not being able to afford to see a doctor in the past 12 months.
Total Sample Size=6809

Table 2. Health Care Coverage by Employment, Montana Adults, 2008
(with 95% confidence intervals)

	No Health Insurance † Adults aged 18-64			Underinsured ‡ All Adults		
	Pop. Est.	Wt. %	95% CI	Pop. Est.	Wt. %	95% CI
Education:						
High School or Less	25,900	38.2	32.9 - 43.9	18,800	6.8	5.3 - 8.5
Some College	11,700	19.5	15.4 - 24.4	14,600	7.1	5.7 - 9.0
College Degree	7,300	8.5	6.1 - 11.6	14,700	5.9	4.7 - 7.5
Income:						
<\$25,000	16,500	46.6	39.8 - 53.6	15,600	9.6	7.8 - 11.7
\$25,000 - \$49,999	17,300	26.3	21.3 - 32.0	16,500	7.9	6.3 - 9.9
\$50,000 - \$74,999	4,200	10.0	6.4 - 15.4	6,700	5.3	3.8 - 7.5
\$75,000+	2,200	4.0	2.2 - 6.9	2,700	1.8	1.1 - 2.8
Employment:						
Employed for wages	54,700	15.8	13.8 - 18.0	23,400	6.5	5.4 - 7.8
Self-employed	28,200	31.0	26.5 - 36.0	6,100	6.1	4.2 - 8.7
Out of/Unable to Work	19,100	32.8	26.8 - 39.3	3,800	15.6	11.0 - 21.7
Homemaker/Student	18,100	26.2	19.9 - 33.7	4,500	5.6	3.6 - 8.5
Retired	3,800	13.8	8.2 - 22.4	4,400	3.5	2.7 - 4.5

† Total Sample Size=4600
‡ Defined as reporting having some type of health care coverage and not being able to afford to see a doctor in the past 12 months.
Total Sample Size=6809

Table 3. Health Care Utilization Measures By Insurance Status, Montana Adults, 2008 (with 95% confidence intervals)

	Uninsured		Underinsured		Adequately Insured	
	Wt. %	95% CI	Wt. %	95% CI	Wt. %	95% CI
General Utilization:						
No Personal Health Care Provider	55.4	50.6 - 60.1	24.2	18.7 - 30.8	22.2	20.4 - 24.0
No Routine Check-up in Past Yr	68.1	63.6 - 72.4	45.5	38.5 - 52.6	32.9	31.0 - 34.9
Cancer Screening Tests:						
Women age 40+, No Mammogram in Past 2 Yrs	57.0	50.3 - 63.3	38.8	31.2 - 47.0	22.8	20.9 - 24.8
All Women, No Pap in Past Yr	64.4	58.2 - 70.2	50.2	42.6 - 57.8	46.4	43.8 - 49.0
Men age 40+, No PSA* in Past 2 Yrs	78.6	71.9 - 84.0	54.1	41.8 - 65.9	39.1	36.2 - 42.1
All Adults age 50+, No FOBT** in Past 2 Yrs	88.2	84.0 - 91.4	77.8	71.0 - 83.4	77.9	76.2 - 79.4
All Adults age 50+, No Sigmoidoscopy or Colonoscopy	78.2	72.8 - 82.8	49.5	41.6 - 57.5	39.1	37.2 - 41.1

* PSA is Prostate-Specific Antigen Test, a blood test that screens for prostate cancer
** FOBT is Fecal Occult Blood Test, sometimes referred to as a blood stool test, tests for the presence of blood in stool and is used as a colorectal cancer screening test

Health Care Utilization

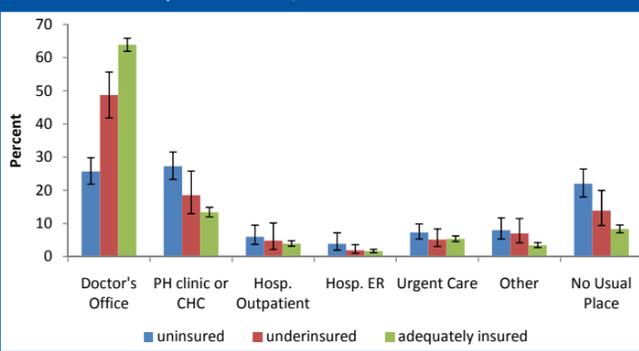
Health insurance status clearly influences the health care utilization practices of Montana adults (Table 3). Uninsured adults (55%) were more than two times as likely to report not having a personal health care provider compared to underinsured and adequately insured adults (< 24%). Similarly the uninsured (68%) and underinsured (46%) were significantly more likely to report no routine check-up within the past year compared to the adequately insured (33%).

Furthermore, uninsured Montanans were significantly less likely to have recommended breast, cervical, prostate, and colorectal cancer screening test compared to the adequately insured. Fifty-seven percent of uninsured women aged 40 or older had not had a mammogram in the past 2 years compared to 39% of underinsured women and only 23% of adequately insured women. Uninsured women (64%) were significantly less likely to report having a Pap test in the past year compared to underinsured (50%) and adequately insured women (46%). Similarly, 79% of uninsured men aged 40 or older had

not had a prostate-specific antigen test in the past 2 years compared to 54% of underinsured men and 39% of adequately insured men. The same trends can be seen with both colorectal cancer screening tests; 88% of uninsured adults age 50 or older had not had a Fecal Occult Blood Test (FOBT) in the past 2 years and 78% of this same group had never had a sigmoidoscopy or a colonoscopy.

Health insurance status is also significantly correlated to the usual type of health care facility used for health care services (Figure 3). When asked where they usually seek health care services when sick or in need of health related advice both underinsured and adequately insured adults answered "a doctor's office" most frequently while uninsured adults answered "a public health clinic or community health center" most frequently. Uninsured Montanans (22%) were also significantly more likely to report "no usual place" for health care services compared to adequately insured adults (8%).

Figure 3. Usual Place Sought for Health Care Services by Health Insurance Status, Montana Adults, 2008



Health Insurance Status & Health Outcomes

Underinsured Montanans continued to be significantly more likely to report poor health outcomes after adjusting for age and income (Table 4). Underinsured adults were about 2 times more likely to report fair or poor general health, 14 or more days of poor physical health in the past 30 days, any cardiovascular disease including: heart attack, coronary heart disease or angina, or stroke, and current asthma compared to adequately insured adults. The underinsured were almost three times more likely to report 14 or more days of poor mental health in the past 30 days compared to those with adequate health insurance (7%) and two times more likely to report 14 or more days of poor physical health (22% vs. 10%). Nearly 30% of underinsured adults reported fair or poor general health compared to only 15% of uninsured and 12% of adequately insured adults. The underinsured (16%) were significantly more likely to report current asthma than either the uninsured or the adequately insured (~9%).

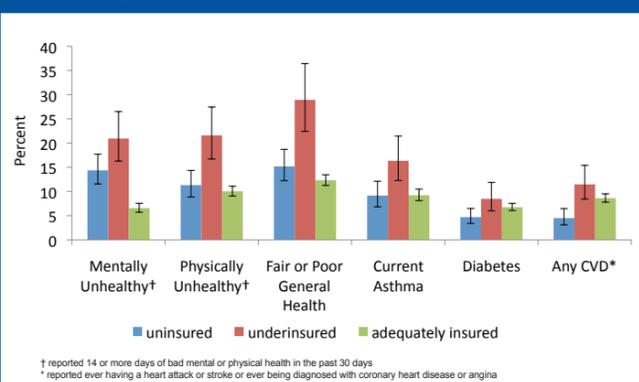
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Table 4. Odds Ratio of Health Indicators By Insurance Status Montana Adults, 2008 (with 95% confidence intervals)

	Uninsured		Underinsured	
	Adj OR†	95% CI	Adj OR†	95% CI
General Health Measures:				
Fair or Poor General Health	0.97	0.68 - 1.39	2.28	1.56 - 3.34
14+ days poor physical health (past 30 days)	0.93	0.65 - 1.32	2.12	1.43 - 3.15
14+ days poor mental health (past 30 days)	1.60	1.12 - 2.28	2.77	1.87 - 4.11
Chronic Conditions:				
Diabetes	0.99	0.64 - 1.54	1.32	0.85 - 2.05
CVD*	0.90	0.55 - 1.48	1.80	1.15 - 2.81
Current Asthma	0.88	0.59 - 1.31	2.16	1.48 - 3.15
Disability:				
Disabled**	0.97	0.71 - 1.32	2.72	1.95 - 3.80
14+ days limited activity due to poor health (past 30 days)	0.80	0.50 - 1.27	1.55	0.95 - 2.55

* Reporting ever having any cardiovascular disease including: Heart Attack, Coronary Heart Disease or Angina, or Stroke.
** Reported being limited in anyway in any activities because of physical, mental or emotional problems or reported having any health problem that required the use of special equipment.
† Odds Ratio Adjusted for age and income. Bolded values are statistically significant.

Figure 4. Health Measures by Health Insurance Status Montana Adults, 2008



Discussion & Recommendations

Montana adults under the age of 34 with less educational attainment, and lower household incomes were the most likely Montanans to be uninsured. A similar yet distinctly different group, adults aged 35 to 54 with lower educational attainment, lower household incomes and self-reported disability were most likely to be underinsured. Being uninsured or underinsured clearly affects Montanans' health care utilization and health outcomes. The uninsured were least likely to have a personal health care provider, to have had a routine medical check-up within the last year, to have had recommended cancer screening tests and to have a usual place for health care. However, it was the underinsured that seemed to suffer the most frequent poor health outcomes. Underinsured Montanans were most likely to report poor physical and mental health, to report fair or poor general health, and to have current asthma, diabetes or cardiovascular disease. Therefore, the group with the highest prevalence of chronic illness and the greatest need for health care services, was also most likely to be limited in accessing care due to cost despite having health care coverage.

Consistent and adequate health care coverage has been repeatedly documented to improve overall health and increase life expectancy, especially for groups at highest risk: adults with chronic conditions, racial and ethnic minorities, and lower income adults.³ However, getting adequate health care coverage is no easy task for the majority of Montana's uninsured and underinsured. Employer sponsored health insurance is often the most affordable option for health care coverage yet only 39% of Montana employers offer health insurance to their employees.⁴ This may be due in part to the high number of small businesses (employ less than 10 per firm) that operate in the state of Montana. Also lower income adults are least likely to get health insurance through their employer with only 13% of adults with household income less than 100% of the federal poverty level (FPL) reporting employer based coverage compared to more than

80% of adults with household incomes that are 400% or more of the FPL.⁴ When health insurance is unavailable or unaffordable through one's employer there is often only one other source of health care coverage, government-sponsored plans. At the federal level adult health care coverage is available to select populations through Medicare, the Veterans' Administration and Indian Health Services (IHS). Medicare is open to adults over the age of 65 and to people under 65 with select disabilities.⁵ IHS is limited to American Indians and Alaska Natives who are members of federally-recognized tribes.⁶ Besides these plans, Montana only offers health care coverage to adults through Medicaid. There are extensive eligibility criteria for Montana Medicaid which can be found at the DPHHS Human & Community Services Division website <http://www.dphhs.mt.gov/hcsd/medicaid.shtml#basic>. Generally, to be eligible for Montana Medicaid adults must meet income requirements and be included in one or more of the following groups: parents or other related adults with dependent children under age 19, pregnant women, women diagnosed with breast or cervical cancer or pre-cancer, people aged 65 or older, or people who are blind or disabled.⁷ Together these government programs covered roughly 15% of Montana adults between the ages of 18 and 64 in 2008.⁴

Government sponsored health care coverage fills a vital role in supplying coverage to select populations: adults age 65 and older, disabled adults, and low income families. However, there remains a significant gap in coverage for adults without children and middle class adults without affordable employer sponsored plans or those who have insurance but are still unable to meet the high cost of care associated with copayments, deductibles or non-covered services. As shown from these BRFSS findings regarding the significant correlations between coverage and health outcomes, it is vital to the overall health of communities that all members, regardless of age, employment status or income have adequate and affordable health care coverage.

Survey Limitations

The BRFSS relies on self-reported data. This type of survey has certain limitations: many times, respondents have the tendency to under-report some behaviors that may be considered socially unacceptable (e.g., smoking, heavy alcohol use); conversely, respondents may over-report behaviors that are desirable (e.g., physical activity, nutrition).

Background

The Montana Behavioral Risk Factor Surveillance System (BRFSS) has been collecting and reporting state-specific, population-based estimates of health-related data since 1984. The purpose of this statewide telephone survey of Montana residents aged 18 and older is to gather information regarding personal health risk behaviors, selected medical conditions, and the prevalence of preventive health care practices among Montana adults. These BRFSS results have been used by public health agencies, academic institutions, non-profit organizations, and others to develop programs that promote the health of Montana adults and reduce risks that contribute to the leading causes of death in the state. A full set of Montana yearly questionnaires and health indicators can be found on the Department of Public Health and Human Services (DPHHS) BRFSS database query system website at www.brfss.mt.gov. The CDC website www.cdc.gov/brfss also provides national, state, and some local area prevalence estimates of health indicators, as well as access to downloadable datasets for further analyses.

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Endnotes

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