

Cardiovascular disease (CVD) and CVD risk factors among Montana American Indians with and without disability



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American Indians and Diabetes and CVD



- Diabetes and Cardiovascular disease(CVD) are among the leading causes of death for American Indians in Montana and cause significant disability in the community (Harwell, et al. 2000).

American Indians and Disability



- Nationally, 28% of American Indians and Alaska Natives age 45 or older have a disability (U.S. Census 2000)
- American Indians living on reservations may not be afforded the same rights and privileges provided for under the Americans with Disabilities Act and Rehabilitation Act of 1973 (e.g, Clay, 2000; Lomay & Hinkebein, 2006)

Montana American Indian Health Survey



- 2003, telephone survey of 1,000 American Indians living on or near the reservations in Montana
- Adapted from BRFSS
- Collaboration of MDPHHS and Billings Area Indian Health Service
- Demographics (including disability)
- History of CVD and CVD risk factors

CENSUS 2000: MONTANA

Percent American Indian by County

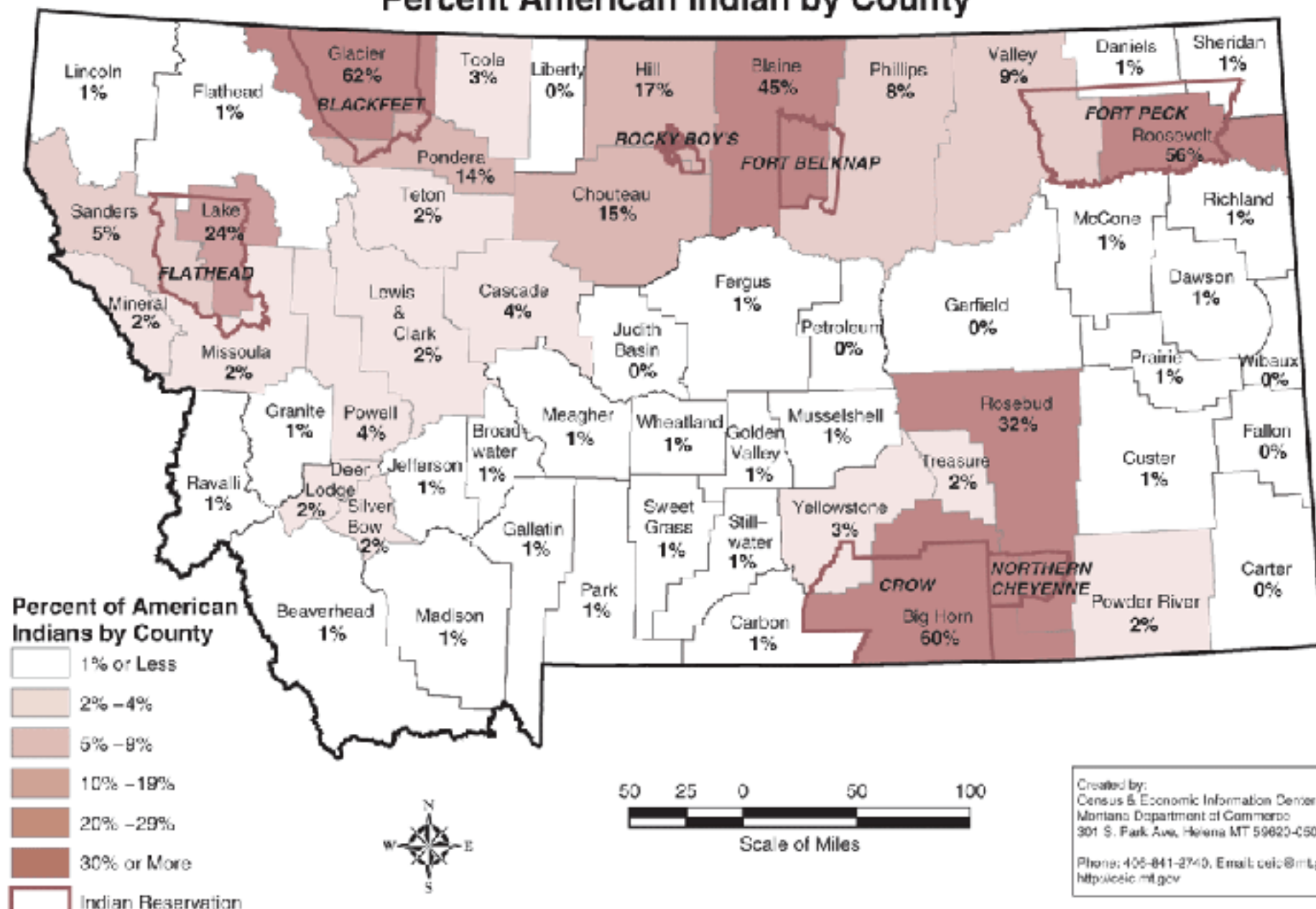


Figure 1. The prevalence of CVD and related risk factors among disabled and non disabled American Indian adults, Montana, 2003

Montana Department of Public
Health and Human Services,
Helena, Mt

*P < 0.05

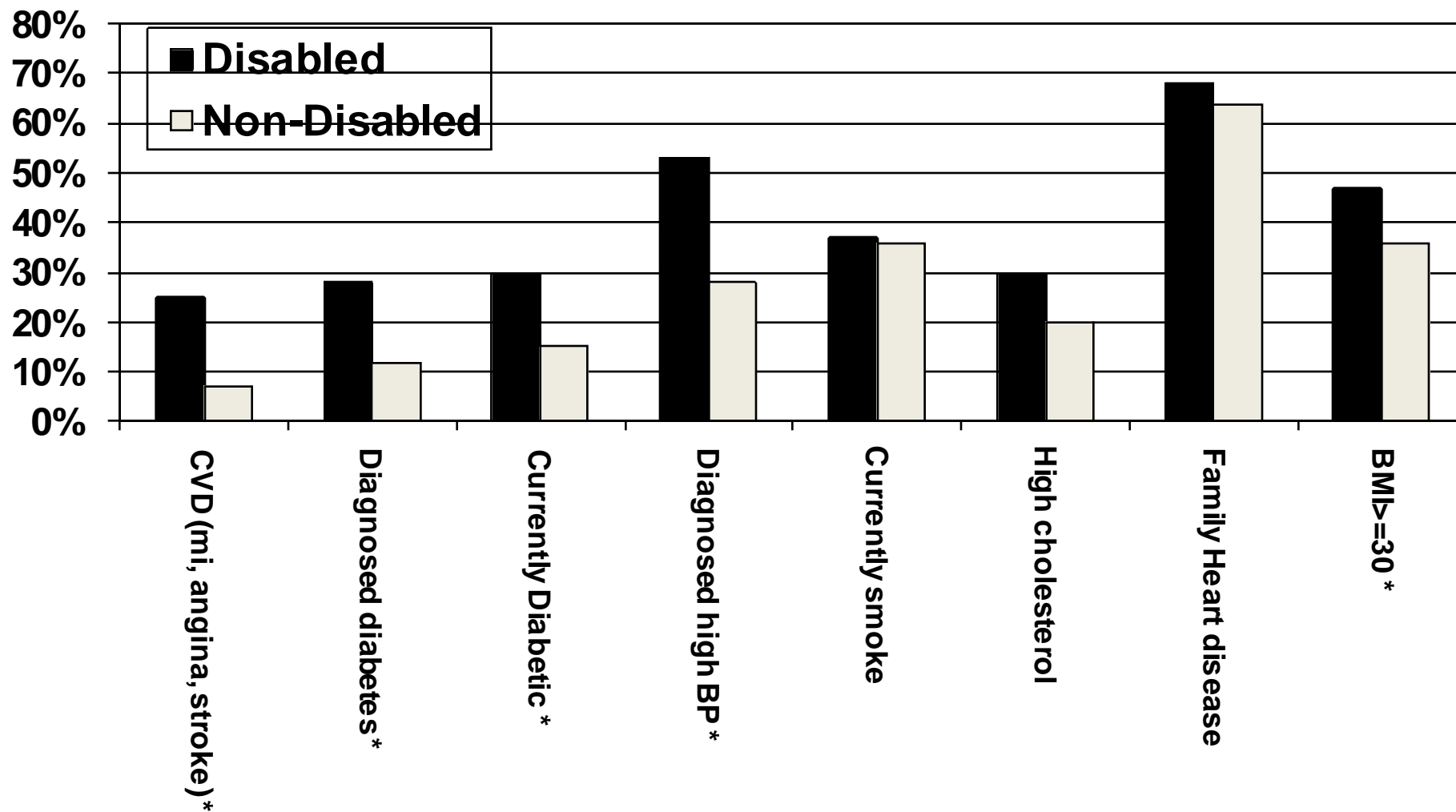


Table 2. Gender and age adjusted risk (odds ratio) that being disabled has on CVD and related risk factors among American Indian adults, Montana, 2003

Variable:	Beta Est. (standard error)	Sig.*	Odds Ratio Est. (95% CI)
CVD	1.23 (0.22)	0.000	3.40 (2.21-5.25)
Diagnosed diabetes	0.74 (0.19)	0.000	2.10 (1.44-3.06)
Current diabetes	0.63 (0.19)	0.001	1.89 (1.31-2.71)
High blood pressure	0.83 (0.17)	0.000	2.30 (1.66-3.18)
Current smoker	0.16 (0.16)	0.341	1.17 (0.85-1.61)
High cholesterol	0.27 (0.18)	0.133	1.31 (0.92-1.86)
Family history of HD/Stroke	0.15 (0.17)	0.376	1.16 (0.84-1.61)
Obese (BMI \geq 30)	0.39 (0.16)	0.016	1.48 (1.09-2.02)

*N = 1,000, two-sided test; the Mantel-Haenszel common odds ratio estimate is asymptotically normally distributed under the common odds ratio of 1.000 assumption; so is the natural log of the estimate (beta est.).

Summary



- Prevalence of disability similar to that reported for Montana 2003 BRFSS (Cummings et al., 2003).
- American Indians with disability
 - Higher prevalence of CVD and many CVD-related risk factors
 - obesity, current smoking, CVD, high blood pressure, high cholesterol, diabetes

Limitations



- Exclusion of American Indian households
 - Without telephones
 - Outside the seven reservations and adjacent counties
- Self-report data
- Cross-sectional data

Conclusions

- Rehabilitation services need improvement.
- Public health and clinical efforts to reduce CVD risk factors among those with and without disability need improvement.
 - Special efforts to reach those with disabilities



2011 and 2013-2015 Combined Montana BRFSS Survey Results for Disability Among Race/Ethnicity = American Indian / Alaska Native Only

