

# Gender and Racial/Ethnic Disparities in Cardiac Rehabilitation Persist across States and Regions in the US

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## Abstract

### Purpose/Objectives:

The Montana Cardiac Rehabilitation Outcomes Project (MCROP) analyzed participation rates of women and racial/ethnic minorities in cardiac rehabilitation (CR) programs from different states and regions over a one-year time period from October 2009 to September 2010.

### Significance:

Trends indicate low utilization rates in participation in CR enrollment among women and minorities.

### Design/Background/Rationale:

MCROP registry includes over 120 CR programs located across the United States. The registry generates benchmarking information to facilitate quality improvement activities for participating programs.

### Methods/Results:

From October 2009 to September 2010, 121 CR programs submitted data to the Montana Cardiovascular Health (CVH) Program. Demographic race/ethnicity information was categorized as white, American Indian, black, Asian, Hispanic and other. Programs were grouped into four geographic regions: the Rural West (Montana, Wyoming, North Dakota, and South Dakota), the Pacific Northwest (PNW) (Washington and Oregon), Arizona and Michigan. From October 2009 to September 2010, data on 7,369 CR patients indicated 71% of the patients were male. No significant variation in sex was noted between regions. The regional gender break-down ranged from 69% male in the PNW to 72% male in AZ. Ninety-four percent of CR patients within the database were white and ranged from 91% white in AZ to 97% white in the Rural West. American Indian (AI), black, Asian and Hispanic ethnicity each made up roughly <6% of the patients within the database. The largest minority population was Black, which represented only 1.5% or 110 patients of the 7,369 CR patients.

### Conclusions:

Results from our multi-state CR registry reveals low CR utilization rates by women and race/ethnic minorities and the data are consistent across the four regions of the United States.

### Implications:

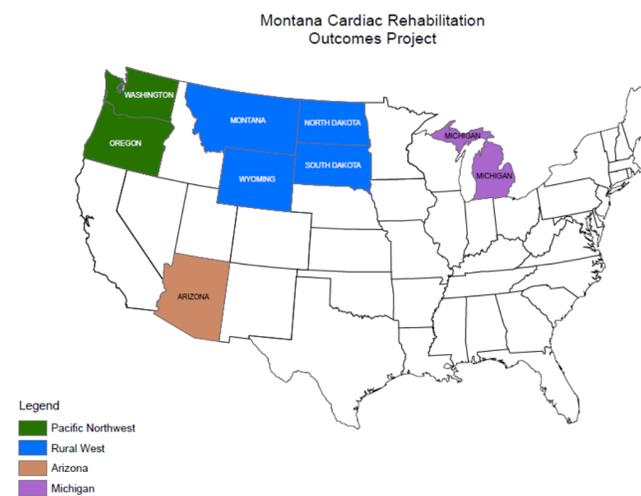
There is a need to raise awareness of the inequalities in CR participation patterns and efforts should be made to increase utilization rates of women and minority populations.

## Methods

Data submitted quarterly, from 121 cardiac rehabilitation facilities participating in the Montana Outcomes Project, were aggregated from October 2009 to September 2010. Basic demographic information (i.e., age, race/ethnicity and sex) is collected from all participating programs. Race/ethnicity is categorized as White, American Indian, Black, Asian, Hispanic and other. Each program determines how race is defined for their patients.

Participating programs were divided into four geographic regions based on their state: 1) **Rural West** - MT, WY, ND and SD; 2) **Pacific Northwest** - OR and WA; 3) **Arizona**; and 4) **Michigan** (Figure 1). Data from states with less than five participating programs were excluded. Data analyses on 7,369 cardiac rehab participants were conducted to assess differences in participation rates by sex and race/ethnicity.

Figure 1. Geographic regions, 2009-2010.



## Results

From October 2009 to September 2010, overall, approximately 71% were male and the average age of program participants was 66.2 years (SD: 10.9) and ranged from 65.0 years in Michigan to 68.0 years in Arizona (Figure 2).

Figure 2. Participation in CR: Gender

Montana Outcomes Project

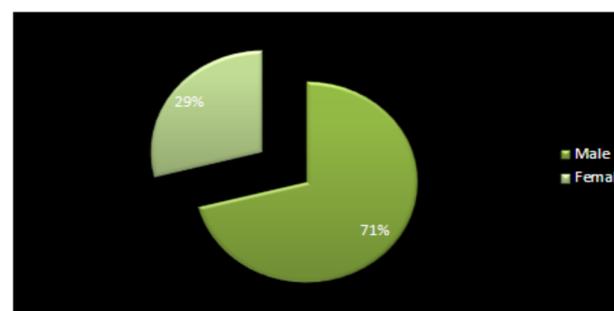
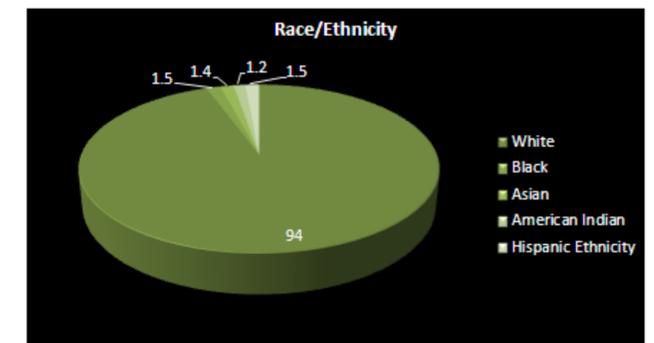


Figure 3. Race/Ethnic Breakdown  
Montana Outcomes Project



Overall, the vast majority (94%) were white, which ranged from 91% in Arizona to 97% in the Rural West (Figure 3). Of the remaining 6%, slightly over 1% reported race/ethnicity as Black or Hispanic, less than 1% reported race/ethnicity as AI or Asian while 2% reported race/ethnicity as "Other." Across geographic regions, the percentage reporting AI ranged from 0.4% in Arizona to 1.7% in the Rural West; Black ranged from 0.3% in the Rural West to 1.7% in the PNW; Asian ranged from 0% in Rural West to 1% in the PNW and Hispanic ethnicity ranged from less than 1% in Rural West to 3% in Arizona.

## Conclusions

Results from our multi-state CR registry indicate low CR utilization rates by women and race/ethnic minorities and the data are consistent across the four regions of the United States. There is a need to raise awareness of the inequalities in CR participation patterns and efforts should be made to increase utilization rates of women and minority populations.

