The Montana Regional Outcomes Project – Update 2010

Michael McNamara, Carrie Oser, Chris Wherity, Chuck Kitchen, Cathy Lisowski, Jeff Redekopp, Elizabeth Dole, Crystelle Fogle, Dorothy Gohdes, Todd Harwell

MONTANA CARDIOVASCULAR HEALTH PROGRAM

MACVPR

ABSTRACT

BACKGROUND:
The Montana Outcomes Project started in 2005 as a collaborative effort between the Montana Cardiovascular Health (CVH) Program and the Montana Association of Cardiovascular and Pulmonary Rehabilitation. In the project's first year, 19 cardiac rehab (CR) programs from Montana and Wyoming participated. By 2009, the project had expanded to 80 programs from 10 states.

PURPOSE:
The purpose of the project was to provide data management and feedback on a uniform set of outcome indicators. The feedback given to CR programs included aggregate means for each indicator, allowing programs to compare their own results to that of the region. The data comparison could identify specific areas for quality improvement (QI) activities.

METHODS:
Participating CR programs submitted de-identified data on a standardized set of indicators to the CVH Program for analysis on a quarterly basis. Results were sent back to each program with their individual data plotted against the regional mean.

RESULTS:
Results included patients who started CR between July and September 2009. A total of 80 programs submitted data on 2,097 patients. Mean age was 66.1, 94% were white, 70% were male, 78% completed at least 12 sessions, and the mean number of visits was 20.5. The mean resting blood pressure (BP) at completion of CR was 120/68 mmHg, and 87% met criteria for BP control. The mean low density lipoprotein (LDL) was 87.7 mg/dL, 72% had an LDL of <100 mg/dL, and 93% were on a lipid lowering medication. Smoking status decreased from 11% pre to 3% post CR while BMI did not change significantly (31.4 vs. 31.2). Significant improvements were noted in pre to post scores in the SF-36, Dartmouth COOP, Duke Activity Status Index and the Dietary Fat Screener.

CONCLUSION:
The Montana Outcomes Project has grown considerably and continues to provide valuable benchmarking information to participating CR programs.

INTRODUCTION

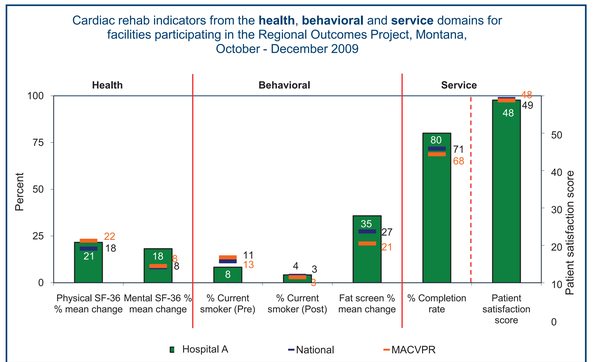
The Montana Cardiovascular Health (CVH) Program and the Montana Association of Cardiopulmonary Rehabilitation (MACVPR) collaborated on the development of a multi-state cardiac rehab outcomes project. The developmental phase of the project started in 2005 and data collection on a uniform set of outcome indicators began in July of 2006. (Table 1) The primary purpose of the project was to generate aggregate, region-wide means allowing individual programs to compare their own outcomes data to the regional mean facilitating quality improvement projects. This poster highlights the data collected in one quarter which started on July 1, 2009 and ran through September 2009.

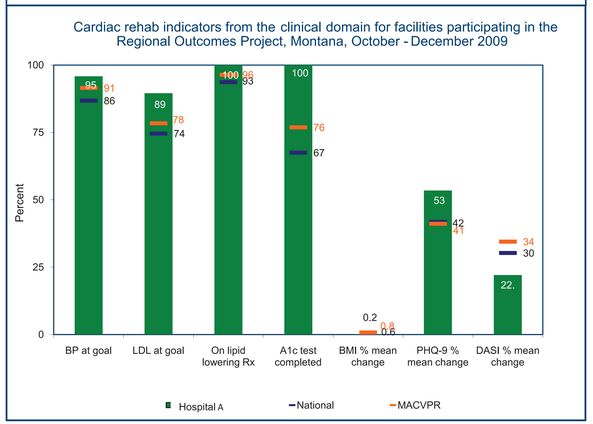
TABLE 1 – OUTCOME INDICATORS – MONTANA OUTCOMES PROJECT 2009
Health Domain
SF-36 version 2 or Dartmouth COOP
Clinical Domain
Blood pressure at goal (<140/90 or <130/80 for patients with diabetes)
BMI
LDL at goal (<100)
Usage of lipid lowering medications
Duke Activity Status Index
A1c tests for patients with diabetes
Behavioral Domain
Smoking status
Dietary Fat Screen
Service Domain
Patient satisfaction
Completion rate

DATA COLLECTION/ANALYSIS

Programs participating in the outcomes project submit de-identified data to the CVH Program for analysis on a quarterly basis. Demographic characteristics and means for each indicator are generated. After the data analysis is completed each program receives feedback which consisted of their programs data plotted against the national and their state or AACVPR affiliate mean. An example of program feedback can be found in Figure 1.

Figure 1





RESULTS

A total of 80 programs representing 10 states submitted data on 2,097 patients. Mean age was 66.1, 94% were white, 70% were male, 78% completed at least 12 sessions and the mean number of visits was 20.5. (Table 2) The mean resting blood pressure (BP) at completion of CR was 120/68 mmHg, and 87% met criteria for BP control. The mean low density lipoprotein (LDL) was 87.7 mg/dL, 72% had an LDL of <100 mg/dL and 93% were on a lipid lowering medication. Smoking status decreased from 11% pre to 3% post CR while BMI did not change significantly (31.4 vs. 31.2). Significant improvements were noted in pre to post scores in the SF-36, Dartmouth COOP, Duke Activity Status Index and the Dietary Fat Screener. (1-4) (Table 3)

TABLE 2 – Demographic And Diagnosis Characteristics, Montana Outcomes Project 2009	
	All Participating Sites (N=80)
Total Patients	2097
	Mean (min – max)
Age (years)	66.1 (18.9 -93.0)
	Mean/Median (min - max)
Number of Phase II visits	20.5/19.0 (0 -40)**
	% (n)
Gender	
Male	70 (1467)
Female	30 (630)
Race	
White	94 (1692)
American Indian	1 (13)
Asian	1 (29)
Black	2 (31)
Other	3 (58)
Not documented	0 (4)
Diabetes	27 (562)
Cardiac Diagnosis	
MI only	4 (90)
CABG only	29 (609)
PCI only	28 (589)
MI/CABG	6 (122)
MI/PCI	18 (386)
Angina	5 (97)
Other	17 (346)

Table 3 – Health/behavioral/clinical Indicators – Mean Pre Vs. Post Values Montana Outcomes Project 2009

	Pre	Post
Domain	Mean	Mean
HEALTH		
SF -36 Physical	38.76	47.13*
SF -36 Mental	47.84	52.33*
Dartmouth COOP	22.19	16.96*
BEHAVIORAL		
Block Dietary Fat Screener	19	14*
CLINICAL		
Duke Activity Status Index	5.52 METs	7.21 METs*

*P <0.001

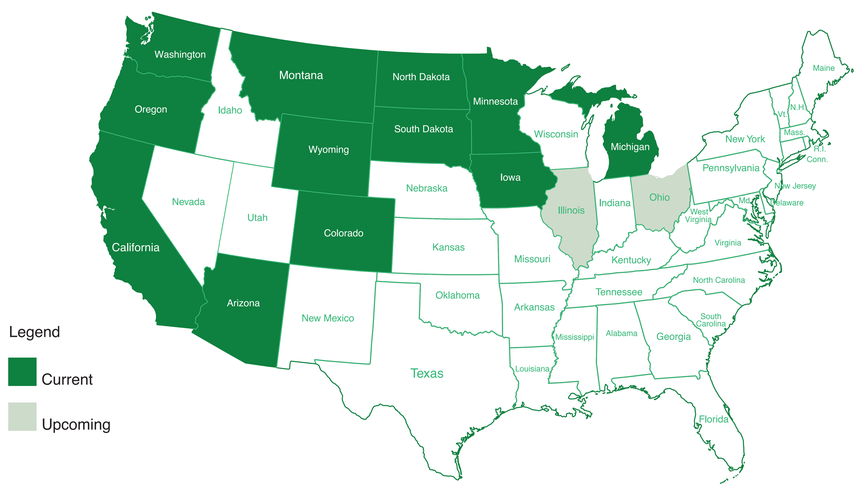
CONCLUSION

The Montana Outcomes Project continues to provide valuable benchmarking and feedback to participating programs. The Project continues to grow – as of April 2010, 84 programs representing 12 states reported data.

For more information please visit:
http://www.angelfire.com/mt2/macvpr/outcomespro.html

Questions or comments can be e-mailed to:
mmcnamara@mt.gov

MONTANA CARDIOVASCULAR REHABILITATION OUTCOMES PROJECT, 2010



REFERENCES

1) Ware JE, Sherbourne CD. The MOS 36-item short-form health survey (SF-36): Conceptual framework and item selection. Med Care 1992;30:473-485.
2) Hlatky MA, Boineau RE, Higginbotham MB, et al. A brief self-administered questionnaire to determine functional capacity: The Duke Activity Status Index. Am J Cardiol 1989;64:651-654.
3) Wassib J, Keller A, Rubenstrin L, et al. Benefits and obstacles of health status assessment in ambulatory settings: The clinician's point of view. Medical Care 1992;30(5):42-49.
4) Block G, Gillespie C, Rosenbaum EH, Jenson C. A rapid food screener to assess fat and fruit and vegetable intake. Am J Prev Med 2000:18(4):284-288.