



State of California
Medical Board of California
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Memorandum

Date: July 10, 2012
To: Board Members
From: Kevin A. Schunke, UCD Telemedicine Project Manager
Subject: UCD Telemedicine Project

Assembly Bill 329, carried by Assembly Member Nakanishi in 2007, authorized the Medical Board of California to establish a pilot program to expand the practice of telemedicine in California. The purpose of the pilot is to develop methods, using telemedicine, to deliver health care to persons with a chronic disease. The pilot also shall develop information on the best practices for chronic disease management services and techniques and other health care information as deemed appropriate.

In the long term, the pilot strives for an outcome that documents improved methods of teaching personal health care maintenance to a patient with a chronic disease and, with this increased knowledge, it is hoped that objective lab data from the pilot will reflect the improvements in the patient's self-managed care of the disease.

The bill required the Board to make a report to the Legislature, with findings and recommendations, within one calendar year after the commencement date of the pilot. The report was to include an evaluation of the improvement and affordability of health care services and the reduction in the number of complications achieved by the pilot. However, as was explained in previous reports to the Legislature, the Board entered into a contract for a three-year pilot and has submitted reports in 2010 and 2011. Both of these annual reports have been presented to the Board and are posted on the Web site.

Dr. Jim Nuovo from the University of California, Davis is principle investigator of the team guiding this project. During the past two years, Dr. Nuovo and the members of his team presented a summary of the project to the Board and will attend the July 20, 2012 meeting to present the preliminary findings and experiences of the pilot. Since the contract ended on June 30, 2012, the data now is being reviewed and evaluated. The final report will be prepared during the fall of 2012, to include an evaluation of the entire pilot and to prepare evidence-based recommendations. That report will be forwarded once finalized.

If you have any questions about this agenda item, please contact me at (916) 263-2368 or via email at kevin.schunke@mbc.ca.gov.

Development of a Diabetes
Self-Management Education
Program Delivered via
Telemedicine to Rural
Communities in California
2009/2012



Welcome to Tulelake



AB329 (Nakanishi)

- The Assembly bill required the conduct of a pilot program to develop methods using a telemedicine model of delivering health care to those with chronic diseases and delivering other health information.







Acknowledgments



- Medical Board of California
- UCDHS Chronic Disease Management Program
- UCDHS Center for Healthcare Policy & Research
- UCDHS Center for Health & Technology



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- Western Sierra Medical Clinic
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- Lassen Medical Group
- Tulelake Health Center
- Miners Family Health Center
- John C. Fremont Healthcare District
- Southern Trinity Health Service
- Jackson Rancheria Health Center



Project Goal

- To test a model for improving access to diabetes self-management training and resources via telemedicine technology for patients in rural communities in northern and central California.



Rationale

- The informed, activated patient in concert with the prepared, proactive healthcare team can improve outcomes.
 - From the Chronic Care Model:
www.improvingchroniccare.org



Methods

- Provided a 2-hour class on diabetes to patients who received their care at these nine clinics.
- Assessed the impact of these classes on a variety of outcome measures.



Methods

- Performed an extensive survey of the participants at these rural clinics:
 - Demographics
 - Self-Management Behavior
 - Knowledge About Diabetes
 - Confidence



Methods

- Assessed participants 6-8 weeks post-intervention.
- Performed chart audit.



Demographics

- 239 participants
- Average age = 63 years
- Women (61%); Men (39%)
- White (77%); Hispanic (9%); Native American (8%)
- High School (76%)
- Access to the Internet (68%)
- 93% either Medicare/Medical

Water Rotation



Demographics

- Over half had diabetes for more than 5 years.
- 85% had Type 2; 9% did not know the type of diabetes they have.



Demographics

- Medications:
 - Oral agents 61%
 - Insulin 9%
 - Insulin/Oral Agent 10%
 - No medications 20%

Demographics

- Most had the following co-morbid conditions:
 - Hypertension 56%
 - Hyperlipidemia 40%
 - DJD 37%



My Diabetes Care

- Participants were asked 20 questions about how often they received diabetes-specific care over the past 6 months at their doctor's office.
 - Scale: “1” = None of the time.
 - Scale: “5” = Always



My Diabetes Care

- The average scores were in the range of 2.5 to 3.6.



Self-Care and Confidence

- A series of questions about self-care and confidence were asked.



Self-Care and Confidence

- There was a statistically significant reduction in feeling overwhelmed with diabetes from the pre-test to the 6/8 week follow-up period.
- 18.8% felt overwhelmed at the pre-intervention survey; 5.4% felt overwhelmed at the 6/8 week post-intervention survey ($p < 0.01$).



Self-Care and Confidence

- Statistically significant changes were observed for the number of days participants did at least 30 minutes of exercise and the number of days participants checked their feet per week.
 - Exercise pre-intervention mean = 3.4 days; post-intervention mean = 3.9 days ($p < 0.01$)
 - Foot check pre-intervention mean = 4.2 days; post-intervention mean = 5.6 days ($p < 0.01$)

Knowledge About Diabetes

- There were a series of questions designed to assess the participants knowledge of diabetes:
 - How much do you know about?
 - The effect of carbohydrates on your blood sugar?
 - Reading food labels?
 - Portion size?
 - The benefits of exercise?
 - The importance of checking your feet?
 - The benefits of longterm blood sugar management?



Knowledge

- There were significant changes from the pre-test to the post-test in these knowledge areas that persisted through the 6/8 week follow-up period ($p < 0.01$).



Summary of Findings

- Self-confidence improved.
- Knowledge improved.
- Self-care behavior improved.
- These findings came from a 2-hour class and they persisted over a 6 to 8 week follow-up period.



Tulelake Super Market



Impact on Outcomes/Costs

- Patients with DM on average incur costs that are 2.4X more than age-matched cohort.



Impact on Costs/Outcomes

- Foot pathology is the most common complication of DM leading to hospitalization.
- Foot pathology accounts for approximately 1/3rd of the costs for diabetes care.



Estimated Costs

- Uncomplicated Foot Ulcer
 - \$2000-\$4000
- Complicated Foot Ulcer
 - \$15000-\$25,000
- Amputation
 - \$107000-\$145000



