An interdisciplinary, outcomes-based model for diabetic care in an underserved population.

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Nature and scope of the project:

Occurrence of diabetes (DM) continues to trend upwards in the Hispanic population (Geiss et al., 2014). Additionally, Kirk et all (2008) documented ethnicity related disparities persist in DM morbidity, mortality, and quality of care. National Health and Nutrition Examination Survey (2014) indicate that glycemic control is poorer for Hispanic adults compared with non-Hispanic whites.

Baseline data demonstrated that fewer than 25% of clinic clients had an A1c less than eight. As a free clinic, primarily serving an uninsured, non-English speaking, relatively mobile population, these clients face multiple barriers to good health (Harris, 2001, Thackery, Merrill & Neiger, 2004).

While a change to an electronic health record impacted quantity of visits and frustrated providers, it improved the ability to run reports to improve quality management. Additionally, it improved access to dental, vision and lab records.

An outcomes based project to improve comprehensive care for diabetics (DM) at a community clinic that serves at risk un and under-insured demonstrates the positive impact of a collaborative partnership involving multiple modalities. Additionally, an evidence based diabetic self management education (DMSE) was incorporated which is based on principles of problem solving and self-management. This Stanford curriculum is linguistically and culturally congruent (Alvarez, 2015)

Synthesis and analysis of supporting literature:

Barriers have been associated with poor health outcomes in Hispanic adults with type 2 diabetes and can contribute to underutilization of healthcare (Fiscella, Franks, Doescher, & Saver, 2002). Methods must be devised to improve access to and collaboration between disciplines, as this improves DM outcomes (Friedber et al, 2009).

DSME has been shown to significantly delay or reduce complications such as cardiovascular disease, kidney disease, blindness, and amputations (NDEP, 2009a, 2009b, Ferguson, Swan & Smaldone, 2015) in the general population. And strong self-management scores can be a significant predictor of long term health (Heller & Carey, 2011, Carey & Doherty, 2012).

However, in a systematic review Gonzalez, Berry, & Davidson (2013) found little evidence of effectiveness of DMSE in studies involving Hispanic patients. Synchronization of education and screening with regular visits could improve accessibly and health outcomes (Davis, Sawyer, & Vinci, 2008). Stanford's DMSE has demonstrated efficacy with English and Spanish language curricula, with statistically significant reductions in participant A1cs after eighteen months (Alvarez, 2015).

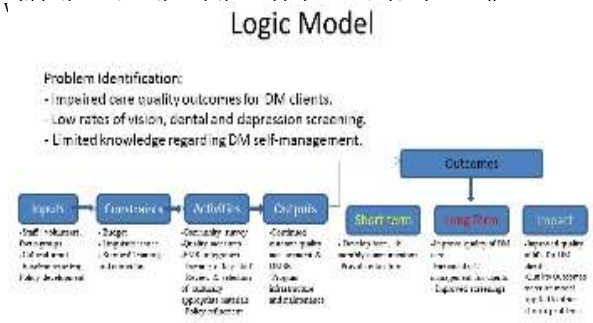
Figure 1 Exercise is included in weekly DMSE class

Project implementation:

Interdisciplinary planning included a patient focus group, dental, medical clinic, optometry and counseling staff. They determined that setting apart "diabetic days" in the schedule where patients could see dental, vision, spiritual, counseling, nursing and medical services in a single 2 to 2.5 hour visit for annual and as needed screenings. The focus group requested that the "diabetic day" appointments be held in the evening. Screening tools were reviewed and selected based on validity, reliability, brevity and bilingual availability.

This practice has 16 paid staff (most full time), and over seventy volunteer physicians, nurse practitioners, nurses, scribes, dental hygienists, dentists, optometrists, and ophthalmologists. Protocols were discussed and developed. Training occurred for essential staff leaders to promote efficiency and consistency. Four essential elements of the project included: improving patient self management, team based delivery of care, increased organizational support, and improved utilization of reminders and templates in electronic health record. (Peek, Cargill & Huang, 2009).

We worked closely with our EMR provider to use evaluations tools



Evaluation criteria:

Base-line measures of dental, vision, tobacco use, and depression screening along with measures of microalbumin, lipids, renal and hepatic function, blood pressure, BMI and A1c were obtained from individuals. The goal is to see screening rates improve, treatments of identified problems, and measures resume to normal limits for age.

Evaluation tools included the PHQ-2, PHQ-9
Base line measures were obtained and were contrasted to measures at 6 months and 1 year.

However, due to the mobile lifestyles of some of this population, not all clients had three or even two data points measured.

Outcomes:

Response to the integrated weekly "diabetic days" was positive and participation has been quite strong.

Data is still being collected and analyzed but will be included in the slide here.

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References: Available on request