\*DSMP in this document is not specific to Stanford marketed DMSP Living Well Program

Summary(brief):

* DSMP controls HbA1C for Type I, Type II, gestational, and pre-diabetes diagnoses
* DSMP reimbursed by CMS (i.e. DSMP has a legally defined definition and standards)
* Cost to implement DSMP approximately $280/person/year
* Cost to reduce HbA1C by 1 point = $180/person/year
* DSMP can reduce treatment costs over a lifetime by $3385/person
* DSMP cost $39,563/QALY
  + Important to note that general standard states that $50,000/QALY and below are deemed cost-effective
* CDSMP found to be effective in delaying time-to-hospitalization of DM Type II patients (not specifically DSMP, but similar principles)
* Over a 1 year period DM-related mortality and days of work missed caused a productivity/workforce loss of approximately $2 million (n=137), totalling to over 20,000 workdays lost

Summary(evidence):

* **DSMP controls HbA1C for Type I, Type II, gestational, and pre-diabetes diagnoses**
  + Banister et al., 2004
  + DSMT (one 4-hr class, individual dietary consultations, monthly support meetings) implemented at a community clinic for Type I, Type II, gestational, and pre-diabetes diagnoses shows controlling glycemic control (A1C) at low cost.
* **DSMP reimbursed by CMS (i.e. DSMP has a legally defined definition and standards)**
  + Urbanski et al., 2008
  + <http://www.cmspulse.org/resource-center/health-topics/diabetes/documents/DSME-Toolkit.pdf>
  + <http://www.ncoa.org/improve-health/center-for-healthy-aging/chronic-disease/diabetes-self-management.html>
* **Cost to implement DSMP approximately $280/person/year**
  + Banister et al., 2004
  + 1 year of DSMP in addition to DM testing for 1 year is 38% less that one ER admission (~$450/ER visit)
* **Cost to reduce HbA1C by 1 point = $180/person/year**
  + Banister et al., 2004
* **DSMP can reduce treatment costs over a lifetime by $3385/person**
  + Brownson et al., 2009
  + Estimate incorporates lifetime reduction in disease progression, cost of adverse events, & increase in quality of life (Markov modeling)
  + Based on Robert Wood Johnson Foundation DM initiative
  + $3385 reduction in treatment cost over a lifetime
  + $15031 to launch and maintain program over life of individual
* **DSMP cost $39,563/QALY**
  + **Important to note that general standard states that $50,000/QALY and below are deemed cost-effective**
  + Brownson et al., 2009
  + QALY = quality adjusted life year
  + Calculated by:
    - Cost of care with DSMP- Cost of care without DSMP Health benefit with DSMP- Health benefit without DSMP
  + Interpreted as:
    - It costs $39,563 per quality adjusted life-year
    - The organization can expect to gain 1 quality life year for every $39,563 spent implementing the DSMP program\*.
  + DSMP intervention costs $39,563 per quality adjusted life year gained.
* **CDSMP found to be effective in delaying time-to-hospitalization of DM Type II patients (not specifically DSMP, but similar principles)**
  + Adepoju et al., 2014
  + CDSMP reduced the odds of hospitalization > CDSMP can improve health status and reduce hospitalizations
  + Effective within 2 year timespan (i.e. evidence that effects are sustainable)
* **Over a 1 year period DM-related mortality and days of work missed caused a productivity/workforce loss of approximately $2 million (n=137), totalling to over 20,000 workdays lost.** 
  + Adepoju et al., 2014
  + Higher productivity loss for Males ($708/yr) and for persons with more than a high school education ($758/year)
  + Highest productivity loss from premature mortality (persons dying prior to normal age of death) lead to an approximately $1 million dollar loss.

Other Notes:

* Currently Stanford is conducting a study called **The National Diabetes Study.** The description is below:
  + This project was funded by the National Council on Aging, in partnership with WellPoint, offered the Internet and the community-based Diabetes Self-Management Programs. The internet program was offered nationally and the community-based program was offered in the Indianapolis, Saint Louis and Atlanta areas, in partnership with OASIS and YMCA. The study will look at the dissemination and outcomes of the programs in the context of a large health care insurer. The study will conclude in 2017.
  + It is possible that there is a cost-effective component to this.

Citations:

Adepoju, O., Bolin, J., Phillips, C., Zhao, H., Ohsfeldt, R., MacMaughan, D., … Forjuoh, S. (2014). Effects of diabetes self-management programs on time-to-hospitalization among patients with type 2 diabetes: A survival analysis model. *Patient Education and Counseling*, *95*, 111–117.

Banister, N. A., Jastro, S. T., Hodges, V., Loop, R., & Gillham, M. B. (2004). Diabetes Self-management training program in a community clinic improves patient outcomes at modest cost. *Journal of American Dietetic Association*, *104*, 807–810. doi:[10.1016](http://dx.doi.org/10.1016)

Brownson, C. A., Hoerger, T. J., Fisher, E. B., & Kilpatrick, K. E. (2009). Cost effectiveness of diabetes self-management programs in community primary care settings. *The Diabetes Educator*, *35*(5), 761–769. doi:[10.1177/0145721709340931](http://dx.doi.org/10.1177/0145721709340931)

Ricci-Cabello, I., Ruiz-Perez, I., Rojas-Garcia, A., Pastor, G., Rodriguez-Barranco, M., & Goncalves, D. (2014). Characteristics and effectiveness of diabetes self-management educational programs targeted to racial/ethnic minority groups: a systematic review, meta-analysis and meta-regression. *BMC Endocrine Disorders*, *14*(60), 1–13.

Urbanski, P., Wolf, A., & Herman, W. (2008). Cost-Effectiveness of diabetes education. *Journal of the American Dietetics Association*,*108*, S6–S11. doi:[10.106/j/jada.2008.01.019](http://dx.doi.org/10.106/j/jada.2008.01.019)