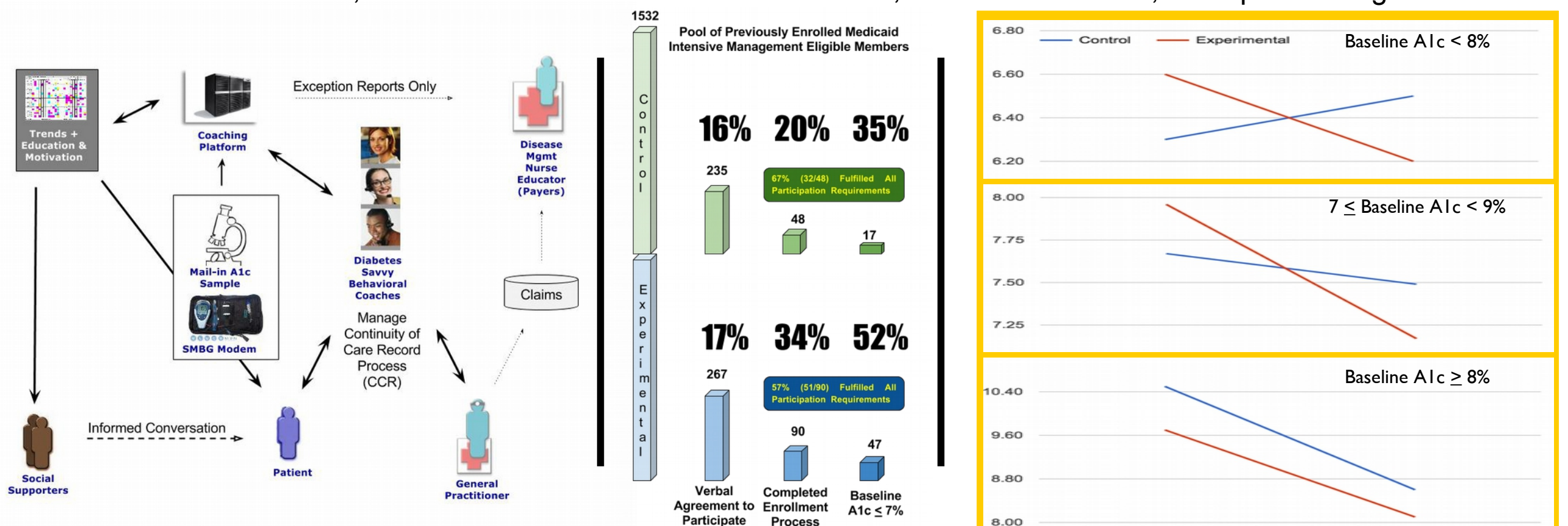


# DIABETES TELEHEALTH INTERVENTION COMPRISING BLOOD SUGAR DATA, HOME A1C, CARE CONTINUITY AND MOTIVATIONAL INTERVIEWING TO EFFECT BEHAVIOR CHANGE IN AN ADULT TYPE 2 DIABETES POPULATION

Results from a 7-month randomized controlled Medicaid telehealth demonstration project – Texas Department of Health & Human Services, McKesson Health Solutions & Diabetech; Kevin L. McMahon, Principal Investigator.



**OBJECTIVE:** To extend the reach and impact of diabetes education into the patient's home with increased frequency, personalization and modulation of care intensity informed by high quality remote data collection.

**RESEARCH DESIGN AND METHODS:** A comprehensive 6 mo. program was designed to educate patients previously enrolled in a high cost Medicaid program for adults with type 2 diabetes. Case managers interviewed participants and encouraged them to follow their previously prescribed self-care regimen. There were no study related clinic visits required at any point.

- 1 Telephone recruiting of previously enrolled high cost disease management participants
- 2 Mail A1c blood sample collection kit (HPLC analysis)
- 3 A1c results received from lab; mail telehealth starter kit (A1c results, meter, strips, modem device)
- 4 Weekly SMBG review by behavioral coach; comments added to blood sugar trend report, printed and mailed to patient's home using postal mail service.
- 5 Exceptions to hyperglycemia and hypoglycemia thresholds prompt interventions:
  - automated reports to diabetes nurse educator
  - behavioral coach completes CCR w patient & faxes to patient's physician
  - all parties apprised of actions & results

**RESULTS:** 505 patients agreed to participate from a pool of more than 1,500. On average, 46% of patients who submitted a baseline A1c sample were discovered to be at or below the ADA target of 7%. The disease management vendor did not previously have access to A1c information. The telehealth demonstration helped to prioritize resources simply by using a high quality, low cost home based A1c test kit coupled with remote monitoring of SMBG and diabetes coaches. Many of these patients may not warrant inclusion in future high cost, high intensity diabetes management programs.

**RESULTS (cont'd):** In the final count, only 83 participants (51 Experimental; 32 Control) were able to complete the minimum participation requirements. A sub-group emerged during analysis consisting of those patients who enrolled with  $7 \leq A1c < 9$ .

	Control Group	Experimental Group	p value
<i>n</i>	9	19	
Baseline A1c	7.67 ± .56	7.96 ± 0.57	0.745
6 month A1c	7.49 ± 1.77	7.17 ± 0.87	0.048
Change A1c	-0.18 ± 1.93	-0.79 ± .78	0.020

Values are mean ± SD

**CONCLUSIONS:** Patient centric care coordination has many barriers to implementation. Much of the resistance is not due to technology. Rather, it has to do with the way providers are incentivized to collaborate in the realm of chronic disease; ie – type 2 diabetes. Further, we learned that disease management programs may benefit from collection and review of periodic vital signs data (e.g.- A1c, SMBG, etc...) as well as claims data in order to more cost effectively risk stratify patient populations. This was effectively demonstrated using the CCR process in spite of < 20% provider participation.

**PRACTICAL TRANSLATION:** In the world of adult type 2 diabetes care, knowing your patient is paramount in designing a cost-effective intervention. Detailed claims data is insufficient in understanding the patient's disease state (risk) and likelihood of engaging in a self-care program. Other studies point out similar poor statistics regarding recruiting and active participation. This pilot should make it clear to anyone that designing a more effective and targeted offer has the potential to yield exponentially greater participation. Once activated, results are favorable.

