Integrating the 2017 National Standards for Diabetes Self-Management Education and Support into a Technology-Enabled Population Health Diabetes Care and Education Framework

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Introduction

Diabetes Self-Management Education and Support (DSMES) is the ongoing process of facilitating the knowledge, skills, and ability necessary for diabetes self-care. DSMES is critical for all people with diabetes, with research demonstrating that participation in DSMES leads to improved clinical outcomes and quality of life.[1] In 2017 the National DSMES Standards Revision Task Force reviewed and updated the standards as summarized in Table 1.[2] The standards are applicable to education and support services provided in a variety of settings in rapidly evolving care and payment models including population health management approaches embedded at the point of care.

National Standards for DSMES Services 2017
1 – Internal Structure
2 - Stakeholder Input
3 – Evaluation of Population Served
4 – Quality Coordinator Overseeing DSMES Services
5 - DSMES Team
6 – Curriculum
7 – Individualization
8 – Ongoing Support
9 – Participant Progress
10 – Quality Improvement

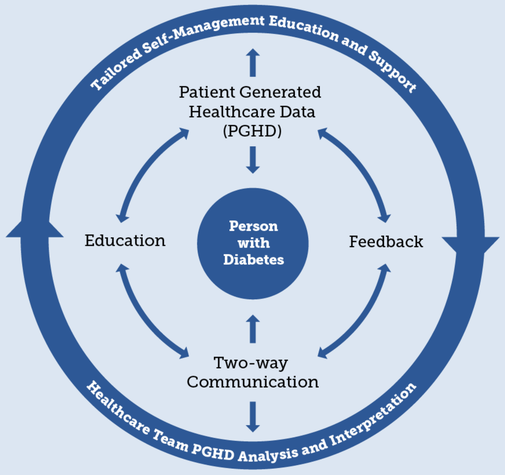
Table 1. 2017 National Standards for Diabetes Self-Management Education and Support Services *(Updates to the Standards from 2012 highlighted in Orange)*

Evidence for a Technology-Enabled DSMES Framework

Recognizing that <5% of eligible participants currently access DSMES, the revised standards recommend incorporating technology and integrating DSMES with medical management to improve access, clinical outcomes, and cost effectiveness. A recent systematic review found that technology-enabled diabetes self-management solutions significantly improve A1c. The most effective interventions incorporated all the components of a technology-enabled self-management (TES) feedback loop that 1) connects people with diabetes and their health care team using 2-way communication, 2) analyzes patient-generated health data (PGHD) , and provides 3) tailored education, and 4) individualized feedback.[3] (Figure 1)

Figure 1

TECHNOLOGY-ENABLED SELF-MANAGEMENT FEEDBACK LOOP (TES)



The 2018 American Diabetes Association (ADA) Standards of Medical Care, lifestyle section, acknowledged the importance of technology-enabled solutions to deliver education and care.[4]

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Digital Health Learning Network

In 2017, the AADE Digital Health Learning Network was formed to explore how to integrate evidence-based digital health into the practice of diabetes education and care. The technology-enabled Population Health Diabetes Education and Care approach was defined in accordance with the TES framework including:

- **Self-Management Education & Support** is provided to an identified population through evidence-based technology delivered solutions supplemented by the right level of human touchpoint.
- **Care Plan Optimization:** A defined process for viewing, evaluating and communicating patient-generated health data for shared decision making is used.
- **Practice improvement:** Extends the reach, effectiveness, and efficiency of the care team with the diabetes educator serving as the leader facilitating the pivot from:
  - Structured programs & planned visits to data-driven encounters
  - Checklists to outcomes tracking
  - Transaction based reimbursement to value-based payment

Figure 2

ROLE OF THE EDUCATOR IN THE DIGITAL HEALTH ECOSYSTEM

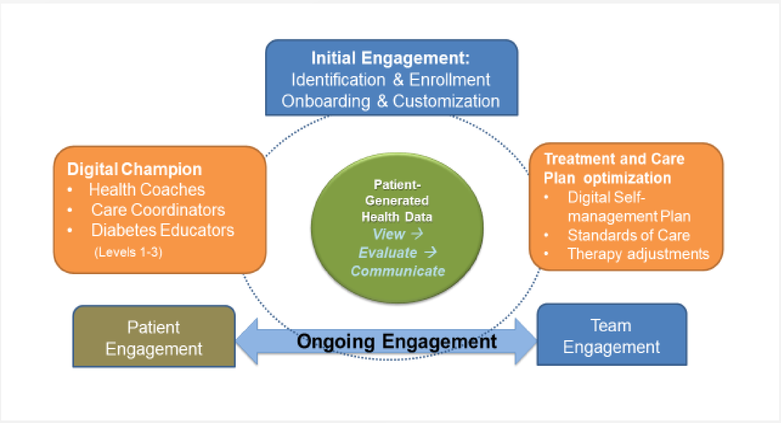

Figure 2 illustrates the role of the educator, as a digital champion, leading the health care team in a population management, technology-enabled team-based DSMES approach.

The educator leads the health care team to:[5]

- Consistently identify patients who would benefit from **evidence based** digital health tools as a standard of care.
- Engage identified patients in the use of the digital health tool **customized** for their care plans.
- Use the resulting patient generated health data in a **complete feedback loop** to inform timely treatment and care plan optimization through shared decision making to achieve improved metabolic outcomes and quality of life.

Conclusions

The confluence of the accelerating movement to population management (value-based payment and care models) with the major impact technology is making on health care is creating a golden opportunity to transform care. Nowhere is that more needed than in diabetes. The diabetes educator is uniquely skilled to lead health care teams in providing evidence-based technology-enabled population-health diabetes self-management care and education.

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References

[1]Chrvala CA, Sherr D, Lipman RD. Diabetes self-management education for adults with type 2 diabetes mellitus: A systematic review of the effect on glycemic control. *Patient Educ Couns* 2016;99(6):926-943.
[2] Beck J, Greenwood DA, Blanton L, Bollinger ST, et al. 2017 National Standards for Diabetes Self-management Education and Support. Diabetes Care, 2017 40(10):1409-1419.
[3] Greenwood, D., Gee, P., Fatkin, K., & Peeples, M. 2017 A Systematic Review of Reviews Evaluating Technology Enabled Diabetes Self-Management Education and Support. *JDST.* e-published May 31
[4]American Diabetes Association. Lifestyle management. Standards of medical care in diabetes – 2018. *Diabetes Care* 2018; 41(Suppl 1): S38-S50.
[5]Macleod, J., Peeples, M. Are you an eEducator? AADE in Practice Sep 2017, 31-35.