

MPO

Digital Health & Advancing the Quintuple Aim

26th Annual Montana Diabetes Conference
October 19, 2023

Innovation
Digital Health | Healthcare | People

"Mountains know secrets we need to learn. That it might take time, it might be hard, but if you just hold on long enough, you will find the strength to rise up."

Tyler Knott

Slide 1

MPO

Kaitlin, if you have a better graphic for this page, please feel free to update

Malinda Peeples, 2023-09-19T15:54:54.031

DIGITAL HEALTH


- Broadly defined as the knowledge and practices associated with use of digital technologies to improve health
- Digital health accelerated with the introduction of the cell phone: 2007 iPhone; 2008 Android
- 97% of Americans own some kind of cellphone; 85% own a smartphone; (35% in 2011); 15% of users are "smart-phone only" internet users*
- Provides for **possible** democratization of healthcare

*<https://www.pewresearch.org/internet/factsheet/mobile/>



A smartphone is shown on the left, with a cluster of colorful icons representing various digital health concepts such as a person, a heart, a brain, a gear, a lightbulb, a speech bubble, and a pill. Arrows point from the phone towards these icons.

Innovation is "Doing New Things"



CROSSING THE QUALITY CHASM
"Quality problems occur typically not because of failure of goodwill, knowledge, effort or resources devoted to health care, but because of fundamental shortcomings in the ways care is organized"
Trying harder will not work: changing systems of care will!


A NEW HEALTH SYSTEM FOR THE 21ST CENTURY: OOM, 2000
THE NATIONAL ACADEMIES PRESS INSTITUTE OF MEDICINE

2000

IHI Triple Aim Initiative
Better Care for Individuals, Better Health for Populations, and Lower Per Capita Costs

2008

Triple Aim



Cost Care Quality Patient Experience

Institute for Healthcare Improvement 2008

Triple Quadruple Aim (2014)



Cost



Quality



Patient Experience



Provider Experience

Institute for Healthcare Improvement 2014

Quadruple Quintuple Aim (2022)



Cost



Quality



Patient Experience



Provider Experience



Health Equity


American Medical Association 2022



How can Digital Health help us achieve Quintuple Aim?


Association of Diabetes Care & Education Specialist (ADCES)


- Take just a few minutes to share with you the technology journey of the association
- Important for all of you in the audience that these resources are available to you through Danatech
- @<https://www.diabeteseducator.org/danatech/home>



AADE American Association of Diabetes Educators

2020





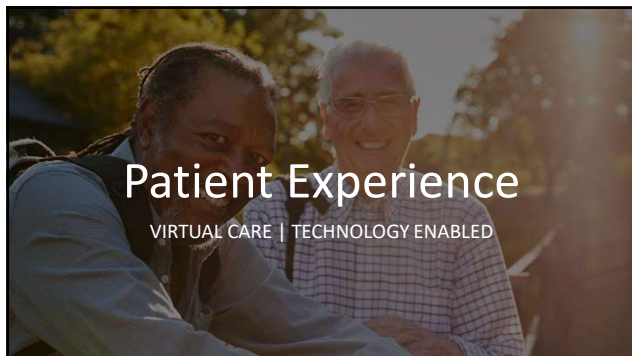
ADCES Association of Diabetes Care & Education Specialists

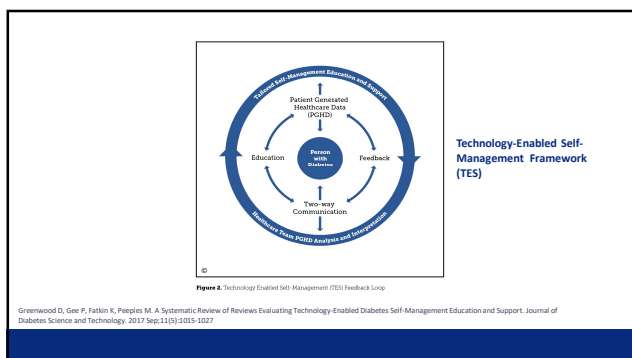
ADCES Leads the Technology Vision in Diabetes Education & Care

1997 – 2000s	2012	2015	2015	2016	2017
Outcomes Project → AADE7 Self-Care Behaviors	The e-Patient	The e-Chronic Care Model	ADCES Strategic Plan & Sphere's of Influence	Technology Work Group is formed	2017 National DSMES Standards
Systematic Reviews of the AADE7	Engaged, Empowered, Educated	Informed, Activated Patient & Prepared, Proactive Practice Team	NEW MISSION: Empower CDE to expand the horizons of innovative education, management and support.	Beyond Diabetes Devices	Addresses Technology Enabled Diabetes Care & Education
NDEIOS → AADE7 System		Produce Outcomes			

Evidence Timeline: Technology enabled (data-driven) Diabetes Care

2017	2020	2020	2020	2021	2021
Systematic Review of Reviews	A Framework for Optimizing Technology Enabled Diabetes Care	Technology Integration: The Role of the DCES in Practice	ADCES: The Role of the DCES as a Champion of Technology Integration	Technology Disparities and Therapeutic Inertia: A Call to Action for the DCES	A New Taxonomy for DSMES Interventions: Results of an Umbrella Review
Technology Enabled Self-Management Interventions (TESI)	Identify, Configure Collaborative Framework (ICF)				







ADCES Self-Care Behaviors: Framework for Quality Assessment



- Chronic disease agnostic
- Focuses on person's activities & role in health outcomes
- Digital enhances the capture of behavioral data previously not available
- Monitor for improvement, maintenance or degradation
- Person-generated data supports adaptive & artificial intelligence interventions that are personalized to the individual

Cost

POPULATION HEALTH



Person Generated Health Data (PGHD)

Patient-Level Data

Right conversation at the right time with the right health care team member

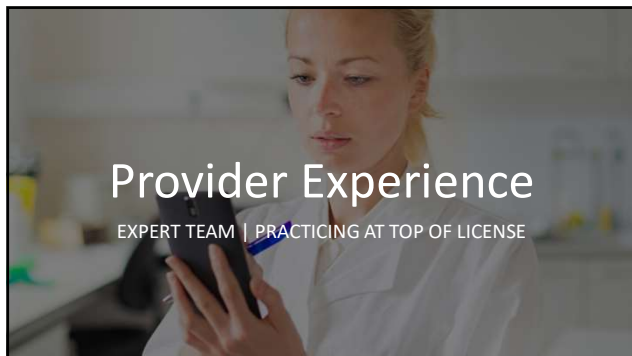


Population-Level Data

Right PWD at the right time



Continuous data-driven care



Shared Decision-Making: ICC Framework

IDENTIFY
(Expand Access)

Help every PWD make informed decisions regarding technology choices; recognize choices evolve over time.

CONFIGURE
(Expand Adoption)

Help PWD get off to a strong start by configuring tools to match their care plan

COLLABORATE
(Improve Outcomes)

Use the data on an ongoing basis in partnership with the PWD

Greenwood DA, Peoples MM, et al. A Framework for Optimizing Technology-Enabled Diabetes and Cardiometaabolic Care and Education The Role of the Diabetes Care and Education Specialist. The Science of Diabetes Care and Education, 2020

ICC framework addresses:

Therapeutic Inertia

- Lack of timely adjustment in the care plan when not meeting therapeutic targets
- Lack of time
- Limited knowledge, skill
- Rapidly changing therapy & technology options

Diabetes Disparities

3X

Less likely to use diabetes-related technology than Pediatric Caucasians.

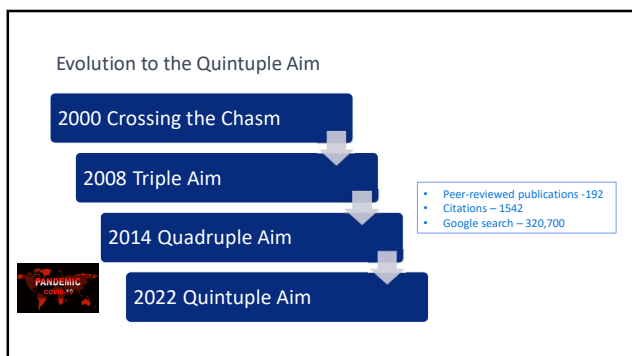
Hispanics and African American youth are less likely to be offered a pump.

3X

Less likely for Asian, Hispanic, or Black Medicare patients to be on any diabetes technology.

Woo, SM, et al. Racial Ethnic Disparities in Management and Outcomes Among Children with Type 2 Diabetes. Pediatrics. 2013; 133: 1009-1014. Internal Clinic, Medicare 2% sample PPS Enrollment with T2DM. Cross-sectional analysis during 2008-14.





Digital Health

“We have the opportunity with health IT to create digital experiences that can reach the unreached. Now, **how you do that matters**,” he adds. “You have to **design those experiences with marginalized communities** in mind first, not last or retrofitted. That means that when you’re building a website, you’re also building a mobile app experience, **testing it with the marginalized individuals in our communities and having their feedback influence your decision-making.**”

Nundy, 2022

