

# 2022 Research Agenda



The ADCES 2022 research agenda aims to guide researchers to design and test hypotheses which will support development and implementation of evidenced-based best practices for diabetes care and education services. The agenda seeks to identify implementation strategies of diabetes care and education that support engagement and positive health outcomes for all people living with or at risk for diabetes.

## Introduction and Background

The Association of Diabetes Care & Education Specialists (ADCES) aims to drive optimal evidence-based outcomes for people with diabetes and the providers who care for them by integrating diabetes self-management, education, prevention and support through six “Vision for the Specialty” pillars. This vision is driving expansion of the field and scope of expertise for the diabetes care and education specialist through the ADCES 2019-2023 strategic plan. ADCES recognizes that this expanded vision and the current ADCES Strategic Plan require a clearly delineated translational research strategy which will support advancing the science of diabetes care and education.

Evidence supporting the value of diabetes care and education has already been established. Despite ongoing research and quality improvement efforts large knowledge gaps exist in translating this evidence to benefit people living with or at risk for diabetes, their providers, health systems and population health nationally. Therefore, diabetes care and education translational research is needed to generate evidence-based strategies to drive improvement across the spectrum of diabetes-related outcomes.

It is proposed/recommended that this research will explore a range of health services and outcomes research in the field which are aligned with the ADCES vision pillars. The priorities have been distilled down to the following four

fields where evidence is needed to advance the science of diabetes care and education, and which are therefore identified as priorities for moving the field forward:

- Diversity and Equity
- Health Economics and Policy
- Implementation Science
- Workforce Development

In addition, it is vitally important to recognize that health services research is a collaborative approach to clinical research and requires a multidisciplinary team of subject matter and methodological experts to achieve optimal outcomes. It is also essential to recognize that this strategy is presented for consideration not only for ADCES and its membership as an organization, but as an agenda for all health services researchers participating across the diabetes care and education research continuum.

## **Process and Development**

### **Identifying the Breadth of Needed Research**

An interprofessional ADCES committee met and developed research questions within these four defined areas of health services research and highlighted how each of the areas identified is aligned with the ADCES vision pillars. These strategic questions are outlined in Table 1. It should be recognized that the areas proposed are not exhaustive but are rather designed to guide translational research in those areas deemed current strategic priorities.

**Table 1. Alignment of the Matrix of Research Questions and the ADCES Pillars**

Research Questions	ADCES Project Vision Pillars					
	Drive Integration	Achieve Quadruple Aim	Leverage Technology	Focus on Behavioral Health	Include Related Conditions	Promote Person-Centered Care
<b>Increase Access to DCES</b>						
What is the evidence supporting best practices for increasing access to DSMES?	X		X	X	X	X
To what extent does technology augment access to DCES (telehealth, mHealth)?		X	X			
<b>DCES Dosage</b>						
What dosage of diabetes care and education best predicts changes in clinical, behavioral, and psychosocial outcomes?		X				
<b>Health Equity</b>						
How can access to DCES be facilitated for all persons with or at risk for diabetes by socioeconomic status, ethnicity, race, cultural background, language, disability, setting, and other social factors in specific settings?	X					X
How do we modify the delivery of DCES based on the specific needs of persons from different social, economic, racial and ethnic backgrounds?						X
What are optimal strategies to attain equitable delivery and acceptance of DCES by population?		X	X	X	X	X
How can access to DCES be facilitated to all people with diabetes?	X	X	X	X		X
<b>Economics and Policy</b>						

What is the evidence that DCES is cost-effective by population and setting?		X		X		
What are the strategies to make DSMES most effective for PWD/populations.	X	X	X	X	X	X
What are the optimal methods for engaging PWD and caregiver/care partners in diabetes care and education		X		X		X
What evidence do we have that DSMES increases quality and lowers cost long term?	X	X	X		X	X
<b>Implementation Science</b>						
What are best practices for implementing DSMES in practice by setting and population?	X	X				
<b>Workforce</b>						
What models exist to integrate DCES into healthcare systems?	X					
What training exists to develop and sustain effective DCES?	X	X	X	X	X	X
What support do DCES have to improve experiences?		X				
<b>Social Determinant of Health</b>						
How are social and environmental factors that influence diabetes self-care behaviors addressed in DCES?	X	X	X	X	X	X
What are best practices for establishing links to effective support for PWD with social needs?	X	X	X	X	X	X

## Need for Increased Access to the DCES and DSMES Services

Through review of the literature and discussions, the research committee identified areas where evidence is needed to support increased access to DCES care<sup>1,2</sup>:

*1) Need to design and study processes which will promote a) the value of the DCES and diabetes care and education and b) access to diabetes care and education services to health care systems where DCESs are absent or underutilized*

The research strategy committee discussed the current state of diabetes care and education in practice. Diabetes care and education specialists are underutilized or absent in many health care systems and organizations. Unfortunately, many health care providers, people with diabetes and their family members are unaware that a DCES can provide the knowledge, skills, and confidence for self-management, resulting in favorable health outcomes. In addition, providers and PWD are often not aware of processes for accessing DSMES services.

*2) How do we disseminate information to providers who don't know who what the DCES' scope of expertise is?*

Current research studies and systematic reviews that promote the value of diabetes care and education are published in specialty journals, yet most generalists - who care for over 90% of people living with diabetes - do not subscribe to these journals, limiting ability of the specialty to reach providers who care for the majority of people with or at risk for diabetes.

## Narrowing the Focus

Through a series of continued discussions addressing the limitations of DCES access, the research committee identified two areas of interest where evidence gaps are particularly great, and which are considered foundational to the development of an ADCES research agenda that addresses the current and future state of diabetes care and education in practice:

Economics and Policy: Defining the impact of diabetes care and education on cost and utilization in the healthcare system.

Implementation Science: Specific methods or techniques used to enhance the uptake, adoption, implementation, sustainability and evaluation of services or practices.

Two recognized experts in the areas of implementation science (Gretchen Piatt, PhD) and economics and policy (Elbert Huang, MD) joined the committee to lead a series of discussions on these two topics. Following these discussions, the research team narrowed the focus of these sections of the proposed research agenda to identifying implementation strategies for diabetes care and education to support engagement and health outcomes and quantifying the economic impact (cost and utilization) of diabetes care and education within health systems, including generating evidence of the cost-effectiveness of DSMES by setting.

Exploring these two foundational areas in the initial years of this research agenda will allow a focus in subsequent years on increasing access, exposure, diversity and equity, workforce training, and social determinants of health.

## Proposed Research Strategy for 2022

ADCES recognizes the need to engage and support/collaborate with health services researchers interested in implementing services that positively impact clinical, behavioral, safety, quality, and economic outcomes and enhance the experience for both the person with or at risk for diabetes and the provider. **This 2022 research agenda aims to guide researchers to design and test hypotheses which will support development and implementation of evidenced-based best practices for diabetes care and education services**, including:

- Diabetes Technology
- Telehealth for delivery of diabetes education
- Diabetes Care and Education Guideline Implementation
  - Decision support for both people with diabetes and providers for optimal health outcomes
  - EHR strategies to facilitate DSMES referrals
  - Establishing an accurate diagnosis and providing tailored education
- Health Equity
- Peer to Peer Diabetes Support, peer navigation
- Patient Reminders related to the ADCES7 Self-Care Behaviors™
- DCES as coach (exercise, nutrition) – Role of the DCES
- Precision Medicine, AI, data science for DSMES and diabetes care
- Innovative DSMES services – redesigning programs, delivery system redesign
- Community resources and policies
  - Built environment (in conjunction with existing organization) as it relates to DSMES

The cornerstone of evidence-based practice and health services delivery incorporating health equity among diverse populations with or at risk for diabetes underpins all aspects of diabetes care and education translational research. Our proposed research strategy is an Implementation Science approach to engage health systems and all members of

the care team, providers and people with diabetes in addressing health equity. This approach leverages the foundation of the ADCES vision pillars with strategic research priorities for moving the field forward.

The 2022 ADCES Research Committee seeks to:

1. Generate interest in translational research supporting the science of diabetes care and education
2. Disseminate the 2022 ADCES research agenda to relevant stakeholders through ADCES communication channels,
3. Solicit applications for research projects supporting this agenda in Q1 2022 and,
4. Take this agenda under consideration when choosing the 2022 recipient of the ADCES/CBDCE Mentored Post-Doctoral Fellowship in Integrated Diabetes Management.

ADCES Gratefully acknowledges the following ADCES Research Committee Members for their significant effort and contributions in developing the research agenda:

Gretchen Piatt  
Michelle Magee  
Michelle Litchman  
Eva Vivian  
Nancy Allen  
Julia Blanchette  
Mayra Cantazaro  
Lisa Letourneau-Freiberg  
Neesha Ramchandani

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## References

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2. Whitehouse CR, Haydon-Greatting S, Srivastava SB, et al. Economic Impact and Health Care Utilization Outcomes of Diabetes Self-Management Education and Support Interventions for Persons With Diabetes: A Systematic Review and Recommendations for Future Research. *The Science of Diabetes Self-Management and Care.* 2021;47(6):457-481. doi:10.1177/26350106211047565