Mobile and Digital Health: Opportunities for Impacting Diabetes Among Native Communities

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Objectives

• Consider the evidence for:
  • mobile and digital solutions for diabetes prevention and self-management
  • using mobile solutions for health promotion more broadly among diverse Native communities

• Where are the gaps and opportunities?

• What are key considerations in addressing gaps and pursuing opportunities?
References


### What does the evidence show?

<table>
<thead>
<tr>
<th>Factor</th>
<th>Web</th>
<th>SMS/Text</th>
<th>Social Media</th>
<th>Apps</th>
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What are barriers to mHealth among Native Populations?

• Gaps in informed consent
• Challenges to data management (data confidentiality, participant privacy, data sharing)
• Social implications
• Failure to appropriately adapt for diverse groups
• Failure to consider appropriate technology
Notable examples of mobile and digital solutions with Native populations

- TXTTaofiTapaa
- Samoa and smoking cessation
- Iterative evaluative process
- Messages theory based
- Linguistic and cultural nuances
Notable examples of mobile and digital solutions with Native populations

• Texting 4 Sexual Health
  • NW Portland Area Indian Health Board and OHSU with We R Native
  • 24 test messages on sexual health
  • Showed increases in condom use

• CRC Screening
  • Southcentral Foundation in Anchorage Alaska—Tribally owned primary care
  • 3 text messages up to 1 month apart
  • Showed increases in CRC Screening
Notable examples of mobile and digital solutions with Native populations

- Meta-analysis of Social Networking Sites
- Included online only versus hybrid
- The hybrid programs produced the greatest effects
  - Consistent declines in HbA1c for Type II Diabetes
  - Exposing patients to online support groups
Opportunities for impact on Diabetes among Native populations with mobile solutions

• What do we know about what works for Diabetes Self-Management in particular using mobile solutions?
  • Reminders for blood glucose measurement
  • Medication reminders
  • Physical Activity
  • Weight management

• Where are the gaps? Adaptations and tailoring for Native communities...
  • SMS?
  • Social Media?
  • Apps?
  • Sensors?
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• Regardless of modality we need careful consideration of:
  • How to reach people consistently and over time
  • How to engage them once we do connect
  • How/whether to engage others within social/family and community networks

• We have underutilized hybrid programs
  • How might we link a mobile solution to existing or new in person programs?
Opportunities for impact on Diabetes among Native populations with mobile solutions

In response to the diabetes epidemic among American Indians and Alaska Natives, Congress established the SDPI grant programs in 1997. This $150 million annual grant program, coordinated by the Indian Health Service (IHS) Indian Health Service (IHS) Division of Diabetes, with guidance from the Tribal Leaders Diabetes Committee, provides funds for diabetes treatment and prevention to IHS, Tribal, and Urban Indian health programs across the United States.

SDPI Updates

New Video! Changing the Course of Diabetes in Indian Country

Check out and share this new video, produced in collaboration with ADA TV. It highlights SDPI and the remarkable improvements that are changing the course of diabetes in Indian Country. Dedicated to all SDPI grantees and featuring the Chicksashlar Nation Diabetes Program, the video premiered at the 79th American Diabetes Association Scientific Sessions in Orlando, FL, June 22–26, 2018. (Running time: 5:40)
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mHealth Impact
CREATING AND CURATING DIGITAL HEALTH SOLUTIONS
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• How might we build on “what works” in more traditional interventions?

• What are the hallmarks of effective interventions among Native populations?
  • Community-based, community-centric
  • Culturally tailored
  • Narrative
  • Role Models (Peer and Community)
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Curriculum Topics

The current DPP program is a year-long structured intervention in which participants learn how to make lifestyle changes to reduce their risk for type 2 diabetes.

Months 1 – 6
All 16 curriculum topics below should be covered in the first six months.

1. Welcome to the DPP Program
2. Self-Monitoring Weight and Food Intake
3. Eating Less
4. Healthy Eating
5. Introduction to Physical Activity (Move Those Muscles)
6. Overcoming Barriers to Physical Activity (Being Active – A Way of Life)
7. Balancing Calorie Intake and Output
8. Environmental Cues to Eating and Physical Activity
9. Problem Solving
10. Strategies for Healthy Eating Out
11. Reversing Negative Thoughts
12. Dealing with Slips in Lifestyle Change
13. Mixing Up Your Physical Activity: Aerobic Fitness
14. Social Cues
15. Managing Stress
16. Staying Motivated, Program Wrap Up

Months 7 – 12
At least one session should be offered in each of the six remaining months. Programs may elect to offer more sessions to participants needing additional support. Lifestyle coaches can choose which of the following topics to present and can do so in any order they wish.

1. Welcome to the Second Phase of the Program
2. Healthy Eating: Taking It One Meal at a Time
3. Making Active Choices
4. Balance Your Thoughts for Long-Term Maintenance
5. Healthy Eating With Variety and Balance
6. Handling Holidays, Vacations, and Special Events
7. More Volume, Fewer Calories (Adding Water, Vegetables, and Fiber)
8. Dietary Fats
9. Stress and Time Management
10. Healthy Cooking: Tips for Food Preparation and Recipe Modification
11. Physical Activity Barriers
12. Preventing Relapse
13. Heart Health
14. Life With Type 2 Diabetes
15. Looking Back and Looking Forward

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• Look at your phone
  • What do you use the most?
  • With whom?
  • Why?
  • Under what circumstances?
• How might this translate for interventions?
• Do these ideas suggest stand alone?
• Hybrid?
Thank you! Sheana.bull@ucdenver.edu