Program Introduction

According to the Centers for Disease Control and Prevention (CDC), more than 100 million U.S. adults are living with diabetes or prediabetes. In Idaho, 127,799 people or 10 percent of the adult population have diabetes. The CDC estimates that average medical expenditures among people with diagnosed diabetes were 2.3 times higher than what expenditures would be in the absence of diabetes. While diabetes is a serious condition, it can be managed through healthy lifestyle changes to lower the risk of complications, reduce medication and insulin use, and ultimately reduce total economic cost.

The Dining with Diabetes (DWD) program was originally developed by West Virginia University Extension and has since been expanded for use nationally through the efforts of the National Dining with Diabetes Working Group (NDWD). The program consists of a four-lesson cooking school designed for people who have type 2 diabetes or people who care for those who have diabetes. Through DWD instruction, participants learn how to prepare healthy meals, learn about carbohydrates and their role in blood sugar management, the causes of diabetes, tools for managing diabetes, and the importance of diet and exercise in managing diabetes.

Typically, the DWD program is offered in-person, with hands-on cooking demonstrations, recipe sampling, and peer-to-peer interaction. In late 2019, a team of Idaho DWD instructors had gained internal funding support to expand outreach of this program to Hispanic/Latinx Spanish-speaking populations in 2020. With these funds, a Spanish translator was contracted, and a Spanish and English DWD in-person program was scheduled for early April 2020 in partnership with a local housing authority. With the pandemic and state stay-at-

home orders, all in-person Extension programs became cancelled in early March. With this shift, an effort began to transform this in-person program into an online format.

Program Outline

The free "Google Classroom" platform was chosen as the online host platform for the online Idaho DWD program. The DWD program instructor self-recorded herself teaching the four main DWD lessons using Zoom. The previously contracted Spanish translator self-recorded herself teaching the four main DWD lessons in the Spanish language using Zoom. Each of the four lessons were broken up into 5-7 mini-videos of no longer than 10 minutes duration for ease of completion for participants. In addition, "Tasty"-style recipe videos were added to each lesson to maintain the "cooking" and recipe component of the program. Listed below are the titles of the four main lessons of the national DWD curriculum:

Lesson 1: Living Well

Lesson 2: Carbohydrates & Sweeteners

Lesson 3: Fats & Sodium

Lesson 4: Vitamins, Minerals, & Putting It All Together

In addition, an "Introduction to Dining with Diabetes" module was recorded in both Spanish and English. The purpose of this module was to explain the structure of the program by reviewing the "Online Program Schedule," describe the course platform "Google Classroom," disseminate the online pre-program questionnaire, and introduce the weekly Q&A sessions (live Zoom meetings). To encourage completion of the program and the pre- and post-program questionnaires, a free diabetes plate was provided to every participant. Diabetes plates were

purchased with the described internal grant funding. Participants who completed the program (indicated by clicking the button "Mark as complete" on each lesson after reviewing) and completed both the pre- and post-questionnaires, received a free Diabetes Plate in the mail. Access to review the online course can be found at this link (class code if needed: 6ahzssx): https://classroom.google.com/c/Njg5NzgyMTMwNDNa?cjc=6ahzssx

To maintain the original program integrity and to keep the program as structured as possible, two structural components were included:

- The program implemented a "building" structure. In other words, a new lesson was made available to the participants each week during the 4-week program, i.e. Lesson
 1 was made available the first week, and Lesson 2 was made available the second week, and so on.
- 2. Weekly, live Q&A sessions using the Zoom platform (linked from the Google Classroom) were offered as an optional engagement for participants. This allowed participants to gain peer-to-peer interaction, to meet and build rapport with the program instructor, and allowed for individual questions to be asked after reviewing each lesson each week.

As this program was developed and offered just a month or so following stay-at-home orders, online literacy and engagement was not as familiar for many of the participants. The typical DWD program audience is in the older age demographics who may not have had much exposure to this type of technology. To reduce stress and increase engagement, participants who registered for the course received (in this order):

- 1. An introductory email with a program letter, instructor contact information, and a direct link to the "Introduction Module" pre-recorded video
- 2. A "Google Classroom" invite email (instructions listed in the program letter)
- 3. A follow-up phone call from the instructor to ensure each participant received both the introductory email and the Google Classroom invite email, as well as to answer any questions from participants.

Program Outcomes

Initially, this program was created to be offered in place of the in-person DWD program scheduled with the local housing authority. However, this online course was offered again in the fall of 2020 with partnership with the local parks and recreation office. From offering this program twice in 2020, a total of 19 participants completed the 2020 Online Idaho DWD program. Of these, one participant chose to complete the Spanish-speaking online DWD program. All participants identified as female, and two participants identified as Hispanic/Latinx.

Out of the 19 participants, 15 completed the pre- and post-program questionnaires. The questionnaires include seven knowledge questions that are each scored and added together for a total possible score of 22 points. A participant's score at the beginning of the program is then compared to their score at the end of the program. Average total scores are shown in Table 1.

	Average Score
Average score on the pre-program survey	17.1
Average score on the post-program survey	19.6
Number (and percentage) of participants increasing their score from pre to post	13 (86.7%)

Table 1. Average score

Over a four-week period, 86.7 percent of participants who were surveyed increased knowledge about diabetes management and self-care behaviors. Five behavior change questions were included in the questionnaire. Average days perweek reported for each behavior in both the preand post-questionnaire is shown in Table 2.

Table 2. Questions	and average	davs a we	ek pre- and	post-questionnair	es
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On how many of the last 7 days did you?	Average days (Pre)	Average days (Post)
Exercise for 20 minutes or more?	4.1	4.7
Eat a variety of fruits and vegetables?	5.6	6.3
Consider portion sizes when making meal choices?	5.0	6.5
Review the food label before eating?	4.8	6.0
Check your feet?	2.9	5.5

On average, participants increased implementing healthy behaviors by 1.3 days perweek after participating in the four-week, online program.

Future Implications

Health risk is still increased for this program's target population, and online programming is becoming more comfortable for older adult consumers. Due to the continued need, Extension Educators will continue to offer this virtual program. To expand program outreach, a team of seven University of Idaho Family and Consumer Sciences Extension Educators from across the state will offer this developed online DWD program simultaneously in March 2021.

FREE Online DINING WITH DIABETES 4-WEEK COURSE

Free Class

Registration is required!

Dining with Diabetes is a program offered by the University of Idaho Extension that helps people with Type 2 diabetes to identify and understand important information on how to manage this disease. We are offering this program online to continue serving you during this time!

Participants will learn about diabetes and how to manage it through meal planning, portion control, understanding labels, and physical activity.

Online program includes:

- 1. An initial phone call from the instructor to ensure you understand how to access the course.
- Access to one "Introduction Module" and four pre-recorded and structured lesson modules and recipe demonstrations on Google Classroom (each week, you will receive access to the next lesson module.)

**Online access to the Introduction Module and Lesson 1 will be provided to all registrants on Friday, September 25.

- 3. Online chat with instructors and other participants
- 4. Four weekly live Q&A sessions on Wednesdays (starting Sept. 30 and ending Oct. 21) from 5:30-6:30 PM
- 5. Completion of the four modules and pre- and post-program evaluations and you will be provided with a **FREE diabetes plate!**

To register, contact: Caldwell Parks & Rec 618 Irving St. Caldwell, ID 83605 208-455-3060

Registration deadline: Thursday, Sept. 24 by 5 pm

University of Idaho Extension

The University of Idaho has a policy of nondiscrimination on the basis of race, color, religion, national origin, sex, age, sexual orientation, gender identity/expression, disability, genetic information, or status as any protected veteran or military status.

Persons with disabilities who require alternative means for communication or program information or reasonable accommodations need to contact Jackie Amende by at least two weeks prior to the event at 501 Main St. Caldwell, ID, 208-459-6003, or jamende@uidaho.edu

[Participant Name],

We are excited you have registered for the Online Dining with Diabetes program! You will receive an email here shortly from "Jackie Amende" with a subject title "Class Invitation: Dining with Diabetes Online." To access the online modules, open this email and click "Join." Then follow the prompts to gain access to the Google Classroom where the program is located.

Although the program is online, it is still structured for a weekly 4-week program. Once you receive the class invitation, you will gain access to the "Introduction" assignment and the "Lesson 1: Living Well with Diabetes" assignment. Follow the steps below to access the first week's modules once you have "joined" Google Classroom:

- 1. Click on "Coursework" once you are within the Google Classroom.
- Click on "Introduction to Dining with Diabetes" and click "view assignment." Follow the three "To-Dos" that are described within the assignment to complete the "Introduction" module. Please, use the "Class Comments" section to post a comment with any questions, etc. I will be able to view these and respond, and so will your peers.
 - a. Once you have completed all steps: click "Mark as Done" so I am aware you are finished with the "Introduction" module.
- Once you have completed the "Introduction" module, return to "Classwork" and click on "Lesson 1: Living Well with Diabetes" and click "view assignment." Complete the assignment as directed.
 - a. Use "Class Comments" section to post a comment with any questions.
 - b. Once you have completed all steps, click "Mark as Done."
- 4. Complete both the "Introduction" and "Lesson 1" assignments by Thursday, March 4. If you are unable to complete the modules on time, you will still have access to Lesson 1 moving forward to catch up.
 - a. Join us for one of two live, Q&A sessions scheduled on Thursday, March 4 at 2 PM MT and/or at 5:30 PM MT. Join the session(s) by following the directions listed on Google Classroom.
- You will gain access to "Lesson 2: Carbohydrates and Sweeteners" after the Q&A session on Friday, March 5.
 - a. This pattern will repeat itself until the final Q&A session on Thursday, March 25. Please review the "Course Schedule" under the "Introduction" module.

For completing all four lessons and both the pre- and post-program surveys. You will be entered to win one of multiple different prizes (diabetes plates, water bottles, resistance bands, etc.)! ③

Please let me know if you have any questions or have trouble gaining access to the online program. Contact me by:

- Email: jamende@uidaho.edu

Thank you!

Jackie Amende MS, RDN, LD FCS Extension Educator University of Idaho Extension, Canyon County

