Ciemins, E. L., Coon, P. J., Coombs, N. C., Holloway, B. L., Mullette, E. J., & Dudley, W. N. (2018). Intent-to-treat analysis of a simultaneous multisite telehealth diabetes prevention program. BMJ Open Diabetes Research & Care, 6(1), e000515. https://doi.org/10.1136/bmjdrc-2018-000515

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These materials are a part of the Compendium of Culturally and Linguistically Tailored Resources for Type 2 Diabetes Prevention, assembled by NORC at the University of Chicago under contract with the Centers for Medicare & Medicaid Services Office of Minority Health.

Diabetes Prevention Program
Telehealth Lifestyle Balance Program
Training Manual

Introduction

The National Institutes of Health with the Center for Disease Control (CDC) conducted a rigorous research study to discover if intensive lifestyle intervention or treatment with Metformin could be effective in preventing or delaying the onset of diabetes. The results supported the hypothesis that type 2 diabetes can be prevented or delayed in persons at high risk for the disease. Participants in the lifestyle change arm of the study reduced their risk of being diagnosed with type 2 diabetes by 58% and were effective for all ages and ethnic groups. Use of Metformin also was effective in prevention of diabetes. 31% of participants in this arm of the study avoided or delayed onset of the disease. Participants in the lifestyle intervention lost an average of 15 pounds the first year and were still maintaining about a 10 pound weight loss after three years. They also found that diet and physical activity leading to weight loss are effective in helping reduce risk factors associated with diabetes, cardiovascular disease, high blood pressure and metabolic syndrome. This diabetes prevention study saw positive results more quickly than expected and the blinded treatment phase was halted a year earlier than planned. The findings were published in the Feb. 7, 2002 issue of the *New England Journal of Medicine* .

As a result of this study, the CDC launched the National Diabetes Prevention Program (DPP) to replicate the success of the original DPP study. The goal was to collaborate with organizations across the country that had the necessary infrastructure, health payers, health care professionals, public health, academia and others to reduce the incidence of type 2 diabetes.

Programs to translate and replicate the success of the DPP study have been piloted in several states and settings. The CDC took what seemed to work the best from these translational efforts to create the National Diabetes Prevention Program. Of special note, the translational studies proved that the program could be effective in a group setting as well as individual counseling. The CDC now supports 59 state and territorial diabetes prevention and control programs (DPCPs). The basic structure of the National DPP is a group-based lifestyle intervention program to deliver the translated “best practice” of diabetes prevention to those at risk. The key features of the DPP’s lifestyle intervention program used in the study were developed by the DPP Lifestyle Resource Core at the University of Pittsburg Medical Center. The intervention program was entitled *Lifestyle Balance.* The components of the curriculum, worksheets, handouts, instructor guidelines, and post- care follow-up can be found on the CDC’s National Diabetes Prevention Program website. It includes a network of training, feedback and clinical support.

Billings Clinic became involved in delivering this DPP Lifestyle Balance program to the Billings (urban) population in 2008 when the Montana State Health and Human Services department offered support to four original hospital based sites. The program has grown to 15 state sponsored sites. In the fall of

2010, the Billings Clinic Center for Clinical Translational Research (CTR) staff took over responsibility for this program in order to test additional diversified staff support and reach a broader population base by using telehealth technology. CTR added to the coaching faculty with a registered nurse (RN) certified diabetes educator (CDE), who also served as the "case manager", an exercise physiologist, and a licensed clinical social worker (LCSW) or "*lifestyle coach".* In addition, a technical assistant aided in processing all the paperwork as needed.

In the spring of 2011, CTR turned over control of the urban DPP program to the Billings Clinic Diabetes, Endocrinology and Metabolism Center. With a grant from the Health Resources and Services Administration's Office for the Advancement of Telehealth (OAT), CTR implemented the same program to a wide rural area using telehealth technology to deliver the content to several rural communities. The purpose was to adapt the existing urban Lifestyle Balance program by utilizing telehealth technology to reach numerous rural sites simultaneously and increase program access to rural and frontier communities which would otherwise not be able to provide this service. Five rural clinics agreed to participate in the initial program offering, their staff received education about the program , and CTR implemented the Telehealth Lifestyle Balance Program in February 2011. As this program was funded by OAT, there was no fee for the program. The community clinics provided the space and the telehealth equipment. They also provided a site coordinator, usually a nurse or medical assistant, to recruit participants, obtain necessary measurements, distribute program materials, and act as a go-between for participants and CTR staff, (referred to as "team" or "coaching team" in this document) as necessary. The various sites were connected with CTR staff via telehealth on a pre-arranged schedule and the sessions were conducted in the five sites at one time. The various sites had telehealth facilitators who were responsible for turning on the equipment and making sure the participants were comfortable with the technology. The study data demonstrates the success of the Telehealth Lifestyle Balance Program is very comparable to the urban face-to-face program. Another measure of success was the participant's response to the effect of the program on their ability to make better lifestyle choices and affect their overall health.

The following is an example of one family that was very successful with the program and how they utilized each other, the Lifestyle coaches, and local professionals to achieve their success. This man and wife couple, both morbidly obese, was willing to participate because they wanted to improve their health and mobility enough to enjoy activities with their grandchildren. The husband especially was very pessimistic about being able to participate much in the activity portion due to severe arthritis and back pain. He could barely walk with a cane and had trouble sitting for any length of time. He also battled with diabetes, chronic kidney disease, and COPD (on oxygen). The RN-CDE called the couple often and offered suggestions and support. The exercise physiologist offered achievable activity goals. With slow but steady progress, the couple met their weight goals and started swimming with the grandchildren. Labs have improved for both, he is no longer on oxygen, and they have purchased bicycles!

Another participant wrote the following: " I am not losing weight very quickly, but I am losing. Most importantly, I am considerably more active than I have been in years. I carry my book with me everywhere and I log my foods. I plan my meals and have changed the way I cook for my family. I am still working toward more balance in my diet, but I have learned a great deal and love this program. Last

week I was hurrying back to Plentywood so I would not be late for the meeting because I look forward to them. I will keep my eye on the prize and look forward to seeing you next week."

Implementing the Telehealth Lifestyle Balance Program

Rural Site Considerations

Identifying Rural Sites to Participate

The first task is to identify interested rural sites to participate in the program. Traveling to these locations to share the details of the program is very important, once the communities have been identified. This should be done several months in advance to ensure all components are in place at the time of implementation. At the site visit, the program is explained to leadership and interested staff. Telehealth equipment, schedule and staffing considerations need to be discussed and the feasibility of participating in the program decided.

- The majority of potential telehealth sites were interested in participating in the Telehealth Lifestyle Balance Program. There were several considerations that were examined before identifying which sites could be included.
    - A clinic in the area that would have primary care providers to identify patients as potential participants.
    - The site must have telehealth videoconferencing capability and be part of a system that can connect with CTR and other sites. (The Polycom system is used in urban and rural sites with the Eastern Montana Telehealth Network system (EMTN)).
    - A telehealth facilitator to make sure the equipment is set up and operational before each session.
    - Adequate space where the participants can meet, be seated comfortably, have a table for writing and placing materials, view the telehealth session, and ideally – space to do some stretching and/or aerobic exercising with the group. These things need to happen in an area and time that does not interfere with clinic business as usual. Its best if this is a room where the door can close so that the telehealth participants and the clinic patients each maintain confidentiality.
    - Interest and backing from the leadership team that will support the time and staff resources is necessary for program success.
    - Staff with the interest and enthusiasm to successfully recruit participants from their community, get baseline data, obtain participant measurements and/or lab values as needed, receive and send materials in a timely manner, and act as a patient advocate to relay problems or special considerations as needed.
    - Onsite blood draw and lab capabilities are a plus if your program will be monitoring lab values. Lab tests you may consider monitoring include: pre /post program lipid panel, fasting blood glucose, and an A1C if a participant has pre-diabetes or diabetes. Weekly

weights and periodic measurements of BMI, waist circumference, and blood pressure are recommended.

- Reliable, calibrated scales and blood pressure measuring equipment are necessary. Since a weight is required at every session, the scale needs to be readily accessible to the attending participants. Site coordinators should be trained in accepted blood pressure measurement technique.
- Not all rural sites had access to public exercise areas in their communities. However, exercise is a vital component to healthy lifestyle change. Some of the communities made changes after the Telehealth Lifestyle Balance Program to create or enhance such access to their population. It is beneficial to have a conversation with community leaders that would be instrumental in promoting such access.
- As the program now exists, it is vital that the community has reliable mail service. The mail service was used to send all the weekly supplies, lessons, handouts and feedback letters to participants. The keeping track books, attendance records, and "homework" were sent back to the team each week via mail. An alternative might be to convert some of the materials to electronic communication with electronic notepads or smart phones.
- At each remote site, the success of the program relied heavily on a "site coordinator". This was usually a nurse or MA who did the many tasks to help participants receive their materials, ensure the room was ready and send the team materials and measurements as needed. CTR recognized their contribution with either a gift certificate or small gift. The remote site did have to agree to allow this person the time to recruit participants and do the necessary tasks to keep the program running smoothly. Sites which identified a "back up" or relief for this person had fewer complications when it came to vacation or other leave. The usual tasks performed by the site coordinator are:
    - Identify and contact possible participants from the local community.
    - Interview the potential participant; obtain needed measurements and lab values – height, weight, BP, waist circumference, pertinent medical history, and mentioned lab values.
    - Have the participant and their primary care providers sign the informed consent to participate and engage in moderate physical activity.
    - Mail the above information with participant contact information to the originating site.
    - Receive and distribute the session materials to participants each week. Some materials may be confidential and sent in a sealed envelope.
    - Perform measurements each session per program requirements. This is usually a weight and could include a blood pressure or waist circumference.
    - Maintain and send record sheets to the originating site each session. This includes attendance records, participant's log book, other materials participants are requested to complete, and any measurements taken. CTR did supply the site coordinator with self- addressed, stamped, return envelopes large enough to hold all these materials.

- Confirm the room and telehealth equipment are ready for the participants each session. This would include checking that the site is signed up for the telehealth time.
- Act as "eyes and ears" for the originating site team. As participants have problems or concerns arise that the team may help with, the coordinator could inform the team, ask the participant to contact us, or suggest an action.
- Site coordinators also helped each other at the various sites. Sometimes this was through the Education Advisory Council which the urban site formed for this purpose, or at times they called someone in another site directly with questions.
- A letter was sent to each coordinator to help identify those tasks to be completed each week. *Refer to Appendix A – Instruction Sheet*

Program and Session Planning

- Four to five months prior to the first session, the team should meet to complete a timeline for tasks needing attention prior to the beginning of sessions. Ordering materials like paper, binders, blue books, and other supplies to be available prior to the start of the program is crucial. Contacting the various remote sites early on to identify a site facilitator and establish an open communication format with each of them is important as well. Recruitment of participants, interviewing them, and obtaining baseline data are all tasks to be completed before the program started. The written timeline with tasks and due dates is a valuable guide to ensure timely completion of tasks. *Refer to appendix B – Planning Timeline*
- A data collection timeline was developed to remind us when to gather data concerning weights, lab values, blood pressures, waist circumference and other measures. *Refer to appendix C – Data Collection Timeline*
- The team met on a weekly basis to plan the flow and content of each session and identify the staff needed to present/facilitate the session well before it was scheduled. The week prior to a specific session we would briefly confirm the upcoming session, problem solve if there were last minute complications, and make sure all materials were ready for mailing. A very useful form was created to help us remember to include all topics, handouts, other teaching tools, and metrics to be used in each session. *Refer to appendix D - Session Plans*

Participant Recruitment

CTR relied on the rural site coordinator to recruit potential participants for the program. The primary care provider is the primary source for referrals plus the office nurses often suggest potential participants. Other methods included public notices and advertising in the local paper. The originating site can offer an advertising layout that could be put in a local newspaper with the local clinic's brand. Participant recruitment should be aimed toward those capable of reading the materials, keeping a log book, and participating appropriately in the group discussions. Participants were requested to obtain a provider's clearance for moderate exercise tolerance. Other criteria that can be used are a BMI in the overweight or obese range, one or more cardiovascular risk factors not in control, or a family history of diabetes or cardiovascular events.

Once an individual is identified, they are invited to the local clinic where the program is briefly explained and required measurements are done – height, weight, waist circumference, blood pressure, and appropriate lab values and pertinent medical history obtained. The site coordinator can then ask the primary care provider to sign a form that gave medical release for moderate physical activity. This information is then faxed to the originating site along with the individual's contact information. This information is then distributed to the case manager RN to complete the recruiting process. *Refer to appendix E – Intake Form.*

The case manager or coaches call each individual as the recruitment forms arrive at the originating site. They explain the program and goals in detail. Program expectations of participants as well as the coaching team are discussed. Participants should be asked what they hope to achieve from the program and what they perceive are the barriers they might need to overcome to achieve those goals. Further medical history information is obtained if needed – i.e. family history of diabetes or gestational diabetes, medications etc. The interest of the individual can be determined using a Likert Scale. They are then sent a written agreement that list those things they could expect from the coaching team, what the team expects of them. They are asked to sign this form and give it to the site coordinator at the first session. *Refer to appendix F – Team Agreement*

After the coach determines the individual wishes to participate in the program, their name, contact information, medical and social history, desired goals and any perceived barriers are entered into the electronic tool to keep track of participants. Information was also entered into the ACCESS database. The new participant is sent a letter of congratulations for joining the Lifestyle Balance program and information about the first session, including time and location. Carefully record how many participants joined in each site so the mailing of supplies will match the participants.

Schedules

- Once the sites are identified, notify the telehealth department to start working out dates and times that will accommodate the system's schedule, the originating site telehealth schedule, and the entire rural sites' telehealth schedule. It is advisable to offer a noon and an evening time for each site to accommodate as many participants as possible.
- The coaching team should meet at least 2 months prior to the first session. Develop your timeline to coordinate tasks such as ordering supplies, contacting rural sites with start up dates, schedules, setting a telehealth schedule, identifying a site coordinator, and recruiting participants. A sample timeline is found in the tools section.
- Frequent review of the timeline helps to stay on task. Develop a data collection schedule as a reminder tool to gather the necessary lab values and measurements on time.
- Meet at least 2 months prior to the first session to finalize the session schedule calendar. In this meeting you will develop a very basic outline of the content of the 16 core and eight after core ~~?~~ sessions. From this, the session schedule with the dates and titles of the sessions are developed to send to participants at the first session. *Refer to appendix G – Lifestyle Balance Meeting Schedule*

About one month prior to the first session, start weekly meetings to plan in detail each of the sessions. What would the main topic be, who would present it, what materials and handouts will be needed are questions to address. The National DPP Lifestyle Balance website offers a step by step process and materials to copy and use. You may choose to adapt the materials, add additional materials, or include specialists to address certain topics. It was determined that covering some of the material in a different order was preferable, but that the general structure of the website was very helpful in organizing the plan. You should always keep your lesson plan at least 3 to 4 weeks ahead of the session presentation. You can also spend some of each planning session reviewing the upcoming session for that week and making any last minute adjustments. The technical assistant attended these meetings also to help keep track of materials that would be needed for each session and when to mail.

After several trials, we developed a very useful tool to help plan for each session. A sample of this tool is copied here:

Session 1						
Date:		Note:				
Metrics	**Measurements:**		**Handouts:**		**Tools:**	
Topic	**Focus of Topic**	**Presenter**	**Detail**	**Alloted time (min)**	**Changes from Fall 2011**	**Post Session Comments by presenter**
Prior Week Review						
Topic 1						
Exercise						
Topic 2						
Summarize						
	Prepare to mail					**Remind to send back**
Mailings						
Notes:						

The completed detail of all sessions is found in the appendix. *Refer to appendix D - Session Plans*

<u>Session Planning:</u>

- All sessions are one hour in length. The title of the session is entered after the session number, then the date and any special considerations. For example, the social worker will be out of town this day. That would remind you of this variation while planning for this session. Enter which metrics are needed for that specific time period. Weights should be obtained every session, but you might also want a blood pressure or waist circumference that day. Prepared session lessons and handouts are listed and the tools

used to help present a lesson. For example: you might list DPP session 1, My Metabolic Picture and a handout about the DASH diet as handouts, and Walk the Pounds Away DVD as a tool to use. Each session starts with a very brief overview of the previous session with a chance for Q&A from the participants. This is also a good time for participants to share what was working for them and what isn't. Main topics can split into 2 sections to avoid too much lecture or going into too much detail on any one topic. Strive for lots of participation from the participants in these sessions. Topic one and two may or may not be related. Topics can be split with a 10 to 15 minute stretching/exercise session to keep the blood flowing and interest high. A 5 minute period is saved at the end of the hour to summarize the main points of the lesson, give assignments if applicable and answer questions. The notes by the presenter will make planning for the next group much easier. The technical assistant uses the bottom section for a reminder of materials to prepare and send to the sites each week before the session. There is also a section to help you remember to ask site coordinators to prepare for the next session if need be. For example: the week before the hypertension talk, we reminded the facilitators to be sure to come prepared to take a blood pressure measurement on everyone. The last note section is to write any special observations or concerns with how the session went.

- At least 2 of the coaching team should be present for each session. If there are problems with the telehealth equipment or certain materials missing, one of them is free to solve the problem. It is also viewed as good for the interest of the group to have more than one person presenting. It adds variety. Often, one of the RN case managers was the second presenter.

<u>Session Plans</u>

- The National DPP website has an extensive list of handouts, coaching instructions, guidelines, and session plans to follow for each of the 16 core sessions. The sessions have recently been updated to reflect the newer sodium guidelines and more information concerning hypertension. These are available for anyone to access and are no charge. There is of course a cost for printing these materials to distribute to the participants. Each team member developed some of our own teaching tools as needed. For example the dietitian preferred the Calorie King book to the Fat Counter book found on the site. The team did not always follow the specific order of content as described by the CDC site, but the main ideas were always covered in the core sessions. For the rural program, the team did rearrange some topics to cover certain content earlier, and also incorporated more content dealing with special holiday challenges, metabolic syndrome, using home blood pressure monitors correctly, choosing good shoes for exercise and other topics not found in the core curriculum. In general these CTR developed materials supplemented the National DPP materials.
- Each participant receives a 3 ring binder at the first session to keep session handouts in as they are received each week. They are asked to bring these binders with them each time. Session materials are pre-punched to fit in the binder easily. The binder includes a list of the coaching

team members and their contact information as well as a schedule calendar of session dates, times, and topics.

- Participants are given tools to help keep track of food eaten, fat grams consumed, and exercise minutes. We did use the "Keeping Track" blue book from the national DPP program. New booklets are sent to the rural site coordinator and distributed to each participant to be completed during the week. The participants then return the booklet to the rural site coordinator, who then mailed them back to the originating site for review prior to the next session. Participants are given a current year copy of the Calorie King book. This book was chosen for its extensive list of foods giving their calorie, fat gram and carb content. It also has special sections on fast food, popular restaurants, sodium, fiber, and other topics. Later in the program, participants can be offered a "Quick Track" form for a shorter way of keeping track if they felt they were ready for that.
- Participants can be given other helpful items to promote program success, such as a simple to use pedometer to promote walking ,exercise stretch bands to use during the program's exercise sessions and for home use. There are many handouts throughout the program with healthy recipes, exercise tips, stress management, a list of helpful websites and DVDs, a state generated periodical and blog called *The Motivator*, to name a few. As mentioned previously, we also used on-line videos to present useful material – *23 ½ Hours* by Dr. Mike Evans is one example. A NIH publication explaining the DASH diet was distributed with the session about hypertension.

The following is a brief description of the 24 sessions in the Telehealth Lifestyle Balance Program.

In general, for each session, the instructor or coach will greet the sites as they are connected via telehealth. Each participant should have been weighed, signed in, and received a binder with the introductory materials in it from the site coordinator. For session one it would be advisable to have the participants in each site tell everyone their name and maybe one sentence about themselves. If there are so many participants that this would take too much time, then just greet the site as a whole.

Each session should follow a basic pattern. Start with a brief review of the main points covered the week before with a chance for participants to ask questions. Follow with an introduction of the content for the current class. The main body of information can be given at one time, or divided into two sections. If the topic requires a lot of time, or explanations, it may be best to divide the topic into two sections, with an exercise period in-between."

Remember to involve the participants in discussion topics with interactive tools.

A period of exercise activity is important to incorporate into each session. This is usually a 10 to 15 minute period of activity directed by one of the coaches. Encourage each participant to join in the exercise session to the best of their ability. For some this may be moving their arms and legs while remaining seated.

End each session with a sentence or two summarizing the main content points. Be sure to give time for participants to ask questions, give examples of things that worked, or vent about things that did

not work for them. Participants tend to problem solve with each other and promote good conversation points.

<u>Session 1:</u> Welcome to Lifestyle Balance

This session is the participant's first exposure to Lifestyle Balance materials, the team, and for many- telehealth technology.

- An RN and the LCSW open the session with a welcome to participants and the support persons present. There is an introduction to the program, how it will be taught by a team and how we look forward to being a team with the participants.
- The team is introduced and each explains their role in the program and respective relationship to the participants. Emphasize the importance of using the phone or e-mail to contact you for personal questions or problems, since a face to face conference after the program is not possible.
- A member of the team explain~~s~~ the binder that has been given to them. This explanation should include:
  - The need to add new material to the binder each week as it is received
  - A description of how information will be processed, via their site coordinator each week The team contact information
  - The program schedule
  - Telehealth etiquette and technical points for example to engage the mute button unless you are trying to talk to the whole group~~.~~
  - Review the team contract form that outlines the team and participant responsibilities. These papers are clearly labeled and placed in the front pocket of the participant binder so they are located easily~~.~~
  - Point~~s~~ out the exercise band, and the Calorie King book, without using detail on how to use them.
- The coach then gives a brief history of the DPP and how Lifestyle Balance got started, the goals of the program, and the programs success record. Rationale for the program goals is briefly covered and the comparative success of those who document food intake and exercise versus those who do not is shown with an overhead graph that depicts the differences.
- The registered dietitian (RD) presents the program as outlined in the manual.
  - Specifics about the program goals,7% baseline weight loss and 150 minutes of moderate activity per week~~.~~ The participant's role and our expectations of them
  - How to use the keeping track book initially, logging food and beverages consumed, amounts and times~~.~~
  - The fat gram scale is briefly described and an explanation of how to transfer daily totals to the back cover of the keeping track book~~.~~
  - How to use the Calorie King book, using examples to illustrate.
  - For the first week, participants are simply instructed to list all the foods eaten in their blue Keeping track book. It is then explained that the following week they will begin to keep track of fat grams.
- The RD also welcomes support persons and discusses their role. Providing time in the program and clinic space for support persons reflects our observation that individuals in the past who were the most successful had an interested, involved support person. It also reflects a commitment to expanding the program benefits to the larger family/community that the participant comes from.

- A coach explains the exercise expectations for the program. Each participant will be encouraged to achieve at least 150 minutes of moderate aerobic exercise each week and to keep track of their progress on the tracking booklet supplied by the program. Each session will provide about 15 minutes of activity guided by an exercise physiologist or the RN.
- The coach also explains that each session will provide time for feedback and help with problems and challenges faced by participants. This time occurs at the beginning of each session.
- At the end of every session the presenter or coach will describe the selected projects to work toward and what to document for the next meeting. A time for questions and answers is always scheduled to be included after the session material is covered. Participants are often reminded to work closely with support persons and family members in working toward their goals.

SESSION 2: Be a Fat Detective

- The first five to ten minutes is the session time used for review/QA from the previous session. For session 2, since participants were still reluctant to talk on telehealth, this time was used to further explain the program and welcome participants and support persons.
- The RD uses this session to go into detail about how to log foods and fat grams, reading labels, using the Calorie King book, and measuring tools. Participants received their personal weight goal and fat gram allowance. Their specific goals were written on a personalized Keeping Track book by one of the case manager RNs.
- The RN explains there will be 2 levels of exercise and why activity is important for success. Realizing that some people are more active than others, she developed a tool with 2 levels. Those in level one were more sedentary and were expected to work up to 150 minutes of activity per week, hopefully by session 5. Those in level 2 were always more active. They are encouraged to be active *at least* 150 minutes a week, and to add more to their current regimen. Involve the support persons to provide encouragement to the participant to become more active. Safety while exercising is also discussed. Participants are encouraged to participate in the weekly exercise offering to the best of their ability. She leads the group in a brief session of physical exercise encouraging everyone to participate.
- A period of questions and answers follows. Again participants are encouraged to call or e-mail one of the RN case managers with personal questions or concerns that they may not be comfortable stating on telehealth.

SESSION 3: Three Ways to Eat Less Fat

- The session begins with a brief review of the major points of the session before. During session 3 remind participants how important having a support person is to helping them succeed. They are encouraged to have that person attend sessions with them; exercise with them, help make meal plans and in general to talk with them. Support persons, if present, are encouraged to sign in with the participant.
- This session is used to further define what a fat is, to distinguish good and bad fats, refining label reading, how to cut fats from recipes and learning about the prevalence of fats in fast foods. The RD created a handout that has participants guessing about the fat content of popular fast food choices. This is included in the session 3 materials in the appendix. Participants have fun with this exercise.

- The RN talks about the types of fats and cholesterols in the blood stream and how they affect health. She borrowed a cardiac vessel 3D model from the cardiology department to demonstrate arterial blockage and a power point presentation to define LDL, HDL, and triglycerides. Handouts of the power point were provided to participants.
- The exercise session and handouts focus on stretching and flexibility. There is a 15 minute exercise session.
- Q&A session and discussion of problems and concerns.

SESSION 4: Move Those Muscles

- The RD conducts the review and Q&A from session 3.
- For this group, Move Those Muscles was moved to an earlier session to help get participants engaged in increasing their activity. The exercise physiologist used lecture and handouts to define exercise vs. activity, rate perceived exertion, and making goals and plans. They were also given pedometers) and taught how to use them. They are challenged by the team to come up with their own site challenge (e.g., racking up the most steps per week or the most minutes of exercise and chip in for a prize.) The team used a U tube video that describes the great health benefits of activity. It is called *23 ½ Hours* by Dr. Bob Evans. The participants especially enjoyed this. Lecture time is followed by using a video called *Walk Away the Pounds* with Leslie Sansone, where the participants are encouraged to join in the exercise to the best of their ability. **Note:** videos and DVDs are easily viewable by site participants on their screen with telehealth technology.
- The exercise physiologist summarized the lesson and answered questions.

SESSION 5: Healthy Eating – Menu Planning

- Review and questions from session 4
- The session for this group was done by the RD who presented the revised national DPP Healthy Eating content to include the Healthy Plate material. She also discussed planning meals around a fat budget. Sodium and fiber content are also included.
- The RN focused on strengthening exercises with exercise bands.
- Q&A and problem solving

SESSION 6: Being Active: A Way of Life

- Review and questions from session 5.
- The exercise physiologist teaches this session. She had revised session 6 Being Active material to include some of her own instruction. The material includes setting up an exercise program, needed components, special considerations, when to stop exercising and examples of stretches. A hand out describing research findings on the dangers of sitting too long was added.
- A handout from Spark People – *7 Ways to Stay Active* was reviewed prior to the exercise session. Time was spent actually doing a warm-up, aerobic activity, cool down and stretches. The physiologist stressed to each participant to develop their own workout plan with all the components – warm-up, aerobics, cool down and stretches.
- Note: one of the sites reported setting up a challenge of at least 60,000 steps per week with a foot spa for the prize. The prize was given at week 16.

- The RD included a handout that presented weight loss tips for carbs, fats, proteins etc.
- Q&A and problem solving.

<u>SESSION 7:</u> Tip the Calorie Balance

- Review and questions from session 6
- The focus of this session is to have participants that are not losing weight as well as should be expected by this time to start monitoring calories and/or carbohydrates as well as fats. Those with an existing diagnosis of diabetes were also asked to count carbohydrate intake. Fiber and sodium are also discussed.
- Handouts include information on artificial sweeteners and a weekly menu sample.
- A video *Dancing to the Oldies* by Richard Simmons is done for exercise. Handouts included a Spark People article on adding exercise.
- Note: another site said they were also doing an exercise challenge with an Omron pedometer as the prize.
- The RN talks about Metabolic Syndrome using a power point presentation and individualized metabolic sheets. For this group, the team asked participants to sign a medical release form from their clinic and have their most recent appropriate lab work sent, (lipid panel, fasting glucose, and A1C if available). This information was used to individualize the metabolic sheet for each participant Metabolic syndrome was defined and discussed in relation to risk factors for chronic disease. *Refer to appendix H - Metabolic Syndrome*
- The RD summarized the session with a quick review of who needs to monitor calories, carbs, fiber, sodium and fluids.

<u>SESSION 8:</u> Take Charge of What's Around You

- The RD does the weekly review Q&A on session 7.
- The RN shows a video called *Support for Success* which was obtained at the 2010 AADE conference in San Antonio. It is a dramatization with professional actors showing how to ask for and give support.
- The other RN did a 20 minute stretching exercise session. They also did a workout with the *Dancing to the Oldies* DVD. The exercise handout was on balance activities.
- The RD covered the Take Charge of What's Around You material from the manual. This session focuses on things you can do to manage your eating environment to help insure success. Food products, removing unhealthy choices, using your support. She also included a new handout on probiotics.
- We also sent the April blog by Diane Arave of the Montana HHS department as a handout to participants. It is helpful, informative, and gives the web information for the state DPP site.
- Q&A and problem solving.

<u>SESSION 9:</u> Problem Solving

- The RD did the weekly review of information from session 8.
- The RN showed another video from the AADE 2010 Conference titled *Weight Matters.* It was done by actors who dramatized the consequences of ignoring the warning signs that come with poor health choices and also re-emphasizes the role of support persons. It did spark some discussion of "tough love" and taking personal responsibility.

- The RN also shows a brief power point and discusses how to construct SMART goals Examples of well written SMART goals are given. Participants are asked to write at least one SMART goal on the front of their Keeping Track book. A *Writing SMART Goals* worksheet is given as a handout.
- Another coach does a 15 minute exercise session that includes some yoga information, using a video called Sit and Be Fit. Handouts included yoga exercises.
- The RD speaks about targeting certain foods to help with problem solving nutrition options and developing a nutrition action plan. She used the Target on Fats and Target on Party Snacks tools in the manual as handouts.
- Q&A and problem solving.

<u>SESSION 10:</u> Talk Back to Negative Thoughts

- The RN reviews SMART goals from session 9 and asked for examples from the participants.
- The LCSW (Lifestyle coach) discusses the content of this session – being mindful of negative thoughts and replacing with a more positive thought. She ties the conversation to how the support person can assist the participant with combating negative thought affects. Participants can break into small groups and practice changing examples of negative thoughts into more positive ones. She uses guided imagery to help develop mindfulness toward thoughts. She asked participants to write an example of a negative thought they had during the week on their Keeping Track book. She uses a handout titled Labeling Thoughts and a power point for the session.
- The RN leads exercises. She uses the *Walk Away the Pounds* DVD and a handout labeled *Walking for Fun and Fitness*.
- Q&A and problem solving.

<u>SESSION 11:</u> Eating Out

- The LCSW led Q&A discussion regarding negative thoughts and participant's written examples from session 10.
- The RD covered the materials from DPP – Four Keys to Healthy Eating Out. She discussed maintaining the program when eating away from home, strategies at restaurants, fast food choices, table service, using tools like the internet and your support person. She put special emphasis on pre-planning. Besides the DPP session materials, she used a handout *Solving the Problem of Buffets and Receptions.*
- The RD also does a role playing session called *Practice for Ordering* to help participants plan ahead and use problem solving tools they already have.
- The RN exercise session uses an exercise video and a handout titled *Using Technology to Get Fit and Stay Fit.*
- Q&A and problem solving.

<u>SESSION 12:</u> The Slippery Slope of Lifestyle Change

- The RD conducted the Q&A session for Session 11.
- The LCSW delivers the content for The Slippery Slope of Lifestyle Change using a power point presentation. She has participants and support persons write down specific changes for activity and reducing fat in their diet and discussing as a group. They also discussed what

contributes to a slip and how to handle that. She then used a new handout explaining the change stages, how to manage ambivalence and maintain motivation. The handout was copied from the power point.
- The exercise session was 20 minutes using an exercise video and doing some warm up stretches.
- Q&A and problem solving

SESSION 13: Jump Start Your Activity Plan

- The LCSW reviews problems and solutions identified on their problem sheet from session 12.
- The exercise physiologist leads this session. She asks how the exercise challenges are going in the sites that started a challenge. She uses the materials from the DPP session with this title and also used a handout about physical activity and brain health put out by the Billings Clinic e-news site.
- She also reviews material from session 6 about 300 calorie workouts and why some workouts burn fewer calories than others. The material also discusses the FITT goal of DPP and aerobic fitness.
- There was a 25 minute workout with exercise tapes, resistance bands, and stretches.
- The RD sent 2 handouts from Mayo Clinic about how to deal with a weight loss plateau and about energy drinks.
- Q&A and problem solving

SESSION 14: Social Cues, Body Image and Self Esteem

- The exercise RN reviews the previous session about activity. She noticed that – although there were only a few support people attending – they were consistent in expressing the importance of offering encouragement and companionship in exercise and the confidence to offer suggestions and support to their Lifestyle partner. This was noticed especially with female friends and siblings. The LCSW leads discussion around social cues and how to respond to them. She also discusses how support persons can add positive social cues in conversation and social events. There was also a discussion of weight stigmas in our society and its effect on self esteem and body image. She encouraged discussion of healthy and unhealthy responses to these social situations.
- The RN also led a 20 min stretching exercise.
- Q&A and problem solving

SESSION 15: You Can Manage Stress

- The LCSW asked for feedback concerning the previous session on social cues, body image and self esteem from session 14.
- The LCSW discusses stress with the group, types of stress and the various types of responses we have to stress. She also covers prevention and management of stress. Some time was spent defining clinical depression and anxiety, and advice on when to seek out help or treatment. She had handouts that helped define stress, anxiety and depression, a handout on stress eating, her power point and the usual DPP session 15 handouts.
- The LCSW also conducted the exercise component this session with some Yoga exercises and a handout titled “Go Out and Play” for exercise partners.

- Q&A and problem solving.

SESSION 16: Ways to Stay Motivated

- The LCSW conducts the weekly review
- She also facilitates the discussion around motivation and maintaining the healthy eating and activity habits they have been working on. Handouts were a combination of the national DPP material on motivation, the social worker created page on defining motivation, and an excerpt from the Livestrong web site that discusses how to maintain motivation. An RD from the Billings Clinic Diabetes Center had developed a sheet that gave websites that offer advice and support for those trying to achieve and maintain weight loss and that was included. The "homework" assignment is to choose one way to stay motivated and write it on the handout worksheet.
- The RD gives information about new foods, recipes and kitchen equipment. She also included a discussion of the "Quick Track" instruction and worksheets as described in the Spring 2012 section. She also sent the *Quick and Healthy Eating* materials from the DPP aftercore manual.
- The RN leads a stretching exercise.
- Q&A and problem solving

After Core – Post Care Sessions: After core sessions for this group number 8 and were held bimonthly.

SESSION 17: Recipe Makeovers and Cooking Demo

- The RN asks for questions or comments from session 16 concerning motivation.
- The RD leads discussion about recipe makeovers to better fit the eating changes participants have made during the program. This includes working with the family, support persons, to lessen the fat content, use of spices, artificial sweeteners, and planning for the future with canning and freezing. Handouts were provided on the use of spices and herbs and on food preservation. She also discusses the use of modern kitchen appliances to get the most out of the foods they buy. She gave a "homework assignment" of making over a recipe and sending it in for a prize drawing. The prize was a healthy cook book.
- The RN leads a session of Zumba and stretches
- Q&A and problem solving

SESSION 18: Exercise

- The RD asks for questions or comments from session 17
- She also provides the recipes that were sent to her and announces the prize winners. Special cookbooks were awarded to those who sent recipe makeovers.
- The exercise physiologist leads this session. They discussed how the exercise plan was progressing for the participants, answered questions they had, and suggested new approaches. A handout was provided for good foot care and water aerobics. Other articles were sent on fad diets and ice cream facts.
- The physiologist and the RN lead a 20 minute exercise session with a walking DVD, resistance bands, and stretching.

- A shoe expert from a local sport shoe store came to discuss proper footwear for exercise and how to assure a proper fit. Diabetes Foot Care was covered by the RN due to the number of people with diabetes or at risk.
- Q&A and problem solving

<u>SESSION 19:</u> Healthy Cooking

- The RD and exercise RN lead this session. It began with review of session 18.
- The RD discussed specific kitchen equipment and the storage and preparation of garden foods. Later she gave a cooking demonstration using an electric pressure cooker.
- The RN led the group in using Therabands in stretch exercises.
- The site coordinators were advised to be ready to take blood pressures the next session and to send copies of any new labs that participants agree to share.
- Q&A and problem solving.

<u>SESSION 20:</u> Hypertension

- The RD reviewed the Healthy Cooking session.
- An RN leads a discussion around hypertension and its affects. A power point presentation to help with defining hypertension, the risks it presents, and treatments ~~is~~ used. Participants are reminded to monitor their BP at home and to discuss their BP with their PCP if it is elevated or if they have questions.
- They are encouraged to monitor their B P with a home meter and are given a handout on how to correctly use a home meter and a sheet to keep track of their readings. The importance of taking prescribed medications for hypertension is discussed.
- The RN and RD talk about the DASH diet and a low sodium diet as ways to combat hypertension. A DASH diet booklet is given, and a handout on being aware of the sodium content in foods.
- The site coordinators took a BP measurement as well as weight for this session. They were also reminded to provide participant labs if appropriate.
- The participants have an exercise break with a walking DVD.
- Q&A and problem solving.

<u>SESSION 21:</u> Grocery Store Tips

- This session was lead by one RN and the RD. A review of last week's hypertension session was done.
- The RD provided handouts on "Budgeting for Nutrients" and "Grocery Store Points". She used a Power Point presentation about a grocery store tour. She discussed "shopping the perimeter", how to make sure the meat is fresh, and other tips.
- The RN led the group in stretching exercises.
- Q&A and problem solving.

<u>SESSION 22:</u> Metabolic Health

- The RD reviewed the previous session with participants

- The RN distributes personal metabolic sheets with participants. These sheets list a beginning and updated ending value for each as well as the ideal value for weight, BP, lipid values, BMI, waist circumference, fasting glucose and A1C if applicable. Participants are encouraged to call or e-mail with personal questions. A general explanation of the labs and their significance is discussed. General questions are answered.
- The remainder of the session is used to show a video done by Dr. Sorli about slow metabolism, its effects, and how to avoid it. Reaction to this video was very positive, by request, copies was mailed to the site coordinators to use for staff or other patients.
- A list of the things Dr. Sorli emphasized as very important for weight loss is given as a handout.
- Handouts include the current issue of the Montana Motivator published by the Montana DPP project,
- The DPP aftercore handout on progress summary and "Give Yourself Credit" handout where participants can list the changes and progress they have made toward a healthy lifestyle are used this session. They are asked to complete this during the next 2 weeks.
- Q&A and problem solving.

SESSION 23: Transition Tips, Resources, and Plans

- Session 22 is reviewed for questions
- The LCSW leads discussion about going forward with Lifestyle changes. She discusses self acceptance, stress management, and uses guided imagery to project 1 year into the future and how participants would see themselves.
- The RD suggests new tools the participants may want to try for a more short hand version of keeping track of fat grams and exercise. Participants are asked to develop their own transition plan.
- The site coordinators were reminded to get a final BP, weight, and waist circumference on all attendees.
- Q&A and problem solving

SESSION 24: Creating an Environment for Success

- The RD reviews participant's plans for their transition to maintaining their healthy changes into the future from session 23
- The RN leads a discussion of how successful weight losers do it. She uses handouts from the National DPP "How do Successful Weight Losers do it?", and "What if the Scale Doesn't Budge?" Also used and discussed are the Mayo Clinic 6 strategies for Successful Weight Loss, and the Brown University National Weight Loss Registry to use as inspiration and resources
- The RD reviews available tools to use and a list of online resources
- Exercise time was "Dancing to the Oldies"
- Q&A and problem solving. Thanking the participants for a lively and interesting program

<u>Record Keeping</u>

- Record keeping tools are important for the program. We developed a form or tool for each of the following:
  - Electronic records:
    - The team entered participant medical, social, and lab histories in the <u>Access Database</u>. Weekly attendance, weight, exercise, fat gram average, and any other data management records where entered after each session
    - In the secure CTR shared electronic file the team also kept an <u>electronic record</u> for each participant including their initial interview, special considerations (i.e. uses a walker), fat gram goals, weight goals and exercise goals for the program, weekly weight and measurement data and any special notes. Contact information and a section to document any correspondence with the participant via phone or e-mail or mail. This file also contained a form to use to write to the participant giving feedback concerning that week's progress with weight and exercise goals. These were then printed to hard copy, folded and sent back with the participant's blue book. The electronic copy was maintained to keep a record of the participant's progress and was mostly used by the dietitian and RN case managers *Refer to appendix I – Electronic Records*
  - Paper or hard copy forms
    - Participant's attendance and weight records were sent to CTR each week by mail or fax from the rural site coordinators. There was space to add a waist circumference or blood pressure as needed by CTR periodically, or at participant request. These forms were kept in a site specific binder
    - Lab values were also kept in the site specific binder

<u>Measurements:</u>

- The team asked for a baseline measurement of weight, height, blood pressure, waist circumference, and for the first 2 groups – a lipid panel and fasting blood glucose. An A1C was requested also if the participant had diabetes. Then the team asked for further measurements as described on the data collection schedule. The weight was measured at every session. Blood pressure and waist circumference were obtained usually half way through and at the end *Refer to appendix J – Weekly Mailings*
- Lab values were redrawn at the end of the group sessions. It was very enlightening to the participants to show the progressive weight loss of the group as a whole on a graph. Usually they did as well or better than the national and state (Montana) average. Another way to use the data is to show the average weight loss of those who logged their food intake and exercise minutes faithfully, compared to average weight loss of those that did not. The team used the Metabolic Syndrome, My Picture handout that we filled in with the individual participant's progress in weight loss, blood pressure, BMI, waist circumference, lipid values and glucose values at least twice during a group's program. It was sealed in an envelope with the participant's name and then we discussed the desirable values in general during

the session. It was a good learning tool. Of course the team used these measurement values for the research value they offered

Establishing a Connection with Participants

Asking someone to make changes in their usual lifestyle routine (even when they ask for it) is a very difficult and emotionally challenging task – both for the participant and the coaches. Coaches need to be very sensitive and empathetic to the sometimes overwhelming obstacles people face in trying to change their eating or activity habits. It is important to develop skills in listening, motivational interviewing, and life coach skills. The use of telehealth can add a layer of feeling "removed" from your participants, but there are ways to get around that obstacle.

- As mentioned earlier, the team did rely heavily on our site facilitator to point out an individual's special challenges during the program. Often they would confide in the facilitator since she was perhaps known to them, or because they could talk privately to her after the session. With the participant's permission she could then tell the team about the conversation or observation and the team could contact the individual.
- Most often the participant used the contact sheet for the team members given at the first session to communicate with us personally. They usually called the dietitian or one of the RNs. That contact was either by phone or e-mail. The team handled the issues, or, if the team felt the social worker should be the one to talk to this individual, the team set up a time for them to meet. That was usually by phone, or could be by telehealth in a one to one conference. The team made sure to mention the contact sheet often and extend the invitation to reach out to us as needed.
- Some individuals did not seem to want to be contacted individually and the team respected that. Many others very much enjoyed our contacting them. The team did try to contact even those who did not request a call at least twice during the program just to see how it was going for them. There was a place in the electronic record to record specific concerns and how the team handled the problem. On a few occasions, a participant was referred back to the PCP.
- Every week the participant sent us their Keeping Track log book with their food intake, fat gram count and exercise minutes. This was reviewed by the dietitian and RNs. Then the coaches would write/type comments, praise, suggestions etc. on a sheet, fold it into the log book and send it back to the participant the next mailing. In that way the participant felt we were actually paying attention to their efforts and offering support. An electronic record of the feedback helped us to monitor an individual's progress. Comments were kept positive and upbeat. Suggestions were individualized. The drawback to this system was that the mailing schedule usually meant they received written feedback 2 or sometimes 3 weeks after they wrote in the log book. This was often complained about in satisfaction surveys.
- Of note, the participants who had a "support person", - a friend, family member, spouse with them during the program, seemed to be more successful than those who did not. Especially in our last group, the team encouraged participants to invite someone to accompany them to the sessions. It did not have to be another participant if they chose not to, it could be just someone

who came with them to the meetings. This success with support was noted in both the urban and rural groups.

- All of the CTR team members became "attached" to our participants and very much enjoyed corresponding with them during the program time. The team has some very moving letters and e-mails with stories of their challenges and successes. The team also developed a close working relationship with the site facilitators and are amazed at the improvements some have made in their communities with their involvement in the program. All of them were enthusiastic about what they were doing for their patient population.

Materials List

This is a list of the materials we used to start and run the program. It is flexible and can be adapted to special needs or circumstances. Some may chose to use more electronic means of communication, less written material, or use other tools for exercise.

- For the coaching team
  - Electronic means of tracking attendance, measurements, goals, and special needs of each participant
  - Electronic record of the schedules, session plans, handouts, and other tools
  - DVDs that help with educational information are a nice change from lecture. The team used exercise discs, informational discs on metabolic syndrome, coping with stress and social pressure issues, and other tools used to help teach
  - The dietitian used food models and plates that exhibited the healthy plate divisions. She also used a 5 pound fat model for a visual shocker. The RN used a blocked artery model
  - Prepared power points were used for some presentations. They are very helpful, but we did feel it was advisable not to rely heavily on power point since the participants lose some of the feeling of one to one connection with the speaker
  - Means of copying educational materials to be sent to sites and envelopes large enough to send the materials, and pre-addressed and stamped envelopes for the facilitator to send materials back. Printed materials should be 3 holed punched to fit in the binders easily
  - Time and space for the team to meet often – at least once a week for planning and problem solving

- For the participants
  - Keeping Track (log books) to write food eaten daily, fat grams and/or calories consumed and minutes of exercise. Usually able to hold one weeks worth of entries. Will need one book for each participant for each week of the program. These were mailed to the site facilitators to distribute each week to the participants along with that weeks lessons and handouts
  - Binders for the weekly lessons and handouts sent. One for each participant. The team used 2 ½ inch binders

- A reliable, portable reference to keep track of fat grams and/or calories in food consumed. The team used current year copies of the *Calorie King* book. It is printed in association with the Joslin Diabetes Center. The National DPP Program also has a fat counter that can be printed from their web site
- The team obtained some inexpensive aids to promote exercise. Exercise stretch bands and pedometers were sent with the first session materials
- A list of helpful DVDs and websites to aid in promoting self monitoring of healthy changes. There are several good sites to help with food and exercise monitoring and recording. Our list is found in the tools section

- For the rural site
    - A large enough room for the participants to be seated comfortably, a table for written materials, and ideally – room to get up and stretch or walk in place for the exercise break. The room must accommodate the telehealth equipment
    - Reliable and frequently calibrated scales and blood pressure monitors