

# *Just Lose It!* Exploring Health Adherence Through Design Thinking

by

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## Introduction

The Family Health Center (FHC) is in an urban area of a mid-size city in the Midwest. The clinic prides itself on being a neighborhood partner with a respected and trusted reputation. The clinic has a variety of clients of all ages, ethnic and cultural backgrounds, and varying socioeconomic status. The clinic has a large waiting room, several examination and treatment rooms, a countertop lab, and cubicle offices for the staff. The clinic is open daily with some evening hours. It is closed on weekends.

FHC is staffed by physician assistants (PA), nurse practitioners (NP), registered nurses (RN), a part time social worker, a part-time registered dietitian nutritionist (RDN), and a health information management specialist. All clients are seen on an appointment basis, and a significant percentage of the clients are seen routinely for chronic illness visits. Many of the clients have comorbidities with most frequently seen ICD 10 codes of I10 (hypertension), E66.9 (obesity), and E11.9 (diabetes mellitus II).

Last year the FHC opened a specialized preconception program for their clients. It is the only program of its kind in the city and offers physical exams, lab evaluations, lifestyle coaching, and weight management. These are the same services offered to their regular clients but customized for the unique needs relating to conception.

Weekly health care team meetings are held to review progress in FHC chronic disease clients. During the report, comments frequently revolve around the frustration of seeing clients on a regular basis who do not seem to progress as expected. Comments have included, “She gained another two pounds again this month; she knows her weight loss is a critical part of her treatment”; “I’ve told him for the last six visits, he needs to lay off the salt shaker”; “I’ve talked until I’m blue in the face, but he still doesn’t eat his meals at regular times”; “She still is not checking her blood sugars like she should”; “If he takes half of his medication every month it’s a good month”; “She missed her appointment again with the pediatric endocrinologist.” Day after day, week after week, the staff wonders why clients just won’t do what they are told. Handouts are given and verbal instructions are repeated time after time, yet no long-term compliance or success in changing their medical status is realized.

This is a problem not for just FHC but for outpatient clinics nationally. Behavior change is not easy, and life-long habits are tough to reset, yet positive health outcomes rely on the incorporation of healthier behaviors.

## Readings

Alikari, V. and S. Zyga. 2014. Conceptual analysis of patient compliance in treatment. *Health Science Journal*, 8(2): 179–86.

Parajuli, J., F. Saleh, N. Thapa, and L. Ali. 2014. Factors associated with nonadherence to diet and physical activity among nepalese type 2 diabetes patients; a cross sectional study. *BMC Research Notes* 7: 758. <<http://doi.org/10.1186/1756-0500-7-758>>.

## Questions

1. Define compliance as it relates to medical care. Is there a difference between compliance and adherence?
2. Create a list of possible reasons for the six non-compliant behaviors noted in the passage above.

## Part I – Planning and Scoping

A 34-year old African-American woman named Rose has been diagnosed by her primary care physician (PCP) with infertility after one year of inability to achieve pregnancy. Her PCP has referred her to the FHC's preconception clinic for care. Rose's care team at the preconception clinic will consist of a nurse practitioner (NP) and a registered dietitian (RDN).

Rose's medical history includes polycystic ovary syndrome (PCOS); she has been overweight most of her life, and her current body mass index (BMI) is 34. Upon arrival at her first visit at the preconception clinic on Thursday, October 5, Rose is informed by a nurse practitioner that her commercial health insurance policy requires a six-month trial of weight loss therapy prior to providing coverage for any infertility treatment, including the ovulation medication clomiphene, which is her PCP's first choice. Rose and her husband are wary of the idea of a trial of weight loss; Rose has tried many diets in the past without success and the couple are very anxious to receive infertility treatment and begin their family.

After being assessed by the NP at the preconception clinic, Rose meets with the RDN there to receive diet counseling. The RDN instructs Rose to eat breakfast, lunch, dinner and at least two healthy snacks of whole fruit or vegetable paired with protein daily. Since Rose is used to skipping breakfast, the dietitian recommends a green smoothie made with kale, skim milk, and sugar-free protein supplement. The RDN gives Rose some examples of snack choices such as an apple with sliced cheddar cheese, or a ¼ cup of walnuts with a pear. Additionally, Rose is to consume no calories from beverages, and avoid refined grains and sweets, fried foods, and fast food, emphasizing instead whole grains, vegetables, low-fat dairy, lean meats and fish. Rose leaves the office feeling confused about the recommendations and skeptical that weight loss will make a difference in her ability to conceive. Rose is instructed to take the weekend to gather supplies and to begin keeping a daily diary that includes food, beverages, activity, and her thoughts regarding the weight loss plan and her lifestyle in general on Monday. The RDN recommends that Michael make the same diet changes and keep a diary also, as a show of support. When Rose explains it to her husband, Michael is unwilling to purchase the expensive protein powder that was recommended, and he doesn't understand why he should keep a food diary, since he is at a healthy weight. At her one-month follow-up with the preconception clinic, Rose has gained one pound and her 24-hour diet recall with the RDN reveals that she has not made any of the recommended changes to diet or lifestyle.

### Readings

Broughton, D.E. and K.H. Moley. 2017. Obesity and female infertility: potential mediators of obesity's impact. *Fertility and Sterility* 107: 840–7. <<http://dx.doi.org/10.1016/j.fertnstert.2017.01.017>>.

Ellakwa, H.E., Z.F. Sanad, H.A. Hamza, M.A. Emara, and M.A. Elsayed. 2015. Predictors of patient responses to ovulation induction with clomiphene citrate in clients with polycystic ovary syndrome experiencing infertility. *International Journal of Gynecology and Obstetrics* 133(1): 59–63. <<http://dx.doi.org/10.1016/j.ijgo.2015.09.008>>.

### Questions

1. What is the normal range for adult BMI and what category does Rose's BMI place her in?
2. What are some reasons that the insurance company would require weight loss for an obese patient prior to other interventions for infertility? What percentage of excess body weight loss is associated with increased chance of conception?
3. Create a stakeholder map with Rose at the center. Try to include all the individuals, groups of people, and factors that would have a stake in, or influence on, Rose's successful weight loss and conception, such as her employer, family, friends, and healthcare providers.

## Part II – Exploration, Synthesis, and Design Implications

Below are the diary entries that Michael and Rose made October 9<sup>th</sup> through October 22<sup>nd</sup>. The entries were required to include information on their daily food and beverage intake located on the food and beverage form, activity, and their thoughts regarding the weight loss plan and their general lifestyle. While reading the diaries of both Michael and Rose be sure to take notes on the observations as they will be used in future components of the case study.

### *Diary Entries for Rose*

*Monday, October 9<sup>th</sup>*

Today was a day off for me as I worked the weekend and we had Michael's kids. After a horrible weekend of eating at Waffle Hut, I have a new mind set on my weight loss plan. I have decided I need to give it a fair try because in all my past attempts the failures were because of me not putting any effort into it knowing there were no other options through my insurance. This time, I know that insurance is driving the decision, so I need to cooperate and do my part to stick to a good healthy diet and exercise plan. Now for the recap of my day:

*Food and Beverage Intake:* See my food and beverage intake form for the specific details of my food choices. Overall, I was satisfied with myself and remained conscious of what I was eating and getting it entered in my form.

*Activity:* Since I had the day off, I decided to take advantage of the wonderful day with a walk around the block in the morning and again in the evening. Michael joined me on the evening walk and we had a good talk about trying to make this work. He sounded sincere but then again, he has sounded this way in the past but quickly changes in tune.

*Tuesday, October 10<sup>th</sup>*

Today started off pretty good as I got back in the swing of things with work. I actually felt refreshed from yesterday's healthy eating and exercise activities. I am extremely satisfied with my new mind set but cannot get past the idea of what is going to happen that pushes me over the edge to change and go back to my "normal" routine for eating and not exercising. My history haunts me often, so it is hard to stay optimistic as it is more of a vicious cycle I put myself through. Workday went well as there were no hard customers today to deal with. I was even able to find time for a healthy lunch. The hard thing I see about work is the unrestricted access to the soda machine. I did good today with only taking diet cola but know I should really be sticking to water for my beverage choice.

*Food and Beverage Intake:* See my food and beverage intake form for the specific details of my food choices.

Overall, I am satisfied with my second day of eating under the meal plan offered to me by the RD. However, once I was home and doing my normal routine I did slip and have ice cream for a snack. The trigger was an argument with Michael not supporting my current progress of trying to be "better" with my habits.

*Activity:* Started my day out with a brief cardio workout I found on some free streaming videos that I found since Michael refuses to let me join a gym or professional weight loss program. I also completed a brief walk in the evening to make up for my slip of eating ice cream and chocolate covered peanuts.

*Wednesday, October 11<sup>th</sup>*

During breakfast, Michael informed me of the poker party he has scheduled at our house this coming weekend with all his guy friends. He also informed me that he volunteered me to make the junk food snacks for the evening party. I mentioned I was trying to be better with my new mindset of being more cautious of what I am putting into my body. His reaction told me he did not care because he proceeded to go on to tell me what his requested menu was. Insurance has left no choice, if Michael and I want to increase our chances of getting pregnant I must put forth the effort of meeting the insurance company's policy of participating in a six-month trial of weight loss. I am on day three and already want to say forget it, if the support is not here. Work was busy but good for making tips.

Who else can I look too? Does Michael really want more children since his are entering their teen years? I am left going to bed wondering if this is all worth it.

*Food and Beverage Intake:* See my food and beverage intake form for the specific details of my food choices. It tells the story of my day and how I stress ate all day. Bad choices were made that's for sure. Hoping to get back on track sooner than later. I just wish when I ate bad it would make me feel bad so that would be one thing to deter me from eating out of control like I did today. I guess I must be a stress eater!

*Activity:* Completed another cardio workout before breakfast. Busy work day led to a lot of walking around at Waffle Hut.

#### Thursday, October 12<sup>th</sup>

I had to work again today but that did not stop me from getting a fresh start with my new eating patterns. I reached out to another support member in my community and that got me motivated to get back to it. I got this, I will keep moving forward to the end goal, conception.

*Food and Beverage Intake:* See my food and beverage intake form for the specific details of my food choices. Not a great start with no breakfast but work started early so only a snack was had. Turned down all the temptations of eating an unhealthy breakfast while working, proud of myself.

*Activity:* Finished out the day with a walk around the block thinking about the situation. I am starting to look at my exercise as my reward for being dedicated. Walks allow me to do a lot of thinking and reflecting on my noncompliance patterns for losing weight.

#### Friday, October 13<sup>th</sup>

Thank goodness for Auntie and my co-workers who keep reassuring me that I can do this. I do need to talk with Michael sometime to make sure we are still on the same page about wanting to have a child together. I just want him to understand that his support means the world to me and without it my success rate will be very low. Work was stressful today and I think I leaned to food to take care of the issue. I would like to know why I have to look to food when I am stressed versus exercise or another healthier vice to get over the hump.

*Food and Beverage Intake:* See my food and beverage intake form for the specific details of my food choices.

Thanks to a visit to Auntie, best cook ever, homemade fettuccine alfredo was for dinner. Portion control was good but not great!

*Activity:* Did a lot of food prep for Michael's poker party tomorrow night. My feet sure are sore. I did sneak a few bites of food as well as I was prepping. Self-control was just not there. I hope it is tomorrow night when all the food is out.

#### Saturday, October 14<sup>th</sup>

Still struggling to find my rhythm of balancing work, my mom (that's another story), my family, and home life. The drive is here but the force behind my drive is not forceful enough yet. What is it going to take? I need my mom to start being more independent and to grow her support system, so I can get focused on me and not everyone but me. The guys played poker and I enjoyed the junk food snacks! I have come to the conclusion that grazing is an issue for me. When food is out I tend to find it but when it is not out I do not go looking for it. Buffet styles are not my friend as I cannot control what I put in my mouth.

*Food and Beverage Intake:* See my food and beverage intake form for the specific details of my food choices. A few details missing about what was eaten during the poker party. Ok ok, maybe a lot of details are missing but I had to get the munchie spree out of me. Nothing from poker night was logged as I am ashamed to share the details of the calories I put into my body. Back to square one again.

*Activity:* Completed another cardio workout before breakfast. I asked Michael to join me for the cardio workout but he declined the offer and indicated he did not need to do cardio as he was already in good enough shape. I had work off today but only to spend it in the kitchen finishing all the poker party food.

*Sunday, October 15<sup>th</sup>*

Had a visit with mom and heard all about all her problems. Mind you she already had started drinking before breakfast was over. I don't mind listening, but she needs to understand that my time is important, and I need to start focusing on my own family. The rest of my day was a bit off thanks to mom, but I still managed to stay semi on track with my eating. Michael was not much help or support today either as he really enjoyed himself at the poker party last night. I also worked second shift today, which was a struggle since I had my mom and her issues on my mind.

*Food and Beverage Intake:* See my food and beverage intake form for the specific details of my food choices. Skipped breakfast to run to mom's rescue. Not too bad on the rest of the day. Still trying to love water as a beverage of choice.

*Activity:* My activities were more mental, not physical for today. I did have some physical activity while at work but limited as I was feeling lazy based on all my outside factors taking a toll on my well-being.

*Monday, October 16<sup>th</sup>*

It's a new week with a fresh start. I will be working all week though to get the weekend off to spend time with Michael's kids. My shifts all vary though so that makes it difficult to get my weekly menu planned. Today I worked first shift and it was pretty busy. My mom was also calling me, but I was not able to connect with her until after my shift. By then she was so far gone from drinking I refused to talk with her.

*Food and Beverage Intake:* See my food and beverage intake form for the specific details of my food choices. I did pretty well today minus the soda. I just cannot find a way to replace it in my diet. Something about the taste and the bubbles that keeps drawing me in.

*Activity:* Started my day out with a cardio workout and ended the day with some stretching since I was sore from working a long shift at work today. I asked Michael to join me for stretching but he was just too busy watching tv and eating snacks, so he declined my offer.

I do feel better when I work out but the challenge is getting up in the morning when I work late the night before then get the morning shift the next day. I just keep finding free options because Michael is still not supportive of providing any finances towards these types of activities. I am having a hard time getting him to provide enough finances for the groceries. He cannot understand that eating healthier is expensive all the way around until fully adjusted to the changes.

*Tuesday, October 17<sup>th</sup>*

This morning Michael and I had breakfast together. Of course, I was eating my healthy choice breakfast of oatmeal with a banana while he ate his egg and sausage sandwich. I again asked him if he was really interested in having another child and if so was he ready to support me in getting the weight off. He really had nothing to say on the subject except for a general comment along the line of you are doing just fine with what you are doing. I again stressed how important it was to have his full support if change was going to happen. I expressed to him that I am not just doing this for me but for us and our future family.

*Food and Beverage Intake:* See my food and beverage intake form for the specific details of my food choices. Another good day even though I had to work second shift today. I have been more honest this week about what I have been eating for my meals and snacks. Again, I am trying to get more passionate about this and find new ways to adjust since my past ways of doing nothing have failed. I think I just need to see some weight loss to keep going. However, I cannot keep falling off the pattern if I want to see results.

*Activity:* Morning cardio workout and lots of walking at my job today.



Wednesday, October 18<sup>th</sup>

*Food and Beverage Intake:* See my food and beverage intake form for the specific details of my food choices.

*Activity:* I forced myself to get up in the morning after working second shift the night before and now first shift today to complete my brief cardio workout. This takes me about 20 minutes each morning to complete. Again, I have found this morning workout to be very beneficial to my mental well-being as it helps to clear my brain and set my agenda for the day. In the evening I asked Michael if he wanted to go for a walk with me and he declined the offer. Again, no support of helping me to stay compliant with my weight loss requirements.

Thursday, October 19<sup>th</sup>

Today I worked first shift.

*Food and Beverage Intake:* See my food and beverage intake form for the specific details of my food choices.

*Activity:* I completed my 20-minute cardio workout and also took a walk in the evening for about 30 minutes. Again, Michael declined my offers of doing either activity with me today. The only reason I continue to get is he is too busy and already in shape.

Friday, October 20<sup>th</sup>

Today I worked a double at my job. It did not start out good either as I had a customer that put me over the edge that led to me eating a glazed donut for a snack and greasy food for lunch. This stress eating has to change but I'm not sure how to do it. Michael is not being supportive, my mom is always drinking, and my Auntie just provides more comfort through food. Who do I turn to now? The kids are coming this weekend, so I know I will have to explain to them why I am eating different from everyone and will they be supportive or just not be responsive?

*Food and Beverage Intake:* See my food and beverage intake form for the specific details of my food choices.

*Activity:* I completed my 20-minute cardio workout this morning and did a lot of walking on my double shift at work. Mentally I am beat up though and not sure how to keep going.

Saturday, October 21<sup>st</sup>

No work today but had a family day since Michael's kids are here for the weekend. Michael and I picked the kids up from their sporting event and when we got back home the kids worked on some homework and completed a few chores. After I made dinner, we went out for family movie night. With the movie of course, the kids and Michael wanted popcorn, candy, and slushies. The kids kept asking if I wanted any and I would respond with no thanks because I'm working really hard to change my unhealthy eating habits. Michael did not offer any information on the situation to the kids. As I reflect on the situation all I can think about is how much money Michael was willing to spend to take the kids to the movies. He is not even willing to purchase anything that was recommended by the RD to assist in the process of us having a baby. Again, I cannot help but ask myself if Michael even wants more kids.

*Food and Beverage Intake:* See my food and beverage intake form for the specific details of my food choices.

*Activity:* More mental instead of physical activity occurred today.

Sunday October 22<sup>nd</sup>

No work today but had my step-kids for half the day.

*Food and Beverage Intake:* See my food and beverage intake form for the specific details of my food choices. I really enjoyed the family time we had when making our family breakfast.

*Activity:* No physical activity was completed today as I was worn out from having the kids for the weekend. When they are here there is no great place to work out in the house.

Diary of: Rose

Food & Beverage Intake

Weekly Weight: 205 pounds, 10/15

Dates: 10/9-10/15	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Breakfast	Bran flakes with 2% milk Coffee w/ liquid creamer	Plain oatmeal with walnuts and bananas stirred in 1 orange Coffee w/cream		Coffee w/cream	Plain bagel Low-fat cream cheese Coffee w/cream		
Snack	Low-fat yogurt Water	None	Apple fritter Coffee w/cream	Apple slice w/ cheddar cheese Diet cola	Orange Coffee w/cream	Coffee w/cream Donut	
Lunch	Chicken noodle soup Saltines	Tuna salad sub on wheat bread Baked chips Diet cola	Fast food burger Fries Regular cola	Cobb salad w/ lite ranch Water	Panini w/turkey and cheddar 1 bag chips Diet cola		Waffles w/syrup Sausage Coffee w/cream
Dinner	Baked cod Green bean Steamed wild rice pilaf Sugar-free lemonade drink	White chicken chili Garlic bread Regular cola	4 pieces pizza w/ sausage Garlic butter dip Regular cola	Pork loin Macaroni w/ cheese Okra Diet cola	Fettuccine alfredo Breadsticks Regular cola	Beef nachos Mozzarella sticks Brownie Regular cola	Shredded BBQ pork sandwich Frozen French fries Sugar-free lemonade
Snack	Light microwave popcorn Water	Milk chocolate covered panuts Ice cream	Ice cream Potato chips Water	Baby carrots w/ lite ranch dip Bubbly water	Ice cream Water	Potato chips Ranch dip Regular cola	Bowl frosted shredded wheat w/2% milk

Diary of: Rose

Food & Beverage Intake

Weekly Weight: 206 pounds, 10/22

Date: 10/16-10/22	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Breakfast	Hard-boiled egg Turkey bacon Coffee w/cream	Oatmeal Banana Coffee w/cream	Egg sandwich w/ham Coffee w/cream			Fried eggs Bacon Hash browns Coffee w/cream	Chicken & waffles Coffee w/cream
Snack	Banana Low-fat yogurt	Pear w/walnuts Water		Blueberry muffin Coffee w/cream	Glazed donut Coffee w/cream		
Lunch	Bowl veggie soup Half turkey/cheese sandwich on wheat Water	Chicken Caesar salad Wheat roll Diet soda	Cup chili Oyster crackers Green salad w/ low-fat dressing Diet soda	Chicken strips w/ honey mustard dip Green salad Regular cola	Bacon cheese burger Curly fries Regular cola	Fried fish sandwich French fries Regular cola	Pork ribs Turnip greens Potato salad Peach cobbler Regular cola
Dinner	Chicken fajitas Diet soda	Turkey burger w/ no bun Salad Diet cola	Pizza w/sausage Regular soda	Gumbo w/ sausage Dirty rice French bread Regular soda	Spaghetti w/ meat balls Breadsticks Regular cola	Fried chicken Black-eyed peas Corn bread muffins Sweet potato pie Regular cola	Leftovers Regular cola
Snack	Low-fat yogurt	Granola bar Water	Apple w/peanut butter	Ice cream w/ peanuts Water	Ice cream Potato chips Water		Ice cream Water

*Diary Entries for Michael**Monday, October 9<sup>th</sup>*

It's the first day of this journal. I am not really sure what I should write. I want to help Rose, but I do not understand why I need to do a meal diary or keep a journal. I had to do a journal for my composition class at the community college, but I never really wanted to do it then either. It was the usual chaotic Monday. I had an early morning meeting with a vendor and took a coffee in the truck, then a fast food breakfast on the way. For lunch, I had the usual takeout from the taco place down the street. Rose made me take a walk.

*Tuesday, October 10<sup>th</sup>*

Overslept. Rose left before me. Starving by lunch. Checking on jobs all afternoon. Rose made dinner. Watched TV—the ball game, news, and for the weather.

*Wednesday, October 11<sup>th</sup>*

Informed Rose that it was my turn for the poker party on Saturday.

*Thursday, October 12<sup>th</sup>*

It was a good day. Called out to the job site late.

*Friday, October 13<sup>th</sup>*

Date night. We went to the movies—Rose's choice. Rose didn't go to Mom's today. I did the shopping on the way home and then was called to an emergency at the job site. Flooding.

*Saturday, October 14<sup>th</sup>*

I won \$50 tonight night! Rose made dinner and snacks before the poker game.

*Sunday, October 15<sup>th</sup>*

Went to brunch with my sister. Ate frozen dinners late while doing the laundry. Rose was at Mom's most of the day. Her mom called and said it was another "emergency." Rose called when she got there and everything was OK.

*Tuesday, October 17<sup>th</sup>*

Yesterday meeting with the divorce attorney. The Ex wants more child support. NO WAY. Gained weight over the weekend. NO MORE ICE CREAM.

*Wednesday, October 18<sup>th</sup>*

Late for work. Coffee at home and donuts at work. Cheryl brought the donuts in for everyone. Met Joe for lunch to plan our next fishing trip. Poker night changed to Wednesday this week. Broke even.

*Thursday, October 19<sup>th</sup>*

Ate breakfast on the run. Met client. Job finished. Got paid. Took leftover pizza for lunch—worked over lunch—needed to finish invoices and payroll for the accountant. Rose and I are good.

*Friday, October 20<sup>th</sup>*

Weight is up this morning—skipping breakfast. Was starving at lunch. Ate leftovers and watched videos.

*Saturday, October 21<sup>st</sup>*

Met the kids at their game. They said they didn't have any homework, and tried to leave their backpacks in their mom's car, but then Joyce said that one has a science project due next week and the other has a math test. We went home and right away after lunch, they were on their computers or phones talking with their friends. I asked one to help paint the extra bedroom and the other to take out the garbage and they complained that it wasn't right that they had to do all this work at my house when they did this kind of stuff at home. Family movie night.



Sunday, October 22<sup>nd</sup>

Rose made a big breakfast for the kids. They did homework after that then we took them home. I visited with Rose's mom after dropping the kids. Did a few house repairs there. Ate leftovers for supper. Good Day.

Diary of: Michael

Food & Beverage Intake

Weekly Weight: 186 pounds, 10/15

Dates: 10/9-10/15	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Breakfast	Coffee Egg sandwich Hash browns	Coffee	Coffee Egg sandwich Hash browns	Coffee Breakfast burrito	Coffee		
Snack					Donut Coffee		
Lunch	3 beef tacos Energy drink	Double cheeseburger Fries Soda	Chicken sandwich Fries Soda	Leftover pizza Soda	2 chili dogs Bag of chips Soda	Omelet w/ sausage Toast Pancake Coffee	Egg scramble Hash browns Bacon Coffee
Dinner	Cod Green beans Rice Soda	Chicken chili Garlic bread Soda	Sausage pizza Soda	Pork loin Mac & cheese Okra Beer	Lasagna Breadsticks Wine	Nachos Mini taco chips w/salsa Brownie 3 beers	BBQ pork on bun Fries Soda
Snack	2 beers Popcorn	Ice cream Chocolate peanuts	Ice cream Beer	Ice cream	Ice cream	Rum & cola Pretzels	Pretzels

Diary of: Michael

Food & Beverage Intake

Weekly Weight: 188 pounds, 10/22

Date: 10/16- 10/22	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Breakfast		Egg, sausage sandwich Coffee	Coffee Donut	Egg, sausage sandwich Coffee	Coffee	Eggs Bacon Sausage Hash browns Coffee	Waffles w/syrup Sausage Coffee
Snack							
Lunch	<i>Forgot to write down food this day.</i>	Crispy chicken sandwich Fries Soda	French dip Fries Soda	Leftover pizza Soda	Double cheeseburger Fries Soda	Fried fish Macaroni & cheese Soda	Ribs Greens Peach cobbler Beer
Dinner		Turkey burger Onion rings Beer	Pizza night supreme Beers	Gumbo Rice Bread Water	Chicken alfredo Bread sticks Wine	Fried chicken Black eyed peas Corn bread Beer	Beef ribs Ppotato salad Beer
Snack		Pretzels Beer	Ice cream	Ice cream	Ice cream	Sweet potato pie	Ice cream

### Reading

Beebe, L. 2013. Coaching clients for weight loss: Incorporating simple techniques during sessions will help spur clients to success. *Today's Dietitian* 15 (11): 40.

### Questions

1. What do you feel are the three most important challenges for Rose to lose weight and why are these challenges important to address?
2. What is the difference between coaching and counseling someone through the weight loss process? Provide examples of both counseling and coaching that Rose is getting from her supporters.
3. Now go back to the stakeholder map that you created in Part II and update it with any new stakeholders that might have been identified through the diary entries of Michael and Rose. What stakeholders did you add and why? If none, why?

## Part III – Concept Generation and Early Prototyping

At the follow-up two week visit to the clinic, Rose and Michael reviewed their diaries and logs with the RDN and NP. The conversation begins with the RDN asking Rose and Michael about their perceptions of the food logs and diaries. Rose shares that it was sometimes difficult at the end of the day to remember everything she has eaten that day, let alone the portion sizes, but she knows how to write in the food log. It is time consuming to journal but sometimes it is helpful because thinking and journaling remind her of her supports, like Auntie and her friends at work. At other times journaling is painful because it causes her to think about her mother and her infertility. The NP notes that Rose decided to include a summary of her food and beverage intake and her activity each day in her food diary. Rose says that the first journal entry each day was about her general feelings and stress, and the food and beverage intake was focused on her eating. She recalls the earlier discussions about the importance of exercising as part of a weight loss program so decided to include her activity in the food diary. Overall, Rose thinks the food log and diary are helpful.

The RDN turns to Michael's diaries and logs, and notes that he also has entries for most days in the diary and on the log. Michael says he is trying to complete the log and diary to support Rose. But, he isn't sure it is worth his time, flatly refuses to detail food portions, and he shares that it doesn't make sense to him to include an activity section. He already knows that he is supposed to eat healthy food and exercise whenever he can. His job involves a lot of physical activity, so he doesn't think exercising every day is important. Michael also reminds the dietitian and Rose that he is at normal weight. Rose tells Michael that walking is a way they can both get exercise and spend time together. He says he will try to walk a least a few days a week with her.

Rose and Michael now complete the food log for today's breakfast and lunch. When the RDN notes that Rose seems to be hesitating she asks Rose and Michael if they have any questions. Is there anything they don't understand about completing the food log? Rose asks if they are supposed to enter *everything* they eat. For example, she says Michael uses hot sauce or ketchup on most of his food. She also eats "a few" chocolate covered mints, available by the cash register at the Waffle Hut, each day and samples the waffle special for the day. The dietitian clarifies that everything that they eat or drink should be recorded in the log, including water. Michael asks if he must include the "feelings stuff" like Rose did. Rose again says that journaling helps her think about who supports her and what stress she is experiencing, although she doesn't know what to do about the stress. Rose tells Michael she is going to keep writing the "feelings stuff." Michael says he will try to add some "feelings" to his diary.

The RDN and NP note that Rose and Michael appear to know how to complete the diary and confirm Rose and Michael have no additional questions. As the visit concludes, Rose and Michael are instructed to make another follow-up appointment in one month.

### Questions

#### Subjective Data

##### 1. *Overview of Present Case and History*

Who is the client and what is their background history and present condition? What have Rose and Michael tried in the past? What are their good and bad experiences? What are their motivations?

## 2. *Resources*

What can be concluded from the stakeholder map created in Part II?

## 3. *Limitations*

What timelines must be considered to address clinical factors and resources? List them and consider factors such as finances, time, program enrollment dates and duration, and insurance. Are there any other relevant limitations or restrictions?

### *Objective Data*

## 4. *Clinical Factors*

Pull out the relevant clinical data about Rose and Michael, from diaries and clinic notes.

### *Summary*

## 5. *Prioritize Problems*

Review the information in Questions 1–4 to pull out Rose and Michael’s problems, from their perspectives. Based on their diary data, order the factors by Rose and Michael’s priorities.

### *Reading*

de Belvis, A., A. Visnijn, A. Izzi, S. Bucci, M. Tanzariello, M. Marino, . . ., and K. Vanhaecht. 2014. Which criteria to prioritize the healthcare problems to be treated through the integrated care pathways? *European Journal of Public Health* 24(suppl\_2). <<https://doi.org/10.1093/eurpub/cku151.095>>.

## Part IV – Evaluation, Refinement, and Production

As a student design team, review all of the data as established in Part III. Use your critical thinking skills to establish content clusters or themes for the data. After all of the data has been sorted, co-create a visual graphic to capture the organized data. There are a number of visual graphics that you can use (e.g., tables, concept maps, roadmaps, histograms, Venn diagrams). Choose the best method to visually represent the available data and use your graphic to help answer the following questions.

### Questions

1. Identify at least two clusters that could be classified as observations (read or hear).
2. What is your opinion about those observations (judgment)?
3. What values are ultimately at work in these clusters (value)?
4. Is there a root issue that is common to the selected clusters? If so, identify it (target issue).
5. How might you design an improved intervention based on the specific attitudes and behaviors of Rose and Michael? Storyboard that intervention using this Wiki for guidance: <<https://www.wikihow.com/Create-a-Storyboard>>.

### Readings

- Johnson, B.D., E. Dunlap, and E. Benoit. 2010. Structured qualitative research: organizing “mountains of words” for data analysis both qualitative and quantitative. *Substance Use and Misuse* 45(5): 648–70. doi: 10.3109/10826081003594757. <<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2838205/>>
- Kahn, M. and S.S. Kahn. 2011. Data and information visualization methods, and interactive mechanisms: a survey. *International Journal of Computer Applications* 34(1). <<https://pdfs.semanticscholar.org/4ff1/f2fff62e899f4b9f507b2eb4bb297b7febc2.pdf>>.
- Ulrich, E. 2007. Inclusive iterations: how a design team builds shared insights. [Blog post]. <<https://noreally.wordpress.com/2007/08/21/inclusive-iterations-how-a-design-team-builds-shared-insights-emily-ulrich/>>.



## Part V – Launch and Monitor

The clinic care team implements the new self-monitoring tool for weight management. Reflect on the changes that occurred in this case study and answer the following questions in a 250-word essay.

### Questions

1. Describe your group process and collaboration.
2. Discuss what factors could have improved the team's group performance
3. Explain how you can connect this problem solving process (design thinking) to future learning.

### Reading

Roberts, J.P., T.T. Fisher, M.J. Trowbridge, and C. Bent. 2016. A design thinking framework for healthcare management and innovation. *Healthcare* 4: 11–4.

### Conclusion

The student design team made revisions to the prototype based on Rose and Michael's feedback, the plan for ongoing evaluation was developed and the product was implemented with other patients in the clinic.

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- Ulrich, E. 2007. Inclusive iterations: how a design team builds shared insights. [Blog post]. <<https://noreally.wordpress.com/2007/08/21/inclusive-iterations-how-a-design-team-builds-shared-insights-emily-ulrich/>>.