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# Motivation to Prevent Chronic Disease or Complications

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# Motivation to Prevent Chronic Disease or Complications

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# Problem Identification

- ▶ Throughout the duration of my family medicine clerkship, I noticed that either diabetes or obesity follow-up cases took up a large proportion of the total number of cases each day.
- ▶ Although patients seemed to recognize a need to eat healthy and exercise regularly, many seemed to come in feeling defeated or unable to commit to the changes that they themselves recognized had to be made for their condition.
  - ▶ This is concerning because being overweight in general can increase the risk of cancer, hypertension, and diabetes<sup>1-2</sup>
- ▶ Additionally, many of the flyers and brochures available as resources for patients were packed with dense information that was difficult to read through.
- ▶ Though motivational interviewing has been documented as a way to stimulate change, there is little information available as to how to implement one's plan, and this becomes even more difficult for a patient who might be resistant to large changes in their behavior and habits.

# Costs to Society and Health

- ▶ Pooled annual medical costs attributable to obesity add up to \$1910, which is about \$149.4 billion at the national level<sup>3</sup>
  - ▶ This increases exponentially when people get into the range of class 2 or 3 obesity (BMI >35)<sup>4</sup>.
- ▶ Diabetes Cost
  - ▶ A \$327 billion cost per year estimated in 2017, an 26% increase from 245 billion in 2012<sup>5</sup>.
  - ▶ Complications: blindness (retinopathy), kidney failure, heart disease, stroke, loss of limb
- ▶ This cost becomes compounded when an individual has both diabetes and obesity
  - ▶ One study showed that annual total excess cost compared with normal weight people without diabetes was 26% for obesity alone and 46% for those with obesity and diabetes.<sup>6</sup>
- ▶ Chittenden County Data between 2013-2015
  - ▶ 66% of adults reported that they did not eat two servings of fruits and 77% of adults in Chittenden county reported not eating 3 servings of vegetables<sup>7</sup>.
  - ▶ 39% of adults and 68% of adolescents are not meeting physical activity guidelines<sup>7</sup>.
  - ▶ 21% of adults in Chittenden County were classified as obese<sup>7</sup>.
- ▶ Adolescents engaging in unhealthy eating and not maintaining physical activity are more likely to experience childhood obesity that can persist in adulthood within 70-80% of these adolescents<sup>8-9</sup>.
  - ▶ This makes it all the more important that we foster healthy eating habits in both adults and adolescent populations where possible to prevent diabetes and obesity

# Patient and Provider Perspective

Anthony Williams, MD;  
perspective on Motivational  
interviewing with patients

- “Some patients are resistant to guidance and change; They can be brought to recognize an issue but are unwilling to make any changes despite repeated interventions. I find myself having to go see patients for the same issue that could be fixed were they to actually attempt to change their behavior. They seem to struggle finding a defined goal that they can actually meet.”

Anonymous patient L;  
perspective on struggles with  
changing lifestyle for diabetes  
and hyperlipidemia.

- “I like being able to have control of my own life. Sometimes providers can be pushy with their advice, so I like making my own changes that make sense. I sometimes struggle and have the occasional slip, but it is not really too much of a problem.”

Anonymous patient M;  
perspective on changing  
lifestyle for obesity

- “I definitely exercise and am aware of my caloric intake. Yeah, maybe I don’t eat enough vegetables, but I hate the idea of going on a diet where you have to get rid of your lifestyle and happiness. If there are little changes here and there that need to be made, that’s not a problem.”

# Intervention and Methodology



Multiple studies have demonstrated great support and evidence behind Motivational Interviewing in its efficacy in promoting weight loss in overweight and obese individuals<sup>10</sup>.

Motivational interviewing has been shown to cause greater outcomes in such patients, but maintaining these changes over a long period of time is difficult; repeated encounters are associated with longer lasting change<sup>11</sup>.



Motivational Interviewing (MI) shows better efficacy when changes made are small and not lumped together when targeting different categories of behavioral change<sup>12</sup>

- MI can be used in conjunction with SMART goal setting and goal attainment scaling to assess goal progress<sup>13-14</sup>



Target intervention: providing a tool to address the fourth component of MI (planning) through use of a SMART goal tool and intervention assessment with Goal attainment scaling

Mini Goal Sheet w/ 1-2 objectives

- Can be used as a starter for small goals → providing potentially visible evidence of competence and self efficacy

Goal Attainment Scaling

- To assess results and provide pre or post intervention data

# Results

- ▶ One handout for patients to reference and providers to review before an encounter, centered on the SMART template for goal setting
  - ▶ A mini goal sheet to stimulate potential engagement from patient
- ▶ Provided to Family Medicine Providers and nurses at front desk
  - ▶ Smart Phrase version of the project handout was created.
- ▶ Per Anthony Williams, MD, he found the handout to be professional and visually appealing. Also noted that the simplicity of the handout made it much more likely to be referenced before an encounter.
  - ▶ Other providers at the office appreciated the creation of a smart phrase that will make this intervention easy and quick to implement with patients.

# Effectiveness and Limitations

## ▶ Effectiveness

### ▶ Objective quantitative measures

- ▶ Hemoglobin A1c levels, blood pressure, BMI, Lipid levels,

### ▶ Subjective:

- ▶ Patient surveys addressing degree of motivation, satisfaction, the progression of their goals, the completed milestones and degree of motivation

- ▶ Ex: Goal Attainment Scaling

## ▶ Limitations

- ▶ 5 week clerkship limited the amount of time to collect data, especially when patient follow ups are generally scheduled 3 or 6 months from their most recent visit



# Future Interventions and Project

- ▶ Determining the patients level of motivation and assigning them to particular groups of motivational interviewing
  - ▶ Ex: For those saying they have 3/5 in motivation to change, conduct motivational interviewing and jointly design attainable goals with the patient that can be followed up or assessed
  - ▶ Exercise ex:
    - ▶ Go for a walk up and down the house during a commercial
  - ▶ Ex: in those saying 5/5 motivation, start with reasonable, potentially significant changes (ie cutting out soda completely or only having it once a week on weekends)
- ▶ Implementation of this project into practice.
  - ▶ Assess changes in motivation, goals met, and quantitative measures through goal attainment scaling
- ▶ Another project could be applying this methodology to alcohol or smoking cessation

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# Consent Form

- ▶ Thank you for agreeing to be interviewed. This project is a requirement for the Family Medicine clerkship. It will be stored on the Dana Library ScholarWorks website. Your name will be attached to your interview and you may be cited directly or indirectly in subsequent unpublished or published work. The interviewer affirms that he/she has explained the nature and purpose of this project. The interviewee affirms that he/she has consented to this interview. Yes  / No  If not consenting as above: please add the interviewee names here for the department of Family Medicine information only. Name: Anthony Williams MD