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Promoting weight-loss via smartphone health applications (MyFitnessPal)

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Michael Barnum

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Rutland Community Health Center

Mentor: Richard Baker, MD

Problem Identification and Description of Need

- **Obesity has become a public health crisis in the United States**
  - 68% of men and 64% of women in the United States are overweight or obese[4]
  - Obesity is associated with HTN, stroke, heart disease, elevated cholesterol, and diabetes[5]

- **Tracking the consumption of certain foods and drinks may help individuals achieve an improved understanding of their dietary patterns[9]**

- **A vast number of health-related mobile apps have been developed and are now being widely used to tackle health problems[6]**
  - Using a diet-tracking app may improve self-monitoring, goal setting, and knowledge and develop self-efficacy—all of which are key behavior change constructs[10]

- **Health-related apps can successfully lead to health behavior change related to weight loss or weight management[7]**
  - when comparing the use of diet-related apps with website groups and food intake diary groups in a randomized control trial, participants using the apps had higher retention, adherence, and weight loss[8]
  - 96% of Americans age 18-29 own a smartphone and 92% of Americans age 30-49 own a smartphone[11]

Public Health Cost and Unique Cost Considerations in Host Community

- **Nationally, the estimated direct and indirect costs of obesity add up to more than $190 billion each year[1]**

- **By 2030, obesity-related health care costs in Vermont are projected to climb 20.3%[2]**

- **If BMIs were lowered by 5%, Vermont could save $1.3 billion in healthcare costs by 2030[2]**
  - In Vermont, only 23% of high school students eat five servings of fruits or vegetables per day (the USDA recommended amount), and 17% have at least one sugar-sweetened drink every day[3]

- **MyFitnessPal is a free application available on all platforms!**

Community Perspective on Issue and Support for Project

- **Three interviews**
  - Richard Baker, MD
  - Leigh Ryan, LPN
  - Patti-Jo Glass, MA

- **Takeaways from the interviews**
  - "people are always looking for diet advice"
  - "making a handout would be helpful"
  - "almost all patients have smartphones"
  - "patients are overwhelmed by all the information at their visit, having a simple, convenient educational document would be beneficial"

https://www.chcrr.org/location/express-care-rutland/

Intervention and Methodology

- **Created a handout that provides easy-to-read, clear instructions on how to use Health App MyFitnessPal**
  - Includes education on Total Daily Energy Expenditure and how to calculate number of calories consumed and spent in a day

- **Included information on tracking daily weight, tracking foods at home, and tracking diet while out at restaurants**
  - Described benefits to using health App versus traditional diet strategies

- **Make handouts accessible to patients in the waiting room, as well as in patient rooms during visit**

MYFITNESSPAL HANDOUT

What is MyFitnessPal?
- Easy-to-use smartphone app which helps users keep track of diet and exercise
- Personalizes the number of calories you should aim for based on your target weight
- Users scan barcodes of food items or find them in the pre-existing database (over 300,000,000 items!)
- Nearly 180 million people use MyFitnessPal to live healthier, happier lives!

Why use MyFitnessPal?
- Tracking calories help individuals achieve an improved understanding of their dietary patterns
- Understanding caloric intake and expenditure is essential to losing weight!
- Most people underestimate the number of calories they are consuming
- MyFitnessPal is 100 percent free!
- MyFitnessPal utilizes gamification to motivate users
- This enables you to analyze patterns and find out what your diet is missing or where you need to cut back a little

WORKING OFF THE CALORIES

	Calories	Walk off	Run off
Quarter of large pizza	449	1hr 23min	43min
Chicken & bacon sandwich	445	1hr 22min	42min
Dry roasted peanuts (50g)	296	54min	28min
Medium mocha coffee	290	53min	28min
Blueberry muffin	265	48min	25min
Standard chocolate bar	229	42min	22min
Packet Crisps	171	31min	16min
Sugary soft drink (330ml can)	138	26min	13min

### Getting started with MyFitnessPal
1. Download MyFitnessPal App
2. Add your information (age, gender, height, weight, target weight, and activity level)
3. The app will provide you with a daily calorie target personalized to help you meet your goals

Tips for Success

Set realistic goals and hold yourself accountable
Each time you eat, track the food you consumed
Tracking gets easier the more you do it!
When tracking food, use the scanner or search MyFitnessPal's database

Results and Response Data

- **Created a handout for patients with key information about calorie counting apps**

- **Physicians and staff at Rutland Family Medicine Office viewed the brochure positively and believed that it would be beneficial to provide patients**
  - Staff specifically appreciated the fact that it is a convenient and simple tool for patients and can save them time in an office visit

https://time.com/5222015/how-to-change-myfitnesspal-password/
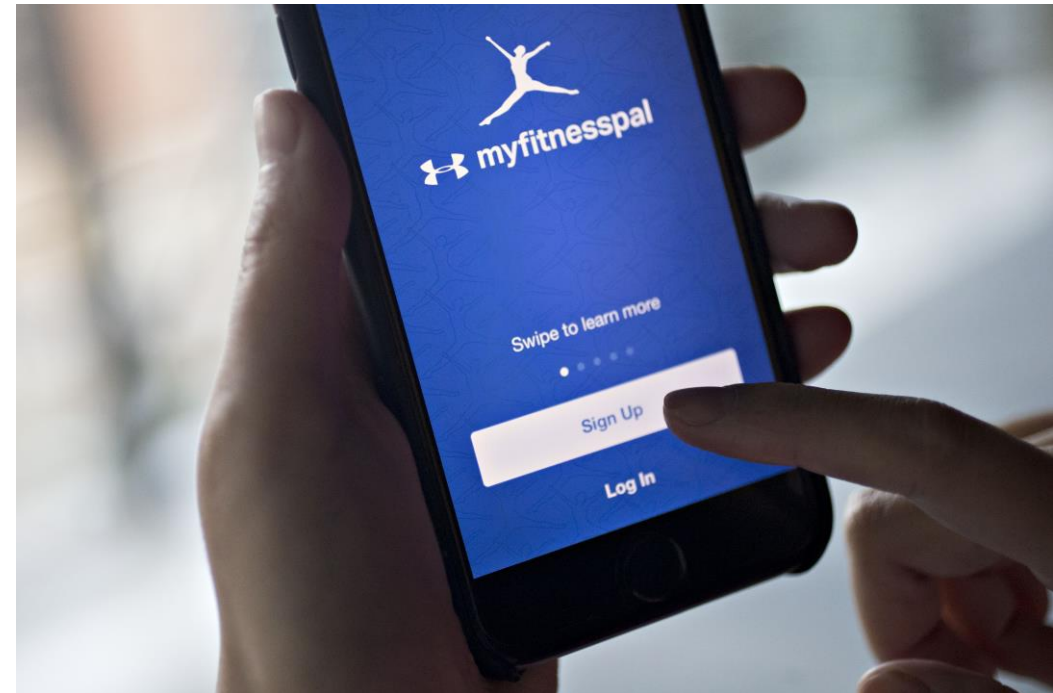
# Evaluation of Effectiveness and Limitations

- **Evaluation**
  - Encourage in-visit distribution of handout to interested patients
  - A useful evaluation would be to assess how often providers distribute this handout
  - Due to the duration of this rotation, follow-up, compliance, and motivational interviewing is unable to be followed or assessed

- **Limitations**
  - Those patients without smartphones may be excluded
  - Not available in different languages
  - Patients may be discouraged by technology (not "tech savvy")
  - Patients may be unaware of handouts

Recommendations for Future Interventions/Projects

- **Would be useful to initially survey patients to assess interest in using Health Apps for weight loss**

- **Interview patients to determine their understanding and preconceptions about Health Apps**
  - The use Health Apps for weight loss is an emerging field with growing popularity, but the views of this technology in a rural setting is unknown

- **Follow-up with patients to assess compliance in a short-term and a long-term fashion**
  - Incentivizing this application could further enhance the motivation and use of this tool

https://thesweetsetup.com/a-roundup-of-apps-for-a-fitter-you/
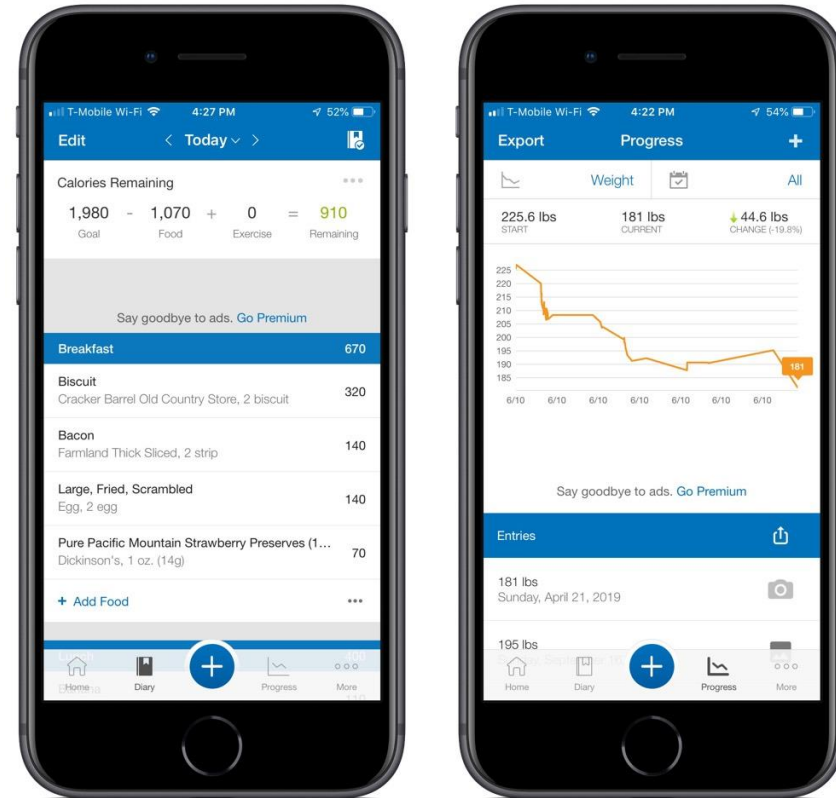
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Thank you for agreeing to be interviewed. This project is a requirement for the Family Medicine clerkship. It will be stored on the Dana Library ScholarWorks website. Your name will be attached to your interview and you may be cited directly or indirectly 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.

Consented __X__
Name: ___Richard Baker, MD_____
Name: ___Leigh Ryan, LPN_____

Did NOT Consent_____
Name: _____
Name: _____