

Developing a Weight Management Program in a Community Setting

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INTRODUCTION

An estimated 97 million adults in the United States are overweight or obese. As the second leading cause of preventable death in the United States, being overweight and obesity pose a major public health challenge.¹ Overweight is defined as a body mass index (BMI) of 25 to 29.9 kg/m² and obesity is a BMI of ≥ 30 kg/m².¹ Data from two National Health and Nutrition Examination Surveys (NHANES) show that among adults aged 20-74 years, the prevalence of obesity increased from 15%, in the 1976 to 1980 survey, to 32.9% in the 2003 to 2004 survey.² This increase is not limited to only adults, as the two surveys also show increases in weight among children and teens. For children aged 2–5 years, prevalence of being overweight increased from 5.0% to 13.9%; for those aged 6–11 years, prevalence increased from 6.5% to 18.8%; and for those aged 12–19 years, prevalence increased from 5.0% to 17.4%.² Among children and teens aged 6–19 years, 16%, over 9 million young people, are considered overweight. These statistics raise concern because of their implications for Americans' health. Being overweight or obese increases the risk of many diseases and health conditions. Metabolic syndrome is a group of medical conditions that includes central obesity, dyslipidemia, and hypertension, type 2 diabetes, prothrombotic state, and a proinflammatory state.³ Each of these disorders is by itself a risk factor for other diseases and in combination these disorders dramatically boost one's chances of developing potentially life-threatening illnesses.⁴ The optimal BMI is usually considered to be about 21 kg/m². Above that level, the risk of death increases slowly until a BMI of about 27 or 28 is reached.^{5,6,7} Observational epidemiologic studies show that overall mortality is positively correlated with increases in body weight.⁸ This evidence is strongest for adults between the ages of 30 and 44

years. Sponsored by the Office of Disease Prevention and Health Promotion and the U.S. Department of Health and Human Services, *Healthy People 2010* has been developed to provide a set of 10-year evidence-based health objectives for improving the health of all Americans. Its two primary goals are to increase the quality and years of healthy life, and to eliminate health disparities.⁹ Although one of the national health objectives for *Healthy People 2010* is to reduce the prevalence of obesity among adults to less than 15%, current data indicate that the situation is worsening rather than improving.² This data raises the question, how can a community pharmacist can get involved in weight management efforts? In addition, why should patients consider talking to a pharmacist? First, pharmacists are the most accessible healthcare professionals, as well as highly trained. Second, many patients who are struggling with their weight come to the pharmacy for vitamins, minerals, and supplements, and it is at this time that the pharmacist can provide professional advice concerning these products. And finally, many pharmacies are expanding their services to include those for weight loss such as using calipers and body composition analyzers. This article summarizes a weight management program that was developed in a community pharmacy and will provide enough structure for community pharmacists to begin their own weight management program. The site in which the program ran was a community pharmacy. This pharmacy contains an office located near the pharmacy that was utilized to provide a more private one on one counseling session, as well as various other services.

METHODS

PROGRAM DESIGN & DEVELOPMENT

Developing Paperwork and Education Materials

The United States Department of Agriculture's (USDA) website, www.mypyramid.gov, was used to develop the educational tools necessary for the patient to develop a healthy personalized dietary plan. Multiple forms were created by the pharmacist to gather baseline information for the patient, including medical, social, and surgical history. In addition to baseline information, a separate form was created to track the patient's progress at each follow up visit by the pharmacist. There was also a folder of educational materials including information regarding counting calories, portion control, reading a nutritional label, the importance of exercise, and a nutrition journal that was given to the patient to take home to read after the first visit. All materials were adopted from the USDA's website.

Equipment Selection

One key component of any weight management program would be the ability to measure the progress of weight loss. Many programs utilize fat calipers or body fat analyzers but there are specific features of each machine to consider, such as cost, the weight capacity it can accommodate, and whether the patient needs to fast or not before weighing in (see Table 1 for a comparison of commercially available machines). Our program chose the Futrex 6100XL as it best suited our needs regarding weight capacity and cost. Also, it was compact and easy to travel with when needed.¹⁰ The community pharmacy is equipped with all devices needed for patient assessment and evaluation, such as a physician weight scale, mercury sphygmomanometer for measuring blood pressure,

various glucometers to measure blood glucose, Cholestech LDX lipid analyzer for evaluating lipid levels, and an A1C Now instrument for evaluating hemoglobin A1c.

Recruitment of Patients

The next step in implementing the program is deciding to whom to offer the services, what services are going to be offered, in how much depth, and at what cost to the patient. The target patient population should be based on local demographics of overweight individuals. This information can be retrieved from the state Department of Public Health. The types of services that will be offered will be based on the type of machine and the features that the machine has. In addition, some programs may wish to involve a nutritionist who facilitates calorie counting and food selection. Others may include pharmacists who perform the counseling on their own. Currently, there is no approved national certification available to pharmacists with regards to specialization in nutrition or weight management. Our program chose a simple method of advertising within the store using paper flyers and bag stuffers for those patients that filled prescriptions in the pharmacy.

PROGRAM IMPLEMENTATION

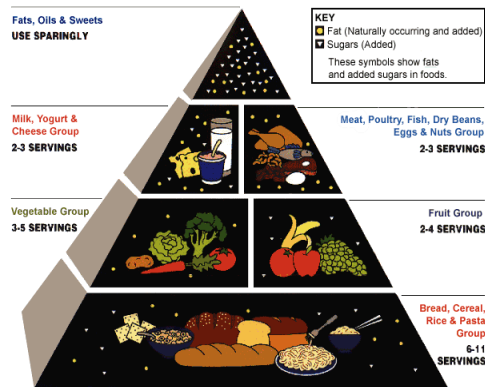
Initial Patient Visit & Patient Education

In order to gather a complete medical history, identify any and all pharmaceutical interventions, and educate the patient regarding nutrition and exercise, our program allotted 45 minutes to 1 hour for the first appointment. In our situation, the community pharmacy is staffed with a pharmacist who was not solely responsible for staffing on a day-to-day basis, therefore there was not as much of a time restriction. This is not

something that is feasible for all community pharmacists, but this visit could take place during overlap coverage with a second pharmacist, if possible. Most of the initial appointment should be centered on collecting the patient's past medical history, and in turn determining if this patient is a candidate for an exercise and nutritional program. While collecting the patient's history, we also measured the patient's body fat with the body composition machine and documented this value. Once the medical history has been collected, the pharmacist should continue to complete a social history, including daily work schedule, environment, and motivation level, as to develop a nutritional plan suitable for that individual.

The biggest challenge for many patients is to understand what types of foods are good for them and what portion sizes are appropriate for the type of food they are eating. A pharmacist can assist a patient with understanding how to read a nutritional label. This would include knowing how many servings there are per package/container, what percentage of their daily nutritional values there are per serving, sodium and fiber content, as well as fat content. The new food pyramid, redesigned by the USDA, does not focus on the numbers of servings and portion sizes that individuals should consume as with the old pyramid.^{11, 12} Instead, the new pyramid focuses on the *types* of foods that should be consumed.

Old Food Pyramid



New Food Pyramid



The orange section of the pyramid focuses on grains. Any food made from wheat, rice, oats, cornmeal, barley or any other cereal grain is a grain product. According to the USDA's new food pyramid, it is recommended to make at least half of the total grains eaten whole grains, which means that an individual should consume at least 3 ounces of "whole" grains every day.

The green section of the pyramid represents vegetables. The USDA recommends eating more dark green and orange vegetables, and also more dry beans and peas. Vegetables can be eaten raw or cooked; fresh or frozen, canned, or dried; and may be whole, cut-up or mashed, just as long as they are eaten.

The red section of the pyramid focuses on fruits. It is recommended to eat a variety of fruits, whether they are fresh, frozen, canned, or dried. More and more, people are drinking fruit juices, but these are not as highly recommended due to greater sugar content.

In yellow is the fat and oil section, and understanding where our fats come from is very important. Most of the fats we eat come from fish, nuts, and vegetable oils. Most oils are high in monounsaturated or polyunsaturated fats, which help to decrease LDL

cholesterol, and low in saturated fats, which tend to increase cholesterol. Oils from plant sources (vegetable and nut oils) do not contain any cholesterol. Other sources of solid fat are butter, stick margarine, and shortening, which are high in saturated fats and have less monounsaturated or polyunsaturated fats. While consuming some oil is needed for health, oils still contain calories. Therefore, the amount of oil consumed needs to be limited to balance total calorie intake.

The blue section is dairy products, which the pyramid focuses more on milk and drinking low fat milk. The USDA suggests for those individuals that cannot consume milk, to choose lactose free products or other sources of calcium.

The last section, which is purple, represents meat and beans. The USDA suggests choosing low-fat or lean meats and poultry that can be baked, broiled, or grilled. They also suggest varying choices with more fish, beans, peas, nuts, and seeds.¹¹

The USDA's website also provides detailed information on how to read a nutritional label, as well as calculates the number of calories a patient should be consuming on a day to day basis. All of these materials were provided to the patient at the initial visit. These basic skills on eating healthy foods, reading a nutritional label and counting calories will provide the patient with a foundation for their weight loss program. If a patient needs further, more detailed information, the pharmacist should then refer them to a dietician, nutritionist, or their doctor.

Follow-Up Visits and Program Evaluation

We conducted our face-to-face follow up visits every 3 months over the next year so that the patient was given sufficient time to implement the dietary and exercise changes that

we had recommended. Follow-up visits typically lasted about 15 to 20 minutes in length. However, if the patient felt that they needed assistance prior to the 3 month visit, they were encouraged to call the pharmacy or stop in for a visit. These informal visits were briefly documented; however no assessment or changes were made at this time. At the formal follow up visits, we conducted a follow up body fat analysis, documented any changes in weight, and discussed challenges the patient was facing, as well as addressed any concerns he/she had.

At the end of the program, we allowed patients to fill out a confidential survey reflecting the value of the program. Some questions to ask patients can be related to what they feel they gained from the program, evaluation of the materials provided, the service offered, the length of the program, their feedback on the pharmacists that ran the program, whether or not they would pay for similar services if offered to them in the future, and how much they were willing to pay, and any additional comments they may have to help improve the program for next time.

CONCLUSION

With the continual increase in the number of people that are overweight, the time is right for pharmacists to get involved and take a role in a patient's weight management. The risks associated with being overweight are numerous, and are causing health care costs to rise. With the implementation of a weight management program, pharmacists may be able to help prevent some of those risks. Each program will be created, designed, and implemented differently, but there are basic factors that need to be considered. For example, where the program is going to be conducted, the type of machine that will suit

the program best, and what types of patients will be enrolled. Other factors to consider include the amount of education that will be offered, how much the program will cost from start to finish – not only for the patient but for the pharmacy as well, and what is the purpose of creating this program are just a few factors that should be considered.

Table 1 – Comparison of Available Machines

Mandatory Pretest Requirements	Skin Fold Calipers	Under Water Weighing	Bioimpedance Technology	Optical Technology
Need to Fast	No	Yes, minimum 2 hours	Yes, minimum 4-6 hours	No
Need to Disrobe	Yes	Yes	Yes, stockings must be removed	No
Can measure after exercising	Yes	No	No, must wait minimum of 2 hours after exercise	Yes
Need for voiding	No	Yes, within 30 minutes	Yes, within 30 minutes of test	No
Measure anytime	Yes	No	No, women cannot be measured during menstrual cycle	Yes
Accuracy	Moderate	Excellent	Excellent, if above criteria followed	Excellent
Repeatability	Depends on operator	Excellent	Excellent, if above criteria followed	Excellent
Possible Risks	None	None	Yes, for implanted defibrillator, questionable during pregnancy	None

Adapted from www.futrex.com

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