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The Role of Recognition and Education of Obese Patients In

The Retail Health Setting and the Effect on Dietitian Referrals.

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Abstract

Obesity is a nationwide problem for which a multi-factorial holistic treatment plan is essential for the successful treatment.

Purpose of study

The design of the project implemented an education module for obese patients in a retail health care setting to promote referrals to dietitians for holistic treatment.

Design of Study

The execution of the education module created by the nurse practitioner project facilitator took place with participants over 18 years old and a body mass index (BMI) greater than 30 in the retail health clinic setting. The education provided information about obesity, personal BMI, and resources available including registered dietitians.

Methods Used:

50 participants from May to July 2017 received the education module. Collection of data occurred for dietitian visits from January through early September 2017.

Findings:

There was an increase in the number of dietitian visits after implementation of the education program; there is no direct attribution to the program and the increase. Plans for sustainability of the program include changes to the documentation process as well as improved outcome measures.

Conclusions:

Further research is necessary with a larger population to evaluate whether education from the nurse practitioner improves dietitian referrals in the retail health clinic setting.

Introduction & Problem Statement

Obesity is a nationwide problem and seen frequently in the retail health setting. Retail health clinics provide ambulatory care that emphasizes patient convenience. There is no need for an appointment to receive basic medical care in retail health clinics and there are also often short wait times. Retail health clinics differ from urgent care settings in that they are located inside stores and typically use nurse practitioners or physician assistants to provide care at a limited scope compared to urgent care facilities. The first retail health clinic opened in the United States in 2000 and the number of clinics has continued to grow (Mehrots, Wang, Lave, et.al, 2008). Typical reasons for visits are upper respiratory infections, sinusitis, bronchitis, otitis media, otitis externa, pharyngitis, conjunctivitis, urinary tract infection, immunization, screening blood pressure or lab test, or other preventative visit (Mehrotra, Wang, Lave, et.al, 2008). There is a lack of understanding by patients who come to a retail health clinic for acute illnesses about how their weight can affect their overall health or treatment (Blackman, 2005). For example, prescribing steroids for an obese patient with associated diabetes who presents with a problem like poison ivy can have a side effect of increased blood glucose. In addition, medically underserved persons cared for in the retail health clinic setting may lack access to preventative health care services as well as treatment for chronic illnesses such as diabetes (Mehrotra, Wang, Lave, et al., 2008). Patients who lack routine care could have undiagnosed co-morbidities that may be detrimental to their overall health.

An advanced practice provider such as a Nurse Practitioner (NP) has a responsibility to recognize, treat and manage health care for the obese patient. Advice from the health care provider who recommends that a patient lose weight could result in improved patient compliance (American Nurse Practitioner, 2013). The role of the Doctor of Nursing Practice (DNP)

prepared NP includes the responsibility and advanced knowledge to collaborate with other health care professionals such as the registered dietitian (RD) to ensure the holistic treatment of the patient. Holistic treatment may lead to improved quality of life for the patient, less co-morbidity as well as less health care costs (Brown & Wimpenny, 2011). There are multi-factorial treatment options for obesity that require close monitoring and collaboration with others to ensure the patient is receiving adequate care. Collaborative goal setting, accountability, nutrition consultation and meal planning, self-monitoring of food intake, weight and activity, stimulus control, problem solving, and relapse prevention are important aspects to the multi-factorial treatment plan (Kellye, Sbrocco & Sbrocco, 2016). Referrals for dietitian services come from within the retail health clinic as well as from outside providers. These services include one-on-one counseling with dietitians and treatment plans as well as group treatment options. Dietitians in the retail health setting offer store tours, cooking classes, and individual shopping experiences to assist patients struggling with medical issues such as obesity, hypertension, high cholesterol, and food allergies/intolerance. A study published in 2015 found a direct association with significant increase in self-esteem and successful weight loss (Stubbs, et.al., 2015). The combination of services of the nurse practitioner and the registered dietitian may improve the outcomes for weight loss and improved self-esteem.

Background & Significance

According to the Centers for Disease Control (CDC), more than one third of American adults are obese which is by a body mass index (BMI) > 30. Heart disease, stroke, type II diabetes and some types of cancer are obesity related conditions that can lead to preventable causes of death (CDC, 2016). Obesity is now considered a chronic illness (often times lifelong) and contributes to 21% of health care costs in the United States. Obesity costs $147 to $210

billion per year in the United States alone (The state of obesity, 2016). Emotional, psychological, societal and environmental factors all have effects on obesity (American Nurse Practitioner, 2013). Perception of weight, stereotypes of obese people, and lack of knowledge of resources for weight management affects willingness and likelihood to seek medical treatment for obesity (Puhl & Heuer, 2010). Knowledge about weight, its relationship to health, and awareness of available resources could improve outcomes (European Federation, 2012). A holistic approach that helped a patient to understand how weight affects overall health could impact self-esteem, chronic health conditions, and quality of life.

An example of a medical resource for management of obesity is the use of a registered dietitian. A registered dietitian has a bachelor's degree or higher and has completed four additional years of education and training about the effects of nutrition on the body, mind and spirit. Dietitians assist people to set goals, and provide suggestions for cost saving on food purchases, as well as educate about the benefits of exercise. In addition, consideration of food allergies, individual food preferences, and other co-morbid conditions are part of the scope of practice for the dietitian (Ansel, 2014). NPs and dietitians collaborate to promote appropriate interventions for obese patients. Dietitians assist individuals to coach and support them in healthy food choices. Examples of dietitian services offered to patients are individual therapy (European Federation, 2012). Improving referrals through collaboration between the NP and RD could improve outcomes for obese patients cared for at retail health clinics.

Purpose

Screening all patients for obesity is a recommendation from the U.S. Preventive Services Task Force (USPSTF). Patients with a BMI of 30 kg/m^2 or higher should receive treatment with intensive, multi-component behavioral interventions. An average of 8.8 to 15.4 pound weight

loss, improved glucose tolerance and decreased cardiovascular risk are possible achievements with the use of intensive, multi-component behavioral interventions for obese patients. The USPSTF found that interventions such as group sessions, individual sessions, setting weight loss goals, improving diet or nutrition, physical activity session, addressing barriers to change, active use of self-monitoring and strategizing how to maintain lifestyle changes are all beneficial aspects of intensive treatment for obesity (U.S. Preventative, 2012). Registered dietitians are qualified providers of comprehensive lifestyle interventions for weight management (Millen, et. al, 2013).

The purpose of the project is to implement an education module for obese patients in a retail health setting to provide information about the effects of obesity and the availability of dietitian services. The goals are 1) improve the knowledge of the patient about obesity and 2) change behavior to include use of dietitian services to overcome obesity.

Literature Review

Available literature on this topic provides evidence about the patient's perspective on weight, obesity, and overall health. In addition, the literature provides information about the role of the dietitian in educating patients about healthy nutrition.

A body mass index equal to or greater than 30 is the definition of obesity which affects more than one third of the United States population (CDC, 2016). There are many contributory factors to obesity including race, gender, and socioeconomic status. A difference in perception of body weight and nutrition amongst male and female collegiate athletes has implications for gender specific education about nutritional practices (Adams, Goldufshy & Schlaff, 2014). In a study by Coleman and Loprinzi, 2015, overweight females who reported they were normal

weight were less likely to engage in exercise, which suggests there may be a connection between perception of body weight and amount of exercise.

A holistic approach to understanding factors such as perception of obesity is essential. Psychobiological, attribution and social support theories are available that may contribute to a better understanding of obesity which supports the need for a more holistic approach to the treatment of obesity throughout the health care spectrum (Brown & Wimpenny, 2011). A study on whole person integrative eating (a program for treating overeating, overweight and obesity) found that by identifying and modifying certain dynamics (providing a 6-week online education program) may lead to less overeating. The study also identified that nourishing the "whole person" physically, emotionally, spiritually and socially could also lead to a decrease in over eating in the obese patients (Kesten, 2015).

Evidence represents a lack of willingness to identify and discuss patient's obesity amongst health care providers. A study by Hayes et al. (2017), states "…evidence shows that there are gaps among healthcare providers in their understanding of the pathophysiology of obesity, in their knowledge of how to address obesity, and in treatment approaches for these persons" (pp.47). Negative stereotypes of overweight persons may also affect willingness to seek out treatment based on a fear of judgment as being lazy or a failure.

In a study by Hayes et al (2017), 31 participants which included physician's assistants, physicians, and nurse practitioners in primary care as well as three patient advocates reported inconsistent primary care team integration and challenges in conceptualizing obesity as a chronic condition both contribute to a lack of being proactive with obese patients in treatment and management of their care. Participants in the study often found out they had a diagnosis of overweight or obese via their medical record or a letter of referral to a specialist. While

guidelines are clear that treatment for obesity should include an integrated, multidisciplinary team approach, exactly how to do that is unclear (Hayes, et al., 2017).

The American Heart Association, The American College of Cardiology, and The Obese Society 2013 guidelines for the management of overweight and obese adults specifically recommend that health care providers refer patients to nutrition processionals such as the registered dietitian for counseling and calorie restricted dietary interventions (American Heart Association, 2013: American College of Cardiology, 2013: The Obese Society, 2013). Recognition of registered dietitians as qualified providers of comprehensive lifestyle interventions for weight management has been well documented (Millen, et al. 2013). Lack of patient follow up with dietitians inhibits successful weight loss (Zinn, Schofield & Hopkins, 2012).

While the research suggests that a health care professional who addresses obesity may be vital to the patient's recognition of obesity and willingness to seek treatment, there is little information if addressing the available obesity resources such as registered dietitian increases referrals for additional treatment. A dietitian is an integral part in obesity treatment; however, an essential component in one's care could be missing if the patient does not receive a referral to the dietitian (Zinn, Schofield, & Hopkins, 2013). According to the position of the Academy of Nutrition and Dietetics, a change in dietary intake to produce a reduction in calories is a key component of obesity treatment. The expertise of the RD is essential for the development, implementation, and evaluation of any intervention designed to reduce obesity (Raynor & Champagne, 2016). Knowledge and reported consumption of healthier nutrition improved during and after an intervention that included nutritional education led by RDs over a 6-month

period with continued self-management of patients for an additional 6 months (Baukje, et al., 2016).

Concepts and Theoretical Framework

Dr. Jean Watson's Theory of Human Caring/Caring Science encompasses a humanitarian, human science orientation to human caring processes, phenomena and experiences. The caring theory can is a foundation for nursing that offers a framework which embraces and intertwines art, science, humanities, spirituality and new dimensions of mind/body/spirit medicine and nursing that is so essential to nursing practice (Watson caring, 2016). The holistic approach to one's obesity using the human caring/caring science theory allows for the provider to incorporate the physical, mental, spiritual and emotional components of the person. Developing and sustaining a helping-trusting, authentic care relationship is a key curative factor of the theory.

Through promotion of engagement in the teaching-learning experience as well as the creation of a healing environment and assisting with basic needs, Dr. Watson's theory is the foundation for holistic care. Mind, body and spirit incorporation are essential for the caregiver and the patient (Wagner, 2010).

Obesity affects one's self-esteem and mental health as well as their physical health. Depression, stress, and binge eating may all result from emotional instability related to obesity. These issues can affect one's relationships, work environment, and ability to lose weight (American Psychological Association, 2016). Caring theory applies to the whole person as a being and includes their mind, body and spirit in the treatment of obesity which may be essential for successful weight loss. The health care provider and dietitian can work together to provide a

healing and non-judgmental environment conducive to meeting the goals established by the patient and collaborative team.

Project Design

The retail health center gave permission to implement the project and collaborate with the dietitian team for this project. Execution of the education regimen following IRB approval occurred during the health care visit of obese patients at retail health clinics in a Midwest metropolitan area. The education program consisted of the distribution of a fact-sheet and a one-on-one teaching session between the patient and NP project manager. Development of a teaching module informed patients about 1) the dietitian services offered and 2) the potential for increased success in controlling obesity by incorporating dietitian services into treatment. Utilization of resources from the Center for Disease Control contributed to the education fact-sheet which consisted of 1) general information about BMI and to calculate it 2) BMI category chart and the individual's BMI results, 3) knowledge of obesity and possible implications associated with being obese, 4) information about the functions and responsibilities of an RD and the role of the RD in obesity treatment, and 5) the options available to consult.

Implementation of the education program occurred during the months of May, June, and July 2017. The project NP provided the education to the participants: 50 participants over the age of 18, with a BMI greater than 30 took part. There was no identifying information collected from the participants. The dietitian team tracked the number of patients who scheduled RD visits before and after the NP education, from January through early September 2017. There was a comparison of the number of new and repeat dietitian visits from before the intervention and after the intervention.

Results and Discussion

Table 1 outlines the new and repeat visits for RDs from January 1st, 2017 through September 9th, 2017. From May 21st through June 17th as well as July 16th through August 12th there was an increase in the number of new visits. There was also an increase in new visits during the period of June 18th through July 15th. The dietitians offered free store tours during the month of June. Typically tours cost $20 and could potentially have accounted for the increase in new visits from June 18th through July 15th. The NP program manager or the dietitians collected no identifying information on the participants; therefore there is no clear deduction that the education program had connection to the surge of new patients. Originally the intent was to have the dietitian screen new patients and document participation in the education intention; however, due to changes in personnel, the documentation of the education intervention did not occur. Therefore, there is no specific correlation in the increase in RD visits and the education program. Changes to the documentation process for the dietitian visits in the future may provide evidence to support a link between the educational program and increased dietitian visits. For future research one could consider having dietitians ask each new patient if they were educated about their obesity and the dietitian services available to them. This documentation could lead to correlation of education to new referrals.

Table 1

Dietitian visit data

Date	New	Repeat
1/1/17-1/28/17	13	43
1/29/17-2/25/17	23	90
2/26/17-3/25/17	6	85
3/26/17-4/22/17	16	93
4/23/17-5/20/17	18	66
5/21/17-6/17/17	24	103
6/18/17-7/15/17	63	84
7/16/17-8/12/17	30	113

8/13/17-9/9/17	44	144

Discussion of Relationship of Results to Framework and Aims/Objectives

Framework – Evidence supports integrated teamwork in the treatment of obesity. Jean Watson's Theory of Human Caring provides support to the collaboration between the primary care provider, patient, and dietitian to promote a healing and non-judgmental environment conducive to meeting goals.

Aims/Objectives – Psychobiological, attribution and social support theories are available that may contribute to a better understanding of obesity which supports a need for a more holistic approach to the treatment of obesity throughout the health care spectrum (Brown & Wimpenny, 2011). Fifty obese patients received education on their BMI number category and the potential implications of being obese. A review of the RD services available in the retail health clinic setting took place with participants. This knowledge may translate into more referrals and improved patient wellness. While the data analysis does not provide a direct correlation to increased new dietitian visits, knowledge provided to patients may improve use the dietitian services available.

Application to Practice Setting

Essential to assessing the effectiveness of an intervention is the measurement of health outcomes which is part of advance practice. Outcomes in healthcare are the result of interventions based on clinical judgment, scientific knowledge, skills and experience. The increased emphasis on patient results affected by advance practice nursing has come from the fact that there is increased recognition on outcomes as a health care initiative (Kleinpell, 2013).

Nurse practitioners have a crucial role in the management of obesity in America. Knowledge gained by conducting a discussion about obesity could open the door to proper

diagnosis and options for treatment. Patients may not be aware of their overweight or obese status and the nurse practitioner may be the first health care provider to inform them of this. After initial diagnosis of obesity, conducting an assessment of the motivation and readiness of a patient to lose weight may be beneficial. The nurse practitioner should be aware of the resources available and provide appropriate referrals. Dietitian services are appropriate resources for patients who are obese and ready to make life changes (American Nurse Practitioner, 2013).

Advance practice providers could provide cost-effective quality health care by providing primary and secondary preventative measures and managing chronic disease such as obesity. Improvement of outcomes for patients is possible by the promotion of behavioral changes that decrease weight and prevent co-morbid conditions. Maintenance of a team effort via collaboration between the primary care provider and the RD begins with the recognition of the condition (Yip, 2015).

Dietician Referrals and Quality Improvement

Quality improvement (QI) consists of methodical actions that lead to measurable improvements in health care. Utilization of a QI model will potentially allow for improved care for the target population of obese patients. The use of a quality model such as the Plan-Do-Check-Act (PDCA) cycle in the retail health organization could be beneficial to implement and evaluate a protocol for communication and integration of dietitian services to obese patients. The PDCA model requires a recognition of an opportunity and planning of a change (obesity as an epidemic and implementation of the education module), test the change by carrying out a small scale study (provide education and track referrals), review the test, analyze the data and identify what has been learned, and then take action based on the knowledge (Kleinpell, 2013). Table 2 demonstrates the use of the PDCA cycle with this project.

Table 2

PDCA Cycle

Action	Use with project
Plan	Obesity has been recognized as an epidemic and the education module was created
Do	The education module was implemented and dietitian visits were tracked
Check	Since no identifying information was collected, there was no direct correlation between increased dietitian visits and the education module
Act	Evaluate the limitations and make changes to improve and collect further data

Sustainability

Providing holistic care and meeting the needs of obese patients is a responsibility as well as a measurable outcome for nurse practitioners. Several members of the retail health clinic healthcare team and administrators were involved in the success of this project. The retail health Chief Medical Officer (CMO) as well as the Director, Patient Centered Strategies and dietitian teams were essential for implementation. The CMO of the retail health approved the project and will be essential in the implementation of the sustainability of the education program in the future. Baseline information provided to the NP project manager from the Director, Patient Centered Strategies who has also served on the committee for the project. The information included pre-program data and assistance with the preliminary cost benefit analysis. The Director, Patient Centered Strategies has provided evaluation of the processes of the project on an ongoing basis with input in many areas including financial, implementation, and data

collection/analysis. The dietitians provided information about services they offer as well as baseline data on number and type of visits they have had in the past and present.

The continuation of the program will require the continued input of the RDs, pending approval from the company CMO. NPs will require an orientation about the need to implement the education module into their daily practice.

Strengths & Limitations

Strengths

Patients received information about BMI and dietitian services at their visit. Many patients stated they were unaware of dietitian services available to them in the retail health setting. Commitment to the project by the retail clinic administration and the dietitians was essential throughout the implementation and data collection processes.

Limitations

There are several limitations to the program affecting outcomes. The timeframe of the project was during the summer months in which the retail health setting had less patient visits due to summer vacations and less illness amongst the community. Recruitment of participants was difficult at times which also expanded the length of time needed to implement the program. Also there was no way to link the patients who visited dietitians to the education received from the NP.

Recommendations for Future Research

There is a national urgency to prevent, recognize, and treat those who are obese at a primary care level. Stakeholders have the potential to benefit from a more proactive, efficient and coordinated approach for the treatment and management of obesity amongst patients.

Collaboration of inter professional entities such as nurse practitioners and dietitians needs recognition, discuss and utilization of a protocol to treat obese patients.

Expansion of research could include the evaluation of educational material as well as other modalities such as group sessions, treatment options that incorporate prescriptions and outcome measurements that may promote holistic care for obese patients. As retail health clinics expand to include primary care services there is potential to improve the knowledge and care of obese patients. Utilization of the information gained from this project throughout retail health centers in the nation could improve patient knowledge, decrease obesity rates, and encourage holistic care. In the future, expansion of the education with referral process could provide assistance with other health care issues such as smoking cessation.

Conclusion

Research provides evidence that health care providers often do not discuss obesity with their patients. Obesity is an epidemic with negative healthcare outcomes and there is an urgent need to prevent, recognize and treat at a primary care level. Inter-professional collaboration and holistic, multidisciplinary treatment for the obese patient in the retail health clinic setting through recognition and education can improve outcomes for patients. There is a need for additional research on a larger scale; however, there has been an increase in useful information and variations of this which provides the opportunity for sustainability in the retail health clinic setting.

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