

Increasing Health Literacy Among Patients: UNHS Resource book

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Introduction/Background Information

Obesity and its related health risks, including diabetes and hypertension, have been on a constant rise in the United States for the last two decades. In fact, obesity has accounted for 6.8% or \$70 billion in total health care cost in the United States (World Health Organization (WHO), 2013). The components that contribute to obesity, diabetes and hypertension are multifactorial however and all areas should be addressed for true treatment and/or prevention to occur.

Because the risk of diabetes and hypertension rise with an increase in weight, there is great overlap between the prevention of obesity and those chronic diseases. The World Health Organization states physical activity is a preventative measure for hypertension, obesity, and diabetes and a sedentary lifestyle is a considered causative (2013). It appears that communities with active lifestyle have a lesser chance of acquiring these diseases. Additionally, environments that promote an active lifestyle by the inclusion of parks and recreational areas for example, may also show lower incidents of diabetes, obesity, and hypertension (WHO, 2013).

Other factors that contribute to obesity, hypertension, and diabetes are dietary choices. A high dietary intake of energy dense, micronutrient poor food can lead to the aforementioned chronic diseases whereas a healthy diet including whole grains, fruits and vegetables can serve as a preventative measure and/or treatment plan for these diseases. It could be assumed that people with increased access to preventative foods will have a decrease chance of developing these diseases (Campbell & Crawford, 2011).

Another contribution factor to a person's health that is sometimes overlooked is a patient's health literacy. According to Ratzan and Parker, health literacy is "the degree in which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions" (2000). If a patient has low health literacy, they may be uninformed of

how certain factors such as diet and fitness affect their overall health. In fact, persons with limited health literacy are more likely to have chronic conditions and are less able to manage them effectively (Williams, Baker, Parker, & Nurss 1998).

When interacting with the clinicians and staff of United Neighborhood Health Services (UNHS), it was quickly learned that the majority of their patient population were diabetic, obese, and/or hypertensive. There was also a lack of medical compliance and a shortage of resources patients could use to maintain their chronic diseases. Patients often stated that they were not receiving enough exercise due to the expensive costs to visit some of the area's recreational centers. Some patients also complained of not having access to the nutritious foods suggested by the clinician due to the lack of fresh produce and other healthy options at the local food banks. This lack of knowledge and access to care greatly diminish these patients' ability to maintain their current diseases and could worsen their overall health.

To address the limited health literacy of the UNHS patient population, the patient's should be made aware of the available resources in the area that could lead to an improvement of their overall health. The goal of this intervention is to create a resource book to be utilized by the healthcare providers and staff at the UNHS clinics during their interaction with patients. The resource book will include the affordable fitness and health care options in the Nashville area. It will also include food banks and farmers markets that offer fresh produce and healthy food choices. Through the creation and use of this book, the health literacy of the patients at UNHS would increase which in turn could positively affect their overall health.

Methods

On Wednesday, June 5, 2013, a meeting was held involving the members of the United Neighborhood Health Services' Diabetes Management Team to discuss the needs of their diabetic

patient population. During this meeting, key areas were recognized as being important to the overall health of the diabetic population. In addition, these areas were deemed by the experienced Diabetic Management team as being somewhat inaccessible by the diabetic patient population. From this list of inaccessible needs, the overarching categories of the diabetes-specific resource book were established. These categories included diabetic-friendly Food Banks, Physical/Social Fitness, Dentistry, Mental Health Support, Preventative Screenings and Insurance Plans. Organized according to these categories, the resource book could be comprised of information pertaining to the available low-cost resources in the Nashville area.

Information for the diabetes-specific resource book began being collected on Thursday, June 6, 2013. The internet was heavily utilized in the early stages of the gathering of information. A popular resource tool, Bridges to Care, was the first to be utilized. This Nashville specific website held information pertaining to the healthcare facilities that charged patients based on their ability to pay. Information was collected from this particular website and then verified by either calling or visiting the establishment. Emailing the employees of these establishments was also necessary in some cases. The information collected from the Nashville specific website included the name, number, address, and services offered by the healthcare establishment. Average prices of the services offered were at times also included. This information was then verified with the healthcare establishment and new information was also collected during this verification process. This new information included patient requirements, required documentation, hours of operation, and any other pertinent information that the patient should know before visiting the establishment. The information gathered using this methodology mostly pertained to the Dentistry and Mental Health Support categories of the resource book and is listed in **Table 1** of the appendix

The gathering of information pertaining to the Food Banks began on Monday, June 10, 2013. Using the suggestions made at the meeting with the Diabetes Management team held on June 5th, a popular search engine was used to gather contact information for these Food Banks, which are included in **Table 2** of the appendix. The websites of these food banks were then examine to gather all information available. After this gathering, questions to ask each establishment was composed to help better organize and guide future contact with the food banks. These food banks were contacted later during the week, beginning on Wednesday, June 12, 2013 and ending on Monday, June 17, 2013.

On Wednesday, June 12, 2013, a follow up meeting was held with the UNHS's Diabetic Management Team. During this meeting, an update of progress the resource book was given to the team. More requests were made to be added to the resource book, specifically information pertaining to a possible insurance plan offered to uninsured patients by Nashville General Hospital. Also, a suggestion was made to the team to use an intake tool in conjunction with the resource book. The idea was to allow each patient, using the intake tool, to specifically select an area of their care in which they needed resources. The diabetes team was not opposed to this suggestion and a feasible method of creating this tool was to be later established. Immediately following this meeting with the resource team, a meeting was held at the Meharry-Vanderbilt Alliance to receive necessary feedback of the resource book and update them on the progress of the project.

Organization of the resource book began on Wednesday June 12, 2013. The organization was created using a template from a similar intervention completed by Morehouse School of Medicine Class of 2016. Each of the resource entries was organized in the same manner to increase the usability of the resource book. A sample set up is located in **Box 1** of the appendix. During the organization time, remaining information was still being collected and verified to be later included in the resource book. Among these was information pertaining to Physical/Social Fitness as well as the insurance plan the

Diabetes Management team specifically requested. Information about Preventative Screening, specifically retinopathy screenings, were being investigated during this time as well.

Organization and collection of the information on the resource book continued using the same methodology. A draft of the resource book was completed on Tuesday, June 19, 2013. The Diabetes Management Team as well as those affiliated with the Meharry-Vanderbilt Alliance was continuously updated on the progress. A meeting was held on Monday, June 24, 2013 between the UNHS Diabetes Management Team, the Meharry-Vanderbilt Alliance and the Health Performance Coordinator of UNHS. During this meeting, it was decided to expand the resource book to include resources that could be used by all the patients of UNHS, instead of only the diabetic population. An increase of physical/social fitness options, retinopathy screenings, and information about the Affordable Care Act were also requested to be added to the resource book at this meeting. Additional feedback about the overall organization of the book was also given. The book was then further revised using this feedback.

A meeting was held on Wednesday June 26, 2013 with the Diabetes Management Team. During this meeting, the intake tool was further discussed. It was decided that it will be laminated for sustainability purposes and will remain on the desk of the members of the Diabetes Management team. In this way, the patients can use the tool upon entering the office of the diabetes management team.

Results

The completed resource book included information of 34 different resources in the Nashville, Tennessee area. The resource book was organized using six categories: General Cost Assistance, Health Care Facilities, Dental Services, Food Banks, Physical/Social Fitness, and Mental Health Support. The different categories and the corresponding services are included in **Box 2** of the appendix.

Each page of the resource book was placed in its own sheet slip cover. This was done to make the resource book sustainable and to also allow it to be updated with relative ease. The 36-page document was then placed in a 2 inch 3-prong binder, with each section labeled using identification tabs. An electronic copy was also saved on a flash drive and given to the Health Promotion Coordinator of UNHS so that it can be added to the clinics intranet and used electronically by the clinicians throughout the community health centers. The intake tool was unable to be completed in the allotted time.

Discussion:

In approximately one month's time, a 36 page resource document including information from 34 different resources in the Nashville area was created to be used with all the patients of UNHS. As previously mentioned, these resources were organized into 6 categories: General Cost Assistance, Healthcare Facilities, Dental Services, Food Banks, Physical/Social Fitness, and Mental Health Support. Unfortunately, the intake tool was not completed in a timely manner and was not able to be used in conjunction with the resource book.

In the collection of these resources, most establishments were eager to be included and spread the word about their organization. East Nashville Cooperative Ministry, for example, shared their programs entire history as well as the multitude of services they offer. The students who run the 12 South Community Clinic was very forthcoming with their information and also requested to place their book in their clinic upon its completion. Both of these establishments were excited about the idea of being able to receive more cliental through their inclusion in and UNHS's use of the resource book. This could be an indication that the resources of Nashville are not being utilized fully because many people, including those who work in healthcare, do not know about these resources. In addition, the eagerness

of these resources as well as other resources featured in the book could be an indication of the community's willingness to help the citizens that inhabit it.

Affordable retinopathy screenings were identified as one of the greatest needs for the patient population at UNHS. During the search for low-cost resources in the area, it became apparent that there was a lack of healthcare facilities that offered retinopathy screenings on a sliding scale to patients who were uninsured. Vanderbilt University School of Medicine once offered free retinopathy screenings once a month at several clinics in the Nashville area, including UNHS. Due to their recent loss of funding, however, they are no longer able to provide this service and leave a large void of patient care in the uninsured population. This discovery of a healthcare void should be discussed amongst healthcare facilities in the area, especially those who have a large uninsured/underinsured diabetic population.

This project was designed with sustainability as a main goal. Supplying an electronic copy of the resource book eases the update process, ensuring that the book's information stays current. Placing each page in its personal sleeve allows each resource to be updated when necessary, without the mandatory updating of the entire book. These factors add to the sustainability of this resource, which is a great strength of this project. The organization of the book, the inclusion of identification tabs, and the possible multiple copies makes the resource book more accessible and increases the chance of it being utilized within the community health centers. This is also a strength of this intervention.

One of the greatest limitations faced during the completion of this project was time. There was only six weeks allotted for the completion of the project. If more time was allotted, more resources could have been added to the book, possibly increasing the amount of help it could provide to the patients of UNHS. Also, the intake tool could have been completed to be used in conjunction with the resource book. This would allow the patient to have more of an active input in their care. It could have also made the resource book easier and faster to use. Without this intake tool, the healthcare provider

and/or staff member will have to inquire about the needs of the patient to ensure the book will be utilized properly.

Another limitation was poor communication between me, the Diabetes Management Team, Meharry-Vanderbilt Alliance, and the Health Promotion Coordinator of UNHS. When I first proposed my project to my site coordinator upon my arrival, it was decided to focus only on the diabetic population. This was due to the limited time I was given to complete the project as well as the fact that diabetic patients were a large percentage of the patients at UNHS. Therefore, for the first three weeks, I was researching information for the resource book with this intention, only focusing on resources that were “diabetic-friendly.”

During the meeting on June 24th, however, it was decided to expand the book to include information about all patients and not just those with diabetes. This expansion suggestion was flattering. It showed that the work I had done so far was appreciated and they wanted it to be helpful to more people. Conversely, the time in which they shared the want for the expansion was when I only had two weeks left to complete the project instead of the six weeks I originally was allotted. If better communication about the project was shared in the beginning of the six week period instead of during the meeting on June 24th, this six week time could have been used more effectively.

Due to the time constraint, there are a few recommendations that can be completed at a later time. To measure the effectiveness of this book, a survey should be composed and given to the members of the diabetes management team. The survey should measure how often the intake tool and resource book was used, in what capacity and should allow space for any other suggestions or room for growth. The results from this survey should be then used to decide if the resource book should be duplicated and placed in other UNHS clinics. Also, the results of the survey could help improve these resources so that they can be better utilized in the other clinics if duplicated.

In the near future, it may also be helpful to designate an individual to regularly update the resource book, to ensure that correct information is given to the patients. If the success of the resource book continues, it could be adapted to a brochure that can be given to the patients to take from the office. This brochure would be less detailed than the actual resource book and will hold general information about the resources offered in the Nashville area.

Conclusion

The goal of this intervention was to create a resource book that included a variety of resources in the area that are important to maintaining a healthy lifestyle. This resource book was to be used during the patient and healthcare provider interaction to help inform the patient of the available low cost resources in the area and how utilizing these resources could improve their health. Making patients aware in this way increases their health literacy and allows them to make more informed health choices. In essence, health literacy is an important aspect of a patient that is directly related to their overall health. Increasing patients' health literacy could lead to better understanding, compliance and chronic disease management. This positive change could serve as an aid to help tackle the growing epidemic of obesity as well as diabetes and hypertension.

Appendix

Table 1

<i>Name of Establishment</i>	<i>Date Contacted</i>	<i>Method of Contact</i>
Interfaith Dental Clinic	June 12, 2013	Phone Call
Meharry Medical College School of Dentistry Clinic	June 6, 2013, June 10, 2013	Establishment visit, email
Metro Public Health Department (MPHD) Nashville Dental Clinic	June 10, 2013	Phone call
United Neighborhood Health Services: Cayce Family Clinic	June 12, 2013	Establishment visit
United Neighborhood Health Services: Southside Clinic	June 12, 2013	Establishment visit
TENNderCare: Tennessee EPSDT Program	June 10, 2013	Phone call

Table 2

<i>Name of Establishment</i>	<i>Date Contacted</i>	<i>Method of Contact</i>
Adventist Community Services Center	June 25, 2013	Phone call
East Nashville Cooperative Ministry	June 12, 2013	Establishment visit
Martha O'Bryan Family Resource Center	June 12, 2013	Establishment visit
Second Harvest Food Bank of Middle Tennessee	June 12, 2013	Establishment visit
Local Farmer's Market	June 12, 2013	Phone call

Box 1:



Adventist Community Service Center: Food Boxes

Providing emergency food for people in need

Contact Information

<i>Address</i>	402 Gallatin Pike S. Madison, TN 27115
<i>Phone</i>	(615) 860-6001

Hours

<i>Monday – Tuesday</i>	10:00 am – 2:30 pm
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Additional Information

- Provides emergency food boxes filled with food essentials for families that are in need.
- Must fill out an application and have two forms of identification, one of which should be a picture ID
- The amount of food you can receive is based on the size of your household.
- Verification of household size is needed when collecting food items (SS cards or birth certificates are needed for everyone that will be counted toward your household.)
- Clients can now come on a first come first serve basis: appointments are no longer necessary

Box 2:

- 1. General Cost Assistance**
 - a. Affordable Care Act
 - b. Nashville General Hospital Discount Plan
 - c. Bridges to Care
- 2. Health Care Facilities**
 - a. 12 South Community Clinic
 - b. Metro General Hospital at Meharry
 - c. Shade Tree Clinic at Vanderbilt
- 3. Dental Services**
 - a. Interfaith Dental Clinic
 - b. Meharry Medical College School of Dentistry Clinic
 - c. Metro Public Health Department (MPHD) Nashville Dental Clinic
 - d. United Neighborhood Health Services: Cayce Family Clinic
 - e. United Neighborhood Health Services: Southside Clinic
 - f. TENNderCare: Tennessee EPSDT Program
- 4. Food Banks**
 - a. Adventist Community Services Center
 - b. East Nashville Cooperative Ministry 
 - c. Martha O'Bryan Family Resource Center 
 - d. Second Harvest Food Bank of Middle Tennessee
 - e. Local Farmer's Markets 
 - i. East Nashville Farmer's Market
 - ii. Nashville Farmer's Market
 - iii. 12 South Farmer's Market

 provides diabetic friendly food options
- 5. Physical/Social Fitness**
 - a. Fifty Forward (3 locations)
 - b. Metro Parks Regional Recreational Centers
 - i. East Park Community Center
 - ii. Coleman Park Community Center
 - iii. Hadley Park Community Center
 - c. Nashville B-Cycles
 - d. Vanderbilt Coalition for Healthy Aging
 - e. YMCA's of Middle Tennessee
 - i. Christ Church YMCA
 - ii. Donelson-Hermitage Family YMCA
 - iii. Downtown YMCA
- 6. Mental Health Support**
 - a. Centerstone Community Mental Health Services
 - b. LifeCare Family Services
 - c. Martha O'Bryan Crisis and Counseling Services
 - d. United Neighborhood Health Services: Behavioral Health Services

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