***Continuing Education Contact Hour Opportunity Pending**

Formation of a Student-Led, Community-based, Chronic Disease Center at an Urban University

Amy Thompson, Timothy R. Jordan, Jodi Brookins-Fisher, Monita Karmaker, and Natasha Evans

Abstract

The increase of chronic disease in the United States has created a strong demand for health education specialists (HESs) who are trained to facilitate behavioral, environmental and policy changes through program implementation and evaluation. However, it is difficult for colleges and universities to prepare future health educators to be competent in such skills by classroom methods alone. Moreover, by utilizing the skills and talents of university students there is the opportunity to improve the resources and services available in the community. This paper describes how a Midwestern, public university met this challenge by developing a "hub model." Through the creation of this model over a five year time period, over 7,000 people were educated on chronic disease prevention, more than 800 individuals received screening mammograms or clinical breast exams, and dozens of cancer survivors received supplemental survivorship services. Colleges and universities through the United States involved in preparing health education specialists should consider replicating this model/center and applying the lessons learned by the authors.

Key words: chronic disease, health education, health education specialists, health education competencies, collegiate experiential learning, underserved populations.

Introduction

In the United States today, chronic diseases represent the single greatest threat to the health of Americans. Chronic diseases are the primary causes of morbidity, disability, mortality, and health care costs in the U.S. (Bauer, Briss, Goodman, & Bowman, 2014). Nearly half of adults in the U.S. have at least one chronic disease and one in four adults have multiple chronic conditions (Ward, Goodman, & Schiller, 2014). Furthermore, seven out of 10 deaths among Americans are caused by chronic diseases; nearly 50% of those deaths are caused by disease and cancer (CDC, 2015). By 2035, annual costs associated with heart disease alone are projected to reach $1.1 trillion (American Heart Association, 2017). By 2020, the cost of cancer care is projected to be $173 billion, a 39% increase from 2010 (Brown, Mariotto, Yabroff, Shao, & Feurer, 2011).

Fortunately, a person's risk of developing chronic diseases can be reduced by engaging in healthy lifestyle behaviors. Four health behaviors greatly increase one's risk of developing chronic disease: 1) lack of exercise and physical activity, 2) poor nutrition, 3) tobacco use, and 4) excess alcohol consumption (CDC, 2015). Other unpreventable contributing factors include genetics, the social and physical environments, access to health care, and the quality of health care (CDC, 2015).

The Importance of and Growing Need for Health Education Specialists

The growing prevalence and burden of chronic disease in the United States has created a growing demand for qualified HESs. Health education specialists play a vital role in preventing chronic disease and reducing its negative impact. HESs are trained to help people modify their health behaviors and evaluate those outcomes. These important and valuable tasks are accomplished by HESs as they use a variety of tools including education, advocacy, research, behavior change interventions, and primary, secondary, and tertiary prevention.

Employment of HESs is projected to grow 16% from 2016 to 2026, faster than the average for all occupations across the board (Bureau of Labor and Statistics, 2017). This is great news for the Health Education Profession. Several other occupational groups are also projected to experience faster than average employment growth, including personal care and service occupations (19.1 percent), community and social service occupations (14.5 percent), and computer and mathematical occupations (13.7 percent) (Bureau of Labor and Statistics, 2017).

Much of this job growth is being driven by the urgent needs of the U.S. health care system to reduce the incidence of chronic disease, improve health outcomes, reduce the costs of health care, and reduce over-utilization of health care services.

Rationale for the Creation of High-Quality Training Programs for Health Educators

Considering the increasing burdens and costs caused by chronic disease and the increasing demand for HESs, it is imperative that universities and colleges prepare HESs to meet these needs. It is equally important that these future HESs be well prepared to handle the increasingly complex challenges

*Amy Thompson, Professor of Public Health, The University of Toledo, Mail Stop 119, 2801 West Bancroft, Toledo, OH 43606; Phone: 419 530-4180; Email: Amy.thompson4@utoledo.edu
Timothy R. Jordan, Professor of Public Health, The University of Toledo
Jodi Brookins-Fisher, Professor, Central Michigan University
Monita Karmakar, Doctoral Student, The University of Toledo
Natasha Evans, Doctoral Student, The University of Toledo

* Corresponding Author

associated with chronic disease. Perhaps the most important aspect of this educational training is the experiential, hands-on learning that takes place outside the classroom as students interact with real clients/patients who are living with chronic disease (Cantor, 1997)

The Challenges of Providing Quality Experiential Learning in the Community

Valuable learning experiences for students in the fields of health education, community health, and public health occur in the field during practicum and field experience type courses (i.e., internships). Such courses are commonly offered at the undergraduate and graduate levels. Unfortunately, many colleges and universities are finding it increasingly difficult to find placements for such courses in the community for several reasons:

1) Mergers of community organizations and agencies: Mergers mean that fewer agencies and organizations are involved in the health sector. This often results in fewer placement spots being available for students.

2) Increased work/time demands placed on practicing HESs: This often results in fewer potential site supervisors who are willing to invest the extra time and effort needed to supervise students.

3) Increasing competition for spots: An increasing number of both undergraduate and graduate professional preparation programs in the health and human services fields (e.g., health education, public health, community health, health promotion, social work, counseling) competing for the same placement spots in the same geographical area.

Another significant challenge to providing experiential education via practicum or internship experiences is that most times, faculty members within the degree program have little control over the learning environment, teaching content, and teaching methods. Thus, the tasks or projects assigned to students by site supervisors in the community can be poorly aligned with the professional responsibilities and competencies in health education (National Commission for Health Education Credentialing, Inc., n.d.)(NCHEC). Moreover, sometimes students are assigned very low-level tasks focused more on observation than actually skill building. Hence, students might not be given opportunities to develop more advanced skills such as needs assessment, program planning, program implementation, administration, and program evaluation. Furthermore, it is less common to find site placements in the community where future health educators can work with students and practicing professionals from other disciplines and learn what it is like to work as part of an interdisciplinary team.

Design of a Potential Solution: A Hub Model

To address the increasing demands of chronic disease, the need for HESs who are well equipped to handle the complex challenges of chronic disease, and the need for high quality, experiential training of future HESs, the authors have developed a new model of education that can be used by many colleges and universities. This proposed "hub model" is campus based and features a steady stream of "in and out" traffic - much like a busy train station or airport. The incoming "traffic" is comprised of adult clients from the community who come to campus for education, programs, and services. These community members learn about the program via word of mouth, through contact with the program community health worker, or by referral from health care providers. The outgoing "traffic" is comprised of teams of students who go out into the community to provide health education, programs, and services.

The primary objective of this "hub model" is to improve the health, wellness, and quality of life of adults living with chronic disease, including cancer. The model is student-led, but directed by university faculty members. Faculty oversight helps to ensure that students' activities are strongly linked to NCHEC responsibilities and competencies. The model is also experiential in nature. As students perform the responsibilities of HESs they learn by doing. Students experience maximum educational benefit while providing valuable, free or low-cost programs and services to the community. Examples of some of these programs include: walking programs, book clubs, cardio drumming, support groups and health coaching. Some of these services are provided by students and faculty from other disciplines besides health education. In this model, counseling would provide support groups, recreation therapy would facilitate cardio drumming and art nights, and exercise science students would help with the walking program. The health education students would assist with behavior change, program planning and evaluation. This two-way traffic through the "hub" and the provision of these free or low-cost programs and services creates a synergistic and beneficial relationship between the university and community. Through participation in "the hub," students have real world experiences, serve populations they many not encounter in their program of study, write grants and conduct research.

Program Setting: The Center for Health and Successful Living

This "hub model" of experiential education is located within the Center for Health and Successful Living (CHSL) on the main campus of the University of Toledo (Ohio) within the College of Health and Human Services. The CHSL was established in October 2013 as a non-profit entity whose mission is to improve the health, wellness, and quality of life of adults in NW Ohio who are living with chronic disease, including cancer. The Center also serves as the cancer survivorship arm of the Eleanor N. Dana Cancer Center, which resides on the medical campus of the university, approximately six miles from the main campus.

Faculty members and students at the CHSL serve specific, high-risk populations in which the rates of chronic disease are very high. These populations include low income, vulnerable, marginalized, at-risk, and underserved populations including racial/ethnic minorities, adults with severe and persistent mental illness, un/underinsured adults, and lesbian, bisexual, and transgender women. Working with such diverse populations also helps students develop cultural competency. Because the students working the Center are from diverse majors, students also get the chance to understand various

professions and how they collaboratively work in inter-professional settings.

In terms of chronic diseases, the CHSL currently focuses on cancers, diabetes, and hypertension. These topics were chosen based on local health data, as well as expertise and interest of faculty and students. As a way of equipping and empowering community-based organizations and agencies, faculty members and students affiliated with the CHSL also provide technical assistance and capacity-building services such as strategic planning, grant writing, program design, and program evaluation.

The Center's activities, services, and programs are guided by five primary objectives. These objectives have both an internal, university emphasis and an external community-based emphasis:

1) To attract and retain high-quality students in the health and human service fields by engaging them in community-based, experiential, and interdisciplinary education.
2) To serve as an "on ramp" and conduit to internal graduate degree programs in public health and health education.
3) To conduct high-quality education and health sciences research while partnering with community agencies and organizations.
4) To provide high quality, primary, secondary, and tertiary prevention services and programming to adults in NW Ohio.
5) To build capacity among adults in NW Ohio to self-monitor and self-manage chronic disease and to build capacity in the organizations and agencies that serve these adults.

History of Development

The idea for the campus based center was generated after the lead author's mother developed breast cancer while living in a small town in rural Michigan. This elderly woman (i.e., the breast cancer patient) had difficulty finding needed education, support, and services and had to travel great distances to meet her needs while in a medically fragile condition. Therefore, the original idea was to consolidate cancer survivorship services under one roof in a location that was centrally located for the majority of cancer survivors in NW Ohio.

The original idea of developing a cancer survivorship center broadened when a college-level, interdisciplinary advisory committee comprised of faculty members, students, physicians, administrators, and community members was organized. This group helped to identify gaps in local chronic disease services and align the proposed services with the university's mission. It took 2.5 years of planning before the structure and organization of CHSL were complete. Physical space and money for renovations of that space were then provided by the Dean of the College. Six months later, the CHSL celebrated its grand opening.

Implementation: The Hub Model in Daily Practice

The "hub model" of experiential education is based on five building blocks as depicted in Figure 1. Programs and services in these priority areas are designed, implemented, managed, and evaluated by student action teams. The action teams are coached by graduate students and faculty members. By serving in supervisory roles, doctoral students gain extremely valuable and beneficial experience in teaching, advising, and mentoring undergraduates.

Figure 1.

The CHSL Hub Model

Prior to each semester, 8-12 undergraduate and master's level students are assigned to the CHSL for their practicum and/or internship courses. These 8-12 site placements represent placements that do not have to be arranged in the community. In addition to students assigned to the Center for official course work, other students, both undergraduate and graduate, volunteer at the CHSL along with adult volunteers from the community. Students from other universities are also placed at the Center for field experience and internship type courses.

Students who rotate through the CHSL typically come from a variety of academic disciplines including Public Health, Health Education, Social Work, Occupational Therapy, Physical Therapy, Counseling, and Nutrition. Discussions are currently under way to include nursing students in the CHSL. Altogether, by the second week of each semester, this leadership group is usually comprised of approximately 20 students.

These students meet weekly and are organized into action teams around specific priorities and projects (e.g., Quality of Life Team, Needs Assessment Team). Senior level undergraduate students or graduate students serve as the coaches of the student action teams. Students within these teams are placed in leadership positions as key "personnel" as they plan and implement the Center's programs and activities.

As experienced in the past, students placed at community sites for practicum or internship courses often find it difficult to gain important leadership and administrative skills that will be required of them in practice. Hence, the CHSL action team method of education that features tiered mentoring and interaction with other academic disciplines is especially significant. Placements at the CHSL put students in important and substantial leadership roles as they engage in the professional responsibilities of needs assessment, program design, implementation, management, and program evaluation. The inter-professional nature of the teams also helps students understand how they fit with other disciplines and how interdisciplinary team members must work together to help adults afflicted with chronic disease.

Evaluation Productivity and Results

Since October 2013, the Center has been very productive in multiple areas including serving as a site placement for official course work for students, serving as a conduit for internal graduate degree programs, grant writing, research, and reaching the community with needed health education services. Table 1 provides a breakdown of the CHSL's productivity in each area.

Table 1.

CHSL Outcomes

Hosting and Serving as a Site Placement for Student Course Work

- Counseling Graduate Student Projects: 2
- College of Life Long Learning Undergraduate Internship Students: 3
- Occupational Therapy Doctoral Capstone Students: 3
- Social Work Internship Students: 3
- Visiting Undergraduate Public Health Internship Students: 3
- Masters of Public Health Internship Students: 7
- Undergraduate Public Health Volunteer Experiences: 13
- Undergraduate Public Health Internship Students: 25
- Undergraduate Public Health Practicum Students: 38

Serving as a Conduit to Internal Graduate Degree Programs

- 100% of visiting students enrolled in UT graduate programs
- 98% of all students assigned to the CHSL have successfully graduated
- 65% of undergraduate interns assigned to CHSL enrolled in our MPH program
- 3 graduates of our undergraduate public health program are now doctoral students in our health education program.

Grant Writing and Scholarly Activity

- $180,000 in awarded grant monies
- 13 doctoral dissertations focused on research topics aligned with the CHSL mission
- 12 peer reviewed poster presentations at regional or national research conferences
- 6 peer reviewed publications
- 2 master's thesis projects

Health Education Services/Clients Served

- 7,120 adults have received brief health education at various outreach events
- 974 adults have received more formal, structured health education
- 457 women have received clinical breast exams due to our patient navigation
- 435 women have received mammograms due to our patient navigation
- 104 non-duplicated adults have participated in programs to improve quality of life

Implications

A student run, chronic disease center with a community-based focus can help both the university and the community meet important needs. A Center like the CHSL can help universities and colleges prepare future HESs to be highly competent in dealing with chronic disease. Such a Center also helps adults learn how to better manage chronic disease. By implementing a "hub model," universities and colleges can effectively address the growing challenge of finding high-quality placements for field experience type courses. A center like the CHSL can help faculty and students learn how to work within interdisciplinary teams. Furthermore, such a Center has a synergistic effect and stimulates research, grant writing, and other types of scholarly productivity. Most importantly, a Center like the CHSL helps to meet the needs of underserved and at-risk populations in the community.

Additionally, the CHSL has become a very effective way to address the shortage of high-quality site placements for field experiences and internships. In just three years, nearly 100 students have "rotated" through the Center as part of official coursework. The Center has become a physical and psychological home for students and in turn has increased retention, skill development, job placements, and enrollment within internal graduate degree programs. Most importantly, these 100 students have provided free or low-cost health education services to local populations that need them the most.

Lessons Learned

Over the course of the last five years that CHSL has been operating there has been continuous improvement and refinement of programs based on observation, and customer satisfaction based services. In terms of lessons learned, there are several important recommendations for other universities considering adopting a similar "hub" model that focuses on interdisciplinary, experiential learning. First, since a model like this requires strong faculty oversight, it is vital that center leaders/administrators recruit and empower several faculty members, ideally from different academic disciplines, to supervise and mentor students while monitoring the quality of services provided. Furthermore, this model is very time intensive on the part of faculty members. The odds of sustainability increase if faculty members are given work-load credit for the continual supervision, mentoring, and monitoring required. Second, optimally there should be funding for a full-time manager or support person to run the day-to-day operations of the center. Due to the high turn-over of students there needs to be some continuity and knowledge of programs and services provided. Third, it is key to employ a community health worker. This has many benefits, as students can travel into the community and shadow this person and there will also be access to populations that may otherwise not be as easy to permeate. Lastly, there has to be support by the university's marketing and communication department. Many of the programs and resources offered by a model like this are only successful if they are marketed. Unless faculty have expertise in this specialty area, this can be a challenge to adequately "spread the word" about the services of a center "hub."

Conclusions

The authors believe that this "hub model" can be replicated at other colleges and universities and will yield many of the same benefits as described in this paper. By engaging students in experiential learning centers like CHSL, health education faculty members can better prepare the next generation of HESs to deal with chronic disease.

References

American Heart Association. (2017). Retrieved from Cardiovascular Disease: A Costly Burden forAmerica - Projections through 2035. Retrived Jun 26, 2018 at http://www.heart.org/HEARTORG/Advocate/Cardiovascular-Disease-A-Costly-Burden-for-America_UCM_491316_Article.jsp

American Public Health Association. Policy Statement Database, Policy # 200911 Health Education Specialists. Retrieved June 26th , 2018 at https://apha.org/policies-and-advocacy/public-health-policy-statements/policy-database

Bauer, U. E., Briss, P. A., Goodman, R. A., & Bowman, B. A. (2014). Prevention of chronic disease in the 21st century: elimination of the leading preventable causes of premature death and diability in the USA. The Lancet(384), pp. 45-52.

Brown, M. L., Mariotto, A. B., Yabroff, K. R., Shao, Y., & Feurer, E. J. (2011, January 19). Projections of the Cost of Cancer Care in the United States: 2010-2020. *J Natl Cancer Inst* (2011) 103 (2): 117-128. doi:https://doi.org/10.1093/jnci/djq495

Bureau of Labor and Statistics. (2017). *Occupational Outlook Handbook*, 2016-2017. Retrieved March 2, 2017, from Health Educators and Community Health Workers: https://www.bls.gov/ooh/community-and-social-service/health-educators.htm

Cantor, J. (1997). Experiential Learning in Higher Education: Linking Classroom and Community. ERIC Clearinghouse on Higher Education Washington DC. ED404948

Centers for Disease Control and Prevention (2015). Chronic Disease Overview. Retrieved on June 26th, 2018 at https://www.cdc.gov/chronicdisease/overview/index.htm

National Commission for Health Education Credentialing, Inc. (n.d.). *NCHEC*. Retrieved on June 26, 2018 fromhttps://www.nchec.org/responsibilities-and-competencies

Ward, B. A., Goodman, R. A., & Schiller, J. S. (2014). Multiple Chronic Conditions Among U.S. Adults: A 2012 Update. Prev. Chronic Dis. 2014; 11:1130389. doi:http://dx.doi.org/10.5888/pcd11.130389

This article may provide one
Continuing Education Contact Hour Opportunity for CHES (Approval Pending)
Instructions and self-study questions may be found on page 39