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Primary Care Delays in Underserved Areas: A Strategic Plan to Improve Access to Care

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for the Degree of Doctor of Nursing Practice

by

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Primary Care Delays in Underserved Areas: A Strategic Plan to Improve Access to Care
Abstract: Hypertension (HTN) and Diabetes Mellitus Type 2 (DM2) are two chronic conditions contributing to morbidity and mortality. 23.1 million people have DM2 and 7.2 million people have it and are undiagnosed in the U.S. During 2015-2016, the prevalence of HTN was 29.0% and increases with age (CDC, 2018). The purpose of this article was to discuss the benefits of developing a Transition Clinic (TC) in a highly traveled metro transit area and the development of a strategic plan on implementing this project, as well as the barriers that may be encountered when implementing such a clinic similar to this. A logic model was developed to initiate the planning process of developing a TC in an underserved area. A logic model/strategic plan was developed to ensure that all identified issues and potential barriers could be evaluated. This model was also utilized to set up a timeline for development and implementation.

Keywords: Underserved Populations, Access to Care, Social Determinants of Health

Primary Care Delays in Underserved Areas: A Strategic Plan to Improve Access to Care

Hypertension (HTN) and Diabetes Mellitus Type 2 (DM2) are chronic conditions contributing to morbidity and mortality. According to the Centers for Disease Control and Prevention (CDC, 2018), 23.1 million people (72%) have DM2 with 7.2 million people (23.8%) undiagnosed in the U.S. During 2015–2016, the prevalence of hypertension was 29.0% and increased with age: age group 18–39, 7.5%; 40–59, 33.2%; and 60 and over, 63.1% (CDC, 2018). Because of the increased prevalence of HTN and DM2, screening and early interventions are necessary to reduce the complications from these diseases. In fact, the Centers for Medicare and Medicaid Services (CMS) lists HTN and DM2 as two core measures of focus across the nation to focus on to reduce complications and improve patient outcomes.

Local health departments have been established throughout the U.S. and are usually located in medically underserved areas. The local health departments are substantially involved in rendering medical care and services are primarily directed toward poverty level clientele (Arden-Miller, Moos, Kotch, Brown & Brainard, 1981, p. 18). A Midwestern, urban, local community health department collaborated with the local metro transit agency to establish a Mobile Medical Unit (MMU). The purpose of the MMU was to provide limited health assessments, including screening for HTN and DM2, to residents in the service area of the health department, which is located in an area with high poverty and limited transportation option. In addition, the MMU assisted local residents in accessing health care for chronic conditions (Wagner, 2018). After one-year, the MMU had nearly 700 resident visits for health conditions, focusing primarily on HTN and DM2 and attempted to assist those who screened positive for a medical condition in

establishing a source of primary health care. Residents experienced a significant delay (over 40 days) in obtaining appointments to a primary care provider for treatment.

Furthermore, only 79 residents (8.75%) had appointments made with the assistance of the MMU, and of those, only 19 (2.4%) attended the scheduled appointment (R. Schwarma, personal communication, November 13, 2018, See figure 1 for pie chart). Hence, many of the residents are suspected to have utilized the emergency departments for their primary care needs, resulting in excessive emergency department use and medical admissions for conditions that may be better managed in a primary care office (Wagner, 2018).

In an effort to bridge the gap from time of diagnosis to treatment by a primary care provider, a local health department and metro transit agency conducted a feasibility study examining the possibility of locating medical clinics at one or more transit stations (Wagner, 2018). It was identified that there was a lack of healthcare facilities within a half-mile of a transit station. Furthermore, it was noted that the lack of access and service gaps in healthcare and transportation may have contributed to high levels of undiagnosed conditions as well as diagnosed conditions without a source for regular medical follow-up or monitoring (Wagner, 2018). The purpose of this article is to discuss a potential solution to the primary care provider shortage and delay in underserved areas and to discuss the barriers to implementation of a transition clinic (TC). The solution would be to develop a transitional care clinic to provide initial care for patients diagnosed with HTN and/or DM2 who do not have a regular source of primary health care.

The development of a “transition clinic” at a metro transit station may improve access to care in underserved areas with lack of access to care as the pilot. The TC could

further improve access to health care for those with HTN or DM2, two major chronic diseases with major healthcare implications. By implementing this clinic, those affected by these diseases would have earlier intervention in an attempt to decrease the incidence of unnecessary hospitalizations.

The concept of “access” to health care includes the social determinants of health (SDOH) which are the social and economic conditions influencing health. Braveman and Gottlieb (2014) define SDOH as the conditions in which people are born, grow, live, and work, as well as age and other factors that contribute to health-related features of neighborhoods (walkability, recreational areas, and accessibility to healthful foods and healthcare services) (p. 19). DeVoe et al., (2016) further defines SDOH as the nonclinical factors, such as economic conditions and neighborhood resources that influence patients’ health outcomes (p. 104). Transportation is often identified as a SDOH and a barrier to healthcare utilization in underserved areas. Arcury, Preisser, Gesler, and Powers (2005) identified those who had a driver’s license in a rural area had 2.29 times more health care visits for chronic health conditions. This study found many of the access to care barriers were due to being an older adult and without transportation. While this study was conducted in a rural area, many of the residents in an urban area rely upon public transportation to travel to work, medical appointments, and other destinations.

Additional barriers to care exist. Shaw (1997) focused on barriers to timely access of primary care and findings demonstrated common responses: “couldn’t get through to a provider on the phone”, “too long for an appointment”, “waiting too long in the doctor’s office”, “not opened when needing to go”, and “no transportation” as the biggest barriers

to primary care (p. 16). Identified areas that may improve access to care were office hours on the weekend and evenings, more providers, and finding a provider near public transportation stations (Shaw, 1997). Furthermore, Glass, Kanter, Jacobsen, and Minardi (2017) conducted a study aimed at decreasing barriers to care. They utilized a worksite clinic, which offered convenient primary care services with no additional travel from work and essentially guaranteed same day access, and no co-pay (Glass et al., 2017). Removing or minimizing barriers may increase access to health care.

Some have experimented with TCs as a temporary clinic to begin or obtain health care while awaiting appointments in a primary care practice. Bicki et al. (2013) and Elliot, Klein, Basu, and Sabbatini (2016) found TCs as a promising strategy to improve care for emergency department (ED) patients by reducing unnecessary ED usage. The research showed a link between utilizing a TC while waiting to visit a primary care provider, and arranging an appointment at the time of ED discharge could reduce the unnecessary ED usage (Elliot et al., 2016). Implementing a TC as a bridge between the ED and the primary care provider may enhance overall health outcomes for those with long wait times to visit a primary care provider.

In a study of post-incarceration individuals utilizing a primary source of health care, the use of a TC resulted in a median number of 10 days between release from prison and first medical visit, with 54% seen within two weeks of being released (Fox et al., 2014). There were clinically relevant health outcomes among people receiving medical care at an urban TC following release from prison (Fox et al., 2014). Early initiation of health care management, especially in vulnerable populations, improves health outcomes.

The type of provider may influence health care access. Bumpus (2016) sought to reduce hospital admissions in cardiac patients through the utilization of advanced practice registered nurses (APRNs) in a TC. This study used a retrospective analysis from a Midwest academic health center when follow-up with the physician within fourteen days of discharge was not available. The cost analysis suggested referring patients to an APRN provider for a, single visit, TC had substantial savings. In one TC, the cost saved was \$7,515 per patient in health care costs associated with adverse events and readmissions (p. 236). Participants in this program were 18.1% less likely to be readmitted 30 days post-discharge, 27.6% less likely to be readmitted at 60 days, 22.8% at 90 days, and 22.6% at 180 days (Bumpus, 2016, p.238). In fact, APRNs have been proven to have a holistic, unique approach to providing care that make them ideal in a transitional care setting (Bumpus, 2016).

Naylor and Kurtzman (2010) found that the number of medical students and residents entering primary care or pursuing careers in general internal medicine is steadily decreasing. The growth of nurse practitioners is projected to increase annually. Between 1995 and 2006, primary care medicine residency programs declined 3 percent, while primary care training programs for nurse practitioners grew 61 percent (p. 894).

Strategic Plan

A logic model was developed to initiate the planning process of developing a TC in an underserved area. A logic model/strategic plan was developed to ensure that all identified issues and potential barriers could be evaluated. This model was also utilized to set up a timeline for development and implementation (See Table 2 for logic model).

The approach utilized in the development of the TC was an interdisciplinary provider model with Advanced Practice Registered Nurse (APRN) and a community health worker. This model could be utilized at the TC, since APRNs can function as a nurse and perform advanced practice health assessments, formulate diagnoses, and initiate treatments, including prescribing medications (Naylor & Kurtzman, 2010). As more physicians are moving away from primary care and moving into more specialized medicine, this may be able to bridge the gap in many communities where there is a delay in scheduling initial appointments for a primary care visit.

In addition to the APRN, a community health worker to assist with registration, insurance, and access to a regular primary health care source may also staff the TC. Many people struggle navigating the healthcare system and by having a community health worker present in the clinic setting, this may empower the patient to be able to advocate for their health. By assisting the underserved population identified with chronic conditions and immediately initiating medical care, this may decrease the incidence of catastrophic events due to untreated disease. (Dohan & Schrag, 2005, p.849). A secondary benefit of this model will decrease the need for unnecessary emergency department visits and unintended hospitalizations.

Barriers to Implementation

There are several barriers to implementation in developing a TC in underserved areas. The first barrier that must be addressed is assuring that all stakeholders involved in the TC process are included in the initial development of the project. It is vitally important to identify who the stakeholders will be and to ensure that no one is unintentionally left out of the planning phase. Some of the stakeholders identified in this

project include the public health department, metro transit station, community centers, local hospitals, and any organization that may work with the underserved population.

Funding is another barrier to that needs to be addressed. The key stakeholders should seek any grant funding available to provide for the build-out of an existing space, supplies, and collaborative practice agreements with a medical doctor. Many states require a collaborative physician to engage in clinical practice of the APRN-led clinic.

Conclusion

In conclusion, early screening and treatment of HTN and DM2 is important in the prevention of complications. In many underserved areas, people have difficulty with access to convenient primary care and initiation of treatment. One solution would be to develop TCs to provide interim care until the patient can successfully find a medical home. APRN-led TCs provide a viable option for initiation of treatment for the vulnerable populations that may struggle to access primary care. This article was able to discuss the benefits of developing a TC in a highly traveled metro transit area and the development of a strategic plan on implementing this project, as well as the barriers that may be encountered when implementing such a clinic similar to this.

References

- Arcury, T. A., Preisser, J. S., Gesler, W. M., & Powers, J. M. (2005). Access to transportation and health care utilization in a rural region. *The Journal of Rural Health, 21*(1), 31-38. doi:doi:10.1111/j.1748-0361.2005.tb00059.x
- Arden-Miller, C., Moos, M.-K., Kotch, J., L Brown, M., & P Brainard, M. (1981). Role of local health departments in the delivery of ambulatory care. *American Journal of Public Health 71*, 15-29. doi:10.2105/AJPH.71.1_Suppl.15
- Bicki, A., Silva, A., Joseph, V., Handoko, R., Rico, S.-v., Burns, J., . . . De Groot, A. S. (2013). A nurse-run walk-in clinic: Cost-effective alternative to non-urgent emergency department use by the uninsured. *Journal of Community Health, 38*(6), 1042-1049. doi:10.1007/s10900-013-9712-y
- Braveman, P., & Gottlieb, L. (2014). The social determinants of health: it's time to consider the causes of the causes. *Public Health Reports, 129*(1_suppl2), 19-31. doi:10.1177/00333549141291S206
- Bumpus, S. M. (2016). Cost analysis of an advanced practice registered nurse transitional care model for cardiac patients. *Nursing Economic\$, 34*(5), 236-254.
- Chronic Disease Prevention and Health Promotion. (2017a). *National diabetes statistics report, 2017, estimates of diabetes and burden in the united states*. Retrieved November 6, 2018, from <https://www.cdc.gov/diabetes/pdfs/data/statistics/national-diabetes-statistics-report.pdf>

- Chronic Disease Prevention and Health Promotion (2017b). *Hypertension prevalence and control among adults: united states 2015-2016* Retrieved November 6, 2018 from <https://www.cdc.gov/nchs/products/databriefs/db289.htm>
- DeVoe, J. E., Bazemore, A. W., Cottrell, E. K., Likumahuwa-Ackman, S., Grandmont, J., Spach, N., & Gold, R. (2016). Perspectives in Primary Care: A Conceptual Framework and Path for Integrating Social Determinants of Health Into Primary Care Practice. *The Annals of Family Medicine, 14*(2), 104-108. doi:10.1370/afm.1903
- Donnelly, P., & Kirk, P. (2015). Use the PDSA model for effective change management. *Education for Primary Care, 26*(4), 279-281. doi:10.1080/14739879.2015.11494356
- Fox, A. D., Anderson, M. R., Bartlett, G., Valverde, J., Starrels, J. L., & Cunningham, C. O. (2014). Health outcomes and retention in care following release from prison for patients of an urban post-incarceration transitions clinic. *Journal of Health Care for the Poor & Underserved, 25*(3), 1139-1152. doi:10.1353/hpu.2014.0139
- Glass, D. P., Kanter, M. H., Jacobsen, S. J., & Minardi, P. M. (2017). The impact of improving access to primary care. *Journal of Evaluation in Clinical Practice, 23*(6), 1451-1458. doi:doi:10.1111/jep.12821
- Naylor, M. D. a. K., Ellen T. (2010). The Role Of Nurse Practitioners In Reinventing Primary Care. *Health affairs, 29*(5), 893-899. doi:10.1377/hlthaff.2010.0440
- Shaw, J. K. (1997). An assessment of two upstate New York rural counties to determine unmet health needs of the Medicaid population. *The Journal of the New York State Nurses' Association, 28*(1), 12-15.
- Taylor, M. J., McNicholas, C., Nicolay, C., Darzi, A., Bell, D., & Reed, J. E. (2013).

Systematic review of the application of the plan-do-study-act method to improve quality in healthcare. *BMJ Quality & Safety*, 23(4), 290-298. doi:10.1136/bmjqs-2013-001862

Wagner, J.L. (2018). *Feasibility study for the implementation of on-site medical services at metrolink stations*. unpublished manuscript, bi-state development research insititute.

Figure 1: Mobile Medical Unit Visits

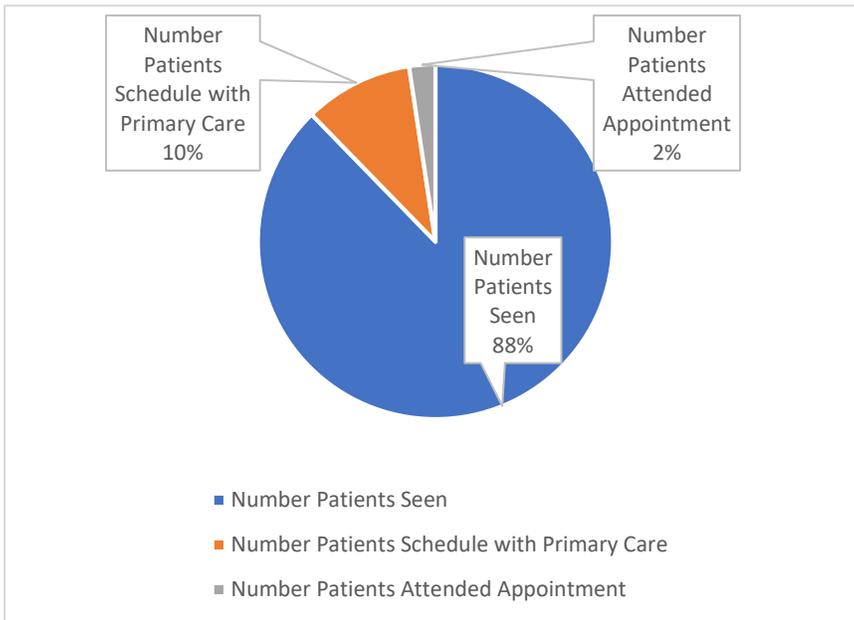


Figure 1: The number of patients seen in the Mobile Medical Unit is illustrated by the blue piece of the pie chart, the number of patients scheduled with primary care is illustrated by the orange piece of the pie chart, and the number of patients who attended the appointment is illustrated by the light gray piece of the pie chart.

Table 1: Logic Model for Strategic Plan

Resources	Activities	Outputs (Objectives)	Short- & Long-Term Outcomes	Impact
<i>To accomplish this project the following items, finances, organization input, statistical support, etc. will be needed.</i>	<i>To address the selected problem, the following activities are expected to be accomplished (including a time or timeline for completion).</i>	<i>Once accomplished, it is expected the selected activities will produce the following result. (Describe using SMART objectives as a guide: Specific, Measureable, Action-oriented or Achievable, Realistic, Timeframe)</i>	<i>If accomplished, these activities will lead to the following (improvement) changes within the year (immediate) and in three years (sustainability).</i>	<i>If accomplished, the following changes in practice will occur at the departmental level, organizational level and/or systems level.</i>
<p>1. Metro-Transit to provide clinic space.</p> <p>2. Pharmacy Vending Machine if possible</p> <p>3. Funding for 0.5 FTE clinic liaison</p> <p>4. Health Department Mobile Screening Unit referrals for HTN and DM patients</p>	<p>1. Space obtained within 2-3 months of project start.</p> <p>2. Contact Vendors. Grant or donation being sought and secured within 4 months of project initiation.</p> <p>3. Grant funding to be secured for clinic liaison.</p> <p>4. Referrals from mobile screening unit to transition</p>	<p><u>Overall AIM</u></p> <p>Increase physical access to a source of primary health care for adults aged 18-years and older with previously undiagnosed hypertension (HTN) or diabetes mellitus type 2 (DM-2).</p> <p>Within one year:</p> <p>1. Increase physical access to timely care by 25% for patients previously</p>	<p><u>Overall Outcome Measures</u></p> <p>1. Time interval between a positive screen for HTN or DM-2 from the mobile screening van to the first primary care office visit.</p> <p>2. Time interval between a positive screen for HTN or DM-2 from the mobile screening van to the first visit at the transition clinic.</p> <p>3. Number of visits (per patient)</p>	<p>Increased transportation and clinic location services to assist local residents with newly diagnosed DM2 and HTN in accessing a source of health care to begin their chronic condition management.</p> <p>Increased physical access to chronic care management from initial screen for DM2</p>

<p>5. Metro Transit to provide transportation for patients</p> <p>6. Seek out private physician network for providing medical support (e.g., collaborating physician for NPs, writing SOPs, some medical office supplies such as exam tables, tec.)</p> <p>7. Collaborate with local graduate nursing programs to provide NP faculty with oversight of DNP students who will be the medical providers, may also provide some medical office supplies such as blood pressure cuffs, etc.)</p> <p>8. Graduate nursing program</p>	<p>clinic to begin 5 months after initiation.</p> <p>5. Ongoing discussions but to be in place by clinic opening.</p> <p>6. Ongoing discussions but agreements and supplies to be in place by opening of clinic. Meetings between private physician. Overall AIM, outcome measures, and research questions drafted.</p> <p>7. NP faculty will provide service time to staff the clinic while providing oversight to NP students. NP faculty will staff the clinic 1-2 shifts per month and cover the two days per week the clinic will be open. Two DNP students will provide nursing, advanced practice nursing and education</p>	<p>undiagnosed with HTN or DM2 within 4 weeks of initial screening.</p> <p>In three years:</p> <p>1. Expand the transition clinic to care for other chronic health conditions, e.g., Asthma, CHF.</p> <p>2. Expand the transition clinic network by at least one additional transition clinic to other Metro transit stations.</p>	<p>to the transition clinic.</p> <p><u>HTN Outcome Measures</u></p> <p>1. Blood pressure (BP) measurement (systolic/diastolic) by the mobile screening van.</p> <p>2. BP measurement (per patient) at each transition clinic visit.</p> <p>3. Self-report of medication (if any) adherence at the transition clinic.</p> <p>4. Documented education regarding HTN at the transition clinic.</p> <p><u>DM-2 Outcome Measures</u></p> <p>1. Hemoglobin A1c (HgbA1c) value by the mobile screening van.</p> <p>2. Serum glucose measurement (per patient) at each transition clinic visit.</p> <p>3. Self-report of medication (if any) adherence at the transition clinic.</p>	<p>and HTN, leading to overall health outcomes for DM2 and HTN in the underserved area.</p> <p>Decreased time to treatment from initial screening to medication and overall chronic condition management for residents of the underserved area.</p>
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<p>providing DNP students who will assist in drafting job descriptions, medical record documentation, data collection and reporting results.</p>	<p>to patients on start-up of clinic.</p> <p>8. a.) Job descriptions drafted for clinic liaison, NP student, NP faculty b.) Medical record documentation drafted.</p>		<p>4. Documented education regarding DM-2 at the transition clinic.</p>	
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