

Point-of-care screenings at the University of Minnesota: Mechanism for civic engagement

Laura C. Palombi, Karen Bastianelli, and Timothy Stratton

Abstract

Objectives: To describe Wellness Initiative of the Northland (WIN) screening events; present participant results from those events; discuss the benefits of pharmacist-conducted, community-based point-of-care (POC) testing to medically underserved patients and to the profession of pharmacy; and describe logistical considerations in launching disease screening services.

Setting: Pharmacist-led community health fairs in a variety of settings, including shopping malls, churches, community pharmacies, senior residence facilities, critical-access hospitals, and clinics.

Practice description: Disease screenings for economically disadvantaged residents of northeastern Minnesota and northwest Wisconsin, held between 2005 and 2012, through WIN.

Practice innovation: Mobile POC screenings for dyslipidemia, diabetes, hypertension, and osteoporosis.

Main outcome measure: Percentage of screenings with out-of-range readings.

Results: Since 2005, WIN screenings have served more than 2,000 individuals, providing 4,152 POC screenings. Out-of-range readings were obtained for 40.3% of fingerstick cholesterol tests, 24.8% of fingerstick blood glucose tests, 24.3% of blood pressure tests, and 38.7% of quantitative ultrasound heel bone density readings.

Conclusion: Community-conducted POC testing functions both as an important public health service and a mechanism by which pharmacists and student pharmacists can become involved in civic engagement.

Keywords: Pharmacists, student pharmacists, point-of-care testing, health screenings, public health.

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Pharmacists, by nature of their accessibility and level of patient contact, have the ability to play a critical role in the health of their communities by embracing population-based health and wellness initiatives, as outlined in Healthy People 2020.¹ To prepare pharmacists for this role, student pharmacists must be taught how to implement and deliver wellness and prevention services.² The American Public Health Association has recognized that public health involves many aspects that can “benefit from pharmacists’ unique expertise,” including pharmacotherapy, access to care, prevention services, or a combination of these functions.² Apart from dispensing medication, pharmacists have “proven to be an accessible resource for health and medication information; the pharmacist’s centralized placement in the community and clinical expertise are invaluable.”³ This is especially the case in rural and frontier areas, whose residents often suffer from health disparities and decreased access to disease screening services.³

The Accreditation Standards and Guidelines for the Professional Program Leading to the Doctor of Pharmacy Degree (adopted January 15, 2006, by the Accreditation Council for Pharmacy Education) specifically addresses the importance of training student pharmacists

At a Glance

Synopsis: Community-conducted point-of-care (POC) testing serves as an important public health activity and a mechanism by which pharmacists and student pharmacists can more fully serve the health care needs of their community. Since 2005, screenings conducted by pharmacists and student pharmacists at the University of Minnesota College of Pharmacy (Duluth) have served more than 2,000 individuals, providing 4,152 POC screenings. Out-of-range readings were obtained for 40.3% of fingerstick cholesterol tests, 24.8% of fingerstick blood glucose tests, 24.3% of blood pressure tests, and 38.7% of quantitative ultrasound heel bone density readings.

Analysis: Substantial forethought and planning are required to ensure that health screening events are safe and beneficial for patients, are effective in meeting the needs of the community, provide an optimal learning environment for students and the supervising pharmacist, and meet state and federal legal requirements. Specific quality assurance forms should be brought to health screening events to ensure that testing equipment is operating up to standards on the day of the event. In planning an initial disease screening event, pharmacists should check with their board of pharmacy for additional record-keeping requirements in their state.

in the use of point-of-care (POC) testing devices as part of their preparation to provide direct patient care.⁴ At the University of Minnesota College of Pharmacy, starting in their first year of study, students are trained to conduct POC testing to screen for hypertension, diabetes, dyslipidemia, and osteoporosis. Students are given the opportunity to practice their skills and techniques in POC testing in the required Pharmaceutical Care Skills laboratory sequence and in a required Patient Assessment course, with these skills being built upon in other areas of the curriculum throughout their education. Students are given volunteer opportunities to use their POC and disease management skills at community health fairs, and some receive credit for these volunteer hours through elective service learning courses. POC testing has far-reaching benefits to the patients who participate in screening events, and it allows students to gain valuable clinical, communication, and leadership skills.

Student pharmacists at the University of Minnesota College of Pharmacy (Duluth) have been putting POC training into practice at community health fairs since 2005 as part of the faculty-initiated Wellness Initiative of the Northland (WIN). The WIN project, which was modeled after a similar school of pharmacy-based initiative in Montana,⁴ uses POC testing equipment to measure blood pressure, blood lipids, blood glucose, and heel bone density. The goals of the WIN project are as follows:

- Train University of Minnesota College of Pharmacy (Duluth) students and interested pharmacists in northeastern Minnesota and northwest Wisconsin to use POC testing devices to screen patients for dyslipidemia, diabetes, hypertension, and osteopenia/osteoporosis
- Conduct screening clinics for residents of medically underserved communities throughout northeastern Minnesota and northwest Wisconsin who would otherwise not have access to these tests because of geographical isolation or economic barriers

An additional initial goal was to track patients whose screening results fell outside of normal ranges to determine whether they obtained follow-up medical care and to monitor the intermediate outcomes of that care (e.g., were patients prescribed appropriate drug therapy when indicated?). This particular objective was pursued through an institutional review board-approved research project that concluded in 2006; the results of this project are reported elsewhere.⁵

Since implementation of WIN, more than 400 students from the college of pharmacy have joined faculty and local pharmacists in providing community-based health screenings, effectively expanding the college’s outreach efforts in partnership with the Minnesota Pharmacy Student Alliance. Students and faculty from the University of Minnesota College of Pharmacy (Duluth) have expanded WIN’s operations from two patient

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