BuchananCares Program: A Team-based Care Pilot Led by a Rural Community Hospital and Local Pharmacist

Hospital readmission rates are a major preventable healthcare burden in the United States.[1]

Team-based care is a health-system strategy of enhancing patient care through the collaboration of health professionals, the patient, and the patient's primary care physician.

Source: Team-based Care to Improve Blood

"We're a small town in southern Virginia. Our program's success is contributing to our town's success. Another pharmacy has joined the BuchananCares program. We're growing because of our commitment level to our patients, college, hospital, and town."

Dr. Randall Cole
BuchananCares

A team of clinical health professionals from the Appalachian College of Pharmacy (ACP), Buchanan General Hospital (BGH), and the Virginia Department of Health, developed BuchananCares to reduce patient readmissions and improve health outcomes. The team built the program using CDC resources[2] and recommendations from the Community Preventive Services Task Force (CPSTF). "BuchananCares has made impactful changes at the pharmacy college and hospital and with patients and their healthcare providers," said Randall Cole, PharmD and transition of care coordinator of BuchananCares. "From the post-study survey, 100% of the patients commented they had a better understanding of their health conditions and the medications used to treat those conditions. Impactful changes at the hospital or with healthcare providers were ensuring that patients received evidence-based guideline-directed medication therapy for their conditions before discharge."

Developing BuchananCares: Combining Team-based Care and a Transition Program to Reduce Readmissions

First, the BuchananCares program team identified participants, determined the objectives of the healthcare group, and researched resources to build the program.

- Participants in the patient group were 18 years and older and were recently admitted to the hospital with one of five disease conditions: acute myocardial infarction, chronic obstructive pulmonary disease (COPD), diabetes, heart failure, or pneumonia.
- The healthcare provider team included a local community pharmacist, student pharmacist, and healthcare providers from the hospital. The team's objectives were to prevent 30-day readmissions for patients with COPD, diabetes, heart failure, or pneumonia; to identify medication-related problems, and to assess patient satisfaction with the new program.
- The program team used resources from The Community Guide and CPSTF recommendations for intervention approaches that address diabetes and heart disease, including
  - Team-based Care for Patients with Type 2 Diabetes Management
  - Tailored Pharmacy-based Interventions to Improve Medication Adherence

Next, the team devised the transition process, coordination or continuity of care from a health care setting or to a home.

- **During a patient's hospitalization:** one student pharmacist was assigned for five weeks to make patient rounds with Latisha Hilton, DO, the attending physician, and help answer medication-related questions. (Student pharmacists rotated this role during their time in the program.) The assigned student pharmacist and Dr. Randall Cole met at least once with the hospitalized patients enrolled in the program to complete a medication review and discuss self-help goals, symptoms to monitor, and reasons to seek more care.

What is The Community Guide?

The Guide to Community Preventive Services (The Community Guide) is an essential resource for people who want to know what works in public health. It provides evidence-based recommendations about public health interventions and policies to improve health and promote safety.

The Community Preventive Services Task Force (CPSTF)—an independent, nonfederal, unpaid panel of public health and prevention experts—bases its recommendations on systematic reviews of the scientific literature. With oversight from CPSTF, scientists and subject-matter experts from the Centers for Disease Control and Prevention conduct these reviews in collaboration with a wide range of government, academic, policy, and practice-based partners.

www.thecommunityguide.org

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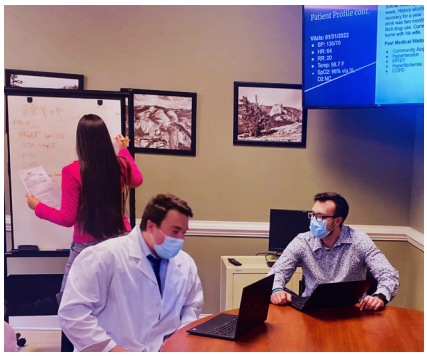
Acknowledgement

We would like to acknowledge Drs. Randall Cole and Latisha Hilton and Patrick Wiggins from the BuchananCares program for sharing their story and for the Applied Research and Translation Team in CDC's Division for Heart Disease and Stroke Prevention for engaging with the BuchananCares developers after they had already completed the pilot.

- **After discharge**: another student pharmacist, different than the individual serving on the five-week rotation, was assigned to that same patient to follow them for 30 days and update Dr. Cole regularly. Using a telephone script, the student pharmacist reviewed medications, monitored health conditions, and asked about readmissions. During the last phone call, the student pharmacist conducted a patient-satisfaction interview. The student pharmacist also contacted the patient's primary care physician about medication-related problems.



"A dedicated, interprofessional healthcare team consisting of nurses, a community pharmacist, and an assigned student pharmacist, were able to identify medication-related challenges during a patient's transition from an inpatient setting to their home. This resulted in the team resolving medication-related challenges and improving patient involvement and health outcomes," said Patrick Wiggins, MPH, the advisor to the BuchananCares program and the disease prevention strategist at the Virginia Department of Health.

Reported Outcomes About the BuchananCares Program Pilot

As reported by Dr. Cole, the BuchananCares program helped "prevent 30-day readmissions for patients with COPD, diabetes, heart failure, and pneumonia." During the patients' transition from the hospital to their homes, the team performed complete medication reviews and identified various medication-related problems that resulted in pharmacist involvement.

Overall, the BuchananCares program reported that the patients and healthcare team were very satisfied with the local pharmacist's involvement as patients transitioned from an inpatient setting to a home setting.

According to Dr. Cole, "The transition program provided pharmacy students with an excellent learning experience, an opportunity to be a part of the healthcare team, and most importantly, a chance to make a difference in our community and patients' lives. Nurses and physicians all commented that having the same student on their daily patient rounds helped the team with medication questions and patient education."

The BuchananCares transitions program was established as usual care at Buchanan General Hospital, and patient education was expanded beyond the five disease conditions in the program pilot to include all disease conditions. Appalachian College of Pharmacy incorporated the BuchananCares program into an Advanced Pharmacy Practice Experience rotation for its third-year students. According to Dr. Cole, "ACP and BGH are now collaborating for a shared faculty position to continue to provide these services at the hospital, add an extra student or two during each rotation, perform research, search for grants for our community, and explore the possibility of new programs that would benefit our small rural town."

"This program is a great example of multiple preventative care services that reduced readmissions, adverse drug events, and disease progression. On a professional level, pharmacy students—myself included—benefitted from the exposure to the team-based care concepts. I am building patient relationships because of this program and broadening my clinical expertise," said Tyler Goins, student pharmacist.

[1]Jacobs DM, Noyes K, Zhao J, et al. Early Hospital Readmissions after an Acute Exacerbation of Chronic Obstructive Pulmonary Disease in the Nationwide Readmissions Database. *Annals of the American Thoracic Society*. 2018 Jul;15(7):837-845.

[2] The BuchananCares team used a Division for Heart Disease and Stroke Prevention (DHDSP) website as a resource while developing the program.