

Johns Hopkins Awarded \$2.1 Million to Improve Post-Hospital Care for Chronic Obstructive Pulmonary Disease

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The Johns Hopkins Armstrong Institute for Patient Safety and Quality has been awarded a \$2.1 million contract to develop, implement and study a program that better supports people with chronic obstructive pulmonary disease (COPD) following hospitalization — a period when patients are especially prone to re-hospitalization. The three-year project will be funded by the Patient-Centered Outcomes Research Institute.

Common among longtime smokers, COPD is a progressive lung disease that affects one in seven U.S. adults, making it the country's fourth-leading cause of death and a common cause of disability. People with COPD are frequently hospitalized or treated in an Emergency Department due to serious worsening of symptoms, known as exacerbations, which cause difficulty breathing.

“Unfortunately, many COPD patients are caught in a revolving door between the hospital and their home,” explains Hanan Aboumatar, M.D., M.P.H., principal investigator for the project and assistant professor of medicine at the Johns Hopkins University School of Medicine. “We want to develop ways to advance patients and their loved ones’ capacity to handle their illness and provide the tools and support they need to overcome obstacles that undermine their health and well-being.”

The new program, to be built on a combination of education and professional and community support, seeks to reduce hospital visits and improve overall quality of life among individuals hospitalized for COPD exacerbations at Johns Hopkins Bayview Medical Center, Aboumatar says.

Program developers say the plan is to begin education during hospitalization and continue it over the following three months, 60 days longer than traditional hospital-to-home transition programs. A nurse case manager will call or visit the patient and any family caregivers during that time to teach and assess self-management skills, including how to identify and treat worsening symptoms early, and how to cope with COPD and improve their quality of life. Program case managers with nursing and social work training will also connect COPD patients and caregivers with community-based resources like special transportation services to enable them to attend their follow-up medical appointments.

Aboumatar says COPD patients and family caregivers will play a critical role in the program's development and assessment, along with community-based advocacy organizations, including the COPD Foundation. They will work with experts from across Johns Hopkins, including physicians, nurses, social workers, case managers and researchers from the Armstrong Institute, Johns Hopkins Bayview Medical Center and the schools of medicine and public health.

Under terms of the contract with PCORI, the Johns Hopkins team will measure the impact of the program in terms of health care utilization, quality of life, survival and need for acute services. Care team members will assess how well symptoms are managed at one-, three- and six-month intervals over the course of the program.

Previous research shows that one out of five patients suffers an “adverse event,” such as a medication error, shortly after discharge from the hospital, and about a third of those errors are preventable.

Nationwide, experts report that 16 percent of COPD patients are never asked whether they need help at home before they are discharged, and never told what symptoms to monitor to prevent subsequent hospitalizations. Focus groups and interviews will be conducted with previously hospitalized COPD patients and caregivers to identify their needs and ensure appropriate levels of support.

For a patient with COPD, a seemingly simple task like cooking a meal or getting to the pharmacy can prove challenging. “If you have an oxygen tank, you can’t cook close to an open flame to make a meal, and getting from one place to another may be difficult, especially if you don’t have someone who can help,” Aboumatar explains. “By offering a support network for patients when they’re most vulnerable, we hope to keep them well and at home,” she says.

The Johns Hopkins study is one of 71 projects totaling more than \$114 million approved for funding by PCORI’s Board of Governors early this month. Proposals were evaluated on the basis of scientific merit, how well they engage patients and other stakeholders, their methodological rigor, and how well they fit within PCORI’s national research priorities. All awards were approved pending completion of a business and programmatic review by PCORI staff and issuance of a formal award contract.