Optimizing the Process and Uptake of Lung Cancer Screening Among Patients and Providers and Across the Healthcare System

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Condition: Lung cancer screening — quality of care

Institution: Dana-Farber/Brigham and Women’s Cancer Center

The purpose of this project is to conduct a pilot implementation trial of system-level clinical decision support (CDS) tools to improve the uptake of lung cancer screening. We will leverage principles of user-centered design to develop CDS tools for patients and primary care providers (PCPs) and integrate them into the electronic health record (EHR). This goal aligns with the NCCN/AstraZeneca Request for Proposals focus on improving access to lung cancer screening by addressing patient-, provider-, and system-level barriers and using health informatic tools that are integrated into the EHR. The long-term goal of this project is to increase the uptake of lung cancer screening by creating CDS tools that can be implemented and tested more broadly among patients and providers and across the healthcare system. These tools can be made available and scaled at a national level if proven to be effective.

This project focuses on the development and testing of system-level CDS tools that engage patients and PCPs in improving the process of tobacco-use data collection, tobacco treatment delivery, shared decision-making, eligible patient tracking, and best-practice advisory alerts to promote the uptake of lung cancer screening. We will use the PROSPR (Population-based Research to Optimize the Screening Process) Lung Cancer Screening Process Model to guide this study. According to this model, several steps are needed for effective screening (risk assessment, shared decision-making, screening, and follow-up). We will focus on enhancing the steps necessary to implement lung cancer screening within the primary care setting.

Primary Objectives/Aims:

- Phase 1: Map clinical workflow for lung cancer screening from tobacco-use data collection through delivery of tobacco treatment, shared decision-making, and ordering and enactment of follow-up recommendations; and identify facilitators and barriers to lung cancer screening within the primary care setting
- Phase 2: Develop, refine, and test CDS prototypes for patients and providers
- Phase 3: Deploy and pilot-test the acceptability and feasibility of implementing the CDS tools across 2 different primary care settings as the primary outcomes, and adoption, appropriateness, and penetration of the CDS tools as the secondary outcomes

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