What, if any, proposed activities were not completed? Briefly describe those activities, the reasons they were not completed and your plans for carrying them out.

Background: The Medical University of South Carolina (MUSC) had previously implemented an automated *"opt out"* tobacco cessation system to delivery smoking cessation services to adult smokers with phone follow-up cessation support for 30 days after hospital discharge consistent with the Joint Commission's tobacco measurement set. The MUSC hospital inpatient tobacco cessation service is based in part upon the program previously implemented at the Ottawa Heart Institute which utilized bedside counseling and interactive voice recognition (IVR) follow-up calls to patients after hospital discharge.

Goal: The goal of this project was to implement an evidence-based Tobacco Cessation Management System in five additional hospitals in the Charleston, South Carolina region.

Activities: To accomplish this goal, we offered area hospital $10,000 to offset start-up costs associated with installing the SC-Quits IVR system. Letters and follow-up phone calls were made to six area hospitals in 2013 inviting them to learn about the SC-Quits IVR system and obtain the start-up funding. Presentations were made to 4 of the 6 hospitals and 3 hospitals (all within one hospital system – Roper St. Francis) agreed to install the SC-Quits IVR system. A memorandum of understanding (MOU) was developed to reimburse the Roper health care system $30,000 for installation of the SC-Quits IVR system in three of their hospitals: Roper Medical Center in Charleston, Roper St. Francis Hospital in Charleston, and Roper Hospital in Mt. Pleasant. The other 3 hospitals approached to implement the SC-Quits IVR system eventually declined the offer even after several presentations were made about the program and initial enthusiasm was expressed for its implementation. The two reasons given for rejecting the program were: 1) concerned about using of IVR (computerized) follow-up calls, and 2) the monetary commitment that might be required to sustain the service after its installation.

Results: Between February 2014 and May 2015, the MUSC hospital program has screened 42,061 adult admissions identifying 8,423 (20%) as current smokers, of whom 69.4% (n=5,843) were referred into the program after exclusions. With 1 full-time bedside tobacco counselor we were able to speak with 1,918 (32.8%) patients, of whom 96 (5%) denied currently smoking and 287 (14.9%) refused counseling. Re-contact at follow-up was achieved for 703 (55%) smokers who received bedside counseling and 1,613 (49%) who did not, yielding and overall follow-up reach rate of 60%. Of those reached by phone, 36.4% reported not smoking (51% versus 27% for those who did and did not receive bedside counseling, respectively). The overall intent-to-treat abstinence rate was 13.5%.

Between October 2014 and September 2015, in all three Roper hospitals combined identified 3,488 smokers. However, because they limited enrollment to only patients seen in the respiratory therapy program, the number enrolled into SC-Quits was limited to 78 patients of which 44 were reach by phone after discharge and 3 (7%) were not smoking. We organized a meeting with Roper representatives in May 2015 to urge them to extend the SC-Quits IVR follow-up to all identified smokers, but they were not interested in doing this for patients not seen by a bedside counselor and did have resources to invest in extending the service beyond respiratory therapy.

In 2014-15 we extended the offer of the SC-Quits IVR start-up funding to other hospital systems throughout South Carolina. We met with 5 additional hospital systems, each of which expressed interest in the start-up offer. Extended discussions were held with several of these hospital systems, but in the end, none agreed to install the system. In every case concerns were raised about the limited funding offered versus the potential downstream costs of sustaining the system once installed.

As a result, MUSC is returning to Pfizer $20,000 of the original $50,000 grant award since only three hospitals agreed to implement the program as planned.

2. Briefly tell us about any other unexpected issues, concerns or successes you have had during this reporting period.

We vastly underestimated the resources need to incentivize hospital systems to adopt what we thought would be an attractive, low cost system for managing tobacco cessation service delivery for adult smoking patients. Essentially, none of the hospitals we dealt with were invested in providing tobacco cessation for their patients. The lack of hard evidence to show a return on investment was a barrier. We a small NIH grant in place to evaluate the impact of the MUSC tobacco cessation service on reducing hospital readmissions, with a focus on readmissions where CMS will no longer reimburse hospitals if patients are readmitted within 30 days after discharge. The hospital administrators we spoke with were keenly interested in this study, but unwilling to allocate scare resources at this time to invest in tobacco cessation, even though reimbursement billing could be incorporated into the automated system we offered them.

3. Is there anything else you want to tell SCLC or Pfizer?

We worked hard to sign up hospitals to implement the SC-Quits IVR system. Hospital administrators were interested in the data we were able to show them on how the system was working at MUSC. That said, data on clinical outcomes is not sufficient to create wide scale adoption of the service, even though all felt it was important and valuable. Without sufficient assurance of reimbursement and/or a mandate to implement the Joint Commission tobacco measure set standard it is unlikely that hospitals in South Carolina will do so.

Presentations

World Conference on Tobacco or Health (WCTOH), March 2015, (Abu Dhabi, UAE)
Cummings KM, Cartmell K, Mueller M, Warren G, et al. Reducing Hospital Readmission Rates by Implementing an Inpatient Tobacco Cessation (poster)

World Conference on Lung Cancer (WCLC), September 2015 (Denver, CO, USA)
Cummings KM, El Nahhas G, Talbot V, Wilson D, et al. Impact of an Inpatient Tobacco Cessation Service (oral presentation)

Society for Research on Nicotine and Tobacco (SRNT), February 2015 (Philadelphia, PA, USA) Warren GM, Cartmell K, Woodard D, Wilson D, et al. Automated Tobacco Cessation for Inpatients and Effects on Readmission Rates (poster)

Papers

El Nahhas GJ, Wilson D, Talbot V, Cartmell K et al. Implementation of a Hospital-Based "Opt-Out" Tobacco Cessation Program (under review)