BACKGROUND

In the United States, the Joint Commission (JC) recommends that all current smokers receive tobacco cessation services as an inpatient and be followed up within one month after hospital discharge.

Few hospitals implement JC standards due to extra costs, the voluntary nature of the standards, and the lack of evidence demonstrating financial benefits to the hospital and insurers.

The Medical University of South Carolina (MUSC) recently implemented an inpatient tobacco dependence treatment service (TDTS) which provides a bedside consult with patients and phone follow-up using interactive voice recognition (IVR) technology after discharge consistent with JC standards. A previous study (Nahhas GJ, et al, NTR, 2016), found that those exposed to the TDTS had a 2-fold higher quit rate 1-month after discharge compared to those not exposed to the program.

HYPOTHESIS: Among current smokers, 1-year post-discharge healthcare costs will be higher among those who are exposed to the TDTS service compared to those who are not exposed to the TDTS service.

STUDY POPULATION

- The study population included 3,158 smokers who were acute care patients admitted and discharged from the MUSC hospital between November 1, 2014 and June 31, 2015.
- Table 1 provides a description of the characteristics of the overall study population, and for smokers who did and did not receive TDTS services.
- There were some notable differences between those who did and did not receive TDTS services. Those who received TDTS services were more likely to be: older, hospitalized for fewer days, female, insured and Medicare recipients.

The study utilized in-place data capture mechanisms to link patient data across 3 data sets: 1) the MUSC electronic health records (EHR) database; 2) the MUSC-TDTS database, and 3) the South Carolina Inpatient Hospitalization Dataset (i.e., state billing claims data). Initial linkage between the MUSC EHR and TDTS databases was done to identify MUSC inpatients eligible for the study, and this merged database was sent to the South Carolina Revenue and Fiscal Affairs Office (SC-RFAO) to obtain follow-up statewide healthcare utilization and cost data among our MUSC inpatient cohort.

Secondary data analyses were carried out to compare healthcare costs among smokers exposed to the TDTS and those not exposed to the service. Among patients in our dataset, we evaluated total healthcare costs post-discharge from MUSC for a 1-year period. Costs taken into account for these analyses included post-discharge inpatient, ambulatory surgery and emergency department charges.

RESULTS

<table>
<thead>
<tr>
<th>Exposed to TDTS Service</th>
<th>Not Exposed to TDTS Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inpatient Claims</td>
<td>$216</td>
</tr>
<tr>
<td>Ambulatory Surgery Claims</td>
<td>$2,049</td>
</tr>
<tr>
<td>ED Claims</td>
<td>$849</td>
</tr>
</tbody>
</table>

Table 2: Effect of TDTS Service On Post Discharge Healthcare Charges Over a 1-Year Period

CONCLUSIONS

- Exposure to the TDTS was associated with a clinically important reduction in health care costs. The average marginal impact of exposure to the TDTS on overall charges post index admission was a reduction of $8,429 after adjusting for age, race, payer, insurance status and Charlson score for the time period under consideration.
- Next Steps: Future analyses will incorporate the cost of program development and implementation into our analyses to enable examination of overall program cost effectiveness from the perspectives of hospitals, insurers and patients.