

Final Report

Integrating tobacco cessation interventions in the routine of care of a rehabilitation hospital serving a rural population in Washington State

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Abstract

Purpose: The goal of this project was to implement a tobacco cessation program at St. Luke's Rehabilitation Institute (SLRI), located in Spokane, Washington.

Scope: Assure that tobacco users admitted to St. Luke's Rehabilitation Institute (SLRI) receive evidence-based tobacco cessation interventions during their hospitalization and after discharge, based on Joint Commission recommendations

Methods: A team approach and an iterative process was adopted in order to provide education to clinical staff on evidence-based tobacco dependence, change inpatient medical record systems to prompt tobacco cessation interventions and implement an pharmacist-based tobacco use treatment program protocol. Concomitantly with project activities, SLRI leadership planned and implemented a tobacco-free campus. Evaluation compared clinical practices before and after the project interventions.

Results: Overall, the project resulted in important improvements in clinical practices and systems as they relate to tobacco use and dependence. Staff participated in trainings and considered them positive; tobacco use assessment, medication and counseling support were integrated in the routine of care and progress was made in the area of referral after discharge. These encouraging results are of particular importance given the site hospital serves primarily a rural population from four states (eastern Washington, northern Idaho, western Montana, and northeast Oregon).

Purpose

The primary goal of this project was to implement a tobacco cessation program to ensure that tobacco users admitted to St. Luke's Rehabilitation Institute (SLRI) receive evidence-based tobacco cessation interventions during their hospitalization and after discharge.

In order to achieve this goal, the key objectives of the project were to:

1. Educate clinical staff on evidence-based tobacco dependence screening, cessation advice and assessment for hospitalized patients
2. Modify inpatient medical record systems to prompt and document tobacco cessation interventions during and after hospitalization
3. Implement an evidence-based, pharmacist-assisted inpatient tobacco use treatment program
4. Implement a discharge protocol that included the provision of prescriptions for medication and referral to support for continued cessation support after hospital discharge

Scope

Background, context and setting

SLRI is the largest free-standing physical rehabilitation hospital and the only level 1 trauma rehabilitation hospital in the Inland Northwest (Spokane, WA). SLRI has 102 beds; inpatient admissions exceeded 1600/year in 2015 and 2016. Stroke, brain injury, spinal cord injury, neurological, cardiac, pulmonary, and orthopedic conditions are the most common inpatient diagnoses. Average hospital stay varies from 14 to 17 days, depending on the diagnosis.

Before this project launching, in May of 2015, SLRI had a smoking area in campus, where staff and patients could use tobacco; cessation interventions for patients who used tobacco were mostly nonexistent.

As a rehabilitation center, the vast majority of SLRI patients were transferred from other facilities. Clinical staff were trained to document tobacco use based on the assessment made by the organization the patient was being transferred from, instead of actively asking the patient. No staff were trained on tobacco cessation counseling; medications to manage nicotine

withdrawal were sometimes offered and provided, but adherence was variable. No protocols were in place to assure smokers had access to continued cessation support after discharge.

Participants

The primary audience for this project were pharmacists, who were assigned by SLRI leadership to lead the tobacco cessation program. Other clinicians involved with patient care at SLRI were also targeted and included Medical Assistants, Nurses, Social Workers, Occupational Therapists, Physical Therapists, Physicians and Physician Assistants.

Prevalence

SLRI had analyzed inpatient tobacco status data by researching their Electronic Health Records (EHR) from 2010 to 2013, before the study launching. It was found that overall tobacco use prevalence was 18% among inpatients, which was slightly higher than WA State prevalence of 16.1% for that year (CDC, 2014). Patients identified as tobacco users had a higher length of hospital stay (1.5 days longer) than non-tobacco users and required a significantly higher number of doses of pain medication. Patients admitted for stroke, spinal cord injury and traumatic brain injury were more likely to be tobacco users than those admitted for other diagnoses.

Methods

Project Approach

This project used a collaborative approach to systems change:

Team approach: Site team were highly involved in decision making and problem solving through weekly meetings and regular site visits.

Flexible capacity building strategy: Training content was defined as challenges were identified. Training delivery methods varied from face-to-face to webinar and online tutorials.

Iterative Electronic Health Records modification: The patient documentation system utilized by SLRI allowed a multiple-step process on deciding best ways to collect and document tobacco use and cessation variables.

Interventions

Interventions were focused in three main areas: implementation of a pharmacist-based tobacco use treatment program protocol, change of medical record systems to prompt tobacco

cessation interventions and provision of education to clinical staff on evidence-based tobacco dependence.

A- Implementation of a pharmacist-based tobacco use treatment program: A set of five types of training/capacity building activities were delivered during the 18 months period of the project. After every training delivery event, Dr. Carlini provided technical assistance to the SLRI team to encourage knowledge translation into evidence-based practices. The training events were as follow:

- 1- In July 2015, the first training was delivered, focused on tobacco cessation pharmacotherapy support. Consultant Mr. Frank Vitale, National Director of the Pharmacy Partnership for Tobacco Cessation, provided mentorship and consultation through webinars and email/phone call consultations (see training in Attachment 1). SLRI pharmacists leveraged this learning opportunity to develop their pharmacotherapy protocol (dosing, medication regimen), later implemented in the routine of care of tobacco users (Attachment 2)
- 2- In October 2015, and per request of the pharmacy department, consultant Genevieve Casey (Master in Counseling Psychology, Tobacco Treatment and Motivational Interviewing Specialist) delivered a webinar training focused on how to approach unmotivated and resistant tobacco users (Attachment 3).
- 3- In December of 2015, pharmacists obtained a tobacco cessation specialist certificate through the online program offered by Washington State Pharmacy Association (WSPA) (<http://www.wsparx.org/event/tobaccocessation>). The training was followed up by a face-to-face booster session, based on role-play of real clinical cases and it was led by Dr. Kawkab Shishani, PhD and Associate Professor of Washington State University College of Nursing. Mr. Greer leveraged the learnings of these training to select and/or develop materials for bed-side counseling. These materials were copied and placed in folders that pharmacists could take with them to guide their counseling (see Attachment 4)
- 4- In August of 2016, pharmacists were trained on the importance of referring patients after discharge by Dr. Carlini. The emphasis of the training was in linking patients with relapse prevention support as soon as they exit the hospital (see Attachment 5). Referral to tobacco cessation community resources were incorporated as an element of discharge procedures. Fax and electronic referrals to quitlines will be one of the options of support and follow-up.

5- The last training developed has not been delivered yet. It will be implemented in 2017 as a mandatory training for all pharmacy students in rotation at SLRI, who are supervised directly by Mr. Greer, head of Pharmacy Department. These students in rotation come from the School of Pharmacy at Washington State University, also located in Spokane. SLRI is a site for both advanced pharmacy practice experience (APPE) students and Intermediate pharmacy practice experience (IPPE) students. At a given time, there are usually five students at SLRI Pharmacy Department – their rotation range from 3 to 6 weeks. As part of their university training, they receive tobacco cessation training from Dr. Kawkab (see above). Mr. Greer made the decision to involve students in the tobacco cessation program, as an opportunity to practice their skills and worked with Dr. Carlini to develop the online training (Attachment 6)

B- Clinical staff education

Nurses and other clinical staff received tobacco cessation best practices training, in order to support the pharmacy-based program and assure identification and documentation of tobacco users at intake.

The first training was delivered in September of 2015 and oriented intake nurses on changes to the EHR at admission (see EHR changes below). This training marked an important change in routine of care, as oriented nurses to proactively ask tobacco use status, instead of only transferring notes from previous hospitalization. For tobacco users, nurses also assessed tobacco frequency and type, to support pharmacotherapy decisions (Attachment 7).

The second online training was developed as the hospital launched a tobacco free campus policy and delivered in December of 2015, educating staff on non-confrontational strategies to deal with patients resisting the new policy (Attachment 8)

C- Modification of Electronic Health Records:

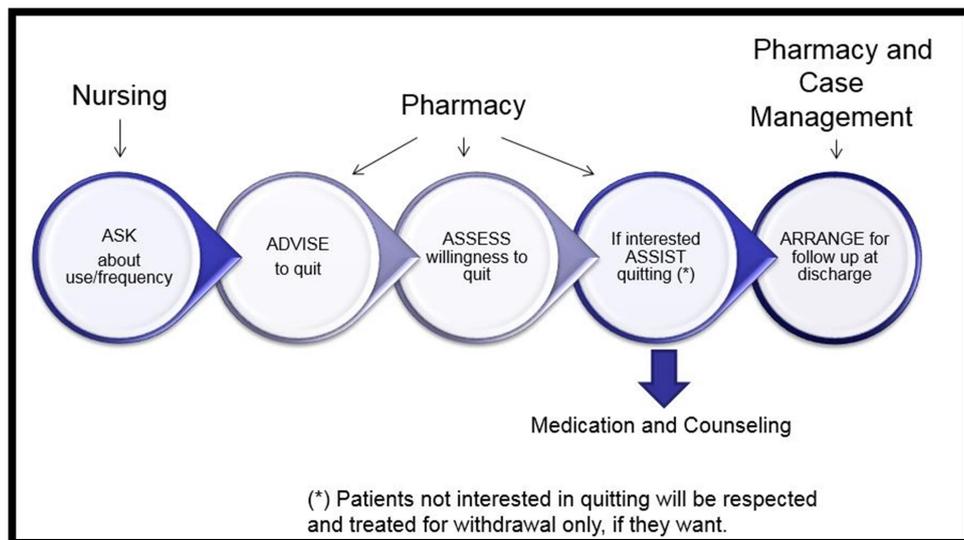
SLRI EHR (Electronic Health Records) were changed to support the delivery of tobacco use treatment by generating automatic requirement of tobacco use assessment and requests to the Pharmacy Department to deliver counseling and medication. The treatment protocol detailed when, how often and under which circumstances tobacco use treatment were to be provided and documented and defined specific components of tobacco use treatment according to patient interest in quitting (wants to quit, not interested in quitting but wants medication, declines medication and does not want to quit). Attachment 9 provides an illustration of some of these changes.

Results

Training attendance: The training resources offered through this project were highly utilized. The intense training offered to the Pharmacy Department had very high rates of participation (total staff=7; participation in any give training varied from 5 to 7) and resulted on protocol development and cessation counseling certification.

A total of 91 nurses received training on assessing and documenting tobacco use (81% completion rate; total of 111 nurses were assigned to the training). Training of clinical staff (Physicians Assistants, Physicians, Nurses, Physical Therapists, Social Workers and others) on tobacco cessation best practices and non-confrontational strategies to deal with patients resisting the new tobacco-free policy had 233 participants (76% completion rate; 305 assigned).

Tobacco cessation program implementation: Perhaps more important than training uptake, this project facilitated changes in the systems of care (documentation, clinical responsibilities) that resulted in the integration of a tobacco cessation program in SLRI routine of care. Figure 1

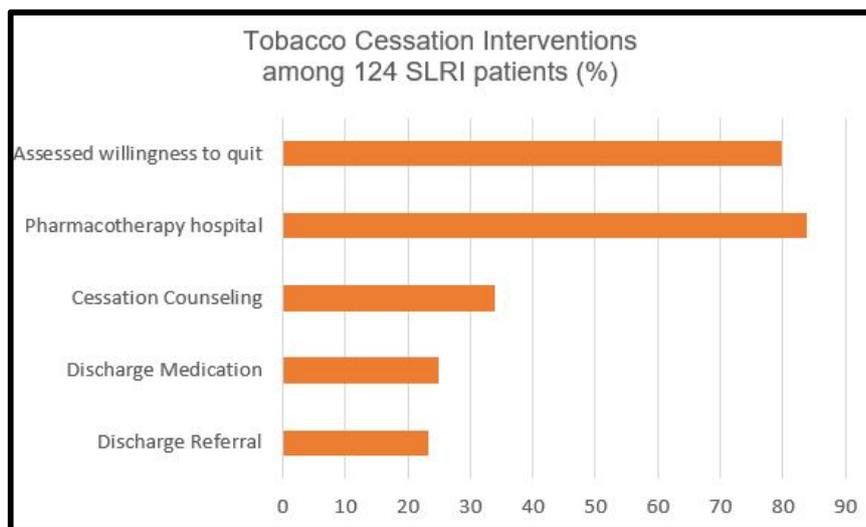


describes the main elements, clinical responsibilities and flow of this program.

Tobacco-related clinical practices: Clinical practices information was obtained through SLRI chart reviews, using reporting capabilities developed during this project.

Identification of tobacco users: Assessment and documentation of tobacco users was implemented two months before other clinical interventions, in October 1st 2015. The review of clinical charts shows that a total of 1608 patients were assessed for their tobacco use, which corresponds to 100% of the inpatient population 18 years or older during the period surveyed (10.01.2015 to 12.9.2016). Tobacco use prevalence was 15.6% (n=251), mean age of 56.5 years (ST 16.2). Men were more likely to report tobacco use (17.9%) than women (12.7%).

Tobacco cessation interventions: The tobacco cessation program (counseling, medication, and referral) was implemented 2 months later (December 1st 2015). Chart reviews included the 1447 patients from 12.1.2015 to 12.9.2016. A total of 232 tobacco users were identified; 124 (53%) of them had documentation of tobacco-related clinical interventions, as can be seen in Figure 2.



Discussion and Conclusion

This project achieved its main goal of implementing a tobacco cessation program to ensure that tobacco users admitted to St. Luke's Rehabilitation Institute (SLRI) receive evidence-based tobacco cessation interventions during their hospitalization and after discharge. This was achieved through clinical staff training, capacity building plus technical assistance to SLRI Pharmacy Department and changes in Electronic Health Records.

Chart review's reports document that much progress was made to support tobacco users to quit while hospitalized through the system implemented. Our baseline assessment of the SLRI clinical practices revealed that tobacco use was not systematically identified among patients

and no clinical practices were in place to address their tobacco dependence. After the implementation of this project's tobacco cessation program, we found that 100% of patients were screened for tobacco use at intake. Of those, 53% had documentation of some tobacco cessation intervention, mostly pharmacotherapy support and assessment of willingness to quit. About a third received cessation counseling and between 20 to 25% received referral and/or pharmacotherapy at discharge.

While these numbers are a testimony of the progress made, they also point to the need of further improvement. Moving forward, SLRI Pharmacy Department is committed to increase the proportion of tobacco users who are systematically approached about their tobacco use. The head of the pharmacy department, Mr. Chris Greer, in meeting with his staff, decided to incorporate pharmacy students in rotation in the SLRI cessation program, starting in January of 2017. These students (five at any given time, in rotation of 3 to 6 weeks) receive tobacco cessation training as part of their curriculum at Washington State University School of Pharmacy. As detailed on page 6 of this report and per Mr. Greer request, Dr. Carlini developed a booster training to them.

In conclusion, this project documents that through intensive capacity building and changes in the systems of care is possible to develop and implement a tobacco cessation program in a rehabilitation hospital such as SLRI.

References

CDC – Centers for Disease Prevention and Control (2014), State Tobacco Activities Tracking and Evaluation (STATE) System, Cigarette Use, Adult current smokers at <http://apps.nccd.cdc.gov/statesystem/InteractiveReport/InteractiveReports.aspx?MeasureID=1>