Addressing Tobacco Use in Hospitalized Patients

Provider Behavior Change After Implementation of an Inpatient to Outpatient Tobacco Use Treatment Program

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Introduction

- Hospitalization provides unique opportunity to offer patients who smoke or use other tobacco help with becoming tobacco free
- Provider advice & brief interventions increase quit rates
- Provider support & buy in critical for program success
- Most patients seen in academic medical centers receive initial treatment from a resident physician who takes history and physical.
- Goal of our program to give providers tools for helping patients consider hospitalization as opportunity to change tobacco use behavior, including ability to order bedside consult from a Tobacco Treatment Specialist.
- Use of survey to introduce new I2O (inpatient to outpatient) program, provide education, receive feedback for program improvement, and evaluate program impact on provider behavior.

Survey Development

- Focus groups held with attending physicians, resident physicians, and nurses to inform survey questions
- Cohort pre-post design
- Domains of interest:
  - Attitudes
  - Awareness
  - Practice
  - Motivators of behavioural change
- Piloted with year 3 Family Medicine residents
- Received approval from UNC IRB.
- Email addresses for year one and two resident physicians provided by Residency Coordinators in departments of Medicine, Family Medicine, Surgery, Obstetrics & Genecology, and Psychiatry
- Incentive for participation--$15

Survey implementation

- Baseline survey email Feb 2011 to 143 resident physicians; two reminder emails
- Follow-up survey email Feb 2012 to143 resident physicians; two reminder emails

Results

- Baseline survey: 106 (74% rr) completed surveys
- Follow-up survey: 120 (83.9% rr)
  - Thirteen physicians no longer at UNC or moved to non-inpatient services, leaving 130 eligible participants for cohort
- Cohort= 92 resident physicians completing pre & post surveys (71% rr)

Demographics

54.3% Female 54.3% First year residents

Residency	Number participating	Response rate
Medicine	38	71.70%
Family Medicine	13	81.30%
Psychiatry	14	58.30%
Surgery	17	77.30%
Ob/Gyn	10	71.40%
Total	92	71.30%

Attitudes and awareness

Attitudes/Confidence (scale 1-5)	2011	2012	p value
Every hospitalized patient who uses tobacco should be offered counseling	1.23	1.22	.140
Every hospitalized patient who uses tobacco should be offered TUT meds	2.30	2.24	.426
Confident to Rx optimal NRT for inpatients who use tobacco*	3.98	3.40	.000
Confident to counsel inpatient tobacco users based on readiness to quit*	4.12	3.62	.001

Changes in awareness (scale 1-3)	2011	2012	p value
Nicotine withdrawal symptoms	1.41	1.42	.863
Stages of change theory	1.73	1.71	.775
Motivational interviewing	1.89	1.87	.741
Reimbursement for counseling*	2.64	1.98	.000
Work of tobacco treatment specialists*	2.52	1.74	.000
NC Quitline*	1.95	1.41	.000
Fax referral NC Quitline*	2.64	2.34	.000
Effectiveness Combination NRT**	2.32	2.11	.025
Inpatient + outpatient tx= increased quits*	2.54	2.29	.009

Note: Lower mean score=higher awareness

I2O Tobacco Use Treatment (TUT) Practices

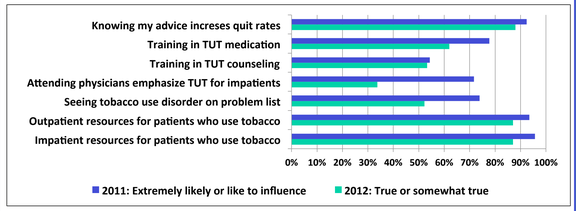
Admitting patients to hospital (scale 1-5)	2011	2012	p value
Ask about patient's tobacco use	1.32	1.22	.140
Offer NRT to tobacco users	2.3	2.24	.426
Request smoking/tobacco consult *	3.98	3.4	.000
Utilize Nicotine Replacement Order Set *	4.12	3.62	.001
During hospital stay	**2011**	**2012**	**p value**
Offer brief advice (less than 3 min)	2.18	2.28	.235
Offer counseling of > 3mins	3.36	3.29	.505
Document tobacco use counseling	3.36	3.21	.171
Add tobacco use disorder (305.1) problem list *	4.11	3.76	.002
Read inpatient tobacco consult notes *	4.20	3.27	.000
Inform/offer NC Quitline fax referral *	4.02	3.79	.004
Refer to UNC NDP *	4.23	3.79	.000
Provide tobacco use Rx at d/c *	3.43	3.12	.018
Outpatient visit following hospitalization	**2011**	**2012**	**p value**
Ask about tobacco use since hospitalization*	2.73	2.48	.049
Offer brief advice for quitting/preventing relapse	2.38	2.37	.917
Refer to NC Quiltine *	3.54	3.04	.000
Refer to UNC NDP *	3.73	3.31	.001
Document counseling in clinic notes	3.18	2.94	.075
Use tobacco prevention counseling codes *	4.34	3.85	.000

Note: Lower mean score=higher frequency of practice

Expectancies for behavior change matched by subsequent program training success

•Pre survey: "Please indicate how each of the following factors would increase your likelihood of addressing tobacco use with inpatients."

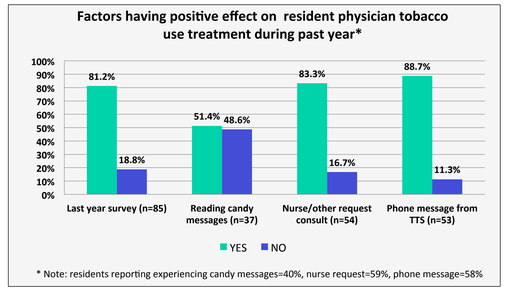
•Post survey: "To what extent are the following statements true or not true for you?" followed by statements related to the same factors (e.g., I have received training on prescribing cessation medications for inpatients, I see tobacco use disorder on the problem list).



Pre survey
"We do not get enough training or know all the available help we have to offer our inpatients with tobacco dependence. This should change."

Post survey
"This was and is an AMAZING initiative. I ask every inpatient and am working to increase my screening, documentation, and referral of my clinic patients. I am excited about the NRT order set and options available to our inpatients. Keep up the great work!"

Influences on resident physician behavior



* Note: residents reporting experiencing candy messages=40%, nurse request=59%, phone message=58%

Conclusion

- Having an inpatient tobacco treatment specialist can dramatically influence resident physician tobacco use treatment (TUT) practices
- Availability and awareness of TUT resources are vital to increase likelihood that resident physicians will discuss tobacco use with their hospitalized patients
- Using a variety of educational formats (e.g., pre-post survey, informal and formal teaching) can increase awareness and behaviour of resident physicians in treating tobacco use.

Future Directions

- Work to increase attending physicians support and advocacy for tobacco use treatment for inpatients
- Provide continued education on TUT resources and make referral process more integral
- Develop strategies with medical staff to make TUT in hospital as routine as possible

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