Stop Smoking Before Surgery: A Systematic Approach to Improve Patient Surgical Outcomes

Nancy Viney (Northern Health), El Taylor (BC Cancer Agency), Nikolai Holm (UBC), and Cherisse Seaton (UBC)

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Harmonization Partners
Stop Smoking Before Surgery
• The SSBS Team
  • Lucy Beck, Principal Investigator (Northern Health)
  • Sonia Lamont (BCCA)
  • Joan Botteroff (UBC, Okanagan Campus)
  • Cathy Adair (CCS - BCY)
  • Nancy Viney (Northern Health)
  • Sherri Tillotson (Northern Health)
  • Kelsey Yarmish (Northern Health)
  • Kerensa Medhurst (CCS)
  • El Taylor (BCCA)
  • Cherisse Seaton (UBC, Okanagan Campus)
  • Sean Stolp (UBC, Okanagan Campus)
  • Nikolai Holm (UBC, Okanagan Campus)

• Funding
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• Collaborating partner
  • QuitNow

• For more information
  • http://harmonization.ok.ubc.ca/
Current Activities in Northern Health to Enhance Surgical Outcomes

- Pre surgical blood work
- Pre op teaching
- Screening for allergies
- Pre-surgery fasting
- Pre-op checklists
- Etc.
Optimizing Surgical Outcomes: Stop Smoking Before Surgery

- Smoking cessation before any type of surgery:
  - Improved anesthetic outcomes
  - Reduced surgical complications
  - Reduced rate of infections
  - Decreased pain
  - Faster healing
  - Shorter hospital stays
  - Decreased health care costs
Smoking Patterns in Northern BC

- Smoking rate 23% (11% in BC)
- 70% of tobacco users want to quit in the next 6 months
- 12,315 surgeries performed in 2014
- ~23% of these patients were smokers (2,832 patients)
Stop Smoking Before Surgery: Aims

• Enable all health care professionals who see surgical patients to provide support for smoking cessation
• Increase awareness and access to smoking cessation resources to support quitting for surgery
• Assist in the development of sustainable systems to encourage brief intervention as a standard of care
Stop Smoking Before Surgery: Program Components

• Clinic resources for quitting smoking before surgery
• New QuitNow resources and promoting QuitNow.ca
• Hospital-based cessation support for surgical patients
• Training and protocols to aid health care providers in supporting smoking cessation for surgery
• Raising public awareness of the benefits of quitting for surgery

For more information:  www.harmonization.ok.ubc.ca
Clinic Resources

- SSBS rack card/posters
- BC Ministry rack card
- QuitNow smart steps booklet
- QuitNow smart steps booklet for aboriginal populations
- QuitNow fax referral form
- Nicotine gum samples
New QuitNow Resources

Stop Smoking Before Surgery

Get in shape and buff out before your surgery!

If you use tobacco and will be facing surgery in the next 6 – 8 weeks, your best chance at a speedy recovery depends on you quitting smoking.

If you quit now, you will:
- Neal factor
- Face fewer complications
- Improve your breathing
- Reduce your risk of infection
- Improve blood flow to your heart and other areas of the body
- Reduce stress on your heart
- Speed up bone fusion (healing) time
- Shorten your hospital stay

Turn your back on tobacco! Quitting before surgery could increase your chances of quitting for good.

www.quitnow.ca
New QuitNow Resources

Dr Nadine Caron. Academic Surgeon. University Hospital of Northern BC.

Margaret Jones Bricker. Regional Director. Northern Region. Canadian Cancer Society.


www.quitnow.ca
New QuitNow Resources

www.quitnow.ca
Hospital-based Cessation Support

- Presentations to medical and nursing staff
- Brief intervention online training
  - Less than 18 mins
- Clinical tobacco intervention program ([www.tobaccoed.org](http://www.tobaccoed.org))
Hospital-based Cessation Support

- Lanyard tags for hospital staff

**I ask about tobacco!**

**I promote a smoke-free recovery.**

Stop smoking for surgery.

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**The 5A’s**

- **Ask** - about tobacco
- **Advise** - tobacco users to quit
- **Assess** - commitment to change
- **Assist** - link to quitnow and HealthLinkBC 8-1-1
- **Arrange** - follow up with quitnow services

**quitnow.ca**

1-877-450-5335

10-425-6048 [HH06/13]
Hospital-based Cessation Support

• Stress Balls

• Discharge Brochure
New SSBS Protocols

• **Prince Rupert Regional Hospital**: Patient pre-admission and planning form

• Tobacco use in the last 6 months (yes/no)
• Tobacco use in the last 7 days (yes/no)
• Nicotine Withdrawal Protocol (yes/no)
• QuitKit Give (yes/no)
• QuitNow referral (yes/no)
New SBSS Protocols

- **University Hospital of Northern BC (Prince George):** Surignet questions

- Have you used any tobacco products in the last 6 months?
- Have you used any tobacco products in the last 7 days?
- Are you aware that stopping smoking before surgery lowers the risk of surgical complications and improves healing?
- Have you been referred to QuitNow and HealthLink BC 8-1-1 for provincial smoking cessation services?
- Have you reduced your tobacco use or quit smoking since you were booked for surgery? (quit/reduced tobacco use/ increased/no change)
Raising Public Awareness

• Promotions at Northern BC hospitals
  • In person and on TV Screens

Stop Smoking Before Surgery
Did you know that if you stop smoking before surgery, you will:

• Heal faster
• Face fewer complications
• Improve your breathing
• Reduce your risk of infection
• Improve blood flow to your heart and other areas of the body
• Reduce stress on your heart
• Speed up bone fusion (healing) time
• Shorten your hospital stay

Ask your health care professional today about how you can quit. Visit QuitNow.ca
Raising Public Awareness

• Patient education video (2015)

www.harmonization.ok.ubc.ca
Brief Intervention With Patients Preparing for Surgery: Demo

- Ask: Have you used any tobacco products in the last 6 months?
- Advise: “I encourage you to quit smoking …..”
- Assess: Are you interested in some resources to help you quit?
- Assist: Link patients to quitnow services and the BC Smoking Cessation Program
- Arrange: Arrange follow up with quitnow services
• Smokers who had surgery at UHNBC and PRRH participated in telephone-administered questionnaires
• Participants recruited at two time points
  • Pre SSBS implementation (2013)
  • Post SSBS implementation (2014)
• Follow up semi-structured interviews with patients and health care providers (HCPs)
• Analysis of surginet questions at UHNBC
SSBS Evaluation: Participants

- N = 240 surveyed
  - By year:
- Interviews
  - 6 HCP interviews
  - 18 patient interviews

By Hospital:
- UHNBC
- PRRH
Patient Sample: Demographics

• Average age: 52.9 years old
• The majority of participants were:
  • Female
  • Euro-Canadian
  • Employed, working full time or part-time
Patient Sample: Smoking Behaviour

- On average smoking for 35 years
- 99.2% smoked over 100 cigarettes in their lifetime
- Average Fagerström nicotine dependency score of low to moderate dependence
Patients Who Reduced Smoking, Made a Quit Attempt, and Quit Smoking by Time Point

- Smoking two months prior to surgery
- Reduced smoking (including quit) within two months prior to surgery
- Made a serious quit attempt within two months prior to surgery
- Quit smoking within two months prior to surgery
- Quit smoking within two months after surgery

% of Participants:

- 2013
- 2014
Advised to Quit by Time Point

- Smoking two months Prior to Surgery
- Advised to Quit anytime two months prior to Surgery
- Advised that smoking could improve their surgical outcomes
- Given specific information or help to quit

Participants:

<table>
<thead>
<tr>
<th></th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smoking two months Prior to Surgery</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Advised to Quit anytime two months prior to Surgery</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Advised that smoking could improve their surgical outcomes*</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>Given specific information or help to quit*</td>
<td>20</td>
<td>20</td>
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“...the doctor didn’t even mention it. He knew I smoked but he didn’t say anything about stopping smoking or anything like that. So I just kind of figured it out on my own that it would probably be a good idea...Yeah, I was kind of surprised as I figured that people would be, you know, really all over the fact that I was a smoker and stuff, but no one really said anything.”

-Female, Smoking for 7 Years
% of Patients Advised to Quit Smoking and % of Advised Who Reduced Smoking by Time Point

<table>
<thead>
<tr>
<th>Time Point</th>
<th>participants advised to quit smoking prior to surgery</th>
<th>% of advised who reduced or quit smoking prior to surgery</th>
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</thead>
<tbody>
<tr>
<td>2013</td>
<td>50%</td>
<td>25%</td>
</tr>
<tr>
<td>2014</td>
<td>60%</td>
<td>30%</td>
</tr>
</tbody>
</table>
Listening to Patients.....

“...the idea of having a faster healing time and less risk of infection and everything was pretty compelling for sure, so that’s what made me want to.”

-Female, Smoking for 13 years

“I thought that it looked like it was actually a pretty good idea to quit smoking before surgery. That it will be easier on your lungs when they have to put you to sleep.”

-Female, Smoking for 39 years
Awareness of Smoking-Related Perioperative Complications

• Participant ratings of four items were summed to create an *Awareness of Smoking-Related Perioperative Complications* score, which ranged from 4-16
  • Slower healing of wounds after surgery
  • Increased risk of infection after surgery
  • Increased pain after surgery
  • Increased complications with anesthetic after surgery
Patients’ Rating Smoking-Related Perioperative Complications as “ Likely”
Awareness of Smoking-Related Perioperative Complications and Being Advised to Quit Smoking
Can we Predict Who Would Reduce Smoking before Surgery?

- We can assess 6 sources of receiving a quit smoking message before surgery:
  - Information from a friend or family member
  - Health care professional
  - A poster in a clinic, doctors office or hospital
  - Recovery discharge brochure
  - Table or banner with information in a hospital
  - Butt out before surgery rack card
Can we Predict Who Would Reduce Smoking before Surgery?

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information from a friend or family member</td>
<td>6.3</td>
</tr>
<tr>
<td>Health care professional</td>
<td>3.0</td>
</tr>
<tr>
<td>A poster in a clinic, doctors office or hospital</td>
<td>2.3</td>
</tr>
<tr>
<td>Recovery discharge brochure</td>
<td>1.5</td>
</tr>
<tr>
<td>Table or banner with information in a hospital</td>
<td>1.1</td>
</tr>
<tr>
<td>Butt out before surgery rack card</td>
<td>0.8</td>
</tr>
</tbody>
</table>
Surginet Questions – How are we doing?

University Hospital of Northern BC (Prince George):

• Have you used any tobacco products in the last 6 months?
• Have you used any tobacco products in the last 7 days?
• Are you aware that stopping smoking before surgery lowers the risk of surgical complications and improves healing?
• Have you been referred to QuitNow and HealthLink BC 8-1-1 for provincial smoking cessation services?
• Have you reduced your tobacco use or quit smoking since you were booked for surgery? (quit/reduced tobacco use/ increased/no change)
Patient responses to the SurgiNet questions

- 2,436 (58.5% women) surgical patients from Sept 16, 2014 to Feb 15, 2015 at UHNBC

- Age range = 17-95 years ($M = 57.48$).

- Pre-op assessment was completed 1 to 30 days before the surgery date

- Admission to day surgery assessment was usually completed the same day as the surgery (or the day before).
Tobacco Use in the Last Six Months

- 95% of patients were asked about their smoking at least once
  - Only 407 were asked at all three possible time points (17%)

- 23% of patients were smokers
- 86% were asked if they are aware of the risks of smoking before surgery
- 55% referred to QUITNOW
- 77% were aware of the risks
Smoking Behaviour Since Surgery Booking

- Increased tobacco use
- No change
- Quit
- Reduced tobacco use
- Unknown
Conclusions

• Patients who were provided SSBS advice/information were more likely to:
  • know about benefits of quitting for surgery
  • reduce/quit before surgery
• SSBS program appears to be helpful in increasing awareness and reinforcing messages received from HCPs regarding SSBS.
• Surgical patients receiving the SSBS advice/information from HCPs did not increase.
Recommendations

• Expand outreach: the more the message is out there in the community the better
  • Continue displays in hospitals, communities
  • Continue to provide SSBS materials for doctor’s offices
  • Increase the promotion of the SSBS information and resources (e.g., on QuitNow, the patient video on SSBS, discharge booklet, patient education video, etc.)

• Optimize surgical outcomes by ensuring all patients receive SSBS advice and support in every HC encounter throughout the surgical trajectory
Recommendations

• Link SSBS to optimizing surgical outcomes
• Develop strategies to increase the use of SSBS questions in protocols throughout the surgical trajectory (e.g., Surginet)
• Identify strategies to integrate SSBS in all protocols related to providing health care to surgical patients
• Orientation programs for new NH employees should include SSBS and resources for smoking cessation.
“...the hesitation is actually because, you know, smoking is an addiction...But then, when I was given the right information and the right dialogue, or information, to give out to the patient, it made more sense. So, educating is really important because, for me, I myself, I'm a nurse, but I was so hesitant because it's an addiction...But then, given the right information and education, it opened my mind. They were right. It's not really stopping them, but making them comfortable, but then at the same time, giving them the chance to stop and quit smoking.”

-Nurse Manager of Acute Care and Maternity Care
"Systemic would be if you make it an expectation."
-Physician

“Yes, that's why it was written on the pre-admission and discharge planning, because that's a good time to discuss it with the patient and family. And it's good, also, to involve the family. Even if she's not the one who's going into surgery, but it's also to reinforce that they have to agree with us. Family plays a good part of the program as well.”
-Nurse Manager of Acute Care and Maternity Care
For More Information

- To learn more about the Stop Smoking Before Surgery Project, please contact:
  - Nancy Viney, Northern Health: Nancy.viney@northernhealth.ca
  - Joan Bottorff, UBC Okanagan: Joan.Bottorff@ubc.ca

- Visit our project website:
  [http://Harmonization.ok.ubc.ca](http://Harmonization.ok.ubc.ca)