



# TOBACCO FREE FUTURES

guidelines

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## CHAPTER 14

# Specific Care Settings: Surgical Care



# ADDRESSING TOBACCO USE IN SURGICAL CARE

The preoperative period represents a crucial time to address tobacco use among elective surgery patients. Tobacco use affects postoperative outcomes due to complications related to

- smoking effects on cardiovascular and respiratory systems
- negative effects on wound and bone healing
- interference with immune response and overall recovery<sup>1,2,3,4</sup>

Complications related to surgical interventions are important to patients and expensive to the health care system, leading to extended recovery periods and longer hospital stays.<sup>5</sup>

Evidence suggests that providing intensive smoking cessation intervention 4–8 weeks before surgery is optimal to increase the likelihood of reducing pulmonary complications and promoting long-term abstinence. However, brief interventions less than 4–8 weeks before admission are effective in supporting short-term abstinence, with insufficient evidence to determine whether they reduce overall complications.<sup>5</sup>

Patients may not be seen preoperatively by surgeons, anesthesiologists or nurses more than 4 weeks prior to surgery, which limits the opportunity to recommend the optimal cessation advice of 4–8 weeks. Clinicians may be hesitant to recommend cessation in the brief period before surgery (<8 weeks) due to the myth that short-term cessation may be associated with increased pulmonary complications related to the transient increases in coughing and mucous production after abstinence. This concern has been documented in the medical literature based on the over interpretation of results of two studies conducted in the Mayo Clinic in the 1980s.<sup>7,8,9</sup> A current anesthesia text still inappropriately recommends that if you are unable to advise the patient to stop smoking 8 weeks or more before surgery, it is preferable for the patient to continue smoking to minimize the increase in pulmonary complications in recent quitters, which may be higher than current smoking.<sup>10,11</sup>

A recent review by Shi and Warner (2011) refutes this advice, concluding that there was an over interpretation of the Mayo Clinic studies. The authors of the Mayo Clinic studies did not report statistically significant findings of increased complication rates in recent quitters and were “careful not to make this conclusion.”<sup>7</sup> Results did show that longer periods of abstinence are necessary for pulmonary benefit.<sup>7,8,9</sup>

The Shi and Warner (2011) review concluded that “(1) no individual study has found that brief preoperative smoking abstinence significantly increases pulmonary risk, (2) meta-analysis of the available studies also does not find a significant increase in risk, and (3) there is no support for the purported underlying mechanism contributing to risk.”<sup>7</sup>

## CAN-ADAPTT Guidelines (2011)

“All elective patients who smoke should be directed to resources to assist them to quit smoking prior to hospital admission or surgery, where possible.”<sup>6</sup>

Concern about pulmonary complications should *not* prevent clinicians from helping their patients quit smoking at any time before surgery.<sup>7</sup>

## **Tobacco Free Futures in surgical care**

Although smoking cessation prior to surgery reduces the incidence of postoperative complications, only a minority of anesthesiologists, surgeons and nurses actively assist their patients to quit smoking or develop a plan to manage the consequences of involuntary perioperative cessation.<sup>12,13</sup> It is optimal to implement smoking cessation intervention before the surgery (>8 weeks); however, this may be difficult from a practical perspective, considering the unique characteristics of this health care setting. Identified barriers include

- short time frame between preoperative visit and surgery (<8 weeks)
- lack of coverage for cessation medication outside the hospital setting
- difficulty coordinating between family physicians and hospitals to promote smoking cessation with patients preoperatively<sup>7</sup>

Despite these barriers, preadmission clinics are ideal locations for

1. identifying patients who use tobacco
2. delivering a brief intervention
3. planning for in-hospital pharmacotherapy
4. initiating referral of patients post-discharge to community cessation services<sup>14</sup>

“Patients reported that the possibility of reducing perceived vulnerability to postoperative complications promoted motivation to quit or reduce smoking prior to operation.”<sup>5</sup>

The brief intervention model outlined in Chapter 7 (“Brief Intervention”) can be easily integrated into the preoperative care setting. Table 14.1 outlines potential considerations for implementation of the model in the preoperative setting.

**Table 14.1: Treatment Model: Considerations for Preoperative Care Settings**

	MODEL COMPONENT	CONSIDERATIONS
ASK	<p><b>ASK</b> all patients if they have used tobacco in the past year.</p> <p><b>ASK</b> about pattern of use.</p>	<ul style="list-style-type: none"> <li>All tobacco users should be identified during the preoperative phase.</li> <li>Relevant forms used in pre-assessment phase should be modified as necessary to document tobacco use status.</li> </ul>
ADVISE	<p><b>ADVISE</b> all patients regardless of tobacco use status or tobacco-free environment policy.</p> <p><b>ADVISE</b> current tobacco users to stop using tobacco. Personalize message.</p>	<ul style="list-style-type: none"> <li>Patients and family/support persons should be made aware of the AHS Tobacco and Smoke Free Environments Policy as part of their preparation for the surgical experience.</li> <li>It is more effective to tailor advice to quit in relation to planned procedure and direct benefits of cessation on recovery.</li> </ul>
ASSESS	<p><b>ASSESS</b> readiness to quit.</p> <p><b>ASSESS</b> interest in support for relief of withdrawal.</p>	<ul style="list-style-type: none"> <li>Having surgery presents a powerful teachable opportunity for tobacco cessation and makes any time a good time for preoperative patients to quit.<sup>7</sup></li> <li>The stress associated with having surgery and awaiting results of procedures may make it difficult for users to quit.<sup>5</sup></li> </ul>
ASSIST	<p><b>ASSIST</b> the patient who is <i>not</i> interested, support autonomy and offer brief information.</p> <p><b>ASSIST</b> the patient who is interested with link to prescriber pharmacotherapy support and/or behavioural support.</p>	<ul style="list-style-type: none"> <li>Provide self-help information to all patients who are identified as tobacco users including the resource, <i>Getting Ready for Surgery or Procedure: What You Should Know About Your Tobacco Use</i> (order through the online catalog at <a href="http://www.albertaquits.ca">www.albertaquits.ca</a>).</li> <li>Patients who are interested in using pharmacotherapy preoperatively should be linked to appropriate prescribing authority (e.g., anaesthesiologist or surgeon). NRT is safe and effective to be used in the perioperative period.<sup>5,12,15,16,17</sup></li> <li>Pharmacotherapy initiated in the preoperative period should be continued in the postoperative period for inpatients. Appendix 9(a)</li> <li>Ensure communication between OR staff and inpatient surgical unit for continuity of care. Appendix 7(a)</li> </ul>
ARRANGE	<p><b>ARRANGE</b> follow-up on discharge for any pharmacotherapy started and link to further behavioural support.</p>	<ul style="list-style-type: none"> <li>For outpatient surgical patients who are interested, facilitate discharge pharmacotherapy. Appendix 9(b)</li> <li>Follow-up after hospitalization is key factor of effective interventions.<sup>18</sup> Link to post-discharge behavioural support. Appendix 7(b)</li> </ul>

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