

## EFFECTIVENESS OF THE OTTAWA MODEL FOR SMOKING CESSATION IN CARDIAC CARE UNITS ACROSS CANADA

KA Mullen, RD Reid, L Hawirko, D Arbeau, LA Jones, J Kocourek, L McDonnell, AL Pip

### Ottawa, Ontario

**BACKGROUND:** Cigarette smoking is a primary modifiable risk factor in the development of cardiovascular diseases (CVD). Unfortunately, most hospitals in Canada are still without systems and protocols to adequately identify and treat admitted tobacco-users. The Ottawa Model for Smoking Cessation (OMSC) is an effective clinical smoking cessation intervention that has been implemented in nearly 70 hospitals across Canada. Among cardiac care units in Canada, the objectives of this investigation were to assess: 1) the prevalence and characteristics of admitted smokers; 2) baseline smoking cessation practices; and 3) the effectiveness of OMSC implementation.

**METHODS AND RESULTS:** A before-and-after study was completed at 12 Canadian hospitals implementing the OMSC with units specializing in cardiac care. The evaluation was guided by the RE-AIM (reach, efficacy, adoption, and implementation) framework. Reach was defined as the proportion of expected cardiac smokers identified and offered treatment. Efficacy was measured as the change in 6-month smoking cessation rates following OMSC implementation. Adoption was the proportion of possible cardiac units in each hospital that implemented the intervention. Implementation pertained to the number of recommended best practices for clinical smoking cessation put in place. Average smoking prevalence was 22.4% among a consecutive series of cardiac admissions screened during pre-implementation data collection. Throughout a one-year observation period following implementation, 3403 smokers admitted to participating units received the OMSC intervention, representing 56.0% of expected cardiac smokers. OMSC efficacy was measured in the first 5 hospitals (16 units) to complete the before-and-after implementation assessments (n=1094). Controlling for hospital, the 6-month smoking cessation rate increased by 12.7% after introducing the OMSC (from 20.6% to 33.3%; OR = 1.90; CI = 1.41 - 2.54; Z = 4.27; I<sup>2</sup> = 0%; p<0.001). Overall, 69.2% of all cardiac units in participating hospitals adopted the program (36 of 52) and, on average, 5/10 best practices for clinical smoking cessation were in place at baseline, compared to 9/10 following the one-year observation period.

**CONCLUSION:** Our study demonstrates that, in general, Canadian hospitals specializing in cardiac care appear to do a satisfactory job identifying smoking status of admitted patients; however, most do not provide sufficient treatment to support continued smoking abstinence. Implementation of the OMSC significantly improves long-term smoking cessation rates and can be easily incorporated into hospital routines. Annually, an estimated 1.5 million hospital-days are associated with tobacco-use in Canada - the majority due to CVD. Considering its impact on CVD-related mortality, morbidity, and re-hospitalization, smoking cessation is a priority for cardiac patients.

*Health Canada, Ontario Ministry of Health Promotion*