## Community pharmacists and the assessment and management of suicide risk

Andrea L. Murphy, BScPharm, PharmD; David M. Gardner, BScPharm, PharmD, MSc; Timothy F. Chen, BPharm, DipHPharm, PhD, MPS, MSHP; Claire O'Reilly, BPharm (Hons), PhD, MPS; Stan P. Kutcher, MD, FRCPC

THE RECENT CANADIAN FEDERAL FRAMEWORK FOR SUICIDE Prevention Act (s.c. 2012, c.30) identifies suicide as a national public health issue that requires federal, provincial, territorial and nongovernmental organization cooperation and action.<sup>1,2</sup> The framework sets forth a process intended to fulfill the requirements of the act. This includes numerous directives, of which at least 3 fit well with the work of community pharmacists<sup>1,2</sup>:

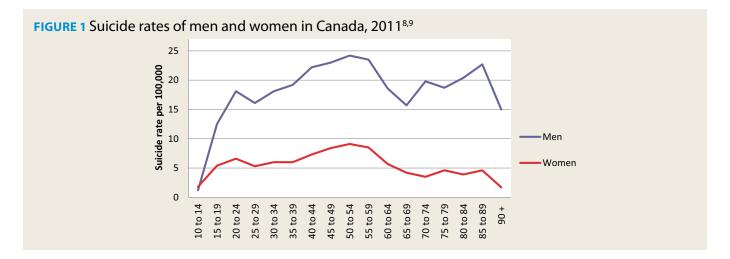
- Disseminating information about suicide and its prevention
- Defining best practices for the prevention of suicide
- Promoting the use of research and evidence-based practices for the prevention of suicide

However, the potential contribution of community pharmacists in suicide prevention strategies is not well recognized. Neither the Mental Health Commission of Canada nor the Canadian Society for Suicide Prevention identify a role for community pharmacists in their recent documents pertaining to suicide prevention.<sup>3,4</sup> This likely reflects the overall absence of pharmacy-focused research in this area rather than the absence of an active opportunity for community pharmacists in identifying and responding to people at risk of suicide.<sup>5,6</sup>

Through our combined years of research focused on mental illness and the community pharmacist, our own clinical experience and tacit knowledge and our numerous committee and panel experiences, we know that community pharmacists are regularly directly involved in the care of people at risk of suicide. We are also aware that suicide prevention in the community pharmacy setting has received little professional attention. Suicide is a major public health problem in Canada, and our national mental health strategy identifies suicide prevention in its first of 6 strategic directions.<sup>7</sup> The rate of suicide is 3 times higher in men than in women, rising rapidly

during adolescence and peaking in both sexes during midlife (see Figure 1).89 Self-poisoning is the leading cause of death by suicide in women and is second to hanging in men. In people 40 to 59 years of age, suicide rates by poisoning and hanging are similar. Most sobering is that suicide accounts for 20% to 25% of deaths in adolescence and early adulthood, second only to motor vehicle accidents.<sup>10</sup> Physical conditions that compromise quality of life (e.g., heart failure, chronic obstructive pulmonary disease, severe pain, etc.) independently elevate risk of medication overdose deaths in older adults.<sup>11</sup> In younger people, a major predictor of suicide, in addition to the presence of mental disorders, is self-injurious behaviours (i.e., nonfatal self-poisoning or self-injury irrespective of suicidal intent).12 The greatest risk of death by suicide occurs in the period following self-injurious behaviours, including overdoses.13

Knowledge of suicide patterns and risk factors is important for community pharmacists in their daily practice, especially when considering that self-poisoning with medication is a leading cause of suicide-related hospitalizations and death. 10,14 A recent coroner's study of overdose deaths in Toronto demonstrates the potential for pharmacists' interventions. Prescribed medications were implicated in 79% of overdose deaths (62% psychotropics, 17% other medication), suggesting the involvement of a physician and pharmacist in the recent care of the patient, while 21% resulted from overdoses with over-the-counter medications, where a pharmacist may or may not have been involved with the individual's care. 15 These data are consistent with our own community pharmacy mental health research and program development experiences that indicate that prescription and over-the-counter medications are used in suicide attempts and that pharmacists often have concerns about a patient's self-harm risk in advance of an attempt or may come to realize the missed opportunity for intervention only after the fact.



The link between pharmacists and intentional selfpoisoning by patients using prescription or nonprescription medications is obvious and thereby provides a clear opportunity for suicide risk assessment and mitigation. Trusted and highly accessible,16,17 pharmacists can be approached in person or via telephone, without the need for an appointment or payment, for advice and support. For these reasons, pharmacists routinely encounter people with risk factors for suicide and people in crisis, irrespective of medication-related needs. The opportunity to take advantage of pharmacists in their accessible positions and with this connection to people in communities has been recognized by the Pharmacy Guild of Australia, which includes staff training in Mental Health First Aid as part of its Community Services Support Pharmacy Practice Incentive program.<sup>18</sup> However, the application of pharmacist suicide risk assessment and mitigation training programs needs to be subjected to appropriate thirdparty scrutiny in Canadian community pharmacy contexts and elsewhere, to determine their appropriateness and whether they achieve the desired goals (i.e., decreasing suicide rates, decreasing incidence of medication-related self-harm and increasing pharmacists' competencies in suicide risk assessment and management). Some literature is available to support that these programs can have positive outcomes for pharmacy practice, 19 but the overall effectiveness of these programs has been questioned in some contexts.20

There are also significant gaps in the health system with respect to transitions in care among services and disciplines, coordination of services and follow-up for people with suicide attempts or self-injurious behaviour. For example, psychosocial assessments, adequate communication back to primary health care providers and follow-up services do not occur for the majority of youth who present to an emergency department (ED) for a self-injurious event, which can include overdose with medication.<sup>21-24</sup> A recent Canadian study found that 2 in 3 adolescents who presented to the ED with self-injurious behaviours were discharged directly from the ED.<sup>25</sup> Pharmacists may interact with these youth and their families, making recommendations or providing advice, without direct

knowledge of the recent ED visit and what has transpired. Patients may be reluctant to disclose information because of concerns of stigma and what they perceive the pharmacist's role to be with respect to suicide, which currently may be limited in the Canadian context.

We are requesting that, as a discipline, we advocate to enhance the education, research and policy agenda for pharmacists with respect to people who are at risk of suicide. We encourage dialogue on suicide risk assessment and ask that appropriate risk management in community pharmacy practice be promoted. Some Canadian pharmacists and students have drawn attention to the issue of suicidal ideation and point to the use of medication reviews as an opportune time to discover these thoughts in patients.<sup>6,26</sup> We applaud these pioneering efforts. Looking forward, we think it is timely and necessary to foster collaborative, coordinated and best evidence-based approaches from policy to practice for suicide risk assessment and management.27 This would also include exploring efficient and effective mechanisms for education, training and mentorship of students and practising pharmacists in assessing and managing suicide risk in people accessing pharmacy services. Pharmacists may require additional education and training to help increase their understanding and competencies in this domain. There is also a need to determine how best to provide postvention support for pharmacists involved in the care of patients who die by suicide, as this need appears underrecognized by researchers, educators and pharmacy employers. Implementation of interventions for pharmacists will also require thoughtful design and planning supported by frameworks that consider changing the behaviours of pharmacists working in the complex environment of community pharmacy practice.<sup>28-30</sup> In addition, stigma must be considered, as it can be a pervasive issue with pharmacy staff and patients. Although stigma in the pharmacy context vis-à-vis mental illness has been reasonably well explored, there is little research available regarding stigma in association with those who present in crisis as suicidal or who have a known history of previous suicide attempts.

We acknowledge that there needs to be a larger conversation around the integration of pharmacists as members of the primary mental health care team, not just with respect to suicide risk assessment and management. This should include all necessary components that can facilitate this integration, including appropriate mechanisms for communication, triage of patients and information sharing with privacy safeguards among providers, patients

and families at various transitions in the health care system. We offer suggestions for action by stakeholders to advance the community pharmacist's role in suicide risk assessment and management (Table 1). We strongly recommend patient engagement throughout the process from development to implementation. And last, quality assurance and evaluation of the systems in place that allow pharmacists to better serve in this role are imperative.  $\blacksquare$ 

TABLE 1 Stakeholder actions for advancing the community pharmacist's role in the assessment and management of people at risk of suicide

Stakeholder group	Potential actions
Community pharmacists	<ul> <li>Engage in evidence-based education and training to enhance knowledge and skills in the assessment and mitigation of suicide risk.</li> <li>Work with patients, families, health care providers and not-for-profit organizations to identify relevant resources and programs that can facilitate patient referral, triage and health system navigation.</li> <li>Advocate locally and via pharmacy professional organizations for better integration of pharmacists in the primary mental health care system.</li> </ul>
General public	• Recognize and use the community pharmacy setting as a resource for information and guidance on health services and local community supports, especially in rural and remote areas.
People at risk of suicide	<ul> <li>Recognize and use pharmacists as a resource for health system navigation support when experiencing suicidal ideation.</li> <li>Work with pharmacists to minimize the risk of suicide secondary to ingestion of medications.</li> <li>Use pharmacists' medication expertise in the management of underlying causes of suicide.</li> </ul>
Other health care professionals	<ul> <li>Include community pharmacists and professional pharmacy organizations when developing, implementing and evaluating suicide prevention policies and programs.</li> <li>Support the role of pharmacists in primary mental health care.</li> </ul>
Nongovernmental organizations with an interest or mandate in suicide prevention	<ul> <li>Ensure that pharmacists are informed of community-based resources and services that assist patients at risk of suicide.</li> <li>Recognize and use pharmacists as a resource for people experiencing suicidal ideation.</li> </ul>
Policy makers	• Engage with pharmacy regulators, pharmacy professional organizations and pharmacists to identify potential roles and opportunities for pharmacists in the assessment and mitigation of suicide risk.
Pharmacist employers and managers	<ul> <li>Ensure that pharmacists have the capabilities and opportunities to care for people in the community pharmacy context at risk of suicide in accordance with standards of practice.</li> <li>Develop policies and interventions for pharmacists affected by a patient's suicide.</li> </ul>
Professional pharmacy organizations	<ul> <li>Engage with pharmacy stakeholders (e.g., pharmacy regulators and pharmacists), as well as with external stakeholders (e.g., government, organizations with mandates regarding suicide) to identify and enhance current and potential roles of pharmacists in suicide risk assessment and mitigation.</li> <li>Ensure that pharmacists have capabilities, opportunities and support to care for people with suicide risk in the community pharmacy context in accordance with professional standards of practice.</li> <li>Develop policies and interventions for pharmacists affected by a patient's suicide.</li> </ul>
Pharmacy regulators	<ul> <li>Encourage safe and effective care of people at risk of suicide by pharmacists through appropriate standards of practice, regulations and legislation.</li> <li>Liaise with other health care professional regulators regarding the pharmacist's role, roles of other health care professionals and collaboration in mental health care.</li> </ul>

(continued)

## **TABLE 1** (continued)

Stakeholder group	Potential actions
Pharmacy educators	Regularly review and incorporate best available evidence in curricular content and teaching methods for suicide risk assessment and mitigation.
Continuing professional education/ development organizations	Offer collaborative, evidence-based programs using effective teaching methods that support pharmacists' ability to care for people at risk of suicide and to link with health service and community resources.
Researchers	Work with key stakeholders to develop a prioritized research agenda that evaluates pharmacists' roles in the assessment and mitigation of suicide risk.

From the College of Pharmacy (Murphy, Gardner) and Department of Psychiatry (Gardner, Kutcher, Murphy), Dalhousie University, Halifax; the Faculty of Pharmacy (Chen, O'Reilly), University of Sydney, Sydney, Australia; and the IWK Health Centre (Kutcher), Halifax, Nova Scotia. Contact Andrea.Murphy@dal.ca.

**Author Contributions:** A. L. Murphy drafted the commentary, and all authors provided revisions, critical feedback and approved the final version.

**Declaration of Conflicting Interests:** The authors declared no potential conflict of interest with respect to the research, authorship and/or publication of this article.

Funding: The authors received no financial support for the research, authorship and/or publication of this article.

## References

- 1. Government of Canada. Justice Laws Website. Federal Framework for Suicide Prevention Act S.C. 2012, c.30. Available: http://laws-lois.justice.gc.ca/eng/annualstatutes/2012\_30/page-1.html (accessed March 9, 2015).
- 2. Parliament of Canada. Statutes of Canada, 2012: chapter 30. An act respecting a federal framework for suicide prevention (Bill C-100). Available: www.parl.gc.ca/HousePublications/Publication.aspx?DocId=5942519&File=4 (accessed February 28, 2015).
- 3. Mental Health Commission of Canada. Suicide prevention. Available: www .mentalhealthcommission.ca/English/issues/suicide-prevention (accessed February 28, 2015).
- 4. Canadian Association for Suicide Prevention. The CASP Blueprint for a Canadian National Suicide Prevention Strategy 2009;2:1-42.
- 5. Mann JJ, Apter A, Bertolote J, et al. Suicide prevention strategies: a systematic review. *JAMA* 2005;294:2064-74.
- 6. Ordre des Pharmaciens du Québec. Les pharmaciens, indispensables pour la prévention du suicide. *L'interaction* 2011;1:12-13.
- 7. Mental Health Commission of Canada. Changing directions, changing lives: the mental health strategy for Canada. Calgary (AB): Mental Health Commission of Canada; 2012. Available: http://strategy.mentalhealthcommission.ca/download/ (accessed April 21, 2015).
- 8. Statistics Canada. Suicides and suicide rate, by sex and by age group (males' rate). Available: www.statcan.gc.ca/tables-tableaux/sum-som/l01/cst01/hlth66e-eng.htm (accessed February 28, 2015).
- 9. Statistics Canada. Suicides and suicide rate, by sex and by age group (females' rate). Available: www.statcan.gc.ca/tables-tableaux/sum-som/l01/cst01/hlth66f-eng.htm (accessed February 28, 2015).
- 10. Navaneelan T. Suicide rates: an overview. *Statistics Canada* 2012; Catalogue no. 82-624-X:1-11.

- 11. Juurlink DN, Herrmann N, Szalai JP, et al. Medical illness and the risk of suicide in the elderly. *Arch Intern Med* 2004;164:1179-84.
- 12. Bridge JA, Goldstein TR, Brent DA. Adolescent suicide and suicidal behavior. *J Child Psychol Psychiatry* 2006;47:372-94.
- 13. Cooper J, Kapur N, Webb R, et al. Suicide after deliberate self-harm: a 4-year cohort study. *Am J Psychiatry* 2005;162:297-303.
- 14. Langlois S, Morrison P. Suicide deaths and suicide attempts. *Health Rep* 2002;13:9-22.
- 15. Sinyor M, Howlett A, Cheung AH, Schaffer A. Substances used in completed suicide by overdose in Toronto: an observational study of coroner's data. *Can J Psychiatry* 2012;57:184-91.
- 16. Law MR, Heard D, Fisher J, et al. The geographic accessibility of pharmacies in Nova Scotia. *Can Pharm J (Ott)* 2013;146:39-46.
- 17. Lynas K. Professionals you can trust: pharmacists top the list again in Ipsos Reid survey. *Can Pharm J (Ott)* 2012;145:55.
- 18. Guthry P. PPI increased requirements for eligibility: are you ready? *Excellence* 2013; January/February: 1-6. Available: www.qcpp.com/docs/librariesprovider4/public-documents/resources/excellence/ppi-increased-requirements-for-eligibility---are-you-ready-.pdf?sfvrsn=0 (accessed April 21, 2015).
- 19. O'Reilly CL, Bell JS, Kelly PJ, Chen TF. Impact of mental health first aid training on pharmacy students' knowledge, attitudes and self-reported behaviour: a controlled trial. *Aust N Z J Psychiatry* 2011;45:549-57.
- 20. Wei Y, Kutcher SP, Leblanc JD. Hot idea or hot air: a systematic review of evidence for two widely marketed youth suicide prevention programs and recommendations for implementation. *J Can Acad Child Adolesc Psychiatry* 2015;24:5-16.
- 21. Suominen K, Isometsa E, Martunnen M, et al. Health care contacts before and after attempted suicide among adolescent and young adult versus older suicide attempters. *Psychol Med* 2004;34:313-21.

- 22. Cooper J, Murphy E, Jordan R, Mackway-Jones K. Communication between secondary and primary care following self-harm: are National Institute of Clinical Excellence (NICE) guidelines being met? *Ann Gen Psychiatry* 2008;7:21.
- 23. Cappelli M, Glennie JE, Cloutier P, et al. Physician management of pediatric mental health patients in the emergency department: assessment, charting and disposition. *Pediatr Emerg Care* 2012;28:835-41.
- 24. Bridge JA, Marcus SC, Olfson M. Outpatient care of young people after emergency treatment of deliberate self-harm. *J Am Acad Child Adolesc Psychiatry* 2012;51:213-22.e1.
- 25. Bethell J, Bondy SJ, Lou WY, et al. Emergency department presentations for self-harm among Ontario youth. *Can J Public Health* 2013;104:e124-30.

- 26. Hamilton AA. Detecting and dealing with suicidal patients in the pharmacy. Can Pharm J (Ott) 2012;145:172-3.
- 27. Kutcher SP, Szumilas M. Youth suicide prevention. CMAJ 2008;178:282-5.
- 28. Cane J, O'Connor D, Michie S. Validation of the theoretical domains framework for use in behaviour change and implementation research. *Implement Sci* 2012;7:37.
- 29. Michie S, van Stralen MM, West R. The Behaviour Change Wheel: a new method for characterising and designing behaviour change interventions. *Implement Sci* 2011;6:42.
- 30. Damschroder LJ, Aron DC, Keith RE, et al. Fostering implementation of health services research findings into practice: a consolidated framework for advancing implementation science. *Implement Sci* 2009;4:50.