

Storage and Disposal of Opioids: Medication Challenges with End-of-Life Care in the Home

Hyland, B.¹; Fan, M.¹; Hamilton, M.²; Reding, R.¹; Trbovich, P.^{1,3}

¹Research and Innovation, North York General Hospital, Toronto, Ontario. ²Institute for Safe Medication Practices Canada, Toronto, Ontario. ³Institute of Health Policy, Management and Evaluation, University of Toronto, Toronto, Ontario

BACKGROUND

End-of-life care often requires evidence-based use of opioids to manage pain.

Improperly securing or disposing of medications, including opioids, in patients' homes has resulted in medication errors, accidental poisonings, and inappropriate use. With the increasing demand for end-of-life care in the home there is an urgency to improve practices and to provide clear and effective guidance to patients and their family members.

In this study, findings from the situation assessment revealed risks in the medication management system. Preferred practices for storage of opioids and disposal of unused opioids were identified.

This work was designed to align with the Joint Statement of Action to Address the Opioid Crisis.¹

OBJECTIVES

The project objectives were to:

- 1) identify preferred practices for safe storage and disposal of opioids during end-of-life care in the home;
- 2) develop and refine educational materials to support end-of-life patients, their families, and healthcare providers.

METHODS

1) Situation Assessment

- A review of peer-reviewed and grey literature was conducted
- A thematic analysis was conducted for 155 articles that met inclusion criteria out of 1285 results from 6 database searches
- A thematic analysis of 20 multi-disciplinary stakeholder (Fig. 1.) interviews was conducted
- Preferred practices for the storage and disposal of opioids with end-of-life care in the home were identified
- Process maps of the varied disposal pathways for unused opioids with end-of-life care in the home were developed

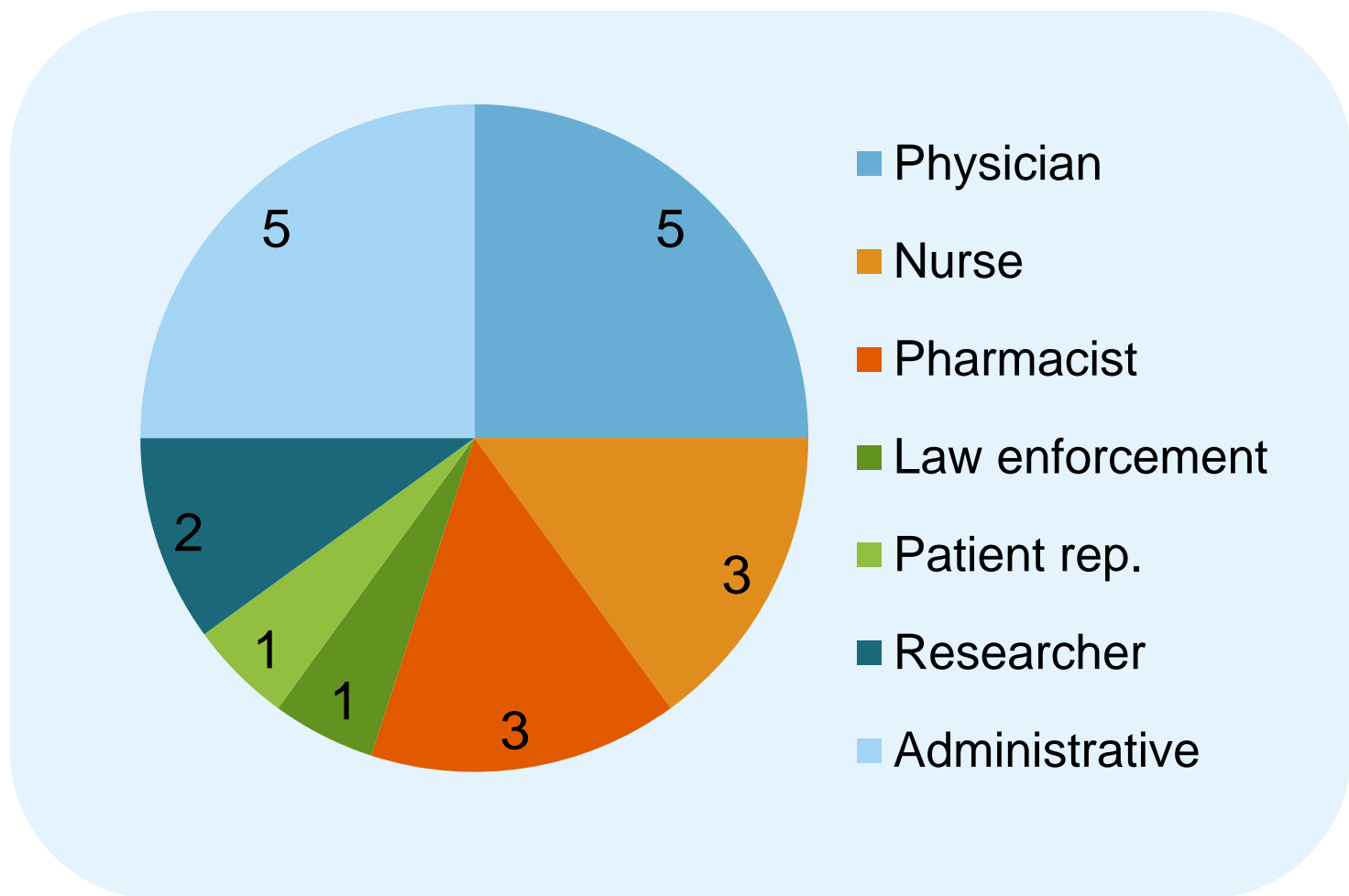


Figure 1. Multi-disciplinary roles of interview participants.

2) Development and usability testing of an educational tool

- An information card denoting one of the preferred practices was developed and underwent heuristic evaluation
- Usability testing sessions of the information card were conducted with research ethics board approval
- Themes of usability issues were identified from usability testing sessions with 6 participants (ages 18–60+)
- The information card was updated to accommodate feedback the usability testing

RESULTS

Situation Assessment Results

Analysis of the findings from the literature review and interviews revealed the following themes:

- 1) Most families are left to dispose of unused medications provided with end-of-life care;
- 2) In addition to known risks of errors, accidental poisonings, and inappropriate use, homes with unused opioids from end-of-life care may be targeted for theft;
- 3) Homecare policies and practices regarding storage and disposal of opioids are inconsistent;
- 4) There is a lack of patient/family education on storage and disposal of opioids;
- 5) Beliefs/opinions differ about which healthcare providers are accountable and responsible for ensuring safe storage and disposal of opioids with end-of-life care in the home.

Three key preferred practices for the disposal of unused opioids with end-of-life care in the home were identified:

- I Homecare service providers pick up unused medications
- II Pharmacists providing in-home medication reviews pick up unused medications
- III Patients/families return medications to a pharmacy; they can contact the Health Products Stewardship Association to identify Canadian pharmacies participating in 'returns programs'

Development of an Information Card and Usability Testing Results

- An information card was developed to outline preferred practice III
- Heuristic evaluation revealed 10 themes of potential usability issues; the information card was refined prior to usability testing
- During usability testing sessions identical knowledge questionnaires were given to participants before and after viewing the information card. Overall, participant confidence in their answers improved after viewing the information card (Fig. 2.)

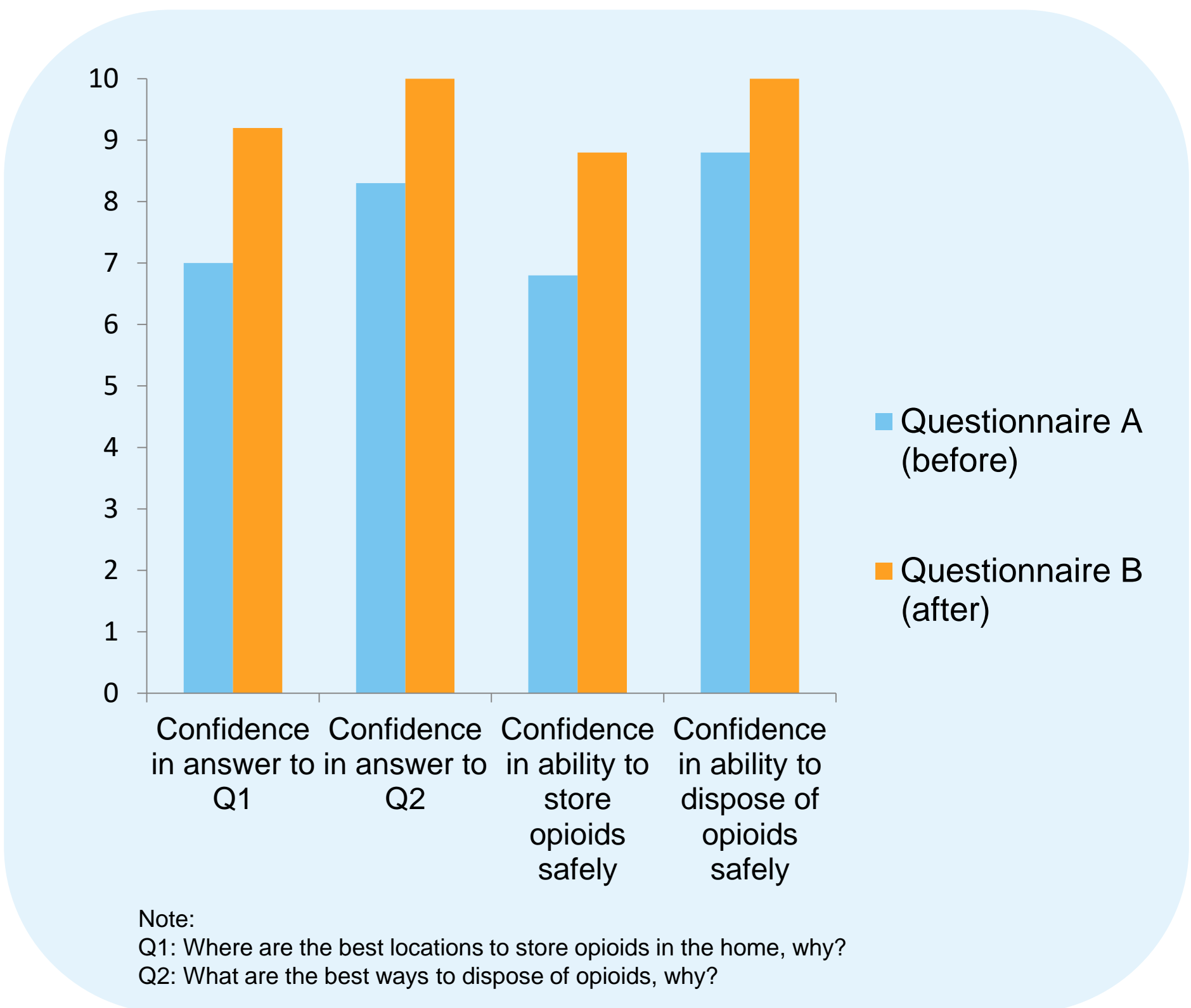


Figure 2. Participant confidence levels before and after viewing the information card.

RESULTS (cont.)

- Eight themes of usability issues were identified; the information card was updated to accommodate feedback (Fig. 3.)

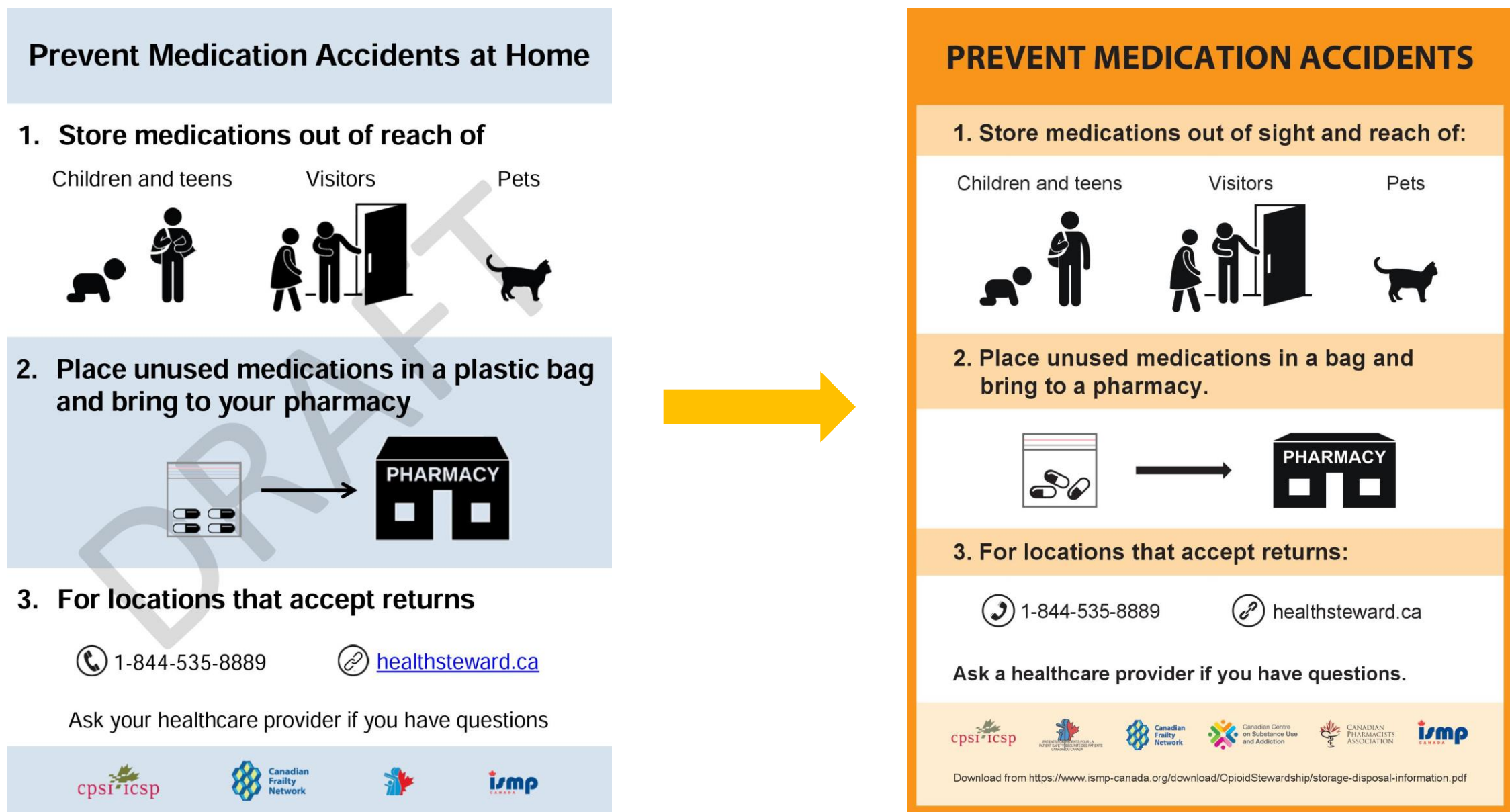


Figure 3. Information card designs before and after usability testing.

DISCUSSION

The situation assessment revealed risks with current practices for storage and disposal of opioids provided with end-of-life care in the home. Homecare policies and practices regarding storage and disposal of opioids are inconsistent and leftover medications may stay in the home for years. There is a need for raising awareness and educating patients, healthcare providers, and the general public on the safe storage and disposal of medications—however, education alone is not sufficient to ensuring the safe storage and disposal of medications.

Healthcare providers discussing the safe storage and disposal of opioids with patients and families is a step towards preventing harm. An information card developed and refined with heuristic evaluation and usability testing provides a resource for healthcare providers when counseling end-of-life care patients and their families.

CONCLUSIONS

Most families of patients receiving end-of-life care in the home are left to deal with storage and disposal of medications. Inconsistent approaches to storage and disposal pose risks, including targeted theft.

Preferred practices for the disposal of opioids were identified:

- 1) Homecare service providers pick up unused medications
- 2) Pharmacists providing in-home medication reviews pick up unused medications
- 3) Patients/families return medications to a pharmacy; they can contact the Health Products Stewardship Association to identify Canadian pharmacies participating in 'returns programs'

A multi-faceted approach, including educational strategies and improved organizational policies, is required to ensure the safe storage and disposal of opioids with end-of-life care in the home.

ACKNOWLEDGEMENTS

The authors would like to thank the Canadian Frailty Network for providing project funding. Support from the project partners was greatly appreciated.

REFERENCES

1. Government of Canada. Joint Statement of Action to Address the Opioid Crisis. Government of Canada. <https://www.canada.ca/en/health-canada/services/substance-abuse/opioid-conference/joint-statement-action-address-opioid-crisis.html>. Published November 19, 2016.



Réseau canadien
des soins aux
personnes fragilisées

