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Medication Incidents Involving Smoking Cessation Therapies: A Multi-Incident Analysis

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CMIRPS
Canadian Medication Incident
Reporting and Prevention System

SCDPIM
Système canadien de déclaration et de
prévention des incidents médicamenteux



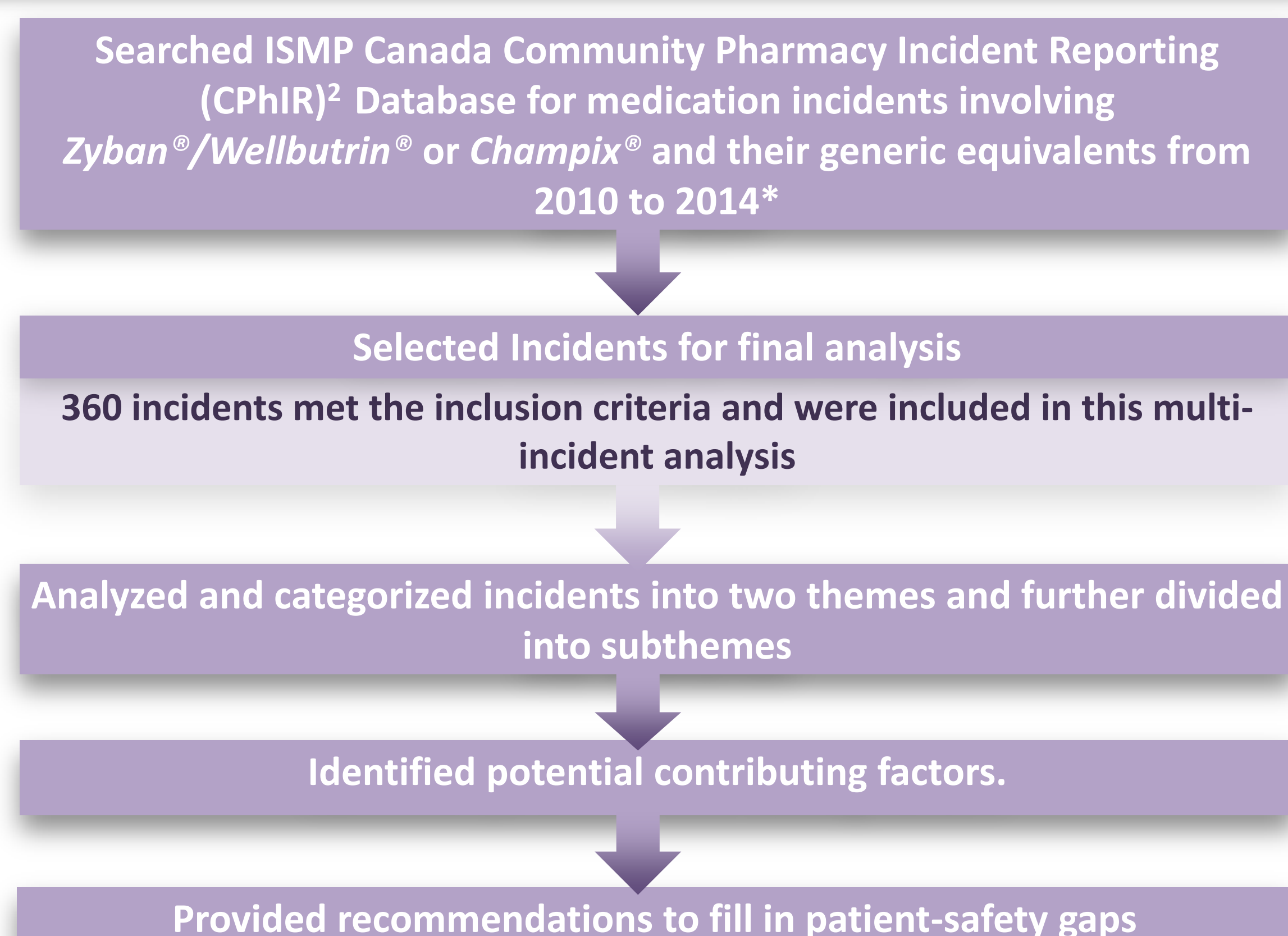
INTRODUCTION

- In 2014, 18% of the Canadian population still continues to smoke despite the multitude of public and private campaigns that highlight the dangers of smoking.¹
- Smokers try an average 5-7 times before succeeding to quit.¹
- **Champix® (varenicline tartrate) 0.5 mg/1 mg or Zyban® (bupropion hydrochloride) SR 150 mg** can be prescribed by Ontario pharmacists for smoking cessation under the expanded scope of practice.

OBJECTIVE(S)

- To help pharmacists minimize errors when prescribing for smoking cessation, medication incidents involving Varenicline and Bupropion must be examined.
- To analyze the underlying trends that can lead to medication incidents involving smoking cessation therapies.

METHOD(S)



Although a search for non-prescription medications, including nicotine replacement therapy (NRT), was also conducted, there was insufficient amount of data necessary for analysis and thus non-prescription medications including NRT were subsequently excluded from this analysis. Only a total of 14 medication incidents involving “nicotine” OR “Nicoderm” OR “Nicorette” OR “Prostep” OR “Thrive” OR “Habitrol” were retrieved between 2010 and 2014.

RESULT(S)

Theme 1:

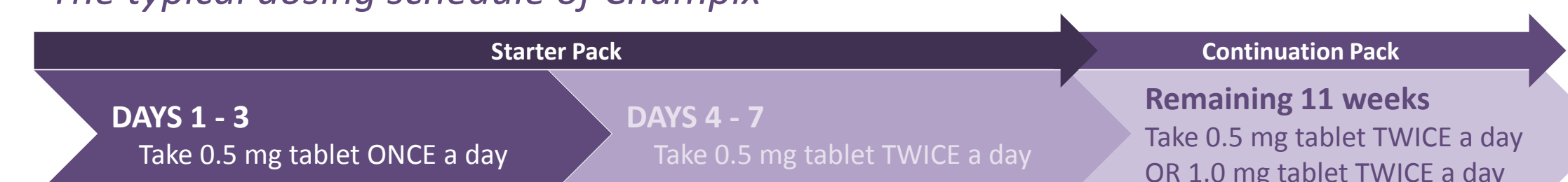
Varenicline

Subtheme: **Incorrect Instructions**

Instructions for the starter and continuation packs are often mixed up leading to underdosing and overdosing depending on the patient's therapy status.

Example) Prescription for Champix® continuation pack had the instructions of the starter pack. Continuation pack was filled with starter pack instructions.

- The typical dosing schedule of Champix®



Recommendations:

1. Apply highlighted labels in bold characters to reflect the different dose packaging.
2. Forcing functions in computerized decision support system (CDSS) to prevent filling of continuation packs until starter packs are completed based on the days' supply.
3. Independent double-checks as final verification

Subtheme: **Incorrect Quantity**

Incorrect quantities were frequently dispensed to patients.

Example) Too many refills on Champix® continuation pack were given. The pharmacy technician gave 12 weeks with 168 tabs when it should have been 10 weeks with 140 tabs. Gave 28 tablets for starter pack instead of 25 tablets.

Recommendations:

1. Utilize a pre-printed order set that includes the pack type, duration of use, days' supply and number of repeats when prescribing this medication.
2. Starter packs should only be for 2 weeks duration with 25 tablets and no repeats.
3. Continuation packs should be for 10 weeks with 140 tablets.

Theme 2:

Bupropion

Subtheme: **Incorrect Formulation**

Various formulations of bupropion often confused prescribers and incorrect formulations were often prescribed for smoking cessation, resulting in therapy failure.

Example) A doctor prescribed Bupropion SR 150 mg but Wellbutrin® XL 150 mg was entered into the pharmacy computers.

Bupropion is a medication that is indicated for:

- Smoking cessation when utilizing the sustained-release formulation.
- Treatment of different depressive disorders when utilizing the longer-acting extended-release formulations.

Recommendations:

- Setting up alerts in the CDSS to prevent prescribing of extended-release formulations of bupropion as well as preventing auto-completion of medication names with multiple formulations during order entry.
- Independent double-check is recommended during final verification as a safety net especially since there are physical and visual difference between the two formulations.

CONCLUSION(S)

- As more patients access smoking cessation therapies, there are more opportunities for pharmacist-patient interactions.
- With pharmacists' expanded scope of practice, there is also a new potential for near misses and incidents involving prescribing errors in the pharmacy.
- Through shared learning of existing smoking cessation medication incidents from this project, pharmacists will be more prepared and aware of safe medication use when executing their expanded scopes.

ACKNOWLEDGEMENTS

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REFERENCES

1. Statistics Canada. Smokers, by sex, provinces, and territories. Government of Canada. <http://www.statcan.gc.ca/tables-tableaux/sum-som/I01/cst01/health74b-eng.htm>. Updated March 7, 2016.
2. ISMP Canada. Community Pharmacy Incident Reporting (CPhIR) Database. <http://www.cphir.ca>

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