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Prescription Drug Drop-off Initiative: Evaluation Toolkit

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Table of Contents

Introduction

Historically, Prescription Drop-off (or Take Back) Initiatives (PDols) aimed to address the environmental impacts of inappropriate disposal. More recently, health and law enforcement officials have taken a role in reducing the harms associated with certain prescription drugs by participating and in some cases leading PDols.

However, the impact of PDols on reducing the harms associated with prescription and other drugs is unknown. Most initiatives measure the absolute weight or volume of the drugs when reporting on the success of PDols. This method is an easy and economical way of measuring the amount drugs returned, but says little about the success of initiatives in increasing awareness of and reducing diversion, in preventing prescription drug misuse or in improving overall healthcare practices for prescribing and dispensing.

> **Prescription Drop-off (or Take Back) Initiatives**
>
> These initiatives aim to reduce the harms associated with certain prescription drugs (e.g., opioids, sedative-hypnotics, stimulants) by:
>
> - Promoting both the safe storage and disposal of prescription, over-the-counter and other drugs;
> - Reducing the amount of these drugs available in people's homes for possible diversion and accidental poisonings;
> - Identifying unused medications to inform prescribing and dispensing practices;
> - Reducing the environmental impact associated with the inappropriate disposal of these drugs in the garbage and sewer systems; and
> - Increasing awareness about the safe storage and disposal of unused medication.

To determine the relative impact on prescription drug misuse and diversion, the returned drugs must be sorted and classified. For example, it is important to determine the proportion of controlled drugs being returned that are opioids, stimulants and sedative-hypnotics in contrast with other drugs. To improve healthcare practices, it is necessary to determine the proportion of specific types of drugs that go unused compared with the numbers prescribed to identify those drugs that require stricter guidelines to govern their prescribing and dispensing.

To determine the extent to which PDols are effective in achieving the latter objectives, evaluations need to collect detailed data related to the objectives themselves. This data includes:

- Changes in awareness of the safe storage and disposal of unused medication;
- The types, proportion and expiry dates of medication being returned;
- How participants are made aware of the initiative; and
- Why participants choose to participate in the initiative.

Why Prescription Drop-off Initiatives Are Important

A large portion of medication remains unused.

- Unused drugs and inappropriately stored drugs can be used by people other than those for whom they were intended. For instance, in Ontario, youth reported obtaining opioids from their home (72%) or their friends (6%; Brands et al., 2010). This means of obtaining medication can result in accidental poisonings or non-medical use.
- PDols can serve as a collection and disposal site for unused drugs, as well as provide a means of educating the public on their risks.

- PDols reduce environmental impacts by intercepting unused drugs before they reach landfills and waterways. These initiatives constitute the only environmentally-sound way to dispose of unused drugs (Stoddard & Hugett, 2012; Gray & Hagemeir, 2012).
- Many PDols seek to improve healthcare practices by providing data on the types of drugs collected to reduce over prescribing and dispensing of drugs that result in the most pharmaceutical waste (Gray-Winnett et al., 2010; Stoddard & Huggett, 2012) and have been associated with prescription drug misuse (PDM).

Prescription Drop-off Initiatives in Canada

Various Canadian jurisdictions have established collection programs for unused drugs, which can take the form of a single event or an ongoing program. PDols aim to raise awareness of the environmental impacts of unused drugs and to promote the secure storage or return of drugs, especially those with the potential for diversion and misuse. No available evaluation tool addresses such data collection or guides program developers and operators through the process of evaluating program success. As a result, it is unclear if the programs are achieving their expected outcomes.

A literature review and environmental scan of Canadian PDols found that initiatives vary in terms of their goals, components and approaches used to determine success (see Appendix I). Apart from those that did not state a program purpose, each PDol included in the scan cited reduction of environmental impact as its stated purpose. However, given the lack of rigorous evaluations or published results, their effectiveness in achieving their intended outcomes remains unclear.

> **First Do No Harm: Responding to Canada's Prescription Drug Crisis**
>
> CCSA in collaboration with the National Advisory Council on Prescription Drug Misuse developed *First Do No Harm: Responding to Canada's Prescription Drug Crisis*, a strategy that includes recommendations to promote the safe storage and disposal of prescription drugs and to determine if regulations are required to reduce the risk of diversion associated with the handling of unused prescription drugs that are returned

About the Evaluation Toolkit

The *Prescription Drug Drop-off Initiative: Evaluation Toolkit* has been developed to help evaluate PDols. This resource can be integrated into existing PDols with minimal resourcing, while helping to focus effort and address the key objectives of promoting the safe storage and disposal of unused drugs, reducing the harms of non-medical use of prescription drugs and preventing illegal diversion.

The evaluation toolkit addresses one of the 58 recommendations of *First Do No Harm: Responding to Canada's Prescription Drug Crisis*, a pan-Canadian strategy to reduce the harms associated with prescription drugs. It was developed to help organizations that develop and implement PDols to determine the extent to which their efforts are producing the intended outcomes. A proper evaluation is essential to assess the effectiveness of PDols and inform improvements to these initiatives.

This evaluation toolkit provides:

1. A detailed description of PDols;
2. An overview of PDols across Canada; and
3. An evaluation resource to facilitate evaluations of PDols.

To obtain advice and support, contact info@ccsa.ca or pharma@ccsa.ca.

Components of the Evaluation Toolkit

The evaluation toolkit can be used by those implementing a PDoI and readily adapted to an existing initiative whether it is a single or ongoing event. The toolkit helps measure outcomes related to reducing diversion and PDM, and promoting the safe storage and disposal of unused drugs. It provides a means of standardizing data collection and reporting across programs. The following table describes the components of the evaluation toolkit.

Process Evaluation Matrix (Appendix A)	
Purpose and Definition	A process evaluation determines the extent to which the goals and objectives of the initiative were achieved, how they were achieved and what may have helped or hindered their achievement. In single events, the process evaluation can be a one-time evaluation, whereas an ongoing PDoI works best with a program monitoring approach with continuing data collection and analyses.
Information Collected	A sample process evaluation matrix is provided in Appendix A. This matrix identifies the activities required to implement the program and the methods of measuring them. When conducting the process evaluation, use the administration report and the site visit checklist, both of which are provided in this toolkit, to ensure that the PDoI is operating according to an agreed upon protocol.
Completed By	The program coordinator
Outcome Evaluation Matrix (Appendix B)	
Purpose and Definition	An outcome evaluation that measures the degree to which changes occurred in program targets is necessary to determine if a PDoI has been successful.
Information Collected	The potential targets of a PDoI are the general public and those prescribing and dispensing medications. A sample outcome evaluation matrix is provided in Appendix B and identifies typical outcomes of a PDoI along with data collection methods to measure their results. Typical outcomes in the evaluation include increased awareness of (a) PDM and diversion, (b) safe storage of medication, (c) disposal of medication, (d) environmental impacts of pharmaceutical waste, and (e) the sources of pharmaceutical waste. The Drug Drop-off Item Inventory Form (Appendix D) and the Pre\Post Participant Survey (Appendix E) are key tools for conducting an outcome evaluation.
Completed By	The program coordinator
Administration Report (Appendix C)	
Purpose and Definition	The administration report identifies how successful the program was in recruiting community organizations to participate in the development, implementation or evaluation of the program.
Information Collected	• Identification of which organizations partnered with the program and their reason for partnering. • Efforts to promote the program by each participant (e.g., radio advertising).
Completed By	The program coordinator
Drug Drop-off Item Inventory Form (Appendix D)	
Purpose and Definition	The Drug Drop-off Item Inventory Form tracks the number of survey participants and determines whether the site was set up according to drive-in or walk-in needs. The inventory form also collects outcome data that is key to measuring the impact the program had on collecting and disposing medication that has the greatest potential for misuse and diversion.
Information Collected	• Name of medication. • Medication classification (e.g., opioid, stimulant, sedative-hypnotic). • Dosage, weight or volume of medication collected. • Proportion of prescribed supply returned.

	• Expiry and prescription date.
Completed By	A pharmacist or a legal designate
Pre\Post Participant Survey (Appendix E)	
Purpose and Definition	The participant survey collects program implementation and outcome data essential to understanding why participants took part in the program and allows comparison to identify change.
Information Collected	• How participants became aware of the program. • Why participants are returning medication. • How participants would dispose of their medication without the program. • Participant feedback on the accessibility of the PDoI and satisfaction with the event. • Demographic information.
Completed By	Each participant who returns medication to the program. If a participant returns multiple types of medication, he or she must only complete one participant survey. The program coordinator administers and analyzes the results.
Post-Project Review Summary (Appendix F)	
Purpose and Definition	Following the completion of the initiative or at key points along the way in a longer-term initiative, the project team should conduct a review and reflect on:
Information Collected	• What the objectives were? • What actually occurred? (facts not judgments) • What went well and why? • What can be improved and how?
Completed By	The program coordinator

Program theory evaluation is critical for any evaluator to clearly articulate what the PDoI aims to achieve and through what means. This evaluation begins by identifying the program's impact theory, which identifies the sequence in which program activities result in social benefits (i.e., program outcomes). To do this, a program logic model (PLM) should be developed that outlines the resources (i.e., inputs), activities, outputs, outcomes and impacts of the PDoI. A sample PLM (Appendix G) is provided to facilitate the development of future PDoI theories.

The largest challenge in conducting an outcome evaluation is identifying the program effect, which is the degree of change that can be attributed to the program above and beyond external influences. To determine the program effect, an evaluation would need to use a quasi-experimental design that compares pre- and post-program levels within the target community and in a comparison community where the program is not available. In situations where funds do not allow for this level of rigorous evaluation, it is recommended that evaluations identify the outcome change by comparing pre-program to post-program outcome levels. That is, evaluators can use the pre-program levels as a baseline against which to compare post-program levels. Although this method of evaluation requires fewer financial resources than a quasi-experimental design, an outcome evaluation does require some financial and human resources. For further information on evaluation, please refer to CCSA's Monitoring and Evaluation Toolkit (2012), which provides a brief introduction to monitoring and evaluation, defines key concepts and provides exercises to help select the proper type of evaluation.

Appendix A: Process Evaluation Matrix

Stage One Activities — Program Implementation				
	Activities	**Outputs**	**Indicators**	**Source of Information**
Location set up	The site was set up according to drive-in or walk-in needs.	Signs navigating participants to and through the collection site	Number of visible signs	
			Participants reported being able to navigate through the site	Participant survey
Drug inventory	All returned items were inventoried.	Completed inventory of all returned items	Completion of item inventory	Drug drop-off item inventory
Participant survey	Survey participants	Completed participant surveys	Number of completed participant surveys	Participant survey
Program marketing	Promoted the program and communicated PDM and environmental issues through various advertising mediums (e.g., presentations, print, radio, television).	Presentations at schools, health centres, senior centres, etc.	Number of presentations and advertisements developed and used	Administration report
		Advertisements in newspapers, radio, and television		
		Print advertisements in pharmacies, health centres, senior centres, etc.		

Appendix B: Outcome Evaluation Matrix

Evaluation Question	Outcome Measured	Timeframe of Outcome	Target Issues	Indicators	Method	Time of Data Collection
Did the program increase awareness of PDM, storing medication and prescription drop off initiatives?	Increased awareness of PDM	Short Term	PDM	Community members' and participants' awareness of PDM, storing unused medications, and prescription drop off initiatives	Community survey* School survey*	Pre and Post
	Increased awareness about storing medication				Participant survey	Post
	Increased awareness about PDoIs					
Were medications with the greatest potential for misuse returned by patients and participants?	Medications most commonly misused (i.e., opioids, stimulants, sedatives) are returned and disposed	Short Term	PDM	Inventory of medications returned to the initiative	Inventory returned medications according to pharmaceutical classifications	Post
Did the program reduce the supply of medications that could be misused?				Amount of medications collected and disposed	Measure the doses of medications returned	
Did prescription drug misuse decrease?	Reduced access to unused prescription drugs	Long Term	PDM	Number of PDM-related poisonings	Survey hospital and other healthcare centre records related to PDM	Pre and Post
	Reduced frequency of medication poisonings			Number of PDM-related hospital intakes		
	Reduced PDM among youth			Youth PDM rates	Survey PDM in community schools	
	Reduced PDM among adults			Adult PDM rates	Survey PDM through a community survey	
Did the program increase awareness of environmental impact of disposing medications through garbage or sewer systems?	Increased awareness of environmental impact	Short Term	Environment	Community members' and participants' awareness of environmental impact	Community survey* Participant survey School survey*	Pre and Post
Were medications intercepted before they could be disposed through the garbage or sewer systems?	Medications were returned and disposed	Short Term	Environment	The amount of medications collected and disposed	Measure the doses, weight or volume of medications returned	Post
					Participant survey asking how medications would be disposed without the program	

Evaluation Question	Outcome Measured	Timeframe of Outcome	Target Issues	Indicators	Method	Time of Data Collection
Were hazardous materials (e.g., used and unused sharps) intercepted before disposed of improperly through the garbage system?	Hazardous materials were returned and disposed	Short Term	Environ-ment	The amount of hazardous materials collected and disposed	Measure the number of hazardous materials returned	Post
Did the program reduce the environmental impact of medications disposed through the garbage or sewer systems?	Reduced pharmaceutical micro-constituents in the environment	Long Term	Environ-ment	The amount of pharmaceutical micro-constituents	Measure the levels of pharmaceutical micro-constituents in landfill leachate and water supply samples	Pre and Post
Did the program increase awareness of which types of medications and prescribing and dispensing practices lead to most pharmaceutical waste?	Increased awareness of pharmaceutical waste	Short Term[1]	Health-care practices	Physicians and pharmacists awareness of pharmaceutical waste	Physician and pharmacist survey*	Pre and Post
Did the program have an impact on prescribing and dispensing practices?	Changes in prescribing and dispensing practices	Long Term	Therapy manage-ment	Physicians and pharmacists prescribing and dispensing practices	Physician and pharmacist survey*	Pre and Post

* For the community and school surveys, and the physician and pharmacist surveys, use the participant survey or create an adaptation to suit your requirements.

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[1] Increasing awareness of pharmaceutical waste serves as both a short- and a long-term outcome. It can stem early on from efforts to promote and educate the community, including physicians and pharmacists, about unused medications and their sources. Further, once the program has been implemented and unused medications collected, information regarding the role of these medications in patients' therapy can be shared with physicians and pharmacists.

Appendix C: Administration Report

Identify your partners on this initiative, their reason for partnering (e.g., concern about the environment, accidental poisoning among seniors), their role in the initiative (in-kind donations, financial support, active participation in planning or at the event), and their interest in future involvement in the initiative.

Name of organization	Reason for partnering	What role did they play in the PDoI?	Would they participate again?

Identify which of the following methods were used to promote the program. Use the comment section to indicate your experience with the promotion method as well as how many times the method was used.

Promotion Activity	Used (Y/N)	Comments	Cost
Presentations			
Newspaper Advertising			
Other Print Advertising			
Radio Advertising			
TV Advertising			
Online Advertising			
Other (please specify)			

Appendix D: Drug Drop-off Item Inventory Form

For the purpose of this inventory, please refer to the following types of medications or products: 2

- **Prescription medications**: medications that are prescribed by a doctor or other prescribing authority (e.g., antibiotics, antidepressants, topical steroid creams, eye drops).
- **Non-prescription medications:**
  Over-the-counter medications: medications that do not require a prescription (e.g., cough syrup, allergy pills, antacids, Tylenol).
  Supplements: common health products (e.g., vitamin C, iron, omega-3, antioxidants).
  Veterinary medications: medications dispensed by a veterinarian (e.g., flea treatments, tranquillizers, deworming medication).

Complete the following table for all medications (i.e., prescription, vitamins, over-the-counter) that are returned. Each medication (i.e., package, bottle) returned should be reported on a new row.

Medication Name (brand or generic name)	Prescription Medication Category				Non-Prescription Category		Amount of Medication Returned			Proportion of supply that was returned	Expiry date	Prescrip-tion date2
	Opioid	Sedative-hypnotic	Stimulant	Other	Over-the counter	Other	Number of pills	Volume of liquid	Total Weight			

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2 If detail about the medication cannot be identified, state unknown

Appendix E: Adaptable Pre\Post Participant Survey

This survey[3] can be translated into languages other than English and French and can be completed with or without the support of a research assistant. The survey can also be reduced in volume for communities with special needs.

Section 1 — Reason for Participating

1. Please tell us why you participated in the Prescription Drop-off Initiative. Check all that apply.

☐ Cleaning out the medicine cupboard.

☐ Preventing prescription drug misuse.

☐ Preventing accidental poisoning.

☐ The medications were past their expiry date.

☐ I did not want to confuse the medications with others I have at home.

☐ It is not safe or sustainable to dispose of medications in the garbage or sewer system.

2. If you have disposed of the following medications and products in the past 12 months, how have you done so?

	Flush down the toilet or sink	Throw in the garbage	Return to a pharmacy	Take to the police	Take to your waste manage-ment plant	Take to a medication return, take back, or drop off event	Take to a hazardous household waste collection event
Prescription medication							
Over-the-counter medications							
Supplements							
Veterinary medications							

Section 2 — Feedback about the Program

3. Please indicate how you heard about this event. Only include the promotion vehicles used.

☐ Presentation
☐ Print advertising

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[3] To be completed by each participant (one per family), at the time of returning medication.

☐ Newspaper advertising
☐ Radio advertising
☐ Television advertising
☐ Online advertising
☐ Doctor, nurse or pharmacist
☐ Word of mouth
☐ I happened to be in the area
☐ I participated previously
☐ Other (please specify):

_____

4. Was it easy for you to participate in the Prescription Drop-off Initiative? Please check all that apply.

	Yes	No
The location was easy to access.	☐	☐
The hours of operation were convenient for me.	☐	☐
The location is in my community.	☐	☐
Instructions on returning my unused medication were clear.	☐	☐
It was easy to navigate through the program site.	☐	☐
The purpose of the program was clear.	☐	☐
I am aware of what will happen to the medication that I have returned to the program.	☐	☐
If I had questions, the staff was able to answer them.	☐	☐

5. Using the scale, please indicate your likelihood to participate in the future.

	Not at all likely				Extremely likely
a. In the future, I will participant in this initiative or one similar to it. If you answered Not at all likely, please explain why? _____	1	2	3	4	5
b. I would encourage other people to participate in this initiative or one similar to it.	1	2	3	4	5

Section 3 — Information about You

6. Please identify your age range?

10-19___ 20-29 ___ 30-39 ___ 40-49 ___ 50-59 ___ 60-69 ___ 70-79 ___ 80-89___ 90+ ___

7. What is your gender? Male _____   Female _____

8. Indicate the age of each person who currently resides in your household:

_____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____

9. Whose medication did you return today? (check all that apply):

Mine _____ Spouse _____ Child _____ Relative _____ Other _____

10. Using the following scale, how important do you think it is to dispose of unused medications?

Not important at all	Somewhat important	Unsure or neutral	Important	Very important
1	2	3	4	5

Section 4 — Information about the Returned Medications

Please fill out the following information for each medication you are returning. Indicate the medication name, if applicable, and check all other categories that apply.

Medication Name (brand or generic name)	Intended User				Reason for Return		
	Me	Family member	Pet	Other	Medication is expired	Medication is not needed	Unsure

Appendix F: Post Project Review Summary

1. Project Goals (be specific, measurable, actionable, realistic, time-bound) (select all that apply)

To reduce the amount of prescription drugs available in {*this community*} for diversion, over the {*period of the initiative, annually*} by accepting and disposing of:
 	
    a)   {*X amount*} of opioids
 	
    b)   {*Y amount*} of sedative-hypnotics
 	
    c)   {*Z amount*} of stimulants
 	
    d)   {*other classes or types of medication*}

To increase awareness among {residents of … or young people in …} of (choose all that apply)
 	
    a)   the extent of prescription drug misuse in this community
 	
    b)   the risks associated with improperly stored and disposed of medications
 	
    c)   appropriate methods and community resources for safe storage and disposal
 	
{*immediately following the project completion or one year after project completion*}

To reduce the risk of accidental poisonings among children by {*x%*} by {*year*} Please note that goals are identified by data informed needs and therefore may vary between initiatives.
To reduce the amount of medication {*entering the environment, watershed, etc.*} by {*x tonnes, or other amount*} by {*date or year*}.
To increase awareness among prescribers of the nature and extent of unused medication to inform prescribing practices.
Other:_____

2. Date of Review: _____

3. When was the review completed?

☐ **During project**

☐ **Following project completion**

4. Project team (internal):

Name	Job title	Role in project
		{Project lead}
		{Facilitator}

5. External Partners

Organization	Representative	Reason for partnering	Role in project	Interest in future participation (Y/N)
			{Project lead}	
			{Facilitator}	
			{Marketing/Communications}	

6. Did you achieve the project goals?

Refer to data collected using specific tools or processes, for example, use

- **Prescription Drug Drop-Off Inventory Form** to determine the amount of medication returned

- **Participant Surveys** (pre and post) to determine change in awareness

Goal	Achieved (Y/N)	Comments
1.		
2.		
3.		
4.		
5.		

7. Participants

Number of individuals who returned medication _____

Number of participant surveys completed _____

8. What went well and why? What were the successful steps taken towards achieving your objective?

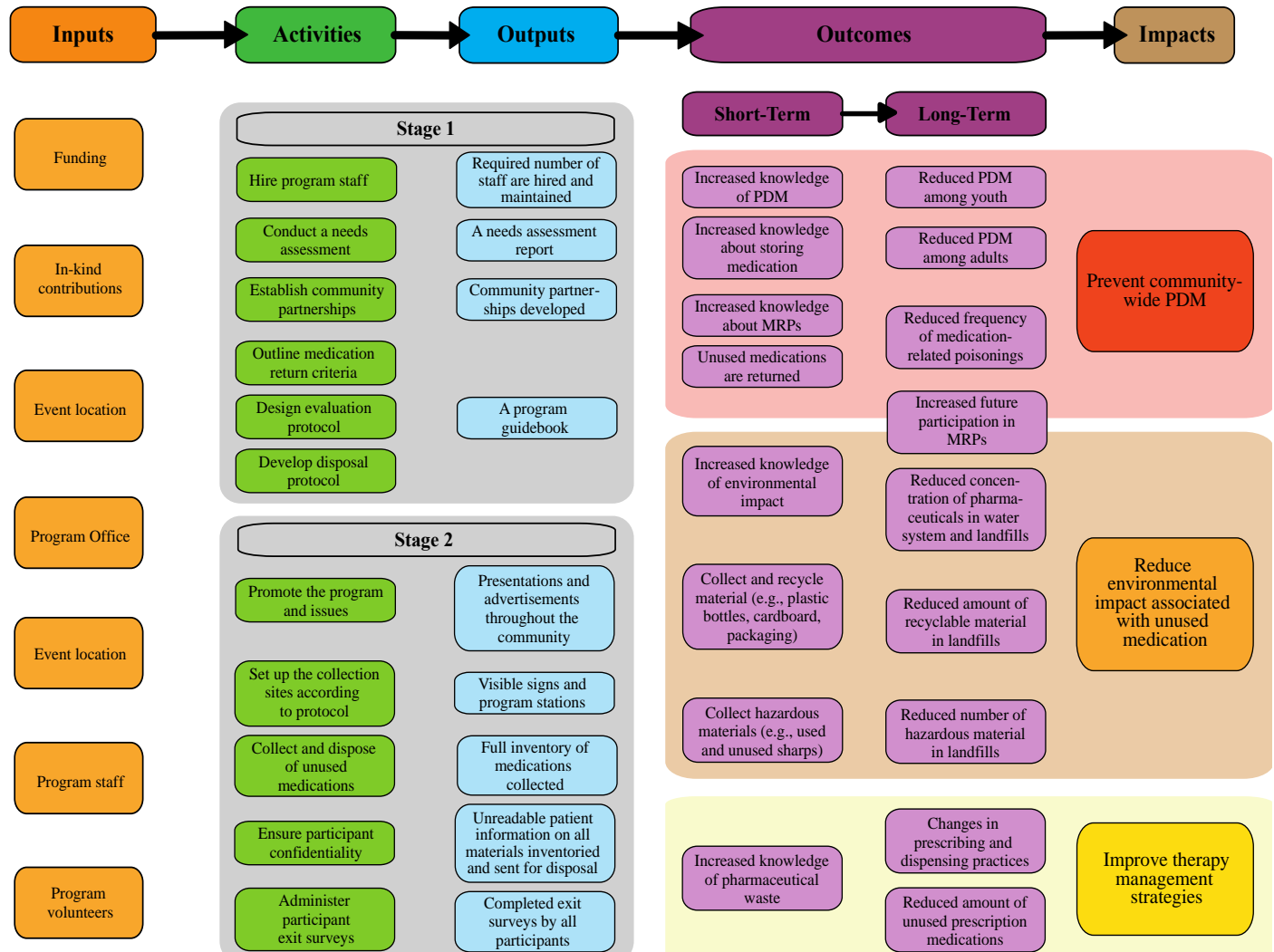| Successes	How to ensure future success

9. What can be improved and how? What could have been done better? What can we do differently in similar situations in the future to ensure success? What is your advice to future project teams?

What can be improved	Recommendations

Appendix G: Prescription Drop-off Initiative Program Logic Model

Medication Return Program. To properly dispose of medications to prevent prescription drug misuse, reduce environmental impact, and improve therapy management strategies.

Inputs → **Activities** → **Outputs** → **Outcomes** → **Impacts**

Inputs
- Funding
- In-kind contributions
- Event location
- Program Office
- Event location
- Program staff
- Program volunteers

Activities / Outputs

Stage 1

Activities	Outputs
Hire program staff	Required number of staff are hired and maintained
Conduct a needs assessment	A needs assessment report
Establish community partnerships	Community partnerships developed
Outline medication return criteria	
Design evaluation protocol	A program guidebook
Develop disposal protocol	

Stage 2

Activities	Outputs
Promote the program and issues	Presentations and advertisements throughout the community
Set up the collection sites according to protocol	Visible signs and program stations
Collect and dispose of unused medications	Full inventory of medications collected
Ensure participant confidentiality	Unreadable patient information on all materials inventoried and sent for disposal
Administer participant exit surveys	Completed exit surveys by all participants

Outcomes

Short-Term → **Long-Term**

Short-Term	Long-Term
Increased knowledge of PDM	Reduced PDM among youth
Increased knowledge about storing medication	Reduced PDM among adults
Increased knowledge about MRPs	Reduced frequency of medication-related poisonings
Unused medications are returned	Increased future participation in MRPs

Impacts: Prevent community-wide PDM

Short-Term	Long-Term
Increased knowledge of environmental impact	Reduced concentration of pharmaceuticals in water system and landfills
Collect and recycle material (e.g., plastic bottles, cardboard, packaging)	Reduced amount of recyclable material in landfills
Collect hazardous materials (e.g., used and unused sharps)	Reduced number of hazardous material in landfills

Impacts: Reduce environmental impact associated with unused medication

Short-Term	Long-Term
Increased knowledge of pharmaceutical waste	Changes in prescribing and dispensing practices
	Reduced amount of unused prescription medications

Impacts: Improve therapy management strategies

Appendix H: Additional Program Planning and Evaluation Considerations

This section contains tools that organizations taking a lead on PDoIs can use in their planning, development and evaluation. The first step in developing any type of program is to conduct a needs assessment that identifies the problems or concerns that one is looking to address (Issel, 2004; Johnson & Pandina, 2001). A needs assessment will identify factors critical to maximizing participation in the initiative and will develop partnerships that facilitate the promotion and implementation of the initiative. Key partnerships for PDoIs include pharmacies, law enforcement agencies, and public health and waste management services. Accordingly, sample needs assessment interview questions for each of these key partners are provided below. In addition to using an administration report, a site visit checklist (provided below) should also be conducted to ensure that the PDoI is operating according to established and agreed upon protocols.

Sample Needs Assessment Partnership Interview Questions

Pharmacy Interview Questions

1. Do you accept unused medication (prescription and over-the-counter) from patients?
2. Are there any restrictions on the medication you will accept?
3. What types of records do you keep regarding returned medication?
    a. Are these records accessible?
4. How do you currently dispose of the medication that is returned?
5. How do you store the medication until it is disposed of?
6. Who pays for the disposal?
7. Are you or the staff paid for the time put into the collection, data recording, and disposing of returned medication?
    a. Who pays for that time?
8. Does your pharmacy currently market to or educate patients about your return process?

Waste Management Services Interview Questions

1. Do you accept unused medication (prescription and over-the-counter) from individuals?
    a. Do you accept medication from pharmacies?
    b. Do you accept medication from physician or dentist offices?
    c. Do you accept medication from veterinary clinics?
2. Are there any restrictions on the medication you will accept?
3. What types of records do you keep regarding returned medication?
    a. Are these records accessible?
4. How do you currently dispose of the medication that is returned?
5. How is the medication transported to/from your facility?
6. Who pays for this type of disposal?
7. Does your organization currently market or educate the public, pharmacies, or medical practices about your return process?

Local Law Enforcement Interview Questions

1. What are the laws governing the handling of unused medication (including prescription medication and controlled substances)?
2. Would a medication return program require local law enforcement to be present?
3. Would any of the program staff and volunteers require a criminal background check?
4. What are the laws regarding the transportation of the medication?
5. Does the medication need to be rendered unusable at the point of collection (e.g., medication placed directly into an acid solution)?
6. Has local law enforcement participated in or hosted a PDoI in this community before?
7. What types of records need to be legally collected?
8. Are there any local data for prescription drug misuse related crimes that can be accessed for comparison purposes?

Sample Site Visit Checklist

Item	N/A	No	Yes	Needs Improvement	Comments
The program or event is clearly advertised					
Signs are visible					
It is easy for participants to navigate through the site					
Collection station is easily marked					
Collection station is easily accessible					
There are sufficient staff to collect medication					
There are sufficient staff to answer participants' questions					
Staff are handling medications according to protocol					
Workstations are clearly distinguished					
Patient information is removed from medication packaging					
Collected medication is securely stored and away from public space					
Law enforcement is present					

Appendix I: Prescription Drop off Initiatives in Canada

Alberta	
Program Overview:	ENVIRx is a voluntary province-wide medication return program administered by the Alberta Pharmacy Association.
Participation Rates:	80% of pharmacies in Alberta participate in ENVIRx.
Accepted Products:	• Prescription medication. • Over-the-counter medications and health products (e.g., vitamins, minerals etc.) in oral dosage form. • Medications from hospitals, institutions, doctors' offices, and the pharmacy's own operations are **not** accepted.
Sources:	• Alberta Pharmacists' Association, n.d., 2013; J. Johnson, personal communication, August 21, 2013

British Columbia	
Program Overview:	The British Columbia Medications Return Program (BCMRP) is a regulated province-wide program administered by the Health Products Stewardship Association.
Participation Rates:	Over 95% of pharmacies in British Columbia participate in the BCMRP.
Accepted Products:	• Prescription medication. • Over-the-counter medications and health products (e.g., vitamins, minerals etc.) in oral dosage form. • Medications from hospitals, institutions, doctors' offices, and the pharmacy's own operations are **not** accepted.
Sources:	• Post-consumer Pharmaceutical Stewardship Association, 2012b; S. Menard, personal communication, August 22, 2013; Vanasse, 2012

Manitoba	
Program Overview:	The Manitoba Medications Return Program (MMRP) is a regulated province-wide program with voluntary pharmacist participation.
Participation Rates:	76% of pharmacies in Manitoba participate in the MMRP.
Accepted Products:	• Prescription medication. • Over-the-counter medications and health products (e.g., vitamins, minerals etc.) in oral dosage form. • Medications from hospitals, institutions, doctors' offices, and the pharmacy's own operations are **not** accepted.
Sources:	• Post-consumer Pharmaceutical Stewardship Association, 2012a, 2013, n.d.; S. Menard, personal communication, August 22, 2013

New Brunswick	
Program Overview:	Though New Brunswick does not have a formal medication return program, consumers can return medication to willing pharmacies and Household Hazardous Waste (HHW) collection sites.
Participation Rates:	No data is collected on participation rates by pharmacies or HHW collection sites.
Accepted Products:	• The types and amounts of products accepted are at the discretion of each pharmacy. • The products accepted at the HHW collection sites may vary by regional district or municipality. However, the majority of these collection sites collect a wide variety of products (e.g., prescription medication, over-the-counter medication, and vitamins).

Sources:	• City of Fredericton, n.d.; J. MacDonnell Pharmacy Ltd., 2009; New Brunswick Pharmacist Association, 2013; P. Blanchard, personal communication, August 28, 2013

Newfoundland and Labrador	
Program Overview:	Newfoundland and Labrador has a province-wide HHW program that collects medication from consumers alongside willing individual pharmacies.
Participation Rates:	No data is collected on participation rates by pharmacies or HHW collection sites.
Accepted Products:	• The types and amounts of products accepted are at the discretion of each pharmacy. • Prescription medications, over-the-counter medications, and health products (e.g., vitamins and minerals) are accepted at all six of the HHW collection sites.
Sources:	• M. Healey, personal communication, August 28, 2013; Multi Materials Stewardship Board, n.d.a, n.d.b, n.d.c

Northwest Territories	
Program Overview:	Though the Northwest Territories does not have a territory-wide medication return program, consumers can return medication to willing corporate pharmacies and HHW collection sites.
Participation Rates:	No data is collected on participation rates.
Accepted Products:	• The types and amounts of products accepted are at the discretion of each pharmacy. • Prescription medications, over-the-counter medications, and health products (e.g., vitamins and minerals) are accepted at HHW sites.
Sources:	• Northwest Territories Environment and Natural Resources, 2010; S. Van Genne, personal communication, August 28, 2013

Nova Scotia	
Program Overview:	Nova Scotia's Medication Disposal Program is a province-wide program administered by the Pharmacy Association of Nova Scotia.
Participation Rates:	100% of community pharmacies in Nova Scotia participate in the Medication Disposal Program.
Accepted Products:	• Prescription and over-the-counter medications. • Some health products (e.g., vitamins and supplements). • Medications from hospitals, institutions, doctors' offices, and the pharmacy's own operations are **not** accepted.
Sources:	• A. Bodner, personal communication, August 28, 2013; Nova Scotia, 2012; Pharmacy Association of Nova Scotia, 2013

Nunavut	
Program Overview:	Though Nunavut does not have a territory-wide medication return program, consumers can return medication to community pharmacies and health centres.
Participation Rates:	No data is collected on participation rates.
Accepted Products:	• The types and amounts of products accepted are at the discretion of each pharmacy.
Sources:	• Gagnon, 2009; Canada Health Products Stewardship Association, 2014

Ontario	
Program Overview:	The Ontario Medications Return Program (OMRP) is a regulated province-wide program managed by the Health Products Stewardship Association with voluntary pharmacist participation.
Participation Rates:	80% of licensed pharmacies in Ontario participate in the OMRP.
Accepted Products:	- Prescription medication. - Over-the-counter medications and health products (e.g., vitamins, minerals etc.) in oral dosage form. - Medications from hospitals, institutions, doctors' offices, and the pharmacy's own operations are <u>not</u> accepted.
Sources:	Health Products Stewardship Association, 2013a, 2013b; S. Menard, personal communication, August 22, 2013

Prince Edward Island	
Program Overview:	In Prince Edward Island, consumers can return medication to willing pharmacies and Waste Watch Drop-off Centres that are managed by the Island Waste Management Corporation.
Participation Rates:	No information has been recorded.
Accepted Products:	- The types and the amounts of products accepted are at the discretion of each pharmacy. - Prescription medications, over-the-counter medications, and health products (e.g., vitamins and minerals) are accepted at all six of the Waste Watch Drop-off Centres.
Sources:	E. MacKenzie, personal communication, August 21, 2013; Island Waste Management Corporation, n.d.; 2013; M. Wyand, personal communication, August 21, 2013; Canada Health Products Stewardship Association, 2014

Québec	
Program Overview:	Québec consumers can return medication to HHW collection sites and community pharmacies which are required through regulations under the Pharmacy Act to collect pharmaceuticals.
Participation Rates:	No data on participation rates are provided by the HHW collection sites.
Accepted Products:	- The products accepted at the HHW collection sites may vary by municipality. However, all accept expired drugs and the majority of these sites collect a wide variety of products (e.g., prescription medication, over-the-counter medications and vitamins). - According to the code of ethics of pharmacists, a pharmacist is obligated, upon a patient's request, to collaborate in the recovery of out-of-date or unused medications for safe destruction.
Sources:	Health Products Stewardship Association; Recyc-Québec; Official city portal – Ville de Montréal

Saskatchewan	
Program Overview:	Saskatchewan has a formal province-wide medication return program called the Pharmaceutical Waste Disposal program which allows consumers to return medication to the majority of the province's community pharmacies. Consumers may also return medication to HHW collection events that are managed by the provincial regional districts and municipalities.
Participation Rates:	No information has been recorded.
Accepted Products:	- The types and amounts of products accepted are at the discretion of each pharmacy. - The products accepted at the HHW collection sites may vary by regional district or municipality; however, the majority collect a wide variety of products (e.g., prescription medication, over-the-counter medications, vitamins etc.).
Sources:	City of Saskatoon, 2012; Customer service, personal communication, August 27, 2013; M.

Wollbaum, personal communication, August 27, 2013

Yukon	
Program Overview:	Though the Yukon does not have a formal medication return program, many community pharmacies have informal prescription take back programs.
Participation Rates:	No data is collected on participation rates.
Accepted Products:	• The types and the amounts of products accepted are at the discretion of the pharmacy.
Sources:	• City of Whitehorse, 2011; Yukon Government, 2002

Adapted from an environmental scan completed by Dr. Jonathan Brown.

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