



BRITISH COLUMBIA
CENTRE ON
SUBSTANCE USE

Networking researchers, educators & care providers

BC Centre on Substance Use

St Paul's Hospital Opioid Stewardship Program

Provider Satisfaction Report

Kathy Xu, BSc, Tamara Mihic, PharmD, Seonaid Nolan, MD,
Lianping Ti, PhD

May 2021



Key Findings

- Among twenty-four survey respondents, 84% were overall very satisfied with St. Paul's Hospital Opioid Stewardship Program.
- In total, 75% of survey respondents found that the Opioid Stewardship Program improved patient care and 79.2% of respondents found the recommendations that were given were helpful.
- Survey respondents qualitatively described the benefits of the Opioid Stewardship Program, including the helpfulness of medication reviews, expertise offered, patient advocacy and improving patient care.
- A few constructive themes emerged, including a lack of awareness of the program, the need to expand the scope of patients included in the program, and to improve communication.

Objectives

In January 2020, the St. Paul's Hospital Opioid Stewardship Program was launched to improve opioid prescribing, utilization, and monitoring.¹ This quality improvement study aims to assess the impact of the Opioid Stewardship Program with respect to patient care, adequacy of communication and overall satisfaction by evaluating prescribers' perspectives on the utility and accessibility of the program.

Methods

There were three phases of this quality improvement study: 1) survey development; 2) study implementation; and 3) analysis.

Survey Development

As a first step, a literature search using EMBASE and Medline OVID was performed to identify validated survey tools evaluating physician satisfaction with quality improvement initiatives. Key search terms included:

- hospital initiative or intervention, quality or patient improvement, Opioid Stewardship Program, prescription drug monitoring program, prescription opioids, quality of care
- assessment tools or validated survey, validated questionnaire, or surveys and questionnaires.
- physician satisfaction or provider satisfaction.

Studies were eligible for inclusion if they were published in a peer-reviewed journal as an original research article in English. We excluded letters to the editor, opinion pieces, interventions aimed at pediatric populations, physician satisfaction with specific pharmaceutical treatment and general physician job satisfaction studies. Data were extracted from included studies and synthesized into recurring themes.

The literature search included twenty-one articles that met the eligibility criteria. Most of the studies examined healthcare worker satisfaction with newly implemented quality improvement projects or interventions, both in the acute and community setting. Three studies used a validated questionnaire,²⁻⁵ the others modified existing validated questionnaires,^{6,7} or created their own based on literature searches.⁸⁻²²

From the literature search, we compiled common recurring items from included articles²⁻²² into four areas, spread across thirteen survey items (see Appendix for the full survey). The four areas of interest were:

- Demographic information (e.g., area of practice, years of practice).
- Communication with and accessibility to the Opioid Stewardship Program.
- Information received and the Opioid Stewardship Program's impact on patient care.
- General satisfaction with the Opioid Stewardship Program and written feedback.

The survey consisted of five demographic questions, six Likert scale questions, and two qualitative open text questions.

Study Implementation

An online survey was developed in Qualtrics, a research-based electronic data capture platform. The survey was disseminated through email listservs utilizing key stakeholders and department heads between October 2020 and March 2021. The study was restricted to healthcare providers who interacted with Opioid Stewardship Program at least once since the program's inception (January 2020).

Analysis

As a first step, we calculated descriptive statistics of the study sample using frequencies and proportions for nominal and ordinal variables. Then, we assessed each of the Likert scale questions and graphically displayed the results. Additionally, we identified common themes among the responses to the qualitative questions and selected relevant quotes that best exemplified the common themes.

Results

Respondent Characteristics

In total, there were twenty-four completed responses from healthcare providers who interacted with the Opioid Stewardship Program at least once. Shown in Figure 1, eleven respondents were physicians (45.8%), ten respondents were clinical pharmacists (41.6%), and three were nurse practitioners (12.5%).

Respondents by Profession

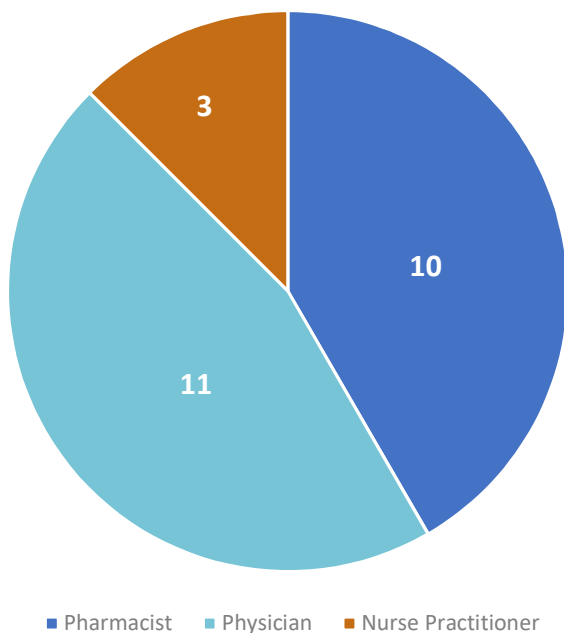


Figure 1. Proportion of respondents by profession



Fifteen (62.5%) respondents indicated that they interacted with the program less than five times, five (20.8%) indicated that they interacted with the program five to ten times, and four (16.7%) indicated that they interacted with the program more than ten times. Contact was split between audit and feedback (13; 54.2%), or through a consult request (11; 45.8%).

Shown in Figure 2, general internal medicine was the most represented specialty (10; 41.6%), with geriatric medicine as the second most represented (5; 20.8%). Other specialties included general surgery (2; 8.3%), orthopedic surgery (2; 8.3%), mental health (1; 4.2%), obstetrics and gynecology (1; 4.2%), respirology (1; 4.2%), family medicine (1; 4.2%), and unspecified (1; 4.2%).

Respondents by Specialty

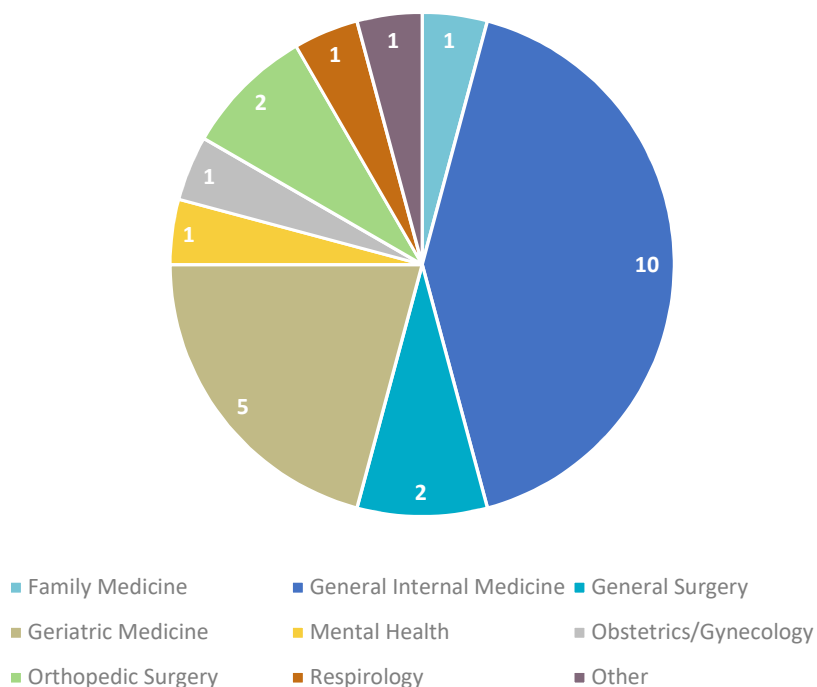


Figure 2. Proportion of respondents by specialty

Likert-Scale Responses

The results of the Likert scale responses in the satisfaction survey are shown in Figure 3 below. Out of the twenty-four respondents, twenty (83.3%) indicated “strongly agree” to both the statements that they were satisfied with the program and that they would recommend the program to their colleagues. Additionally, twenty respondents (83.3%) would consult the Opioid Stewardship Program in the future. Most respondents strongly agreed that patient care was improved because of the program (18; 75%). Nineteen respondents (79.2%) indicated “strongly agree” to the statement that they received helpful information and recommendations for managing patient care. Most of the respondents (19; 79.2%) indicated “strongly agree” to the statement that the communication method used to contact them was appropriate. While there was one respondent who disagreed with these statements, it is noteworthy that their qualitative comments seemed to indicate only positive feedback and it is possible that an error was made in response to the Likert scale questions.

Satisfaction with the Opioid Stewardship Program

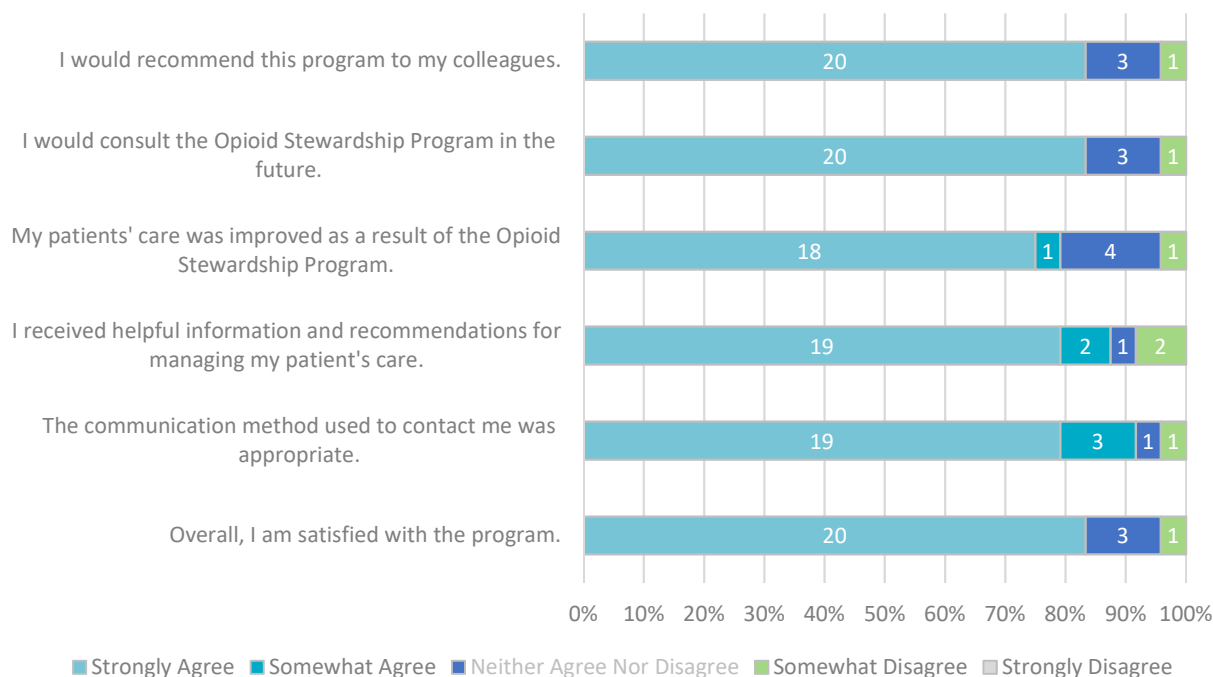


Figure 3. Respondent satisfaction with different aspects of the Opioid Stewardship Program from the survey results.



Qualitative Responses

Qualitative responses were grouped into two broad themes: positive feedback and constructive feedback. Within these, they were further grouped into common sub-themes.

Positive Feedback:

Two sub-themes emerged from the positive feedback we received from the Opioid Stewardship Program: knowledge and expertise and benefits for patient care.

Knowledge and Expertise

Many respondents stated that they found the medication review and expertise provided by the Opioid Stewardship Program to be helpful for patient care. Three respondents noted that the benefits of the program included:

“

Practical recommendations about optimizing opioid routes, dosing regimens, adding or optimizing adjunctive pain or anxiety medications, liaising directly with prescribers about opioid tapering regimens, answering drug information questions related to opioid dose conversions, helping to select most appropriate opioid based on patient factors. – Pharmacist, unspecified specialty.

Easily accessible and helpful with incredibly complex patients from a medication/opioid/non opioid recommendations. – Nurse practitioner, orthopedic surgery.

Stewardship team picked up high risk patient (concurrent AUD, accessing street opioids) that had not been flagged to be seen by AMCT. They suggested an AMCT consult and the patient did have OUD and was successfully started on OAT. Stewardship's knowledge of risk factors for OUD and integration into medicine teams was critical in picking up cases of OUD that may otherwise slip through the cracks. – Physician, family medicine.

Benefits for Patient Care

Three respondents commented on how the Opioid Stewardship Program helped with advocacy, patient care and liaising with different health care workers.

“

Liaising with other pain services when appropriate, very useful for complicated patients. – Pharmacist, general internal medicine.

The Opioid Stewardship Pharmacist also liaising with the patient's GP regarding further titration in the community. – Nurse practitioner, geriatric medicine.



A helpful voice to add to advocacy for patients to decrease opioid use for pain that is unlikely to benefit from opioids. – Physician, general internal medicine.

Additionally, one respondent explained how the Opioid Stewardship Program was able to improve patient care management:

“

Very thorough evaluation of the patient's pain management and needs. Communication was very clear to both the team and patient. The Opioid Stewardship team provide very useful information and teaching to the patient, which facilitated discharge. – Pharmacist, general internal medicine.

Constructive Feedback:

Three common sub-themes emerged from the constructive feedback that we received from respondents: lack of awareness, expansion of the program, and communication issues.

Lack of Awareness

One respondent noted that there was a lack of awareness that the Opioid Stewardship Program exists.

“

I think the only downfall of the service is that many people don't know it exists! – Nurse practitioner, geriatric medicine.

Expansion of the Program

One respondent noted that there could be ways that the program could be expanded to include other patients that may need the service. One respondent made a specific suggestion:

“

It could be further expanded to include patients who are followed by other pain or addictions services to some extent. Occasionally patients who are followed by addictions medicine for a non-opioid addiction are receiving opioids for a pain indication, for example, and could benefit from review by the opioid stewardship team. – Pharmacist, unspecified specialty.

Communication Issues

There were conflicting reports by respondents about the appropriate method of contact. One respondent stated that they wanted:

“

More telephone/face to face interaction (rather than just a note) especially when advice is being given via audit, more clear and widespread information about how to consult the program. Recommend that you come to speak with the internal medicine residents on CTU if you are not doing this already! – Physician, geriatric medicine.

However, another respondent felt that the level of contact is unnecessary.

“

We field many many phone calls throughout the day as a busy CTU service and would prefer to reduce the calls to ones that truly affect patient care. This felt more like a call to make things look better on paper, without any actual effect on patient care. Consider only calling for patients who are flagged as using the medications without good indication or using it in an escalating or inappropriate manner. PRN doses that are not actually being used by the patient may not be an actual problem that requires intervention. – Physician, general internal medicine.

Discussion



Our quality improvement study found that the large majority of respondents were highly satisfied with the Opioid Stewardship Program overall and would recommend the program to their colleagues. Respondents noted that the most common benefits of the Opioid Stewardship Program were that it provided practical information around opioid dosing, tapering and alternative medications, and played an important role in patient advocacy through liaison and medication reviews. However, they also noted some areas for improvement, including: the need to let providers know of its existence, the potential to expand the program to patients on other services and in other settings (i.e. outpatient), and optimizing communication (i.e. when to call prescriber vs. leave note).

Provincially, only two other Opioid Stewardship Programs exist, both located in the Fraser Health Authority region.²³ More broadly, a recent environmental scan of international hospitals found that among the 133 included hospitals, only 23% reported a stewardship program and 14% reported a prospective audit-and-feedback process.²⁴ Our findings highlight the important need for these types of programs to be scaled up in hospitals in order to improve opioid prescribing and patient safety in these settings.

Our findings also point to the potential for Opioid Stewardship Programs to act as a patient advocate and liaison between hospital departments, as well as between acute and community care. One recent qualitative study conducted in 2019 found that there was a significant lack of communication between primary care physicians and surgeons in terms of opioid prescription and postoperative care plans.²⁵ The lack of coordination during discharge between primary care physicians and surgeons with respect to opioid prescribing could introduce further harms (e.g., new persistent opioid use, prescription opioid misuse and dependence) to individuals.²⁶ This is an



area where Opioid Stewardship Programs can make a unique and important contribution to the health system.

There are some limitations to this study. First, our sample size was small and may not have been an adequate sampling of all clinicians that have interacted with the program. Therefore, there may be some other opinions that we have not captured within our study. Second, as this study was completed at one urban hospital setting, the generalizability of these findings to other healthcare settings (e.g., rural and remote hospitals) is unknown.

In conclusion, the Opioid Stewardship Program has generally been regarded as very helpful and a useful service for providers. Given the acceptance of the program by providers, there is potential for the program to be scaled up in other settings. Future research is required to understand patient satisfaction with the program, as well as to understand its effectiveness on patient outcomes in acute care settings.



References

1. BC Centre for Substance Use. *St. Paul's Hospital Opioid Stewardship Program: 6 Month Program Report January – June 2020*. Vancouver, BC: BC Centre for Substance Use; 2021.
<https://www.bccsu.ca/wp-content/uploads/2020/10/OpioidStewardshipProgram-Final.pdf>
2. Schackmann EA, Munoz DF, Mills MA, Plevritis SK, and Kurian AW. Feasibility evaluation of an online tool to guide decisions for BRCA1/2 mutation carriers. *Familial Cancer*, 2013;12:65-73.
3. Cillessen FHJM, de Vries Robbe PF, and Biernans MCJ. A hospital-wide transition from paper to digital problem-oriented clinical notes. *Applied Clinical Informatics*, 2017;8(2):502-514
4. Torres MJ, Beitzl K, Jimenez JH, Mayer H, Zehetmayer S, Umek W, and Rubin NV. Benefit of a nurse-led telephone-based intervention prior to the first urogynecology outpatient visit: a randomized-controlled trial. *International Urogynecology Journal*, 2020 (forthcoming): doi: 10.1007/s00192-020-04327-z.
5. Hudson D, Kushniruk A, Borycki E, and Zuege DJ. Physician satisfaction with a critical care clinical information system using a multimethod evaluation of usability. *International Journal of Medical Informatics*, 2018;112:131-136.
6. Poot AJ, Caljouw MA, Waard CS, Wind AW, and Gussekloo J. Satisfaction in older persons and general practitioners during the implementation of integrated care. *PLoS One*, 2016;11(10):e0164536.
7. Cao VBS, Tan LD, Horn FBS, Bland D, Giri P, Maken K, Scott L, Dinh V, Hidalgo D, Nguyen BH. Patient-centered structured interdisciplinary bedside rounds in the medical ICU. *Critical Care Medicine*, 2018;46(1):85-92.
8. Bishop L, Young S, Twells L, Dillon C, and Hawboldt J. Patients' and physicians' satisfaction with a pharmacist managed anticoagulation program in a family medicine clinic. *BMC Res Notes*, 2015; 8: 233.
9. van Eeghen C, Kennedy AG, Pasanen ME, and MacLean CD. A new quality improvement toolkit to improve opioid prescribing in primary care. *Journal of the American Board of Family Medicine*, 2020;33(1):17-26.
10. Linden S, Chang R, Anupama G. Impact of an innovative psychiatric consultation liaison model on provider satisfaction with care of behaviourally complex patients. *Southern Medical Journal*, 2018;111(12):772-775.
11. Wilson CG, Park I, Sutherland SE, and Ray L. Assessing pharmacist-led annual wellness visits: Interventions made and patient and physician satisfaction. *Journal of the American Pharmacists Association*, 2015;55(4):449-54.



12. Narang B, Park SY, Norrmen-Smith IO, Lange M, Ocampo AJ, Gany FM, and Diamond LC. The use of a mobile application to increase access to interpreters for cancer patients with limited English proficiency: A pilot study. *Med Care*, 2019; 57 Suppl 6 Suppl 2:S184-S189
13. Heidemann L, Petrilli C, Gupta A, Campbell I, Thompson M, Cinti S, and Stewart DA. Improving interdisciplinary provider communication through a unified paging system. *Southern Medical Journal*, 2016;109(6):382-87.
14. Inokuchi R, Sato H, Iwagami M, Komaru Y, Iwai S, Gunshin M, Nakamura K, Shinohara K, Kitsuta Y, Nakajima S, and Yahagi N. Impact of a new medical record system for emergency departments designed to accelerate clinical documentation: a crossover study. *Medicine*, 2015;94(26):e856.
15. Glaser M, Winchell T, Plant P, Wilbright W, Kaiser M and Butler MK. Provider satisfaction and patient outcomes associated with statewide prison telemedicine program in Louisiana. *Telemedicine and e-Health*, 2010;16(4):472-9.
16. Remick RA, Araki Y, Bruce R, Gorman C, Allen J, Remick AK, Lear SA. The mood disorders association of British Columbia psychiatric urgent care program: a preliminary evaluation of a suggested alternative model of outpatient psychiatric care. *Canadian Journal of Psychiatry*, 2014;59(4):220-7.
17. Jones MG, Decherrie LV, Meah YS, Hernandez CR, Lee EJ, Skovran DM, Soriano TA, and Ornstein KA. Using nurse practitioner co-management to reduce hospitalization and readmissions within a home-based primary care program. *Journal for Healthcare Quality*, 2017;39(5):249-258
18. Palanica A, Flaschner P, Thommandram A, Li M, and Fossat Y. Physicians' perceptions of chatbots in healthcare: cross-sectional web-based survey. *Journal of Medical Internet Research*, 2019;21(4):pp.e12887.
19. Hanson RE, Truesdell M, Stebbins GT, Weathers AL, and Goetz CG. Telemedicine vs office visits in a movement disorders clinic: comparative satisfaction of physicians and patients. *Movement Disorders Clinical Practice*, 2018;6(1):65-69.
20. Chittle MD, Rao SK, Jaff MR, Patel VI, Gallen KM, Avadhani R, Ferris TG, and Wasfy JH. Asynchronous vascular consultation via electronic methods: A feasibility pilot. *Vascular Medicine*, 2015;20(6):551-6.
21. Tenforde AS, Iaccarino MA, Borgstrom H, Hefner JE, Silver J, Ahmed M, Babu AN, Blauwet CA, Elson L, Eng C, Kotler D, Homer S, Makovich S, McInnis KC, Vora A, and Borg-Stein J. Feasibility and high quality measured in rapid expansion of telemedicine during COVID-19 for sports and musculoskeletal muscle practice. *PM&R*, 2020 (forthcoming). doi: 10.1002/pmrj.12422
22. Keefe KR, Levi JR, and Brook CD. The impact of medical scribes on patient satisfaction in an academic otolaryngology clinic. *Annals of Otolaryngology, Rhinology & Laryngology*, 2020;129(3):238-44.



23. Fraser Health Authority. *Fraser Health Overdose Response Public Report: August – October 2020*. Surrey, BC: Fraser Health Authority; 2020. https://www.fraserhealth.ca/-/media/Project/FraserHealth/FraserHealth/Health-Topics/Overdose/202010_Public_OD_Report_Quarterly.pdf?rev=5d725fa76bf44386a3bb9532415911ed
24. Ardeljan DL, Waldfogel JM, Bicket MC, Hunsberger JB, Vecchione TM, Arwood N, Eid A, Hatfield LA, McNamara L, Duncan R, Nesbit T, Smith J, Tran J, and Nesbit SA. Current state of opioid stewardship. *American Journal of Health-System Pharmacy*, 2020;77(8):636-43
<https://doi.org/10.1093/ajhp/zxaa027>
25. Klueh MP, Sloss KR, Dossett LA, Englesbe MJ, Waljee JF, Brummett CM, Lagisetty PA and Lee JS. Postoperative opioid prescribing is not my job: a qualitative analysis of care transitions. *Surgery*, 2019;166(5):744-51.
26. Klueh MP, Hu Hm, Howard RA, Vu JV, Harbaugh CM, Lagisetty PA, Brummett CM, Englesbe MJ, Waljee JF and Lee JS. Transitions of care for postoperative opioid prescribing in previously opioid-naïve patients in the USA: a retrospective review. *J Gen Intern Med*, 2018;33(10):1685-91.



Appendix 1

Please give us some information about yourself:

Area of Practice:

- ☐ Acute Pain Service
- ☐ Addiction Medicine
- ☐ Anesthesiology
- ☐ Cardiology
- ☐ Cardiovascular/Thoracic Surgery
- ☐ Complex Pain Service
- ☐ Critical Care Medicine
- ☐ Emergency Medicine
- ☐ Endocrinology
- ☐ Family Medicine
- ☐ Gastroenterology
- ☐ General Internal Medicine
- ☐ General Surgery
- ☐ Geriatric Medicine
- ☐ Hematology
- ☐ Mental Health
- ☐ Nephrology
- ☐ Neurology
- ☐ Obstetrics/Gynecology
- ☐ Orthopedic Surgery
- ☐ Physical Medicine and Rehabilitation
- ☐ Plastic Surgery
- ☐ Respiratory Medicine/Respirology
- ☐ Rheumatology
- ☐ Urology
- ☐ Other

Profession:

- ☐ Physician
 - ☐ Attending
 - ☐ Fellow
 - ☐ Resident
- ☐ Nurse practitioner
- ☐ Other: _____



Years of Practice:

- ☐ <5 years
- ☐ 5 – 10 years
- ☐ 11 – 15 years
- ☐ 16 – 20 years
- ☐ >20 years

How many times have you interacted with the Opioid Stewardship Program?

- ☐ 1 time
- ☐ 1-4 times
- ☐ 5 – 10 times
- ☐ > 10 times

How were you engaged with the Opioid Stewardship Program?

- ☐ Contacted by the program through audit and feedback
- ☐ Requested a consult

Please mark the number that best describes your experience with St. Paul's Hospital Opioid Stewardship Program:

| | Strongly disagree | | | Strongly agree | | |
|---|-------------------|---|---|----------------|---|--|
| 1. I received helpful information and recommendations for managing my patient's care. | 1 | 2 | 3 | 4 | 5 | |
| 2. The communication method used to contact me was appropriate. | 1 | 2 | 3 | 4 | 5 | |
| Please specify the method of contact: | | | | | | |
| <input type="checkbox"/> Note in chart | | | | | | |
| <input type="checkbox"/> Phone call | | | | | | |
| 3. I believe patient care has improved as a result of the opioid stewardship program. | 1 | 2 | 3 | 4 | 5 | |
| 4. I would consult the Opioid Stewardship Program in the future. | 1 | 2 | 3 | 4 | 5 | |
| 5. I would recommend this program to my colleagues. | 1 | 2 | 3 | 4 | 5 | |
| 6. Overall, I am satisfied with the program. | 1 | 2 | 3 | 4 | 5 | |



Please write about your experiences with the Opioid Stewardship Program:

7. What aspects of the program were helpful?

8. What aspects of the program could be improved on?
