

Erratum

After publication, we found a mistake within the text of "*Outpatient Oral Anticancer Agents in Manitoba*".

On pages 63 and 64, in the Conclusions and Policy Recommendations, the text should say:

"The use of OAAs and the expenses associated with these medications has increased significantly over the years. We observed that the launch of the HCDP altered the prescription filling patterns of OAAs in Manitoba. Starting to fill an OAA prescription was associated with changing pharmacies for some Manitobans. In seeking to balance convenient access to important medications with access to clinical expertise, policymakers could consider making an 'expert' pharmacist or pharmacy available for dispensing certain medications (e.g., targeted oral chemotherapy); this would ensure optimal pharmacist expertise and open prescriber/pharmacist/patient communication to monitor for safety and efficacy. This recommendation would need to be balanced with ensuring that patients in rural and remote areas, where an 'expert' pharmacist might not always be available, continue to have access to important medications."

The web version of the report has been updated.

The updated pages are below.

Costs of OAA Prescriptions

The costs of cancer therapies, including OAAs, have risen dramatically over the past decade, largely due to the availability and uptake of new targeted therapies [13,14,62]. With costs of up to approximately \$400 per day of therapy, it is important to consider the impact that targeted OAAs can have on provincial pharmacare programs. In Manitoba, a rigorous approval process is required before a medication is funded by Pharmacare. Formulary decisions are generally informed by the Canadian Association for Drugs and Technology in Health (CADTH) Pan-Canadian Oncology Drug Review (pCODR) review. The HCDP also ensures that each prescription covered is reviewed on a case-by-case basis for appropriate indication and context of prescribing. (As a reminder, Manitoba has universal income-based medication coverage for pharmaceuticals, but the HCDP eliminates the family income-based deductible for OAAs and select non-OAA medications).

In the context of a public payer such as Manitoba Pharmacare or the HCDP, the range of professional fees charged in Manitoba for targeted OAAs was important to note. Although fee maximums can vary with private insurance, the majority of prescriptions in this study were covered through Pharmacare or the HCDP, which is also paid for by Manitoba Health. With no cap on professional fees during the study period, a small proportion of pharmacies charged over \$1,000 per prescription to dispense targeted OAAs. Outside of these relatively few cases, the markup was about 6% for traditional, 9% for hormonal, and 3% for targeted OAAs. A dispensing fee cap implemented in Manitoba in August 2017 will limit the maximum professional fee per prescription to \$30 [63].

Home Cancer Drug Plan Impact

The HCDP covered the cost of 190,847 deductible-free prescriptions from inception in 2012 to the end of 2015/16. The saw-toothed pattern of seasonal prescription filling for OAAs was eliminated after the implementation of the HCDP. While it makes sense that most patients would be diligent about filling their cancer therapy prescriptions at all times, the change in timing of prescription fill patterns we observed provides evidence that the program impacted how and when patients filled these prescriptions. We were not able to explore the impact of this change on OAA adherence, including primary non-adherence where patients have a prescription written but never filled, due to limitations of the administrative data. This analysis would require reconciliation between prescriptions in the CancerCare Manitoba Electronic Medical Record with the dispensations recorded in DPIN.

Limitations of Administrative Data

All data used in this report are derived from Manitobans' contacts with the healthcare system. The DPIN system contains records of prescriptions dispensed from outpatient dispensaries. Because not everybody who seeks medical attention and receives a prescription for a medication actually fills the prescription, our analyses may underestimate the number of prescriptions written for OAAs and non-OAA medications covered by the HCDP. Medication use not captured in the DPIN system may include physician samples, although the possibility is low for these types of medications. There are some systems of compassionate use or dispensing outside of DPIN system for OAAs; notable examples include thalidomide, which is dispensed through a pharmaceutical company, and oral fludarabine, which is not included in DPIN as it is dispensed through the CancerCare Manitoba pharmacy. The DPIN system does not contain records on Manitobans who are incarcerated or members of the RCMP; however, these individuals make up a very small proportion of the Manitoba population (<1%). It should be noted that approximately 25% of personal care homes in Manitoba do not fill prescriptions at community pharmacies, and are therefore also not included in the DPIN system.

We presented prevalence of OAA use as crude population rates to help standardize by population size, but we did not present age standardized rates to account for changing population demographics over the study period.

For several analyses, we used administrative data to determine medical diagnosis of cancer or other conditions. The use of administrative data may have caused us to underestimate the prevalence of a given condition in the population, because it requires a patient to seek contact with the healthcare system to receive a diagnosis. Some diagnoses may have been missed if a physician visits resulted in a single billing code that masked the diagnosis. There is also a small potential for underestimating or overestimating a given condition due to misclassification.

Conclusions and Policy Recommendations

The use of OAAs and the expenses associated with these medications has increased significantly over the years. We observed that the launch of the HCDP altered the prescription filling patterns of OAAs in Manitoba. Starting to fill an OAA prescription was associated with changing pharmacies for some Manitobans. In seeking to balance

convenient access to important medications with access to clinical expertise, policymakers could consider making an 'expert' pharmacist or pharmacy available for dispensing certain medications (e.g., targeted oral chemotherapy); this would ensure optimal pharmacist expertise and open prescriber/pharmacist/patient communication to monitor for safety and efficacy. This recommendation would need to be balanced with ensuring that patients in rural and remote areas, where an 'expert' pharmacist might not always be available, continue to have access to important medications.