# Chapter 35
# Heartland Regional Health Authority—Medication Management in Long-Term Care Facilities

## 1.0 Main Points

*The Regional Health Services Act* makes each Regional Health Authority (RHA) responsible for providing health care, which includes planning for safe and effective medication management to individuals residing in long-term care facilities. Medications play a vital role in the ongoing health and quality of life of residents of long-term care facilities. The right medication can improve residents' quality of life and health, while inappropriate medication can have a negative impact.

This chapter reports that Heartland Regional Health Authority (Heartland) did not have effective processes to manage medication plans for residents in its long-term care facilities.

Heartland needs to:

- Establish and implement comprehensive policies for medication plans, including enhanced planning for residents with complex medication needs
- Develop a regional approach for identifying trends and needs, and clearly communicate the approach
- Improve its documentation of the medication plans, and changes made to the plans
- Strengthen its processes for planning appropriate and effective medication use for residents
- Identify, track, and analyze information about the use of medication, medication errors, and complaints in its long-term care facilities

We encourage other regional health authorities to use the information in this chapter to assess their own processes for managing medication plans for residents in long-term care facilities.

## 2.0 Introduction

This chapter reports the results of our audit of the effectiveness of Heartland's processes to manage medication plans for residents in its long-term care facilities.

In Saskatchewan, RHAs are responsible under *The Regional Health Services Act* for the planning, organization, delivery, and evaluation of health services within their respective health regions.[1] Their responsibilities include providing health care to individuals residing in long-term care facilities. All healthcare facilities including long-term care facilities must comply with *The Health Care Directives and Substitute Health Care Decision Makers Act*

[1] www.qp.gov.sk.ca/documents/english/Statutes/Statutes/r8-2.pdf (12 May 2014).

(Decision Makers Act). The Decision Makers Act sets out who can make healthcare decisions and how, for a resident who is unable to make such decisions on their own.

Long-term care facilities (also called "special-care homes" or "nursing homes") provide a place of residence for individuals who require continuous health care when their needs can no longer be met in their own homes. These individuals require access to 24-hour care and supervision in a secure setting.

The Ministry of Health (Ministry) has established the *Program Guidelines for Special-care Homes*. These Guidelines include policies that RHAs must follow for the provision of long-term care services and guidelines for suggested practices. The Guidelines include specific policies related to planning and managing care for residents.[2]

Medications play a vital role in the ongoing health and quality of life for residents of long-term care facilities. Medication use amongst seniors, particularly those living in long-term care facilities, has been increasing because they often have complex health needs related to age and/or other medical conditions. At times, such complex conditions require multiple medications which create a higher risk of negative drug interactions or other adverse events. Planning for safe and effective medication management is critical for residents with complex health needs.

## 2.1 Background—Medication Management in Long-Term Care Facilities

A resident care plan records the individualized care plan for a resident. Development of the care plan includes consideration of a resident's physical, social, and emotional needs along with cultural and spiritual preferences. Physical needs include nutritional, hygiene, pharmaceutical (medication) needs, and consideration of the risks of wandering and falling. Staff use these care plans to guide how they provide care to each resident.

Developing the medication aspect of care plans for long-term care residents involves the coordination of multiple healthcare providers. Physicians decide which medications to prescribe based on an individual resident's needs. Pharmacists dispense medications and can provide advice on the identification and management of drug-related problems or potential problems (e.g., conflicts in medications). Registered and licensed practical nurses within facilities administer the medications, and they, along with other caregivers, monitor the resident's day-to-day health.

A key component in resident care planning is medication reviews. This is a regular qualitative and quantitative review of the resident's medication using a multi-disciplinary process. Such a process should involve long-term care facility staff, pharmacists, medical practitioners, and the resident or their designated decision maker.[3]

The Canadian Patient Safety Institute has identified emerging safety issues related to medication use in long-term care settings such as adverse medication events, inappropriate prescribing practices, and concerns when residents transfer between acute and long-term care. Challenges, such as leadership, staff turnover, staff skills and

[2] http://health.gov.sk.ca/adx/aspx/adxGetMedia.aspx?DocID=843ea94d-23bd-4a0a-8531-de690caccbe6&MediaID=7182&Filename=Program+guidelines+for+SCH+online+version+apr+2013.pdf&l=English (8 May 2014).
[3] www.macoalition.org/Initiatives/docs/safe_medication_practices_wkbk-2008.pdf (12 June 2014).

training, and increasing complexity of resident health, impact the safety of residents. The Institute's 2008 study[4] identified the need to ensure that:

- Appropriate medications are prescribed for residents
- Effective medication reviews are in place
- Accurate communication of instructions on medication occurs
- Provision of the right medications to the right resident occurs

Most long-term care residents are seniors. A 2012 national study by the Canadian Institute for Health Information[5] identified that more than 60% of seniors (people age 65 and older) in long-term care facilities were using 10 or more different drug classes. This was more than double that of seniors not in long-term care (26.1%). However, the number of medications was not the only concern identified in the study. The extent of use of psychotropic[6] drugs was much higher in long-term care facilities. For example, compared to seniors living at home, benzodiazepine usage was twice as much amongst residents of long-term care homes, antidepressant usage was three times as much, and anti-psychotics usage was nine times as much. Most psychotropic drugs are listed as potentially inappropriate medications.

Accepted best practice in geriatric care has identified many potentially inappropriate medications which could have adverse effects on older people (older than 75 years) and for which better alternative medications are available. These potentially inappropriate medications are identified on several lists: Beers List,[7] ISMP list,[8] and the START/STOPP criteria.[9] In its guidelines for medication management for seniors, the Ministry recognizes these lists as appropriate standards of care. The Ministry also recognizes that seniors on 13 or more medications are also at greater risk of adverse drug reactions.

Also, the prevalence of dementia has increased over time as the population ages. In some cases, medication is required. Many of these medications (i.e., anti-psychotics) are sedatives. The rate of psychotropic drug use in long-term care facilities is a concern because it is generally known that all anti-psychotic drugs are related to increased morbidity and mortality (i.e., increases the risk of stroke and transient ischemic attacks [mini-strokes]) and/or confusion in individuals with dementia.[10]

Medication use in long-term care facilities impacts residents' overall health and quality of life. The right medication can improve their quality of life and health, while inappropriate medication can have a negative impact. Medication is an important part of health care. It is critical that residents are safe, but also that costs are managed. Seniors account for only 15% of the Canadian population, but are estimated to account for 40% of all spending on prescribed drugs and 60% of public drug program spending.[11]

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[4] www.patientsafetyinstitute.ca/English/research/commissionedResearch/SafetyinLongTermCareSettings/Documents/Reports/LTC%20paper%20-%20Safety%20in%20LTC%20Settings%20-%202008.pdf (10 May 2014).
[5] https://secure.cihi.ca/free_products/Drug_Use_in_Seniors_on_Public_Drug_Programs_2012_EN_web.pdf (10 May 2014).
[6] Psychotropic drugs refers to psychiatric medicines that alter the chemical levels in the brain that impact mood and behaviour. For example, benzodiazepine is a common anti-anxiety medication.
[7] AGS Beers Criteria for Potentially Inappropriate Medication Use in Older Adults 2012.
[8] ISMP (Institute for Safe Medical Practices) List of High-Alert Medications in Community/Ambulatory Healthcare and ISMP Drug-Drug Interactions in the Geriatric Population.
[9] START/STOPPing Medications in the Elderly-Pharmacist's Letter 2011.
[10] www.bccare.ca/wp-content/.../Anti-Psychotics-Guide-hr-06-05-13.pdf (14 May 2014).
[11] www.patientsafetyinstitute.ca/English/research/commissionedResearch/SafetyinLongTermCareSettings/Documents/Reports/LTC%20paper%20-%20Safety%20in%20LTC%20Settings%20-%202008.pdf (10 May 2014).

## 2.2 Background—Heartland Regional Health Authority

Heartland has 483 long-term care beds in 14 facilities located across the region (see **Figure 1**). It is not readily determinable how much Heartland spends annually to deliver long-term care services (e.g., accommodation, nursing, administrative services) as it does not separate expenses for inpatient and resident services. The Ministry may reimburse doctors directly through its fee-for-service program or Heartland may contract a physician's services. Residents and/or the Ministry pay pharmacists for prescriptions depending on the resident's eligibility for a subsidy.

**Figure 1—Heartland Long-Term Care Facilities**

| Facility | Long-Term Care Beds |
|---|---|
| Kindersley and District Health Centre | 77 |
| Davidson and District Health Centre | 30 |
| Kerrobert Health Centre | 30 |
| Outlook and District Health Centre | 42 |
| Unity and District Health Centre | 32 |
| Dinsmore Health Centre | 18 |
| Elrose Health Centre | 30 |
| Eston Health Centre | 31 |
| Kyle Health Centre | 17 |
| Lucky Lake Health Centre | 17 |
| Wilke Health Centre | 29 |
| Biggar Diamond Lodge | 54 |
| Rosetown and District Health Centre/Rosetown Rose Villa | 54 |
| Macklin St. Joseph's Health Centre (affiliate) | 22 |
| **Total** | **483** |

Source: Heartland Health Region management.

Heartland includes towns and communities that also serve the surrounding rural areas. Heartland recognizes that low population densities may create challenges in relation to access to healthcare services.[12] For example, the availability of medical professionals to take part in a multi-disciplinary review process in the dispersed communities within its region may create challenges related to developing and maintaining medication plans for long-term care residents.

Ineffective processes for developing and maintaining medication plans for long-term care residents could result in health and safety concerns including potential adverse events such as drug complications, over-medication, and fatalities.

[12] www.hrha.sk.ca/documents/2012-13AnnualReportfinalJuly2_000.pdf (12 May 2014).

## 3.0 Audit Objective, Scope, Criteria, and Conclusion

The objective of this audit was to assess if Heartland Regional Health Authority (Heartland) had effective processes to manage medication plans for residents in its long-term care facilities for the period of September 1, 2013 to August 31, 2014.

The audit did not question or assess medical decisions and did not include the examination of medication plan processes at Heartland's acute care facilities or for its home-care clients.

To conduct this audit, we followed the standards for assurance engagements published in the *CPA Canada Handbook – Assurance*. To evaluate Heartland's processes, we used criteria based on our related work, reviews of literature including reports of other auditors, and consultations with management. Heartland's management agreed with the criteria (see **Figure 2**).

We examined Heartland's policies, procedures, reports, and other relevant documents that relate to managing medication plans for long-term care residents. We also visited various long-term care facilities, interviewed numerous long-term care staff, and tested a sample of resident medication plans.

**Figure 2—Audit Criteria**

Effective processes to manage medication plans for long-term care residents include processes to:

1. **Establish direction to manage medication planning for residents**
   - 1.1 Align regional policies for resident medication planning with provincial guidelines
   - 1.2 Identify trends, needs and issues on long-term care medication use
   - 1.3 Develop a regional approach for use of medication (e.g., strategy, policy, and targets)
   - 1.4 Communicate approach (e.g., to new and existing residents, family, and healthcare professionals)
   - 1.5 Provide educational program for staff to develop and deliver medication plans
2. **Develop medication plan as part of the overall care plan for each resident (resident care plan)**
   - 2.1 Involve appropriate parties in plan (e.g., resident, family, and multi-disciplinary team)
   - 2.2 Use a standardized process for planning
   - 2.3 Create and document individual medication plans in a timely manner
   - 2.4 Enhance planning process for residents with complex medication needs (e.g., involve multi-disciplinary team when residents have a high risk of adverse reactions, are on psychotropic medications, and/or a high number of medications)
   - 2.5 Obtain appropriate approvals and consent for individual medication plans
3. **Deliver resident medication plans as part of the overall resident care plans**
   - 3.1 Administer approved medication based on medication orders and standard procedures
   - 3.2 Document medication-related activities in each resident's medication plan (e.g., what, when, and by whom medications were administered)
   - 3.3 Monitor residents, with enhanced monitoring practices for residents assessed with a high risk for medication complications
   - 3.4 Review and adjust medication periodically in accordance with assessed level of risk and changes in condition
   - 3.5 Obtain informed consent from residents or their designated decision-makers on changes to the medication plan
   - 3.6 Coordinate with other health service providers on resident's medication plans (e.g., with acute care, home care, and other health services upon admission, transfer or discharge)
4. **Assess regional approach for use of medication for residents**
   - 4.1 Track prevalence of use of medications, medication errors, and complaints
   - 4.2 Report medication errors and complaints to appropriate parties
   - 4.3 Collect and analyze information to improve medication plans for residents
   - 4.4 Collect and analyze information to improve regional strategies and policies

**We concluded that Heartland Regional Health Authority did not have effective processes to manage medication plans for residents in its long-term care facilities for the period of September 1, 2013 to August 31, 2014.**

**We found Heartland needs to establish and implement comprehensive policies for medication plans, including enhanced planning for residents with complex medication needs. It needs to develop a regional approach for identifying trends and needs, and clearly communicate the approach. Heartland also needs to improve its documentation of the medication plans, and changes made to the plans. In addition, to strengthen its processes for planning appropriate and effective medication use for residents, Heartland needs to identify, track, and analyze information about the use of medication, medication errors, and complaints in its long-term care facilities.**

## 4.0 Key Findings and Recommendations

In this section, we describe our key findings and recommendations related to the audit criteria in **Figure 2.**

## 4.1 More Direction for Medication Planning Needed

### 4.1.1 Policies Need Alignment and Updating

*We expected Heartland to align its policies for medication management in its long-term care facilities with the guidelines established by the Ministry of Health. Documented policies and procedures help agencies meet their objectives and provide appropriate, consistent guidance to staff to carry out their tasks.*

The Ministry has established Program Guidelines for medication management in long-term care facilities. These guidelines include expectations and requirements for the management of medication.

We found that Heartland had some medication management policies that aligned with the Ministry's guidelines. For example, it has a policy which describes the Beers List for potentially inappropriate medications in older adults. The policy states that "avoiding the use of inappropriate and high-risk drugs is an important, simple, and effective strategy in reducing medication-related problems and adverse drug events in older adults." It also acknowledges that the policy does not "supersede clinical judgment or an individual resident's values and needs. Prescribing medication and managing disease conditions should be individualized and involve shared decision-making" as required under the Decision Makers Act. The policy does not address the ISMP list or STOPP/START criteria (also endorsed by the Ministry). Also, as we note in **Section 4.1.2**, the residents' files that we tested showed that all residents received one or more potentially inappropriate medications and 66.7% of the files indicated that the residents received three or more potentially inappropriate medications.

Heartland's policies were not comprehensive. For example, it did not have policies requiring complete medication plans and what should be included in those plans, multi-

disciplinary reviews of medication, nor staff training requirements on medication administration and monitoring.

Heartland did not consistently review and update its policies. The Ministry revised its guidelines in 2013 and Heartland's accreditation report, received in July 2013, recommended some improvements to medication management in its long-term care facilities. However, we found that Heartland had not reviewed or updated most of its policies since 2011.

The lack of policies or out-of-date policies increases the risk of discomfort and harm to residents of long-term care facilities.

1. **We recommend that Heartland Regional Health Authority have comprehensive policies for medication management that are aligned with the Ministry of Health's guidelines for its long-term care facilities.**

### 4.1.2 Need to Identify Trends, Needs, and Issues

*We expected Heartland to have a process to identify trends, needs, and issues on long-term care medication use.*

Heartland does not have a process to identify trends, needs, or issues related to medication use in its long-term care facilities. It reports information on various resident indicators (e.g., health condition, cognitive problems, disease diagnosis) quarterly to the Ministry. Heartland does not verify the accuracy or completeness of the reported information. We noted that Heartland did not accurately or completely record use of anti-psychotics in its tracking system for 28% of the files we tested.

The Ministry uses this information to report on six quality indicators, one of which is relevant to medication use – the use of anti-psychotics without a diagnosis of a psychosis. The Ministry sends an analysis back to Heartland which identifies how such use in each facility compares with the regional, provincial, and national averages.

Heartland did not collect any other information regularly to help identify medication-related trends, needs or issues in the region. For example, management could not tell us how many residents in long-term care received potentially inappropriate medications, how many non-critical medication errors occurred, or the frequency of its medication reviews.

Our examination of residents' files showed that:

- All residents in our sample received one or more potentially inappropriate medications, with two-thirds receiving three or more potentially inappropriate medications
- 58% of the residents in our sample received 13 or more daily medications
- All residents in our sample diagnosed with dementia received one or more anti-psychotic drugs, which were sedative in nature

- 27% of the residents in our sample received concurrent duplicate medications

These findings are indicative of a lower than acceptable standard of care for the seniors in Heartland's long-term care facilities.

Heartland needs to regularly collect and analyze trends, needs, and issues related to medication usage in its long-term care facilities. Without such information, Heartland risks not being able to work effectively with healthcare providers to ensure medication regimes used in its long-term care facilities for its residents are appropriate.

**2. We recommend that Heartland Regional Health Authority establish a process to identify trends, needs, and issues related to medication management in its long-term care facilities.**

### 4.1.3 Need to Develop a Regional Approach for Use of Medication (e.g., Strategy, Policy, and Targets)

*We expected Heartland to have a regional approach for the use of medication in its long-term care facilities.*

Heartland has a philosophy for resident and family-centred care to focus on the value of the individual and preserve quality of life. However, Heartland did not have a strategy for medication use in long-term care facilities. Without a clear strategy, employees may not know what Heartland expects to achieve and how.

Also, as we note in **Section 4.1.2**, Heartland does not have comprehensive and current policies for medication management. It has not established any targets related to medication use. For example, it could set targets for reducing the use of anti-psychotics for residents with dementia, reducing the number of potentially inappropriate medications administered, or reducing the number of medication errors.

However, without an approved regional approach for use of medication in long-term care, it is difficult for management to set goals and targets for appropriate use.

**3. We recommend that Heartland Regional Health Authority develop a regional approach for the use of medication in its long-term care facilities.**

### 4.1.4 Need to Communicate Approach

*We expected Heartland to communicate its approach to medication management to residents and their families, and to healthcare professionals (both staff and healthcare providers, e.g., doctors and pharmacists).*

Heartland has a *Client – Family Information Handbook*. The Handbook includes some information about medication (i.e., pharmacy used by the facility, storage of medication,

payment for medication) as well as some information about the use of chemical restraints and its "least-restraint" policy. However, the Handbook does not describe how or to whom complaints may be made (see **Section 4.4.1** for further detail).

Heartland's least-restraint policy recognizes that sometimes residents need some form of restraint to protect themselves, other residents, or staff from injury due to falls, aggressive behaviour, or wandering. Restraints may be environmental (e.g., locked doors), physical (e.g., belts or straps) or chemical (e.g., anti-psychotic medication). Heartland is required to report to the Ministry the use of physical restraints. However, the Ministry does not require the reporting of chemical restraints.

The least-restraint policy requires staff to exhaust all alternatives and interventions before using restraints, and that restraints be used for the shortest time possible. Chemical restraints are defined by the policy as drugs which:

> *Intentionally inhibit a particular behaviour or movement (College of Nurses of Ontario, 2009). It would also apply when a medication is used to control a person's behaviour when there isn't a diagnosis that is an approved indication for use of the medication or when the dose prescribed is over the recommended dosage.*

Under the established policy, staff must conduct a behaviour assessment to determine the appropriateness of a contemplated chemical restraint. In our testing of residents' files that required behaviour assessments, we found that only 24% had evidence that such an assessment took place. Also, the least-restraint policy requires informed, written consent for the use of restraints by either the client or designated decision maker.[13] For the files we tested, there was no evidence that written consent had been obtained prior to implementing chemical restraints. This deviation from the policy could be due to a lack of communication around Heartland's least-restraint policy, lack of staff training, or lack of necessary supervision.

As a condition of their hospital privileges, physicians agree to abide by Heartland's bylaws, rules, regulations, policies, and procedures. While Heartland has a policy to avoid or limit the use of medications on the "Beers List", given the findings reported in **Section 4.1.1**, it seems unlikely that Heartland is working with service providers (e.g., physicians, nurses) to encourage compliance with its policies.

**4. We recommend that Heartland Regional Health Authority clearly communicate its approach for medication use to long-term care residents and their families, staff, and healthcare providers.**

### 4.1.5 Training Needed

*We expected Heartland to provide an educational program for staff to develop and deliver medication plans.*

[13] A Designated Decision Maker is a proxy, nearest relative/or personal guardian as defined in the provisions of *The Health Care Directives and Substitute Health Care Decision Makers Act.*

Management indicated that staff receive some medication-related training when hired to work in Heartland's long-term care facilities. Also, Heartland has delivered training for alternative treatments for residents with dementia to staff in about half of the long-term care facilities in the region and expects to train the remainder this year. Also, as part of their professional practice, nurses are expected to maintain ongoing professional development. However, the nurses we interviewed stated that any education on medication was done on their own time. The clinical educators employed by Heartland stated they did not specifically address medications or potential adverse reactions as part of the region's educational plan.

Because of the complexity of medication management, providing appropriate training on medication management could help staff identify residents who may be at high risk of adverse medication interactions. This would also help determine the monitoring that the resident should receive.

**5. We recommend that Heartland Regional Health Authority implement an educational program for staff who develop and deliver medication plans in its long-term care facilities.**

## 4.2 Better Development of Medication Plans Needed

### 4.2.1 Appropriate Parties Should be Involved

*We expected Heartland to involve appropriate parties in medication plans (e.g. resident, family, and multi-disciplinary team).*

Heartland has a consistent process for developing medication plans. When a resident is admitted into a long-term care facility, a medication reconciliation is prepared. This involves obtaining, from the provincial pharmacy system, a list of the resident's medications and discussing it with the resident or designated decision maker to ensure the list is current. The physician and/or nurse reconciles the list for any discrepancies and ensures the discrepancies are resolved to confirm the list is appropriate. The reconciled list then becomes the medication plan and is approved by the physician.

Some facilities use a computer system, while others have manual documentation. We noted from our testing of newly-admitted residents' files, there was evidence that physicians and nurses acknowledged the appropriateness of the medication plans. However, we found no evidence that a pharmacist had also reviewed the plans.

The Ministry's guidelines recommend that "a process be established to ensure availability of a pharmacist(s) to support the drug management program." Management indicated that staff sent the prepared medication plans to the facility's pharmacist but did not require the pharmacist to formally agree to the plan. Management also indicated that most pharmacists simply use the medication plan as their authority to dispense the drugs.

Because of the complexity of medication administration and the number of residents that are on potentially inappropriate medications, anti-psychotics and/or more than 13

medications, involving a pharmacist in preparing medication plans for residents would be a useful addition to help determine the appropriateness of the plans.

6. **We recommend that Heartland Regional Health Authority use a multi-disciplinary approach (e.g., physicians, nurses, pharmacists) for finalizing medication plans for long-term care residents.**

### 4.2.2 Need to Use a Standardized Process for Planning

*We expected Heartland to use a standardized process for planning for medication use.*

As described previously, various facilities in the region have similar processes for medication planning. However, none of the documentation of the medication plans we examined for residents admitted during the audit period had all of the critical information we considered necessary.

For example, while the medication, dosage and frequency were documented in some form, the method for dispensing (e.g., crush, mix with food) was not always documented. Some medications, to improve their efficacy (e.g., osteoporosis, thyroid), should not be taken with food, other medications, or multivitamins; other medications should be taken with food to reduce possible adverse side effects. We did not find evidence of this information documented in the plans.

Heartland has no requirement to document high-risk medication regimes (as defined by the Ministry's guidelines and best practice), nor to flag residents at greater risk of adverse drug events. We noted from our testing that only two files indicated that medications were on the Beers List. If this type of information is not recorded in the plan, nursing staff may not always know critical information.

Without a standardized process to document medication plans including risks and dispensing methods, Heartland cannot ensure that planning is done consistently and appropriately throughout the region.

7. **We recommend that Heartland Regional Health Authority establish standardized documentation requirements for medication plans of its long-term care residents.**

### 4.2.3 Need to Create and Document Medication Plans in a Timely Manner

*We expected Heartland to create and document individual medication plans in a timely manner.*

The Ministry's guidelines suggest that care plans be developed within 14 days of admission. While Heartland's policies do not address the time frame for developing care plans, it does have a policy that the medication reconciliation be completed within 24

hours of admission. As described in **Section 4.2.1**, the medication reconciliation is designed to generate an accurate list of medications at the time of admission or discharge.

We noted that 28% of the care plans we examined for residents admitted during the audit period had either not been created within 14 days of admission, or were incomplete. We also noted that 93% of medication reconciliations were done on admission.

As noted in **Section 4.1.1**, Heartland does not have a policy requiring complete medication plans and what must be included in those plans.

### 4.2.4 Need an Enhanced Planning Process for Residents with Complex Medication Needs

*We expected Heartland to have an enhanced planning process for residents with complex medication needs (e.g., involve a multi-disciplinary team when residents have a high risk of adverse reactions, are on psychotropic medications and/or a high number of medications).*

As described in **Section 4.2.2**, Heartland does not routinely document high-risk medication regimes, nor flag residents at high risk of adverse drug reactions. Only two of the plans that we tested indicated that medications were on the Beers List. The plans did not include any discussion of potential alternatives to prescribed medications (either behavioural interventions or substituting other less-potentially harmful drugs), alerts for possible adverse effects of the medications, or any enhanced monitoring.

Also, Heartland has many assessment tools that it should use in the planning process for both overall care and, more specifically, medication needs. For example, pain assessments and behaviour assessments can result in confirmation of a medication plan or a change in a medication plan. We found that for the resident files that we tested, only about half had documented pain assessments, and only 15% of those residents who required a behaviour assessment actually had one completed.

Frequently, residents with dementia have inappropriate or negative behaviours including aggression towards other residents and/or staff, and the risk of wandering. However, according to best practices, many non-medication interventions should be tried before chemical restraints are prescribed.

While we noted from our testing that most residents had complex medication needs, there was no evidence of enhanced planning for those complex needs. Behaviour assessments would indicate which interventions to attempt, what success was achieved, and next steps before chemical restraints are used.

**8. We recommend that Heartland Regional Health Authority develop a policy for enhanced planning for long-term care residents with complex medication needs, including the use of appropriate assessment tools.**

### 4.2.5 Appropriate Approvals and Informed Consent for Medication Plans Needed

*We expected Heartland to obtain appropriate approvals and consent for individual medication plans.*

Heartland's policies require approval by a physician for any medications administered. Physicians are required to sign the medication reconciliations on admission, and must also sign any changes to or discontinuation of medications.

While we acknowledge that physicians have the primary responsibility for medication decisions, Heartland has a role too. It must know whether the resident or designated decision maker is kept informed of any high-alert medications in the plan, and of potential alternatives available. Residents or their designated decision makers need this information so they can make informed choices regarding treatment in consultation with the physician.

**9. We recommend that Heartland Regional Health Authority require that all appropriate approvals and informed consent for residents' medication plans are received from the long-term care residents or designated decision makers.**

## 4.3 Better Delivery of Medications Needed

### 4.3.1 Administering Medications Needs Improvement

*We expected Heartland to administer approved medication based on medication orders and standard procedures.*

Heartland's processes that staff are expected to follow for administering medication were reasonable. We examined a sample of files for residents receiving services during our audit period and found that medication plans existed and were approved by a physician. Physicians' orders consistently showed evidence of nurses' review. Management stated that only nursing staff administer medication (except in limited circumstances, a care aide may receive a formal delegation to administer certain drugs). However, as noted in **Section 4.4.1**, a number of medication errors were reported, and staff indicated that more medication errors occurred but were not reported.

Errors in administering medications increase the risk of adverse health outcomes for residents. Not reporting all medication errors reduces the ability of Heartland to systematically examine why such errors occur and improve processes to reduce medication errors.

We recommend in **Section 4.4.1** that Heartland track all medication errors and analyze causes of errors to improve its processes in the future.

### 4.3.2 Better Documentation Required

*We expected Heartland to document medication-related activities in each resident's medication plan (e.g., what, when and by whom medications were administered).*

Heartland's Nursing Information Systems Saskatchewan (NISS) Charting System policy requires that health records be maintained:

- Clinically, to collect, maintain and communicate health information in the care and treatment of clients
- Legally, to demonstrate that care providers have met accepted standards in the provision of reasonable treatment of clients

Heartland uses a Medication Administration Record (MAR) as its health record for medication administration to individual residents in long-term care facilities. MAR lists the medications to be given and the frequency (e.g., three times daily). The chart provides space for a nurse to sign for each and every drug administered and time administered. If a drug is not administered for a specific reason, it must also be noted on the chart.

We found that only one-third of the monthly MAR's that we examined were complete and signed by the relevant nurses. In most cases, some days in the month did not have any nurses' sign offs. There was no explanation detailing why the daily medication for those days was either not administered or not signed off as administered.

Also, nursing staff indicated that they found the electronic MAR used in two facilities to be inefficient (other facilities used paper MARs). However, regardless of whether the MAR was electronic or paper, we found all facilities had poor charting records. Without complete and accurate records, the risk of medication errors that could potentially harm the long-term care resident is increased.

**10. We recommend that Heartland Regional Health Authority follow its policy for documenting, in the long-term care residents' medical records, all the medication-related activities.**

### 4.3.3 Better Monitoring Needed

*We expected Heartland to monitor all residents and to have enhanced monitoring practices for residents assessed with a high risk for medication complications. NISS recognizes that "nursing notes" are an appropriate way to both document care for and condition of residents and to communicate with other staff.*

We examined nursing notes and found some evidence of monitoring for medication reactions. For example, some files that we examined indicated that residents were monitored for a couple of weeks to ensure they were stable after a medication change.

However, there was no evidence in any of the files that we examined that enhanced monitoring was done for any of the residents. Nor was there any identification if the resident was at high-risk of medication complications.

In **Section 4.2.4**, we recommend that Heartland develop a policy for enhanced planning for residents with complex medication needs, including the use of appropriate assessment tools. With such a policy, Heartland could enhance its monitoring practices for residents with high risk medication regimes.

### 4.3.4 Review and Adjustment of Medication Plans Need Improvement

*We expected Heartland to require regular review of medication plans and adjust medication periodically in accordance with assessed level of risk and changes in condition.*

The Ministry's guidelines require "a multi-disciplinary review process be conducted quarterly or when the resident's circumstances indicate a need for review." The guidelines contain the suggested process for such reviews including what should be reviewed, when it should occur, who should be involved, and how such reviews should be conducted. The purpose of the reviews is to ensure:

> *Medication prescribed is appropriate for the resident's needs/diagnosis, effective, and any required monitoring is being carried out. The reviews should also consider drug interactions, side effects, compliance, concordance, duplication, non-prescription medications, herbal/ complementary medicines and any unmet medical needs for medications.*

As noted in **Section 4.1.1**, Heartland does not have a corresponding policy for quarterly reviews of medication plans. Even though there is no regional policy requiring such reviews, we noted that Heartland did some medication reviews. However, 61% of residents' files that we examined did not have evidence of any such quarterly reviews. We noted that two long-term care facilities in the region did regular quarterly reviews.

Also, for most files that we tested, there was no evidence residents and/or their family or a pharmacist was involved in the review. Of the files we examined, there was no indication of pharmacist involvement in 90% of the files, or involvement and consent of the resident or designated decision maker to medication changes in 73% of the files.

Without regular review done by a multi-disciplinary team, Heartland cannot ensure that the medication plans continue to be appropriate and effective.

In **Section 4.1.1**, we recommend that Heartland align its medication management policies with the Ministry's guidelines. Such a policy would include a requirement for medication reviews.

Changes to required medications can occur as a result of changes in a resident's condition, such as increased pain or negative behaviours. Heartland has policies and procedures to assess both pain and behaviour. Its policies require that such assessments be done at least quarterly or when a change in a resident's condition requires.

For example, the pain management policy requires that "if scheduled pain medication does not relieve pain, a record must be kept to ensure that those with identified pain are monitored and that pain is brought under control." The least-restraints policy requires behaviour mapping to start immediately if a chemical restraint is being considered. Ideally, behaviour mapping would occur for at least seven days before a change in medication is considered. The policy requires that the NISS Behaviour Mapping form be used for this purpose and become part of the resident's chart. It also requires that other options to change behaviour be exhausted before utilizing chemical restraints.

71% of the resident files that we examined did not have evidence of quarterly pain assessments. We did note that two facilities did all pain assessments as required. 85% of the resident files that required behaviour assessments did not have evidence of behaviour assessments. Of those where a behaviour assessment took place, 50% did not indicate that other options were explored.

By not completing all the required assessments, long-term care residents may be at risk of receiving inappropriate medications that could impact the quality of life for the resident.

**11. We recommend that Heartland Regional Health Authority follow its established policies and procedures for medication changes for its long-term care residents.**

### 4.3.5 Informed Consent Needed

*We expected Heartland to obtain informed consent from residents or their authorized decision makers on changes to the medication plan.*

Heartland has no specific policy regarding consent for changes in treatment. When a resident is admitted to a long-term care facility, the resident or designated decision maker is required to consent to treatment. Other than its least-restraint policy, Heartland does not have any policy requiring consent for changes in treatment, including changes in medication.

In some of Heartland's long-term care facilities, staff indicated they discussed changes in medication with residents and families, but they could not provide us any evidence of formal consent. Residents or their designated decision makers should be made aware of changes in medication, especially if newly-prescribed medications are potentially inappropriate, or if the medication regime is complex.

**12. We recommend that Heartland Regional Health Authority implement a policy requiring informed written consent from long-term care residents or their designated decision makers for changes in high-risk medication.**

Heartland's least-restraint policy requires that a resident or designated decision maker give informed, written consent prior to any form of restraint application, including the

use of chemical restraint. Nurses are responsible for ensuring that clients and/or the designated decision maker have received information on the implications and possible risks of using restraints.

For the resident files that we examined, only 27% included notes that the resident or designated decision maker was consulted and informed of medication changes. Also, only one file we examined had evidence (i.e., a signed consent form) indicating that the residents' designated decision maker agreed to the prescribed chemical restraint.

Informed, written consent is important as unnecessary restraints affect the dignity of the long-term care residents, as well as their quality of life.

**13. We recommend that Heartland Regional Health Authority follow its policy to obtain informed written consent from long-term care residents or their designated decision makers before using medication as a restraint.**

### 4.3.6 Information Provided on Transfer Needs Improvement

*We expected Heartland to coordinate with other health service providers on resident medication plans (e.g., with acute care, home care, and other health services upon admission, transfer, or discharge).*

Heartland's long-term care facilities admit residents directly from their homes, on discharge from an acute facility, or on transfer from another long-term care facility. When admitted from acute care or other long-term care facilities, transfer forms are used to relay pertinent information. However, 23% of the files that we examined for transfers of residents from acute care or other long-term care facilities did not have transfer forms. For residents sampled who were admitted directly from their homes, there was no evidence in their files that Heartland's Home Care Services had been contacted or information shared.

Our sample did not include any residents who were transferred to acute care or discharged home.

Information sharing can reduce duplication of work, and can help ensure accurate and complete information about a resident is known in order to provide appropriate services.

**14. We recommend that Heartland Regional Health Authority consistently collect and document transfer information for residents transferred to its long-term care facilities.**

## 4.4 Assessment of Regional Approach for Medication Use Needed

### 4.4.1 Need to Track and Report Information

*We expected Heartland to track information on the prevalence of use of medications, medication errors, and complaints. We expected Heartland to report medication errors and complaints to appropriate parties.*

**Prevalence of Use of Medications**

As described in **Section 4.1.2**, Heartland is required to report, each quarter, information on various resident indicators to the Ministry. The reported information includes which types of medications (e.g., anti-depressant, anti-anxiety, analgesic, etc.) each resident is taking. Other than the anti-psychotic medications the Ministry tracks, Heartland does not track any other information on the prevalence of the use of medications.

Tracking other prevalence-related statistics would help Heartland identify trends, needs, and issues in medication use in the region and allow it to work with healthcare providers to ensure medications are appropriate.

**Prevalence of Medication Errors**

Heartland has a policy and process for tracking incidents, including specific procedures for incidents involving medication errors. It requires staff to complete incident reports and forward them to Care Team Managers and Heartland's Quality Improvement and Safety Department (Quality Department). Heartland uses the incident reports and subsequent incident investigation reports to improve processes, increase training, and reduce future errors.

Staff indicated that certain facilities always complete incident reports; others seldom do. When asked, some facilities could not provide copies of any incident reports related to medication errors during the audit period. However, when we interviewed staff, they mentioned many examples of medication errors they had observed, such as medication administered to the wrong person, at the wrong time, and/or in the wrong dose, by the wrong route.

While we noted that staff recorded some medication errors on incident reports, the incident reports did not indicate who was informed about these errors and how. For example, one incident report indicated that the resident's physician was notified of the medication error, but did not indicate if the resident's family was also informed. Some incident reports indicated what actions were proposed to avoid such errors in the future, but not all. Heartland does not have a process to ensure it communicates medication errors to the resident or designated decision maker and the physician, nor does it identify actions to reduce future errors.

**15. We recommend that Heartland Regional Health Authority track for analysis and reporting, all information on the prevalence of medication use and medication errors in its long-term care facilities.**

**Prevalence of Complaints in Long-Term Care**

Heartland has an established complaint process for long-term care. However, Heartland's *Client – Family Information Handbook* does not describe how or to whom complaints may be made. Minor complaints may be resolved at the service delivery level. Moderate to serious complaints are required to be reported to the Quality Department. Management indicated that complaints are usually received verbally or through the mail. These are given to the Care Team managers to address and resolve. The Quality Department can also receive complaints directly.

However, Heartland is not following its established policy. Management indicated that any complaint, including moderate to serious, may be resolved at the service delivery level and therefore not reported to the Quality Department. During the audit period, the Quality Department did not receive any complaints related to long-term care. This could be the result of Heartland not following its established policy to report moderate to serious complaints to the Quality Department.

Tracking moderate to serious complaints would help Heartland identify issues in medication management. This would allow it to make informed decisions about improved service delivery to residents and/or any staff training needs.

**16. We recommend that Heartland Regional Health Authority follow its policy to have staff report moderate to serious complaints relating to long-term care to the Quality Improvement and Safety Department.**

**Incident Reporting**

Staff send incident reports to Heartland's Quality Department. The Quality Department tracks incidents and reports facility statistics to the care teams of each facility. Also, each quarter, it reports incident information to the facility directors and the Vice-President of Quality and Risk Management. The Board receives quarterly reports on falls and medication errors for the region as a whole. However, as noted previously, because medication errors are not always recorded on incident reports, the reports are not complete.

The Ministry requires RHAs to report all critical incidents to the Ministry.[14] Heartland did not report any critical incidents related to medication errors in long-term care facilities to the Ministry in the audit period.

## 4.4.2 Need to Collect and Analyze Information at the Resident Level

*We expected Heartland to collect and analyze information to improve medication plans for residents.*

[14] *Saskatchewan Critical Incident Reporting Guideline, 2004*: Critical Incident related to medication errors is defined as "Patient death or serious disability associated with a medication or fluid error including, but not limited to, errors involving the wrong drug, the wrong dose, the wrong patient, the wrong time, the wrong rate, the wrong preparation, or the wrong route of administration *(Excludes reasonable differences in clinical judgment on drug selection and dose.)"*

Heartland does not collect or analyze any information to improve medication plans for residents. For example, Heartland could collect information about:

- How many residents receive regular quarterly medication reviews by multi-disciplinary teams
- The number and frequency of pain assessments done
- The number of behaviour assessments done prior to implementing restraints

Information such as this could help Heartland improve its processes to plan for appropriate and effective medication use for residents.

**17. We recommend that Heartland Regional Health Authority collect and analyze information to improve medication plans for long-term care residents.**

### 4.4.3 Need to Collect and Analyze Information at the Regional Level

*We expected Heartland to collect and analyze information to improve regional strategies and policies.*

Heartland does not collect or analyze any information on medication use in long-term care other than what is required by the Ministry. The Ministry analyzes the number of residents who are administered anti-psychotics without a diagnosis of a psychosis. Each facility that reports statistics higher than the national average must provide an action plan to reduce the use of anti-psychotics in its facility.

We noted that Heartland has a philosophy for client and family-centred care, but it does not define what that means in terms of medication practices in the region. For example, as described in **Section 4.1.1**, Heartland has a policy to avoid, when possible, the use of potentially inappropriate medications, specifically those on the Beers List. However, Heartland did not collect or analyze information about the prevalence of potentially inappropriate medications administered, or if alternative treatments had been considered. We found that 100% of residents we sampled received at least one potentially inappropriate medication, with two-thirds receiving three or more potentially inappropriate medications. As described in **Section 2.1**, anti-psychotics are contraindicated for people with dementia, but we found that 100% of the files of residents with dementia that we sampled received anti-psychotic medications.

We do not know if Heartland supports these practices as it has not clearly set out its expectations.

We recommend in **Section 4.1.3** that Heartland develop a regional approach for the use of medication in its long-term care facilities. With such an approach, Heartland could determine what information it must collect and analyze to ensure its objectives for medication use are achieved.

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