

Chapter 3

Section 3.01

Immunization

Standing Committee on Public Accounts Follow-Up on Section 1.04, 2016 Annual Report

On November 22, 2017, the Standing Committee on Public Accounts (Committee) held a public hearing on our 2014 audit of Immunization. The Committee tabled a report on this hearing in the Legislature in April 2018. The full report can be found at www.auditor.on.ca/en/content/standingcommittee/standingcommittee.html.

The Committee made 14 recommendations and asked the Ministry of Health, previously known

as the Ministry of Health and Long-Term Care (Ministry), to report back by August 2018, which the Ministry did. A number of the issues raised by the Committee were similar to the audit observations of our 2014 audit, which we followed up on in 2016. The status of each of the Committee's recommended actions is shown in **Figure 1**.

Between the time of the Committee's recommendations in April 2018 and our follow-up, the

Figure 1: Summary Status of Actions Recommended in April 2018 Committee Report

Prepared by the Office of the Auditor General of Ontario

	# of Actions Recommended	Status of Actions Recommended				
		Fully Implemented	In the Process of Being Implemented	Little or No Progress	Will Not Be Implemented	No Longer Applicable
Recommendation 1	3		2	1		
Recommendation 2	1	1				
Recommendation 3	1	0.5			0.5	
Recommendation 4	1		1			
Recommendation 5	1	1				
Recommendation 6	1			1		
Recommendation 7	2		2			
Recommendation 8	1			1		
Recommendation 9	2	1	1			
Recommendation 10	1				1	
Recommendation 11	1		1			
Recommendation 12	1				1	
Recommendation 13	1				1	
Recommendation 14	1				1	
Total	18	3.5	7	3	4.5	0
%	100	19	39	17	25	0

Ministry was expecting changes to the *Immunization of School Pupils Act* to help it to implement key actions, such as requiring health-care practitioners to report immunization data so that the data can be promptly entered into Ontario's immunization repository. However, those previously planned changes to legislation were not proclaimed, and at the time of our follow-up, the Ministry could not tell us when, or if, the changes would become law.

In the absence of legislated changes, the Ministry was looking at alternative solutions using available technology. For example, at the time of our follow-up, the Ministry was working with vendors to coordinate updates to physicians' electronic medical records (EMRs) so that immunization data can be transferred from the EMRs to the immunization repository (as a workaround, in the absence of legislation requiring physicians to provide this data).

We conducted assurance work between April 1, 2019 and June 30 2019, and obtained written representation from the Ministry that effective October 31, 2019, it has provided us with a complete update of the status of the recommendations made by the Committee.

Overall Conclusion

At the time of our follow-up, the Ministry had implemented, or had plans to implement, many of the Committee's recommendations. However, in some areas, the Ministry indicated it would not, or could not, implement recommendations.

According to the information the Ministry provided to us, as of August 12, 2019, only 3.5 of the Committee's 18 recommended actions (9%) were fully implemented; seven actions were in the process of being implemented (39%); for three actions (17%), little or no progress had been made; and the Ministry indicated it would not be implementing 4.5 actions (25%).

The Ministry's completed actions included deciding on at what ages Ontarians' immunization

rates should be measured and finalizing specifications for software product vendors to enable transmission of immunization data from electronic medical records to the immunization repository. The Ministry was assessing whether national immunization coverage rates are appropriate for use in Ontario. The Ministry was expecting that legislative changes to the *Immunization of School Pupils Act*, planned for 2018, would help it implement three recommended actions. For example, one expected change in legislation would have supported the reporting of immunization data in real time for entry into the immunization repository, which in turn would have helped inform reporting of immunization coverage rates by schools and day-cares. The changes had still not been proclaimed at the time of our follow-up, and so the Ministry had made little progress on these actions. Regarding recommendations that will not be implemented, the Ministry indicated it could not unilaterally eliminate incentives paid to physicians because these incentives were part of its broader negotiations with the Ontario Medical Association (we recommended that the incentives be eliminated because they had been found to be ineffective in improving immunization rates). The Ministry also indicated it would not revise its policies on adverse-events reporting and follow-up because it considered its current practices to be sufficient.

Detailed Status of Recommendations

Figure 2 shows the recommendations and status details that are based on responses from the Ministry of Health, and our review of the information provided.

Figure 2: Committee Recommendations and Detailed Status of Actions Taken

Prepared by the Office of the Auditor General of Ontario

Committee Recommendation	Status Details
<p>Recommendation 1</p> <p>The Ministry of Health and Long-Term Care should make optimal use of Panorama by:</p> <ul style="list-style-type: none"> including all Ontarians’ immunization data in the immunization repository; Status: In the process of being implemented by December 2020. assessing the advantages and disadvantages of each Panorama module and calculating the costs associated with implementing additional modules; Status: In the process of being implemented by end of fall 2019. establishing a specific timeline for individual physicians and pharmacists to enter real-time immunization data into Panorama. Status: Little or no progress. 	<p>Since early 2016, all public health units input all middle-school immunizations that they administer directly into the immunization repository. However, most children’s immunizations are given during infancy, and are typically not entered until children begin attending school or a licensed daycare—often many years after the immunizations were administered.</p> <p>Amendments to a regulation of the <i>Immunization of School Pupils Act</i>, which would have required paediatricians and other health-care providers to report immunizations to public health units, were passed on March 29, 2018, but were not proclaimed. At the time of our follow-up, the Ministry could not provide a time frame for when or if the regulation would be proclaimed.</p> <p>The Ministry has been working on different initiatives to enable immunization information to be entered into the immunization repository by physicians and other health-care practitioners. In particular, since 2016, the Ministry’s preferred method of tracking immunization data has been to use software to extract it from patient records. In November 2018, the Ministry began working with eHealth Ontario, the Ontario Medical Association and electronic medical record vendors to enable such extractions, with the plan being to use this information to populate the immunization repository. However, the approach will include only those physicians who are compliant with Ontario Medication Association standards. The Ministry does not expect this method to be operational before December 2020.</p> <p>The Ministry has implemented two of Panorama’s four modules: those for recording immunizations in a database (2014) and managing the inventory of vaccines (2015). The Ministry did not assess the advantages and disadvantages of these because they considered them to be integral to the immunization program and they had already been implemented at the time of our follow-up.</p> <p>In March 2019, the Ministry outlined the results of its preliminary evaluation of the other two modules: investigations and management of illness outbreaks. The evaluation indicated that these modules had limited functionality compared to the legacy system used by public health units for over 10 years. The Ministry also noted that implementing these modules would be a complex and not cost-effective project costing nearly \$100 million. The Ministry expects to finalize its full evaluation by end of fall 2019.</p> <p>Since the amended regulation of the <i>Immunization of School Pupils Act</i> was passed on March 29, 2018, but was not proclaimed, paediatricians and other health-care providers did not become required to provide immunization information to public health units. At the time of our follow-up, the Ministry could not provide a time frame for when or if the amended regulation would be proclaimed.</p> <p>As noted above, the Ministry has been working on other approaches to entering real-time immunization data into Panorama with limited success to date.</p>

Committee Recommendation	Status Details
<p>Recommendation 2</p> <p>The Ministry of Health and Long-Term Care should provide a more detailed account of Panorama’s current \$14 million annual operating budget, including Ministry spending on information and technology, maintenance, and research and development.</p> <p>Status: Fully implemented.</p>	<p>The Ministry provided a more detailed account of Panorama’s 2016/17 operating budget. According to the information provided by the Ministry, costs decreased by about \$2 million between 2016/17 and 2018/19 as a result of several factors. In 2016/17, a one-time cost of about \$1 million was incurred for a software upgrade, primarily consisting of labour costs; and, in 2018/19, the Ministry incurred decreased labour costs due to greater familiarity with the software and also negotiated reduced maintenance fees.</p>
<p>Recommendation 3</p> <p>The Ministry of Health and Long-Term Care must confirm if, as planned, it finalized the specifications for product vendors in February 2018, and if health-care providers were able to enter and view immunization records through ICON, as of March 2018. If either or both of these goals have not been accomplished, the Ministry must provide an explanation to the Committee.</p> <p>Status: Fully implemented specifications for product vendors; entering and viewing records through ICON will not be implemented.</p>	<p>In early 2018, the Ministry prepared the specifications for software product vendors to enable the sharing of immunization data within electronic medical records using Panorama; the Ministry updated the specifications again in June 2019.</p> <p>ICON was not rolled out for physicians to use because the Ministry indicated it was focusing its efforts on obtaining immunization records from electronic medical records, as described above.</p>
<p>Recommendation 4</p> <p>The Ministry of Health and Long-Term Care should determine if national vaccination coverage goals are appropriate for Ontario and, if they are suitable, should officially adopt them as Ontario’s target coverage rates. If the goals are unsuitable, the Province should set provincial coverage rate targets.</p> <p>Status: In the process of being implemented by end of fall 2019.</p>	<p>In 2017, the Ministry and Public Health Ontario (PHO)—the agency responsible for assessing Ontario’s immunization coverage—participated in an expert working group led by the Public Health Agency of Canada to establish new national immunization coverage goals for 2025. This working group approved national immunization targets; however, at the time of this follow-up, the Ministry was still assessing the targets to determine their applicability for Ontario. Considerations include Ontario’s ability and authority to collect immunization information, and setting provincial goals for vaccines not provided nationally (e.g. rotavirus, which is provided in Ontario but not throughout Canada).</p> <p>The Ministry informed us that it plans to finalize its assessment and approve an approach to adopt immunization targets by end of fall 2019.</p>
<p>Recommendation 5</p> <p>The Ministry of Health and Long-Term Care should determine if the federally determined tracking immunization rates for individuals aged 2, 7, and 17 are appropriate for Ontario’s needs.</p> <p>Status: Fully Implemented.</p>	<p>The Ministry has determined that tracking immunization rates for individuals aged 2, 7 and 17 is appropriate for Ontario’s needs because tracking at these ages allows for the comparison of immunization coverage within Canada and internationally. However, at this time, it is not possible to report immunization rates for two-year olds, because there is no specific legislative mechanism in place to enable the collection, use and disclosure of data in Ontario.</p>

Committee Recommendation	Status Details
<p>Recommendation 6</p> <p>The Ministry of Health and Long-Term Care should formally set a timeline by which it will collect and publish information for immunization coverage rates by schools and daycares.</p> <p>Status: Little or no progress.</p>	<p>In the Ministry's August 2018 response to the Committee, it indicated that by March 2019, it would be publicly reporting immunization rates by school. However, at the time of our follow-up in June 2019, the Ministry was still reviewing, with Public Health Ontario, options for publicly reporting these immunization rates. The Ministry plans to use the outcomes of this review to also inform how it will then report rates by daycares. However, the Ministry will not be able to establish timelines for publishing immunization information for infants and toddlers in daycares until immunizations are recorded in Panorama.</p>
<p>Recommendation 7</p> <p>The Ministry of Health and Long-Term Care should ensure that childhood immunization coverage rates reach herd immunity levels by:</p> <ul style="list-style-type: none"> • identifying specific communities or areas with low immunization coverage rates; Status: In the process of being implemented by December 2020. • promoting and educating these communities or areas on the benefits of immunization. Status: In the process of being implemented by December 2020. 	<p>As a first step toward improving immunization rates in communities where the rates are lower, the Ministry revised its Public Health Standards in January 2018. The revisions require public health units to monitor immunization coverage and trends, and identify priority populations across the broad spectrum of public health. However, identifying priority communities requires current immunization information by school and/or daycare, which, as outlined in Recommendation 1, the Ministry does not expect to have before 2020.</p> <p>The Ministry has historically provided materials for public health units to help promote the overall benefits of immunization. Public health units work with community partners to improve public knowledge and confidence in immunization programs and services. The Ministry and public health units will not, however, have the community-specific information needed to promote and educate priority communities before it has immunization coverage rates by individual schools and/or daycares.</p>
<p>Recommendation 8</p> <p>The Ministry of Health and Long-Term Care should continue to advance the most effective practices to combat vaccine hesitancy and learn from other jurisdictions' best practices.</p> <p>Status: Little or no progress.</p>	<p>The Ministry's most recent significant action that could address vaccine hesitancy was to require parents who were not going to immunize their children for non-medical reasons to attend an education session at their public health unit. However, the Ministry has not yet been able to determine the extent to which this has increased vaccination rates.</p> <p>The Ministry continues, in collaboration with other provinces, to research ways to reduce vaccine hesitancy, such as developing effective communication materials. Public Health Ontario completed a study on the characteristics of unimmunized children in May 2019. The Ministry indicated that the results of this study will help to inform future approaches to reducing vaccine hesitancy.</p>

Committee Recommendation	Status Details
<p>Recommendation 9</p> <p>The Ministry of Health and Long-Term Care should optimize the CANImmunize tool by</p> <ul style="list-style-type: none"> integrating the CANImmunize data to the Panorama data; Status: In the process of being implemented by January 2020. increasing the number of Ontarians who utilize CANImmunize to monitor and track their own or their family's vaccinations. Status: Fully implemented. 	<p>CANImmunize, which was developed by an Ontario hospital using federal funding, is a free smartphone application that Ontarians can use to record their immunizations for personal record-keeping. The hospital and the Ministry have together worked to integrate CANImmunize with the immunization repository data, which includes Panorama data, and this integration is expected to be completed by January 2020. Those who have the application can then elect to have their immunization information transmitted to the immunization repository after the public health unit checks whether the vaccines have been given correctly, in accordance with Ontario's immunizations schedule and consistent with the child's immunization history.</p> <p>Since CANImmunize was not developed using ministry funding, the Ministry informed us that it has limited authority over its use in Ontario. However, the Ministry has made local public health units aware of the system to allow them to consider promoting it based on local needs. Some public health units have accordingly engaged in activities to increase the local use of CANImmunize.</p>
<p>Recommendation 10</p> <p>The Ministry should ensure that incentives paid to physicians to improve immunization rates are evidence-based and achieve the desired outcome. Status: Will not be implemented.</p>	<p>The Ministry continues to support findings originally published in a 2011 study, which noted payments to physicians are generally not an effective means of increasing flu and toddler immunization rates. Following the most recent negotiations between the Ministry and the Ontario Medical Association in February 2019, these incentives remain unchanged.</p>
<p>Recommendation 11</p> <p>The Ministry of Health and Long-Term Care should develop and establish a consistent process for conducting a cost-benefit analysis of vaccines and report the time frame for the NACI's and the Province's cost-benefit process to the Committee. Status: In the process of being implemented by fall 2020.</p>	<p>The Ministry informed us that the National Advisory Committee on Immunization (NACI), a committee of the Public Health Agency of Canada, is planning to update its framework for evaluating vaccines in the fall of 2020. It expects to include additional factors in its framework, such as whether vaccines can be delivered equitably across Canada, as well as the feasibility of their delivery. The Ministry informed us that it plans to consider aligning its new cost-benefit assessment process with NACI's updated approach.</p>
<p>Recommendation 12</p> <p>The Ministry of Health and Long-Term Care should immediately begin developing a plan for collecting and tracking information on the health-care providers who administer vaccines with adverse events. Status: Will not be implemented.</p>	<p>While 2018 revisions to the <i>Health Protection and Promotion Act</i> require health-care providers such as physicians to report adverse reactions to public health units, the Act did not require the name of the health-care provider who administered the vaccine to be reported. The Ministry informed us that they were not planning on requiring such reporting because, in their assessment, most adverse reactions are related to vaccines and ingredients, not vaccine administration practices.</p>

Committee Recommendation	Status Details
<p>Recommendation 13</p> <p>The Ministry of Health and Long-Term Care and Public Health Ontario should develop and implement an official strategy for following up on adverse events following immunization once the Public Health Accountability Framework is finalized in January 2018.</p> <p>Status: Will not be implemented.</p>	<p>In January 2018, the Ministry updated the Public Health Accountability Framework as part of a larger update of Ontario's Public Health Standards. As part of this update, the Ministry provided more details on how to implement the existing requirement for public health units to promote the reporting and investigating of adverse events.</p> <p>The Ministry informed us that the current process for monitoring the safety of vaccines is robust and it does not plan to revise it.</p>
<p>Recommendation 14</p> <p>The Ministry of Health and Long-Term Care should examine best practices from other provinces and jurisdictions with a view to decreasing vaccine wastage.</p> <p>Status: Will not be implemented.</p>	<p>The Ministry has not examined the practices of other provinces and jurisdictions and is not planning a formal initiative to do so because it has concluded that the size of Ontario, and the related size of the distribution network for vaccines, minimizes the value of such comparisons.</p> <p>The Ministry has informed us that it will work with local public health units to develop inventory management best practices for minimizing vaccine wastage.</p>