

Chapter 1

Section 1.03

Ministry of Health

Chronic Kidney Disease Management

Follow-Up on VFM Section 3.03, *2019 Annual Report*

RECOMMENDATION STATUS OVERVIEW

	# 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		Fully Implemented	In the Process of Being Implemented	Little or No Progress	Will Not Be Implemented	No Longer Applicable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	2		1	1		
Recommendation 2	2		2			
Recommendation 3	1	1				
Recommendation 4	2		1	1		
Recommendation 5	1		1			
Recommendation 6	3	1	2			
Recommendation 7	2		2			
Recommendation 8	2	1	1			
Recommendation 9	2	1	1			
Recommendation 10	2		2			
Recommendation 11	2	1	1			
Recommendation 12	2	1	1			
Recommendation 13	2		2			
Recommendation 14	2	1	1			
Total	27	7	18	2		
%	100	26	67	7		

Overall Conclusion

The Ministry of Health (Ministry) and Ontario Health (Renal Network and Trillium Network), as of October 22, 2021, have fully implemented 26% of actions we recommended in our *2019 Annual Report*, including conducting a province-wide and cross-jurisdictional analysis to identify best practices

for increasing home dialysis usage rates across the province, reviewing the Program for Reimbursing Expenses of Living Organ Donors to determine if the reimbursement rate is reasonable and if any adjustment is needed; studying living-donor transplant policies and initiatives in other jurisdictions to identify best practices that would help increase the rate of living-donor transplants in Ontario; collecting renal expenditures from Regional Renal Programs

on an annual basis and use the information to inform changes in future funding allocation; and reviewing the oversight and funding of dialysis services provided at the Independent Health Facilities (Facilities) to identify opportunities to improve the co-ordination between the Facilities and the Regional Renal Programs.

The Ministry and Ontario Health (Renal Network) made progress in implementing 67% of the recommendations, such as working with the Regional Renal Programs to investigate cases where patients are not being referred to see nephrologists on a timely basis; collecting information on the composition and staffing level of the multidisciplinary team at each Multi-Care Kidney Clinic from the Regional Renal Programs on an annual basis to identify teams that do not meet best practices and make changes accordingly; collecting further information and feedback regarding the revised eligibility criteria for Multi-Care Kidney Clinics from health-care providers at the Regional Renal Programs as well as experts in the field of renal care; conducting a province-wide capacity analysis to realign the supply of in-centre dialysis spots to the demand in each Regional Renal Program; assessing and addressing the challenges (such as staffing and resources issues) of increasing the home dialysis usage rate; studying transplant policies and initiatives in other jurisdictions to identify best practices that would help increase organ donations and shorten wait times in Ontario; reviewing the funding for renal service to determine if the amount is reasonable and adjust if needed based on costing information from the Regional Renal Programs and best practices; reviewing the current funding rates for both deceased-donor and living-donor transplants to confirm what adjustments are needed; collecting cost information on peritoneal dialysis equipment and supplies from the Regional Renal Programs; and developing and improving performance measures related to post-transplant activities (such as transplant failure rate and frequency of follow-up visits).

The Ministry and Ontario Health (Renal Network) made little or no progress in implementing 7% of the recommendations, which included sharing lab data

from the Ontario Laboratories Information System (OLIS) with the Regional Renal Programs to help them identify and follow up on patients who are eligible for referral to a nephrologist; and updating the revised eligibility criteria for Multi-Care Kidney Clinics if needed, based on information and feedback, which is underway.

The status of actions taken on each of our recommendations is described in this report.

Background

The prevalence of chronic kidney disease is on the rise in Ontario, leading to a higher need for dialysis treatment and a greater demand for kidney transplants. Over the last decade, the number of Ontarians with end-stage renal (kidney) disease has grown over 32% between 2010 and 2019, from about 15,800 people to about 20,850 people.

At the time of our 2019 audit, the Ontario Renal Network (Renal Network) was a division of Cancer Care Ontario (CCO). As of December 2, 2019, CCO and the Renal Network were transferred to become part of Ontario Health. As of April 1, 2020, Trillium Gift of Life Network (Trillium Network) was also transferred to become part of Ontario Health. The Renal Network is responsible for advising the Ministry of Health (Ministry) on chronic kidney disease management, determining funding to each of the 27 Regional Renal Programs in Ontario, and leading the organization of chronic kidney disease services (excluding transplants, which fall under the responsibility of the Ministry, Trillium Network and six adult kidney transplant centres).

In 2020/21, the Renal Network's expenditures on chronic kidney disease services were approximately \$692 million (\$662 million in 2018/19), and the Ministry provided approximately \$20 million (\$20 million in 2018/19) to transplant centres for funding approximately 730 kidney transplants.

As at the time of our audit the Ontario government was planning to integrate the Renal Network within

CCO and the Trillium Network into Ontario Health, we noted the importance of better co-ordination of renal services to meet the needs of Ontarians.

The following were some of our significant findings.

- In 2017/18, over 40% (or about 8,700) of patients in Ontario who met the Renal Network's referral criteria were not referred by their primary-care providers to a nephrologist (a physician specializing in kidney care) even though these patients' lab test results indicated that they would benefit from a nephrology visit.
- Before starting dialysis, patients should receive at least 12 months of multidisciplinary care in Multi-Care Kidney Clinics, which help patients manage chronic kidney disease and educate patients on the treatment options available. However, of the approximately 3,350 patients who started dialysis in 2018/19, about 25% received less than 12 months of care in a clinic while 33% did not receive any clinic care prior to starting dialysis.
- Capacity for in-centre dialysis in a hospital or clinic did not align with regional needs. Twenty-seven Regional Renal Programs had a total of 94 in-centre dialysis locations across Ontario with a capacity to serve about 10,200 patients. While the occupancy rate of all locations was about 80% on average, it ranged from 26% to 128% depending on location.
- Promoting the use of home dialysis has been part of the Renal Network's strategic direction since 2012, but the home dialysis usage rate still had not met the Renal Network's target. The rate varied significantly (16% to 41%) among the 27 Regional Renal Programs, and only six met the current target of 28%.
- Wait list and wait times for deceased-donor kidney transplants remained long. In each of the preceding five years, approximately 1,200 patients on average were waiting for a deceased-donor kidney transplant and the average wait time was approximately four years. Patients had to undergo dialysis as well as continuous testing and evaluation to stay on the wait list, creating mental and physical

burdens on patients and resulting in significant costs to the health-care system.

- Apart from the 27 Regional Renal Programs funded and overseen by the Renal Network, the Ministry also funded and provided oversight for seven Independent Health Facilities (Facilities) that provided dialysis. With no complete oversight of and information on dialysis across the province, it was difficult for the Renal Network to effectively plan and measure renal care in Ontario.
- While the Trillium Network and the Renal Network established a data-sharing agreement in September 2017 to capture patients' complete transplant journeys, inaccurate and incomplete transplant data caused difficulty in measuring and reporting transplant activities.
- The Renal Network had not reviewed its funding amounts for most chronic kidney disease services since implementing them between 2012/13 and 2014/15, even though they were meant to be a starting point. Through our review of expenditures of the five Regional Renal Programs we visited, we found possible surpluses of \$37 million over the previous five years.
- Base funding for kidney transplants was unchanged since 1988 and did not align with the actual cost. The current funding rate per kidney transplant was approximately \$25,000, with a top-up amount of \$5,800. However, the average cost reported for a deceased-donor kidney transplant, including pre-transplant and pre-operative care provided by transplant centres, was \$40,000, ranging from about \$32,000 at one centre to \$57,000 at another.

We made 14 recommendations, consisting of 27 action items, to address our audit findings.

We received commitment from the Ministry of Health, Ontario Health (Renal Network) [formerly Ontario Renal Network] and Ontario Health (Trillium Gift of Life Network) [formerly Trillium Gift of Life Network] that they would take necessary actions to address our recommendations.

Status of Actions Taken on Recommendations

We conducted assurance work between April 1, 2021, and August 13, 2021. We obtained written representation from the Ministry of Health that effective October 22, 2021, it has provided us with a complete update of the status of the recommendations we made in the original audit two years ago.

Patients Do Not Always Receive Sufficient and Consistent Specialty and Multidisciplinary Care on a Timely Basis

Recommendation 1

To help patients receive timely referrals to a nephrologist and slow down the progression of their chronic kidney disease, we recommend that the Ontario Renal Network:

- *work with the Ministry of Health to share lab data from the Ontario Laboratories Information System with the Regional Renal Programs to help them identify and follow up on patients who are eligible for referral to a nephrologist;*

Status: Little or no progress.

Details

In our 2019 audit, we found that the Ontario Renal Network (Renal Network) used data from the Ontario Laboratories Information System (OLIS) and other sources to measure the percentage of patients who visited a nephrologist within 12 months of meeting the referral criteria. Our review of 2017/18 results of this measure noted that over 40% of patients (or about 8,700) had not been referred to a nephrologist even though they met the referral criteria.

In our follow-up, Ontario Health (Renal Network) informed us that it has taken the following actions to increase the rate of patient referral. For example,

- It initiated preliminary discussions with the Ministry regarding the use of OLIS data for

the purpose of identifying and following up on patients who are eligible for referral to a nephrologist. The latest meeting took place on April 13, 2021, discussing the permission of using OLIS data for the purpose of an early chronic kidney disease case finding program and/or physician-level reporting, the legal and privacy requirements for using this data for these options, and the existing data and reporting structures to share information with the Regional Renal Programs.

- It collaborated with the Kidney, Dialysis and Transplantation Research Program at the Institute for Clinical Evaluative Sciences (KDT-ICES) on a research study to understand the feasibility and potential model of connecting patients to nephrologists for a kidney health check. One of the objectives of the study is to determine the feasibility of using OLIS data to identify patients for whom a referral to a nephrologist is indicated to promote early detection of chronic kidney disease. The study will launch by June 2022 and the interim results of the study will be summarized in a report by December 2023.
- It conducted an in-depth analysis of the patient characteristics, including demographics, socio-economic status, and health status, of those patients who are eligible for referral, but have not seen a nephrologist. The results from the analysis, which were shared with Regional Renal Programs, indicate that referral rates decrease as the distance between the patient and the Regional Renal Program increases, which suggests that access to virtual care may improve referral rates.

Ontario Health (Renal Network) will finalize the design for an early detection program based on the results of the feasibility study in collaboration with the KDT-ICES. It will also conduct further statistical analysis to identify targeted populations for the program. Concurrently, it will continue to engage partners to explore other mechanisms and determine the feasibility of identifying eligible patients for referral to nephrologists through other means, which include performance measures for primary care providers and prompts in laboratory results.

- *work with the Regional Renal Programs to investigate cases where patients are not being referred to see nephrologists on a timely basis to ensure these patients are referred for assessment.*

Status: In the process of being implemented by June 2022.

Details

In our 2019 audit, we found that about 2,200 patients who initially met referral criteria in 2015/16 and continued to meet the criteria in subsequent years were never referred to a nephrologist. However, the Ontario Renal Network had not followed up on these cases.

In our follow-up, we found that the Ontario Health (Renal Network) has been working with the Regional Renal Programs to ensure eligible patients are referred to see nephrologists on a timely basis. Specifically,

- Ontario Health (Renal Network) has reported to the Regional Renal Programs on the early chronic kidney disease (CKD) referral rate to nephrology on an annual basis. This early CKD indicator measures the proportion of patients who are eligible for referral from primary care to nephrology based on the KidneyWise Clinical Toolkit criteria and have had at least one outpatient nephrology visit. The indicator was revised in 2020 to better support the Regional Renal Programs in targeting patients and primary care providers within their communities. The revised methodology was based on input from the Early CKD Priority Panel and Ontario Health (Renal Network)'s Provincial Leadership Table. The refinements improve alignment of the indicator with the KidneyWise Clinical Toolkit criteria for referral and focuses on patients who would benefit the most from timely and appropriate referrals to nephrology.
- To further support the Regional Renal Programs so they can better understand trends and opportunities for improved referrals, Ontario Health (Renal Network) shared the results of an analysis of the referral to nephrology indicator in February 2021. The analysis will provide the Regional

Renal Programs with a better understanding of the indicator's performance at a provincial and regional level. The analysis will also help support the Regional Renal Programs to investigate local opportunities for improvement to ensure patients receive timely referral to nephrology.

Insights from the analysis were reviewed with the Regional Renal Programs during the quarterly performance review meetings. Discussion focused on how Regional Renal Programs have used or plan to use the information from the analysis for engagement initiatives with primary care and on actions to improve referral rates of patients. These meetings also provided an opportunity for the Regional Renal Programs to suggest additional analyses in the future.

Based on discussions at the quarterly performance reviews, Ontario Health (Renal Network) will explore the need for further refinements to the early indicator of chronic kidney disease and continue to share the results with the Regional Renal Programs on an annual basis to support investigation and improvement of the referral rate.

Recommendation 2

To help patients with advanced stages of chronic kidney disease obtain access to equitable and consistent services across the province, we recommend that the Ontario Renal Network:

- *collect information on the composition and staffing level of the multidisciplinary team at each Multi-Care Kidney Clinic from the Regional Renal Programs on an annual basis to identify teams that do not meet best practices and make changes accordingly;*

Status: In the process of being implemented by June 2022.

Details

In our 2019 audit, we noted that in January 2019, the Ontario Renal Network released a document that outlines best practices for the Multi-Care Kidney Clinics (Clinics). One of the best practices was related to the composition and responsibilities of the multidisciplinary team. Despite the Renal Network's best

practices, through our survey we found that staffing levels varied widely from one Clinic to another. For example, one Regional Renal Program with approximately 500 Clinic patients had access to two full-time pharmacists, while another with a similar patient volume only had access to one part-time pharmacist.

In our follow-up, we found that Ontario Health (Renal Network) has started collecting information on the composition and staffing level of the multidisciplinary team from the Regional Renal Programs and prepared further analysis. Specifically,

- The Regional Renal Programs submitted their staffing composition and levels by discipline to Ontario Health (Renal Network) in October 2020. Ontario Health (Renal Network) has summarized and reviewed the findings. The report will be submitted annually by the Regional Renal Programs so that changes can be monitored over time. Ontario Health (Renal Network) will collect an updated annual report from all Regional Renal Programs in October 2021.
- Ontario Health (Renal Network) has conducted virtual quality-focused assessments with three Regional Renal Programs in 2021. Following the assessment, Ontario Health (Renal Network) will be providing a formal report back to each Regional Renal Program's leadership team with recommendation on actions that should be taken to ensure adherence to the best practices, including adequate resourcing of the multidisciplinary team. All three reports have been drafted and are in the process of being shared with the Regional Renal Programs. Ontario Health (Renal Network) will conduct a minimum of five additional quality-focused assessments with the Regional Renal Programs by March 2022.

Based on results from the annual report of the Regional Renal Programs and the virtual quality-focused assessments, Ontario Health (Renal Network) will release a provincial summary report in June 2022 to share practices and learnings among Regional Renal Programs.

- *review the composition and practices of each multidisciplinary team to identify whether to implement minimum patient-to-staff ratios.*

Status: In the process of being implemented by June 2022.

Details

In our 2019 audit, we found that approximately 50% of Regional Renal Programs that responded to our survey indicated having gaps in their Clinic as a result of either not having a specific staff discipline (for example, a pharmacist) or not having enough access to a specific discipline. Therefore, patients' access to care at the Clinics varied depending on which Regional Renal Program they were connected to, creating an inequity in the availability of services across the province.

As mentioned in the previous recommended action, the Regional Renal Programs submitted their staffing composition and levels by discipline to Ontario Health (Renal Network) in October 2020. Ontario Health (Renal Network) is in the process of summarizing and reviewing the findings. The report will be submitted annually by the Regional Renal Programs so that changes can be monitored over time. Ontario Health (Renal Network) will collect an updated annual report from all Regional Renal Programs in October 2021, including information on composition and practices of each multidisciplinary team.

Ontario Health (Renal Network) will engage with experts in December 2021 to review the summary of findings from the annual report to inform the decision on whether to implement minimum patient-to-staff ratios. Ontario Health (Renal Network) will also release a provincial summary report in June 2022 to share practices and learnings among Regional Renal Programs.

Recommendation 3

To provide enough multidisciplinary care to patients with advanced stages of chronic kidney disease, we recommend that the Ontario Renal Network work with the Regional Renal Programs to fully investigate the reasons for late referrals to the Multi-Care Kidney Clinics and implement practices to allow for timely referral.

Status: Fully implemented.

Details

In our 2019 audit, we found that the Ontario Renal Network and Regional Renal Programs indicated that patients should receive at least 12 months of multidisciplinary care in the Multi-Care Kidney Clinic (Clinic) before starting dialysis to slow down the progression of the disease, delay dialysis starts and educate patients on the treatment options available. However, we found that almost 60% of patients did not receive at least 12 months of multidisciplinary care in the Clinics. Of the approximately 3,350 patients who started dialysis in 2018/19, about 25% received less than 12 months of care in a Clinic while 33% did not receive any care in a Clinic prior to starting dialysis.

In our follow-up, we found that Ontario Health (Renal Network) has partnered with the Kidney Dialysis and Transplantation Research Program at the Institute for Clinical Evaluative Sciences (KDT-ICES) to fully investigate the reasons for late referral and has begun implementing practices to support timelier referral to the Clinics. KDT-ICES submitted a final report to Ontario Health (Renal Network) in March 2021.

The investigation found that more than half of patients spent limited or no time in the Clinic prior to initiating dialysis. This could be attributed to various reasons, for example:

- Patients experienced a significant change in their health condition that triggered a kidney-related disease or acute kidney injury, and then survived to transition into chronic dialysis care.
- Primary care providers did not refer patients to a nephrologist on a timely basis.

- Patients did not receive appropriate testing by a primary care provider on a timely basis.
- Nephrologists did not refer patients to the Clinic in a timely basis.

Based on the study results, Ontario Health (Renal Network) has implemented the following initiatives to address the reasons for late or no referral to the Clinic:

- Ontario Health (Renal Network) has reviewed the performance of the Regional Renal Programs on a quarterly basis, including indicators that measure the proportion of the Clinic referrals and time spent in the Clinics prior to dialysis initiation.
- In January 2020, Ontario Health (Renal Network) established a provincial target for the time spent in a Clinic prior to dialysis. Meetings with all Regional Renal Programs were held in January and February 2020 to discuss performance and improvement practices.
- In March 2021, Ontario Health (Renal Network) launched technical and methodology refinements for the Multi-Care Kidney Clinic Referral indicator. A provincial target has been approved and launched in the regional scorecard in June 2021.
- The development of a Multi-Care Kidney Clinic Insights report is underway to support the Regional Renal Programs with supplementary data related to referral and clinic utilization that will enable local improvement initiatives. The report was piloted with select Regional Renal Programs beginning in March 2021. The report will be fully completed and released to all Regional Renal Programs in November 2021, providing them with supplementary data to further investigate the reasons for late referrals to the Clinics.

Recommendation 4

To help the Multi-Care Kidney Clinics (Clinics) admit the right patients who would benefit from multidisciplinary care at the right time, we recommend that the Ontario Renal Network:

- collect further information and feedback regarding the revised eligibility criteria for Clinics from health-care providers at the Regional Renal Programs as well as experts in the field of renal care;
- Status: In the process of being implemented by March 2022.**

Details

In our 2019 audit, we found that in 2016, the Ontario Renal Network revised the eligibility criteria for admission to the Multi-Care Kidney Clinics (Clinics) because the original criteria (established in 2013) had resulted in many patients with a lower risk of kidney failure being referred to the Clinics unnecessarily. Subsequent to the criteria changes, the number of patients admitted to the Clinics fell about 39% between 2015/16 and 2018/19, which resulted in cost savings of about \$8 million per year for the Renal Network to use for other initiatives.

In our follow-up, we found that Ontario Health (Renal Network) has taken actions to collect further information and feedback. For example:

- In May 2021, Ontario Health (Renal Network) initiated a refreshed literature review to inform updates required to the Multi-Care Kidney Clinic best practices. The review is expected to be completed in September 2021.
- In June 2021, a multidisciplinary task group was convened with experts from the Regional Renal Programs to review the literature and determine updates required on the best practices and revised eligibility criteria.

Additionally, Ontario Health (Renal Network) informed us that a plan has been developed to complete the update and refresh of the Multi-Care Kidney Clinic best practices. The timeline of the plan is as follows:

- Seek feedback from the Regional Renal Programs, health-care providers and experts in the field of

renal care on the recommended changes (December 2021); and

- Launch an updated Multi-Care Kidney Clinic Best Practice document, including revised eligibility criteria if needed. (March 2022).

Ontario Health (Renal Network) informed us that the COVID-19 pandemic impacted the ability to engage with the Regional Renal Programs and resulted in the redeployment of staff to pandemic-specific provincial initiatives. As a result, the refresh of the Multi-Care Kidney Clinic Best Practices has been postponed and is planned for completion by March 2022.

- update the revised eligibility criteria if needed, based on information and feedback.

Status: Little or no progress.

Details

In our 2019 audit, we found that in 2016/17 and 2017/18, the Ontario Renal Network evaluated the impact of revised eligibility criteria and found no negative impact on patient outcomes. However, it received mixed feedback from a survey it conducted during the first year of implementing the criteria. We also noted that 73% of Regional Renal Programs that responded to our Office's 2019 survey indicated they provided Clinic care to patients using other sources of funding even though these patients did not meet the new eligibility criteria. The survey result aligns with what we found during our site visits.

As mentioned in the previous recommended action, Ontario Health (Renal Network) has taken actions to collect further information and feedback. Ontario Health (Renal Network) informed us that it will launch an updated Multi-Care Kidney Clinic Best Practice document, including revised eligibility criteria if needed, by March 2022.

Dialysis Services Do Not Fully Meet People's Needs or Provincial Target

Recommendation 5

To better align the capacity for in-centre dialysis with regional needs, we recommend that the Ontario Renal Network conduct a province-wide capacity analysis and realign the supply of in-centre dialysis spots to alleviate high-demand situations in some Regional Renal Programs and reduce the amount of under-used capacity at others.

Status: In the process of being implemented by December 2021.

Details

In our 2019 audit, we found that capacity for in-centre dialysis in a hospital or clinic setting did not align with regional needs. Twenty-seven Regional Renal Programs have a total of 94 in-centre dialysis locations across Ontario with a capacity to serve about 10,200 patients. While the occupancy rate of all locations is about 80% on average, it ranges from 26% to 128% depending on location. About 35% of these locations have an occupancy rate of at least 90%, with some at or near full occupancy. Meanwhile, about 18% of these locations have an occupancy rate below 70%, meaning their dialysis stations are not being used to their maximum capacities. We found that the mismatch between dialysis capacity and regional need could be the result of patients not always receiving dialysis at the locations closest to them. For example, a Regional Renal Program with an occupancy rate of approximately 90% at most of its locations has about 22% of its patients coming from outside of its catchment area.

In our follow-up, we found that Ontario Health (Renal Network) has started taking the following actions to analyze province-wide capacity and realign the supply of in-centre dialysis spots.

- Ontario Health (Renal Network) has updated its projections of the future demand for dialysis across the province over the next 10 years. Regional analyses comparing these projections to available dialysis capacity have been distributed to

all 27 Regional Renal Programs through the 2019-2029 Regional Dialysis Capacity Assessments. Ontario Health (Renal Network) has met with all Regional Renal Programs to review, discuss, and validate the data in these assessments. Ontario Health (Renal Network) will continue to update these assessments every two years.

- As part of its funding agreement with each Regional Renal Program hospital, Ontario Health (Renal Network) has required the submission of a Strategic Dialysis Capacity Plan from all Regional Renal Programs outlining their short, medium, and long-term strategies to address their capacity needs, leveraging the data provided in the 2019-2029 Regional Dialysis Capacity Assessments. Regional Renal Programs will be required to update their Strategic Dialysis Capacity Plans every two years based on the updated Regional Dialysis Capacity Assessments.
- To assist in this work and promote collaborative capacity planning across Regional Renal Programs, Ontario Health (Renal Network) hosted a Greater Toronto Area Capacity Planning Forum in Spring 2020 attended by renal program leaders from the 10 Regional Renal Programs located within the Greater Toronto Area. At this forum, Ontario Health (Renal Network) presented the current and future projected demands for in-centre dialysis and the gap between demand and available supply of capacity across this region, and facilitated working sessions exploring collaborative capacity planning strategies.
- All 27 Regional Renal Programs have submitted their first Strategic Dialysis Capacity Plans to Ontario Health (Renal Network). Ontario Health (Renal Network) has reviewed each Strategic Dialysis Capacity Plan and is assessing the potential effectiveness of each in appropriately addressing each Regional Renal Program's projected dialysis demands as well as working with Regional Renal Programs to make adjustments where necessary.
- To further support the Regional Renal Programs in their capacity management and planning efforts,

Ontario Health (Renal Network) has developed an In-Centre Dialysis Occupancy indicator. This indicator is reported quarterly and measures the proportion of each Regional Renal Program's capacity to provide in-centre dialysis that is occupied and the capacity that remains available.

The above actions are expected to be fully implemented and completed by December 2021. Specifically, Ontario Health (Renal Network) will:

- Complete the assessments of each Regional Renal Program's Strategic Dialysis Capacity Plan and their effectiveness in appropriately addressing each Regional Renal Program's projected dialysis demands;
- Obtain updated Strategic Dialysis Capacity Plans from Regional Renal Programs where adjustments are found to be necessary to meet future dialysis demand; and
- Complete and release the multi-year Provincial Dialysis Capacity and Capital Planning Strategy to inform the prioritization, location, size and timing of investments required to create additional capacity where necessary, and to optimize the utilization of existing resources.

Recommendation 6

To further increase the rate of home dialysis in Ontario and meet the target, we recommend that the Ontario Renal Network work with the Ministry of Health to:

- *assess and address the challenges (such as staffing and resources issues) of increasing the home dialysis usage rate and take corrective action;*

Status: In the process of being implemented by June 2022.

Details

In our 2019 audit, we found that the home dialysis usage rate in Ontario still had not met the Ontario Renal Network's then target of 28% (measuring the percentage of patients on home dialysis out of all patients on dialysis), which has subsequently changed to 27% based on consensus to reflect the impact of transplantation on the home dialysis rate. Our analysis of home dialysis usage rates in 2018/19 at each of the 27 Regional Renal Programs found that the rate

across the province was 26% on average, but it varied significantly, ranging from approximately 16% at one Regional Renal Program to about 41% at another; and only six (or 22%) of the 27 Regional Renal Programs met the then home dialysis target of 28%. We noted that increasing and maintaining home dialysis usage rates was challenging for many reasons, mainly related to patients' choices or medical conditions and staffing or resource issues.

In our follow-up, we found that Ontario Health (Renal Network) has started taking the following actions to assess and address the challenges of increasing the home dialysis usage rate.

- Ontario Health (Renal Network) has assessed home dialysis province-wide through various forums and methods (e.g., quarterly reviews of program performance, mentorship, and site visits as needed). Quarterly Performance Review meetings were completed with all 27 Regional Renal Programs in September 2020. The focus of the discussions was on supporting an increase in home dialysis, particularly during the COVID-19 pandemic when home dialysis has additional safety benefits for patients.
- Ontario Health (Renal Network) has released a Home Dialysis Insights report to each Regional Renal Program on an annual basis to provide support with identification of local gaps and opportunities to improve home dialysis. The latest report was released in August 2020.
- In January 2020, a home dialysis mentorship pilot project was launched to support the sharing of best practices among Regional Renal Programs. The pilot was paused in March 2020 due to the COVID-19 pandemic, but restarted in August 2020. The pilot was completed in March 2021. Based on the pilot project, Ontario Health (Renal Network) launched a provincial home dialysis mentorship program to all Regional Renal Programs in June 2021.
- Ontario Health (Renal Network) has completed an implementation evaluation and produced a report for the Integrated Dialysis Care (IDC) model for assisted-peritoneal dialysis (a type of dialysis that is primarily delivered at home). The report was

disseminated to Regional Renal Programs in September 2020. Five early adopter Regional Renal Programs continue to provide assisted-peritoneal dialysis through the IDC model. Ontario Health (Renal Network) will launch the IDC model to other Regional Renal Programs by June 2022.

- *collect information on home dialysis training from the Regional Renal Programs to determine the appropriate funding for training and adjust the current funding allocation if needed;*

Status: In the process of being implemented by April 2023.

Details

In our 2019 audit, we found that the Ontario Renal Network funded the Regional Renal Programs to provide 21 days of training to patients choosing home hemodialysis. Some Regional Renal Programs informed us that 21 days of training for home hemodialysis was often not enough to ensure that a patient is adequately trained. This meant that patients may have to go back to in-centre dialysis.

In our follow-up, we found that Ontario Health (Renal Network) has developed a multi-year plan for the phased refresh of the Chronic Kidney Disease Quality-Based Procedure (see **Recommendation 9**), including training for home dialysis modalities. This will include a comprehensive review of the current funding models and reimbursement methodologies to address noted gaps and opportunities. The plan includes data collection and expert consultation to define and cost the standard of care for home training. The refresh will pursue equitable, transparent, and evidence-based funding and reimbursement methodologies. Ontario Health (Renal Network) will collect and review additional home training information as part of the refresh of the Chronic Kidney Disease Quality-Based Procedure. To support the refresh, it has been collecting information on the number of days spent for home dialysis training through the Ontario Renal Reporting System.

Ontario Health (Renal Network) indicated that home dialysis training is expected to be investigated within the 2022/23 fiscal year.

- *conduct a province-wide and cross-jurisdictional analysis to identify best practices for increasing home dialysis usage rates and implement those practices across the province.*

Status: Fully implemented.

Details

In our 2019 audit, we noted that the home dialysis usage rate in Ontario remained steady (around 25% to 26% in recent years), but was lower than some provinces and other countries. The rate in Canada was about 25%, which was about the same as Ontario's current average rate of 26%. According to the most recent (2017) data from the Canadian Institute for Health Information, Ontario's home dialysis usage rate was about 25%, the same as the rate in Canada, but lower than the rates in Alberta (29%) and British Columbia (30%). According to the 2018 United States Renal Data System Annual Data Report, home dialysis rates varied worldwide, ranging from less than 5% in some countries (such as Japan) to over 40% and 70% in New Zealand and Hong Kong, respectively.

In our follow-up, we found that Ontario Health (Renal Network) has conducted a jurisdictional scan, with a focus on home hemodialysis. Based on the jurisdictional scan, Ontario Health (Renal Network) summarized the findings on innovative models of care that may increase home dialysis usage rates and provided recommendations for implementation across the province.

Ontario Health (Renal Network) has also held Quarterly Performance Review meetings with all 27 Regional Renal Programs in September 2020. The focus of the discussions was on supporting home dialysis, particularly during the COVID-19 pandemic.

As well, Ontario Health (Renal Network) has hosted weekly COVID-19 calls with all Regional Renal Program. The impact of COVID-19 on home dialysis was frequently discussed on these calls and practices were shared between Regional Renal Programs across the province.

Wait Times for Kidney Transplants Remain Long

Recommendation 7

To provide eligible patients with timely access to kidney transplants in Ontario and appropriate pre-transplant care, we recommend that the Trillium Gift of Life Network, in collaboration with the Ministry of Health and the Ontario Renal Network:

- *study transplant policies and initiatives in other jurisdictions to identify best practices that would help increase organ donations and shorten wait times in Ontario;*

Status: In the process of being implemented by December 2021.

Details

In our 2019 audit, we found that wait lists and wait times for deceased-donor kidney transplants remained long. In each of the last five years, approximately 1,200 patients on average were waiting for a deceased-donor kidney transplant and the average wait time was approximately four years, resulting in some patients becoming too ill for a transplant or dying before receiving a transplant. Patients waiting for a kidney transplant had to undergo dialysis as well as continuous testing and evaluation to stay on the wait list, creating mental and physical burdens on patients and resulting in significant costs to the health-care system.

In our follow-up, we found that Ontario Health (Renal Network) and Ontario Health (Trillium Gift of Life Network) have taken the following actions to identify best practices that would help increase organ donations and shorten wait times in Ontario.

- In January 2020, Ontario Health (Renal Network) participated in the Canadian Blood Services (CBS) Advancing Living Kidney Donation Forum, which reviewed leading practices in other jurisdictions.
- Ontario Health (Trillium Gift of Life Network) has partnered with CBS to improve organ utilization and is a member of the national Optimizing Utilization of Deceased Donor Kidneys Steering Committee. Ontario Health (Trillium Gift of Life

Network) has completed a preliminary analysis of kidney utilization data in Ontario to present at a national forum. Due to the COVID-19 pandemic, the national forum was delayed until late 2021. A summary report was released in April 2021. A jurisdictional scan of national and international policies and initiatives intended to increase kidney transplants from organ donors will be completed by October 2021. A summary of preliminary recommendations on increasing kidney utilization will be presented to the Ontario Health (Trillium Gift of Life Network) Kidney Pancreas Working Group (KPWDG) by December 2021.

- Ontario Health (Renal Network) and Ontario Health (Trillium Gift of Life Network) are continuing their partnership to implement the Access to Kidney Transplant and Living Donation (AKT) Strategy, which was developed based on leading practices in other jurisdictions. The AKT Strategy will identify evidence that will drive policies and initiatives to increase living-donor kidney transplants. A process evaluation was initiated in winter 2020/21 with final results expected by December 2021. In January 2022, the AKT Strategy will expand to all 27 Regional Renal Programs. Quantitative evaluation results are expected in June 2023.

- *work with kidney transplant centres and Regional Renal Programs to review the transplant eligibility and annual pre-transplant assessment or work-up process in order to identify efficiencies and cost savings.*

Status: In the process of being implemented by December 2022.

Details

In our 2019 audit, we found that the annual pre-transplant work-up not only created a burden on patients, but also results in significant costs to the health-care system. A 2019 study conducted by the European Renal Association—European Dialysis and Transplant Association also identified considerable agreement among experts that the work-up for a kidney transplant for low-risk patients should only

include a limited number of tests. Yet, the existing work-up process for a kidney transplant in Ontario aimed to cover all patients and circumstances, even though complicating factors (such as age and presence of other health conditions) could vary significantly between kidney transplant candidates.

In our follow-up, we found that Ontario Health (Renal Network) has conducted consultations with Regional Renal Programs and patients and family advisors to understand current state challenges and identify local processes, tools and models of care that have or could be implemented to improve the timeliness and efficiency of work-up processes. Ontario Health (Renal Network) has also conducted a jurisdictional scan to identify efficient and person-centred pre-transplant work-up processes.

Based on consultation with Regional Renal Programs and patient and family advisors, and the jurisdictional scan, a summary report was completed in June 2021 to identify challenges and opportunities for improving the pre-transplant work-up process.

Ontario Health (Trillium Gift of Life Network) has supported a referral triage program being piloted by the University Health Network (UHN) by providing recurring quarterly reports on wait time data. Ontario Health (Trillium Gift of Life Network) will evaluate the UHN's referral triage program pilot and consider provincial roll out. In addition, Ontario Health (Trillium Gift of Life Network) has begun the process of reviewing transplant referral and listing, including consultation with transplant programs and Ontario Health (Renal Network). Ontario Health (Trillium Gift of Life Network) has also begun the process of reviewing annual assessment requirements as part of its review of the Clinical Handbook for Kidney Transplantation.

Recommendation 8

To improve patient access to living-donor transplants in Ontario, we recommend that the Trillium Gift of Life Network, in collaboration with the Ministry of Health and the Ontario Renal Network:

- *conduct a review of the Program for Reimbursing Expenses of Living Organ Donors to determine if the reimbursement rate is reasonable and if any adjustment is needed;*

Status: Fully implemented.

Details

In our 2019 audit, we found that while Ontario had a program called Program for Reimbursing Expenses of Living Organ Donors (PRELOD) to reimburse living organ donors for eligible expenses (including travel, parking, accommodation, meals and loss of income up to a maximum of \$5,500), the reimbursement rate had not been changed since April 2008 when PRELOD was first introduced.

In our follow-up, we found that Ontario Health (Trillium Gift of Life Network) completed a review of PRELOD and submitted recommendations to the Ministry of Health (Ministry) in July 2020.

The review assessed gaps and limitations of PRELOD. Same as the findings in our 2019 audit, the review completed by Ontario Health (Trillium Gift of Life Network) in July 2020 also found significant deficiencies with PRELOD that undermine the potential of living organ donation in Ontario. As well as highlighting frustrations with the application process, it is evident from the review that reimbursement rates remain insufficient to cover the costs of living donation for many donors. Examples of the limitations identified through the review included the following:

- The maximum reimbursement allowances are insufficient to cover the costs incurred through living donation.
- The current eligibility criteria exclude applicants from claiming certain expenses based on the distance they live from the hospital.
- All living donors are required to return to the hospital after surgery to monitor and prevent adverse

outcomes. However, follow-up expenses incurred after a patient returns home are not eligible for reimbursement.

- Applicants indicated confusion and frustration with the application process as the eligibility criteria are unclear, forms are overly complicated, and reimbursement policies are inflexible.

As part of the review, Ontario Health (Trillium Gift of Life Network) completed a jurisdictional scan of Canadian and international living-donor reimbursement programs to help inform the recommendations to improve PRELOD. Ontario Health (Trillium Gift of Life Network) also consulted with BC Transplant and Transplant Quebec to discuss and understand how and what other provinces have done to improve their donor reimbursement programs.

Based on its review of PRELOD and consultations with other Canadian jurisdictions, Ontario Health (Trillium Gift of Life Network) recommended a number of changes to PRELOD. For example, Ontario Health (Trillium Gift of Life Network) was proposing to increase the maximum allowance for eligible expenses, eliminate distance restrictions for mileage and meal reimbursement, include reimbursement for post-surgery follow-up, broaden eligibility criteria and simplify the application process. These changes are expected to ensure equitable access to living-donor transplants and to minimize the financial barriers affecting access to living-donor transplantation in Ontario.

On February 25, 2021, the Ministry approved the recommendations contained in the review for implementation in 2021/22.

- *study living-donor transplant policies and initiatives in other jurisdictions to identify best practices that would help increase the rate of living-donor transplants in Ontario.*

Status: In the process of being implemented by December 2021.

Details

In our 2019 audit, we found that the overall number of kidney transplants increased in Ontario, but this growth was due to an increase in deceased-donor

transplants while living-donor transplants remained almost unchanged since 2008. Specifically, living-donor transplants accounted for about 45% of all kidney transplants in 2008, but dropped to 30% in 2017. This was much lower than the world average, as a 2018 study published by the American Society of Nephrology noted that approximately 40% of the kidneys for transplant worldwide come from living donors. In comparison with other provinces, the rate per million population for a living-donor kidney transplant in Ontario (13.5) was lower than Alberta (13.7), British Columbia (17.5) and Manitoba (20.9).

In our follow-up, we found that Ontario Health (Renal Network) and Ontario Health (Trillium Gift of Life Network) have taken the following actions to identify best practices that would help increase the rate of living-donor transplants in Ontario.

- A number of the initiatives that have been introduced in Ontario as part of the Access to Kidney Transplant and Living Donation (AKT) Strategy were based on studies completed in other jurisdictions. The AKT Strategy has focused on improving access to living kidney donation through education, quality improvement, peer support and data. The AKT Strategy process evaluation results are expected by December 2021. In January 2022, the AKT Strategy will expand to all 27 Regional Renal Programs. (see **Recommendation 7**).
- Ontario Health (Renal Network) participated in the Canadian Blood Services (CBS) Advancing Living Kidney Donation Forum in January 2020, which reviewed leading practices in other jurisdictions. (see **Recommendation 7**).
- Ontario Health (Trillium Gift of Life Network) held workshops in May and July 2021 to discuss variations in practice among living-donor programs and develop a clinical pathway and service bundles with standard frequencies of required tests, assessments and consultations for living donors in Ontario.
- Ontario Health (Trillium Gift of Life Network) has worked with Ornge to develop a process to facilitate shipping of living-donor kidneys for Kidney

Paired Donation (KPD) imports to avoid unnecessary travel for living donors during COVID-19 restrictions. Ontario Health (Trillium Gift of Life Network) has facilitated several transfers to date.

- Ontario Health (Renal Network) and Ontario Health (Trillium Gift of Life Network) completed a jurisdictional and evidence scan of best practices to increase the rate of living-donor transplants. A summary report was completed in July 2021.
- Ontario Health (Trillium Gift of Life Network) is collaborating with transplant programs and Ontario Health (Renal Network) to develop a living-donor clinical handbook to help standardize practices across the province.

In addition, to help transplant programs manage the anticipated increase in living-donor referrals, Ontario Health (Trillium Gift of Life Network) will also review the living-donor transplant funding rate (see **Recommendation 10**).

Funding Needs to Be Reviewed to Match Actual Costs and Identify Potential Savings

Recommendation 9

To better reflect the volume and costs of services actually provided to patients in the funding amounts that are set based on the Quality-Based Procedure (QBP) method, we recommend that the Ontario Renal Network:

- *conduct a review of the QBP funding per service to determine if the amount is reasonable and adjust if needed based on costing information from the Regional Renal Programs and best practices;*
- Status: In the process of being implemented by July 2023.**

Details

In our 2019 audit, we found that Ontario Renal Network has not reviewed its funding amounts for most chronic kidney disease services since implementing them between 2012/13 and 2014/15, even though they were meant to be a starting point given

the limited evidence available at the time. We also noted that it did not collect actual expenditures incurred by the Regional Renal Programs to ensure that funding allocated to each of them aligned with the costs of providing renal care. Through our review of expenditures of the five Regional Renal Programs we visited, we found possible surpluses of \$37 million over the last five years.

In our follow-up, we found that Ontario Health (Renal Network) has started taking the following actions, which are expected to be implemented by July 2023.

- Ontario Health (Renal Network) conducted a consultation on the approach to the multi-year plan for the work to refresh the Chronic Kidney Disease (CKD) Quality-Based Procedure (QBP) funding model, including the sequencing and timing of patient cohorts for phased development. The plan has been endorsed by the Steering Committee.
- Ontario Health (Renal Network) has begun work to refresh the CKD QBP funding model. This includes a comprehensive review of the current funding models and reimbursement methodologies to address gaps and opportunities. Detailed costing data from Regional Renal Programs and relevant best practices will be used to cost the standard of care in the respective patient pathways, in terms of type, duration and frequency of services, and required cost inputs. The CKD QBP refresh will be conducted so that funded models of care are clearly defined, and future changes to costs or best practices can be readily incorporated into the funding models.
- The CKD QBP refresh will be completed in phases, to ensure due diligence in data collection, expert consultation, and Regional Renal Program engagement. The current planned schedule for the refresh includes the review of in-centre hemodialysis and acute dialysis treatments, followed by home dialysis (including training and assistance), and finally, multi-care kidney clinics and other services. The sequencing of the clinical elements of the refresh is subject to change. Given the Ministry of Health's requirement of six months' advance

notice for funding model changes, implementation of updated funding rates may not occur until April 1st of the fiscal year following the finalization of each set of rates.

- Ontario Health (Renal Network) has collected data from select Regional Renal Programs for in-centre hemodialysis to understand care practices and related cost inputs. Follow-up engagement to review the data and define the care standard was put on hold for a number of months due to the COVID-19 pandemic, which impacted the ability to engage Regional Renal Programs and staffing available to work on the project. A working group has so far built consensus on recommendations for key inputs including: staffing, supplies, labs and drug requirements. Discussions about access co-ordination and number of treatments in the in-centre hemodialysis are ongoing. All recommendations will be modelled and iterated as required, and will be brought forward through the governance for this project.
- Ontario Health (Renal Network) has, through consultation, developed a detailed template to collect data from select Regional Renal Programs for acute treatment events to understand the care activities, supply costs, and treatment duration of the standard of care for each event type. The template has been endorsed by stakeholders and released to participant Regional Renal Programs. Preliminary analysis and follow-up with the Regional Renal Programs has begun based on data that has been submitted. Similar to the in-centre hemodialysis work, a working group will be established to recommend inputs to inform the standard of practice for acute dialysis.
- Ontario Health (Renal Network) has also begun identifying available key measures to help inform costing of assisted dialysis home-care models. For this patient cohort, the refresh will consider care utilization data currently being submitted by Home and Community Care Support Services through the Home Care Database, and also by select Regional Renal Programs through the Integrated Dialysis Care template.

- *collect renal expenditures from Regional Renal Programs on an annual basis and use the information to inform changes in future funding allocation.*

Status: Fully implemented.

Details

In our 2019 audit, our review of the Regional Renal Programs' budget submissions and their annual reporting to the Ontario Renal Network found that their budget submissions were based on the Quality-Based procedures (QBP) funding model, but their report back to the Renal Network did not include the actual expenditures they incurred to provide services. Therefore, the Renal Network did not know if the allocated funding to Regional Renal Programs reflects the cost of providing renal services.

In our follow-up, we found that Ontario Health (Renal Network) worked with Regional Renal Programs to develop a reporting methodology to capture all appropriate expenses as accurately as possible, recognizing that the CKD QBP funding model is complex and includes patient-care services provided within the dialysis unit as well as those provided by other hospital departments. Specifically:

- Ontario Health (Renal Network) conducted a pilot expense collection project with Regional Renal Programs to assess the feasibility and comparability of data submitted. The results of this pilot indicated wide differences in methodology and approaches to expense monitoring from Regional Renal Programs, suggesting it be replaced with a standardized approach to collecting expenses.
- Ontario Health (Renal Network) has developed a methodology for estimating expenses using data from hospital trial balance submissions and the Ontario Costing Distribution Model (OCDM). Consultation with the Regional Renal Programs regarding this approach was completed in March 2021. Ontario Health (Renal Network) has finalized the expense calculation methodology and applied it to all Regional Renal Programs. Based on this methodology, Ontario Health (Renal Network) estimated that the net provincial

surplus based on 2019/20 results is approximately \$1 million (or 0.2%) of the associated provincial QBP funding. Ontario Health (Renal Network) will continue to monitor expenses based on this methodology on an annual basis.

Recommendation 10

To better reflect the actual costs incurred by the transplant centres for kidney transplants, we recommend that the Trillium Gift of Life Network, in collaboration with the Ministry of Health:

- *continue to collect and review cost information from the transplant centres;*

Status: In the process of being implemented by December 2021.

Details

In our 2019 audit, we found that base funding for kidney transplants was unchanged since 1988 and did not align with the actual cost. Our review of information at the transplant centres we visited showed that the cost of a kidney transplant varied and that the funding rate (approximately \$25,000, with a top-up amount of \$5,800) did not align with the actual cost incurred by the centres. For example, the average cost reported for a deceased-donor kidney transplant, including pre-transplant and pre-operative care provided by the transplant centre, was \$40,000, ranging from about \$32,000 at one centre to \$57,000 at another.

In our follow-up, we found that Ontario Health (Trillium Gift of Life Network) submitted its report on kidney transplant costing and funding for deceased-donor recipients to the Ministry in November 2020. The Ministry of Health has reviewed the submission and is working with Ontario Health (Trillium Gift of Life Network) to launch a Transplant Funding Advisory Committee in late 2021 to plan for implementation of a new funding model.

- *conduct a review of the current funding rates for both deceased-donor and living-donor transplants to confirm what adjustments are needed.*

Status: In the process of being implemented by April 2023.

Details

In our 2019 audit, we found that the time and resources involved in managing patients waiting for transplants were significant given the ongoing testing and evaluation required. The funding rate of \$25,000 only covered the cost of the transplant procedure during the surgical phase. Therefore, if the patient died while waiting for a transplant, the transplant centres did not receive any funding for providing pre-transplant care to the patient and maintaining the patient on the wait list. As well, the top-up of \$5,800 for each living-donor transplant was not enough to cover the additional costs of evaluating donors, as multiple donors typically had to be evaluated for suitability in each kidney transplant case.

In our follow-up, we found that Ontario Health (Trillium Gift of Life Network) has sent a template to living-kidney donor programs to collect information on donor intervention and frequencies. After collecting the information, it will finalize the costing and funding model, including pre-transplant, transplant and post-transplant related activities. Based on the information collected and funding model, it will review the living-donor transplant funding rate as part of the overall funding evaluation for transplantation, which is expected to be completed by April 2023.

Recommendation 11

To help identify and achieve potential savings from the procurement of peritoneal dialysis equipment and supplies, we recommend that the Ontario Renal Network:

- *collect cost information on peritoneal dialysis equipment and supplies from the Regional Renal Programs;*

Status: In the process of being implemented by December 2021.

Details

In our 2019 audit, we reviewed a sample of invoices for peritoneal dialysis supplies across the Regional Renal Programs and found price differences ranging from 8% to 20%, indicating opportunities for cost savings.

In our follow-up, we found that Ontario Health (Renal Network) has started taking the following actions, which are expected to be implemented by December 2021.

- Ontario Health (Renal Network) has been proceeding with its Peritoneal Dialysis Procurement initiative. The Clinical Advisory Council for the initiative was established and held its first meeting in November 2020.
- Consensus has been reached on a data collection approach and endorsed by the Clinical Advisory Council. Ontario Health (Renal Network) has been working with the Regional Renal Programs, group purchasing organizations, and peritoneal dialysis supply vendors to collect cost information on peritoneal dialysis equipment and supplies. Ontario Health (Renal Network) completed its work on the data collection strategy in June 2021.

As of the end of June 2021, Ontario Health (Renal Network) was able to collect 12 months of anonymized data on patient orders of peritoneal dialysis supplies directly from the two vendors with market share in Ontario. The data collected represents 17 of 27 Regional Renal Programs and 75% of the current peritoneal dialysis patient population. The data collection is expected to be completed December 2021.

- *analyze whether a provincial procurement initiative (similar to the fixed-price agreements for hemodialysis equipment and supplies) would provide additional savings.*

Status: Fully implemented.

Details

In our 2019 audit, we found that Ontario Renal Network reviewed the cost of hemodialysis equipment and supplies and achieved a savings of approximately \$30 million through a provincial procurement initiative. While the Renal Network did not establish a similar initiative for peritoneal dialysis supplies, it began reviewing the pricing of peritoneal dialysis supplies at the time of our audit to determine if additional savings were available.

In our follow-up, we found that Ontario Health (Renal Network) presented the business case for the Provincial Peritoneal Dialysis Procurement to the Ontario Health Board and subsequently reviewed and approved by the Ontario Treasury Board/Management Board of Cabinet. As of June 2021, Ontario Health (Renal Network) conducted analyses of potential savings based on data collected from Regional Renal Programs and peritoneal dialysis supply vendors. Through these analyses, Ontario Health (Renal Network) identified that pricing of peritoneal dialysis supplies varies significantly across the province and represents an opportunity for savings if purchased through a centralized provincial agreement.

Lack of Co-ordination Creates Challenges for Planning and Managing Renal Care

Recommendation 12

To provide patients with equal access to quality dialysis services across the province, we recommend that the Ontario Renal Network (Renal Network) work with the Ministry of Health (Ministry) to:

- *conduct a review of the oversight and funding of dialysis services provided at the Independent Health Facilities (Facilities) to identify opportunities to improve the co-ordination between the Facilities and the Regional Renal Programs and evaluate the benefits of transferring the Ministry's responsibility for the Facilities to the Renal Network;*

Status: Fully implemented.

Details

In our 2019 audit, we found that apart from the 27 Regional Renal Programs funded and overseen by Ontario Renal Network, the Ministry also funded and oversaw seven Independent Health Facilities (Facilities) that provided dialysis to patients. Unlike the Regional Renal Programs that also provided dialysis, these Facilities were not required to report the

same data to the Renal Network. Because of this, the Renal Network did not have complete oversight of and information on dialysis across the province. This made it difficult for the Renal Network to effectively plan and measure renal care in Ontario.

In our follow-up, we found that Ontario Health (Renal Network) has worked with the Ministry of Health to identify opportunities for improved co-ordination between the Regional Renal Programs and Independent Health Facilities that provide dialysis services. This has included a review of the benefits and legislative considerations of transferring the responsibility for funding, quality improvement, as well as performance measurement and management, of these Independent Health Facilities from the Ministry of Health to Ontario Health (Renal Network). Based on this review, the Ministry of Health developed a business case recommending the transfer of responsibility for dialysis Independent Health Facilities from the Ministry of Health to Ontario Health (Renal Network).

- *begin collecting information from the Facilities that is consistent with the information collected from Regional Renal Programs so that the data on all dialysis patients is complete for planning and performance measurement purposes.*

Status: In the process of being implemented by April 2022.

Details

In our 2019 audit, we found that while both Facilities and Regional Renal Programs provided dialysis to patients, the performance measures used by the Ministry to evaluate the performance of the Facilities were different from the measures used by the Renal Network to evaluate the Regional Renal Programs. For example, the Renal Network could not assess the results of patient-reported experience measures at the Facilities as it did for Regional Renal Programs because the Ministry did not collect this information. Since the Facilities were not subject to the same reporting requirements and performance measures as the Regional Renal Programs, the Renal Network cannot assess whether the dialysis services

provided by the Facilities were effective, efficient and consistent with the Regional Renal Programs and whether the operations of the Facilities aligned with the goals outlined in the Renal Network's strategic plans.

In our follow-up, we found that in anticipation of supporting data collection and to better co-ordinate surveillance on the impact of COVID-19 on the in-facility dialysis population across Regional Renal Programs and Independent Health Facilities, Ontario Health entered into Master Data Sharing Agreements with the Independent Health Facilities in July 2020.

Ontario Health (Renal Network) will work with the Ministry of Health to evaluate options for collecting data from these Independent Health Facilities to further align with the information collected from Regional Renal Programs, where the data is appropriate and applicable, based on the services provided to patients at these facilities. This work will begin once the comprehensive review of the Ontario Renal Reporting System data elements is completed, which is expected by April 2022 (see **Recommendation 14**).

Recommendation 13

To collect accurate and complete transplant data for performance measurement and reporting purposes, we recommend that the Trillium Gift of Life Network, in collaboration with the Ontario Renal Network:

- *continue to work with kidney transplant centres and Regional Renal Programs to identify and address the data issues, understand the underlying data flow, and explore potential options to support the data-validation process;*

Status: In the process of being implemented by December 2021.

Details

In our 2019 audit, we found that Ontario Renal Network had no oversight of kidney transplants, which fell under Trillium Network's responsibility. While Trillium Network and the Renal Network established a data-sharing agreement in September 2017 to capture patients' complete transplant journeys, concerns about the data's accuracy and completeness

made it difficult for the Renal Network to determine whether the Regional Renal Programs referred patients who were eligible for a transplant to a transplant centre on a timely basis. As well, there was limited co-ordination between the Renal Network and Trillium Network in terms of tracking the performance of transplant activities (such as post-transplant care) and patient outcomes.

In our follow-up, we found that Ontario Health (Trillium Gift of Life Network) has started taking the following actions, which are expected to be implemented by December 2021.

- Ontario Health (Trillium Gift of Life Network) has worked with Ontario Health (Renal Network), Regional Renal Programs and transplant programs to enhance data quality for performance measurement and reporting purposes. In July 2020, Ontario Health (Trillium Gift of Life Network) implemented a new pre-listing data quality report for transplant programs, a patient outcome data quality report, and in collaboration with Ontario Health (Renal Network), improvements to the living-donor data submission processes.
- Ontario Health (Trillium Gift of Life Network) has been working on the implementation of a new IT system called Organ Allocation and Transplantation System (OATS), which is currently undergoing user acceptance testing. The new system will support data validation and accuracy.
- An amended data-sharing agreement between Ontario Health (Renal Network) and Ontario Health (Trillium Gift of Life Network) has been finalized (effective February 10, 2021), which allows Ontario Health (Renal Network) to share the improved/ revised living-donor candidate data with Ontario Health (Trillium Gift of Life Network).
- In July 2021, Ontario Health established a single leadership structure for the Renal Network and Trillium Gift of Life Network which is intended to further enable co-ordination and integration of kidney transplant activities. In collaboration with Ontario Health (Renal Network), Ontario Health (Trillium Gift of Life Network) completed

a project in July 2021 to identify issues and propose solutions that could be addressed through OATS to improve data flow to the Regional Renal Programs.

- *continue to develop and improve performance measures related to post-transplant activities (such as transplant failure rate and frequency of follow-up visits).*

Status: In the process of being implemented by December 2022.

Details

In our 2019 audit, we found that while patients on dialysis may eventually receive a transplant and patients with failed transplants would go back on dialysis, there was limited co-ordination between the Renal Network and Trillium Network in terms of tracking the performance of transplant activities (such as post-transplant care) and patient outcomes.

In our follow-up, we found that Ontario Health (Trillium Gift of Life Network)'s Kidney Transplant Performance Measurement and Evaluation Executive Committee (TPEC) has approved an initial list of quality indicators. This is in alignment with the national Data System Working Group aimed at aligning transplant data collection strategies across the country.

The Kidney TPEC will develop methodology for the approved quality indicators; identify data sources and define data collection and validation processes; and establish a reporting framework for the dissemination of indicator reports to stakeholders. The Kidney TPEC will further develop and improve kidney performance measures, including post-transplant performance measures, to support system monitoring and quality improvement.

In addition, the Kidney TPEC will review and assess the recommendations by the national Data System Working Group for post-transplant care to support quality and performance improvement in alignment with identified measures. This review and assessment are expected to be completed by December 2022.

Information on the Performance of Chronic Kidney Disease Services Is Incomplete and Not Fully Reported to the Public

Recommendation 14

To better oversee and report on chronic kidney disease services across Ontario, we recommend that the Ontario Renal Network:

- *conduct a comprehensive review of all data fields and determine what data must be reported by the Regional Renal Programs to effectively plan and measure the delivery of renal care;*

Status: Fully implemented.

Details

In our 2019 audit, we found that although Ontario Renal Network's Ontario Renal Reporting System (ORRS) allowed the Regional Renal Programs to submit additional information on patients (such as primary nephrologist's name and home dialysis eligibility), the submission of this information was voluntary. Even though this information was helpful for the Renal Network to plan and oversee chronic kidney disease services, we found that many Regional Renal Programs did not typically report such optional information. For example, of the almost 8,600 patients that spent time in the Multi-Care Kidney Clinics and began dialysis between 2015/16 and 2018/19, more than 2,850 (33%) were missing data in ORRS that indicated their eligibility for home dialysis.

In our follow-up, we found that Ontario Health (Renal Network) has reviewed all 365 mandatory and optional data elements in the ORRS and documented usage levels where applicable. A data availability review was also conducted to determine if all data with an identified use could be sourced from other internal or external databases. All data elements were reviewed for continuation of reporting or for decommissioning, in consultation with Regional Renal Programs.

A portion of data collected in the ORRS is used solely for the purpose of submitting to the Canadian Institute for Health Information's (CIHI's) Canadian Organ Replacement Register. A review, in collaboration with the CIHI, was completed to understand the use of each data element and whether this data could be sourced from other databases or decommissioned.

Ontario Health (Renal Network) completed its review of the data elements in the Ontario Renal Reporting System, including those used by CIHI, in June 2021. A total of 86 data elements (24% of the ORRS dataset) have been approved for decommissioning. These were communicated to Regional Renal Programs in July 2021.

- *publish the results of all performance measures related to the goals outlined in its strategic plans regularly (such as quarterly or annually).*

Status: In the process of being implemented by December 2021.

Details

In our 2019 audit, our review of all performance measures (39 in total) established by the Renal Network over the last two strategic plans covering 2012 to 2019, found that Ontario Renal Network only publicly released the results of eight of these measures, including the proportion of dialysis patients receiving home dialysis. However, we noted that the results of other important measures that specifically involve educating patients and assisting patients in decision-making were not made public.

In our follow-up, we found that Ontario Health (Renal Network) is in the process of developing an online provincial renal performance report, which will be made publicly available on the Ontario Health (Renal Network) website and will describe the continuum of renal care in Ontario. This will be the first report developed by Ontario Health (Renal Network) that comprehensively describes chronic kidney disease and the overall patient journey. All of Ontario Health (Renal Network)'s renal performance measures will be included to illustrate how the province is performing on these measures. For each indicator, a description of the indicator, the latest results, and

any steps taken by Ontario Health (Renal Network) to improve performance will be provided. The report will be updated at least annually.

The content for the performance report has been drafted and is currently undergoing review with key stakeholders, including provincial renal clinical and administrative leadership and Ontario Health (Renal Network)'s Patient and Family Advisory Council.

Ontario Health (Renal Network) will complete content review of the performance report and design it for public release. Ontario Health (Renal Network) plans to publish the renal performance report by December 2021, subject to Ministry approval.