



Alberta Department of Health

**Alberta Health System
Sustainability and Resiliency
Action Plan**

February 10, 2022

Table of contents

Table of contents.....	2
1. Background, overview, and approach	3
1.1. Background	3
1.2. Overview	4
1.3. Approach	5
2. Implementation considerations	7
2.1. Future COVID-19 scenarios	7
2.2. Oversight and delivery of key actions	7
3. Action Plan Recommendations.....	9
3.1. Workforce	9
3.2. Acute, Critical Care and Surgery	19
3.3. Primary and Community Care.....	26
3.4. Governance and decision making.....	35
3.5. Public Health	38
3.6. Modelling	43
4. Appendices.....	46
4.1. Appendix A: Critical workforce gaps: specific roles, sites, and strategies.....	46
4.2. Appendix B: Strategies for building nursing capacity.....	50
4.3. Appendix C: Detailed considerations for building workforce planning capacity.....	55
4.4. Appendix D: Critical care surge planning considerations.....	62
4.5. Appendix E: Surgical resumption planning	79
4.6. Appendix F: Key components of a public health response	83
4.7. Appendix G: Types of COVID-19 modelling capacity	84
4.8. Appendix H: Addiction and Mental Health challenges and planning considerations	85
4.9. Appendix I: Community Pharmacies	92
4.10. Appendix J: Priority actions update and next steps.....	94

Notice to reader

This document is intended solely for the information and use of the Government of the Province of Alberta and is not intended to be and should not be used by any other parties. EY, therefore, assumes no responsibility to any user of the document other than the abovementioned parties. Any other persons who choose to rely on this analysis do so entirely at their own risk.

1. Background, overview, and approach

1.1. Background

Every health system around the world has been under unprecedented strain from the COVID-19 pandemic, and Alberta is no exception. Alberta Health (AH), Alberta Health Services (AHS), physicians, and other care providers came together in the period of extreme uncertainty that marked the early days of the pandemic, working hard to creatively create capacity in the province's health care system in the shadow of overwhelmed systems in China, Europe, and parts of the United States. Since those early days of the pandemic, Alberta's health system has been under varying levels of strain for nearly two years, and while the processes, approaches, and tools for responding to COVID-19 have evolved, the pandemic continues to relentlessly put pressure on all aspects of health care system, particularly the care providers who have been working day after day to care for Alberta patients.

As with nearly all aspects of life since March 2020, health systems have marked the passing of the last 21 months by the rise and fall of the pandemic's four waves.

Wave 1 (March, 2020 - May, 2020)

Alberta's response to wave one involved an immediate and significant refocusing of the health care system to respond to the potential 'worst case' scenarios seen in the earliest-hit jurisdictions. Alberta declared a state of public health emergency on March 17, 2020 and slowed down or stopped the vast majority of elective procedures to create acute care capacity. In addition to slowing down surgeries, Alberta began scaling up testing capacity, activating the emergency response structures, procuring personal protective equipment, and implementing public health measures such as closing restaurants, health and personal care services, and "non-essential" stores. The peak of the first wave was reached on April 30, 2020 with approximately 3,000 identified cases. As the cases subsided, the province ended the state of emergency and entered Stage 2 of the phased recovery and economic relaunch plan, allowing businesses such as theatres, libraries and wellness services to re-open.

Wave 2 (October, 2020 - February, 2021)

The rate of new cases remained relatively low through the summer and early fall of 2020, before beginning to rapidly climb in October of that year. In November 2020, Alberta again expanded public health measures to respond to the second wave. While non-covid health care services were again slowed to create capacity, the system was able to meet the demands of this wave without restricting these services as significantly as during wave 1. Wave 2 peaked in December 2020 with just over 20,000 active cases.

Wave 3 (March, 2021 - June, 2021)

In January 2020, the Province announced the intent to incrementally lift restrictions through the "Path Forward" framework based on the key metrics. In the spring of 2021, however, cases began to increase again, driven in part by emerging variants of concern, and Alberta halted the re-opening process. Wave 3 peaked in May 2021 with 25,000 active cases. Increasing availability of the vaccine, in combination with public health measures, triggered a drop in new cases between May and June. This positive trajectory informed the province's development of a three-stage "Open for Summer" framework, with a phased approach to reopening linked to immunization and hospitalization rates. In July, the province achieved its hospitalization and vaccination targets and lifted all public health restrictions.

Wave 4 (August, 2021 - November, 2021)

Despite hopes that the availability of effective vaccines would lead to a new, longer-term endemic phase of COVID-19, the significant infectiousness of the Delta variant, combined with lower than hoped-for uptake of the vaccine in parts of the province, led to another rapid increase in cases beginning in August 2021. As cases increased, hospitalizations soon followed, particularly among unvaccinated patients. Alberta declared a public health emergency on September 15, 2021. The fourth wave put an unprecedented level of stress on Alberta's acute-care system; the increased severity of the Delta variant, particularly among older unvaccinated patients, led to significantly higher non-ICU and ICU admissions than in previous waves. Wave 4 COVID-19 hospitalizations peaked at just over 1,100, with ICU patients peaking at 266 on September 28th. While AHS was ultimately able to create enough ICU capacity to care for the admitted patients, the organization had to surge rapidly to do so, and at the expense of delivering elective surgeries and other services. This rapid and significant response, combined with a workforce that is showing evidence of burnout and attrition from two years of rising to the challenges of COVID-19, brought Alberta's system as close to distress as it has come at any point during the pandemic.

The fourth wave is now beginning to subside in Alberta and the province is hopeful that the introduction of a vaccine passport, combined with other outreach and incentive programs, will continue to drive vaccinations resulting in fewer and less severe cases of COVID-19.

As the province mounted its response to the fourth wave, the Alberta's Department of Health (Alberta Health, AH) commissioned an independent review of the province's response to the pandemic, particularly during wave 4, to understand how the health system could be made more resilient and better able to manage the pandemic and respond to potential future waves of COVID-19.

1.2. Overview

Ernst & Young (EY) was engaged by AH in early October 2021 to perform a review of Alberta's response to COVID-19 and facilitate the development of recommended priority actions that the health system should consider in order to build longer-term capacity and resilience. The detailed findings and recommendations from our review of the province's response to COVID-19 were delivered to AH in early November 2021 in an interim report. This document represents the final deliverable and builds on those findings and recommendations to provide a set of specific actions to be considered by Alberta's health system and aggregated into an agreed-upon delivery plan by Alberta Health and Alberta Health Services.

EY structured the review and action plan around six workstreams:

1. **Workforce:** This workstream considered how medical, clinical and non-clinical staff supported the response to COVID-19 across all levels of the Alberta healthcare system. As wave four comes to an end, the health system will need to consider how to limit workforce attrition, be better prepared and ultimately recover from any potential future waves, while addressing care deficits created by COVID-19. This workstream explored strategies to stabilize the workforce in the short-term as well in the long-term to ensure the adequate supply and distribution of health care staff within hospital and community settings to meet future population health needs.
2. **Acute, Critical Care & Surgery:** This workstream centered around the response and strategies to unlock acute and critical care capacity and manage system pressures that were heightened

by the COVID-19 pandemic. AHS' response evolved throughout the pandemic based on experience gained from managing each wave. Moving forward, prioritization and balance will continue to be key considerations for the recovery and resilience planning for the provincial system as whole. To achieve those goals, this workstream identified numerous actions such as best practices to inform ICU surge and reduce surgical backlog.

3. **Primary and Community Care:** This workstream considered the roles of primary care physicians (PCP) clinics and aspects of health services delivered outside of acute care facilities such as home care, continuing care facilities, and addiction and mental health services. With understanding that Covid-19 will remain for the foreseeable future, there is an increased importance to address longer term "new normal" issues for care delivered in the community as well as look for opportunities to deliver care in a different way. As part of capacity building efforts, our recommendations include re-assessing and reviewing the roles of all primary and community care providers to enhance their role in the pandemic response; tackling the home care staffing deficit; implementing strategies to transform and modernize continuing care; and responding to growing demand for mental health and addiction services.
4. **Governance & Decision-Making:** This workstream focuses on the oversight, planning, and coordination of the pandemic response across AH, AHS, and other parts of the health system. In Alberta, with one single large health authority, the decision-making and coordination between AHS and Alberta Health is largely dependent on quality of relationships among small number of executives while operationally the leadership is more diverse in both organizations. This workstream considers actions to develop structures and processes to enable flow of information to support decision-making and strengthen AH's governance, oversight, and system coordination role for management of the future waves and health system going forward.
5. **Public Health:** This workstream captures the impact on the public health areas directly impacted by the pandemic, such as communicable disease, immunization, surveillance and planning/emergency preparedness. As the pandemic continues, it will be important for Alberta to address emerging resourcing challenges as well as other key issues to support a more cohesive and efficient response. To achieve those objectives, the recommendations are centered around developing a forward-thinking public capacity plan and operating model for delivering public health services in Alberta.
6. **Modelling:** This workstream explores how Alberta's health system could more effectively use modelling and data to inform the system response. Although AH and its counterparts have invested significant resources in building effective forecasting models and decision support tools, current methods are not meeting the needs of all stakeholders. To more effectively leverage modelling, the recommendations aim to establish a common understanding of modelling and its purpose, clarify roles, and establish clear communication channels as well as build capacity and processes to manage requests related to modelling.

1.3. Approach

EY delivered this project in two parts:

1. Interim review report
2. Final action plan

Interim review report

This report was developed between early October and early November 2021. It consisted of three core components:

1. A rapid, high-level assessment of Alberta's response to COVID-19 across each of the six workstreams.
2. Jurisdictional scan of lessons-learned and leading practices from other Canadian and international jurisdictions.
3. Recommendations for building health system capacity and resilience, based on the findings of the response assessment and the insights gathered from other jurisdictions.

To develop the interim report, the EY team conducted interviews with more than 85 people from across Alberta's health system, met with COVID-19 response leaders from more than 20 organizations across Canada and internationally, and reviewed existing data and documents from AH, AHS, and other organizations and stakeholders in Alberta and across the country.

Final action plan

This document represents the final action plan deliverable. The action plan builds on the recommendations from the interim review report to provide a series of specific, high-priority actions for AH and the health system more broadly to consider. Each action consists of the following:

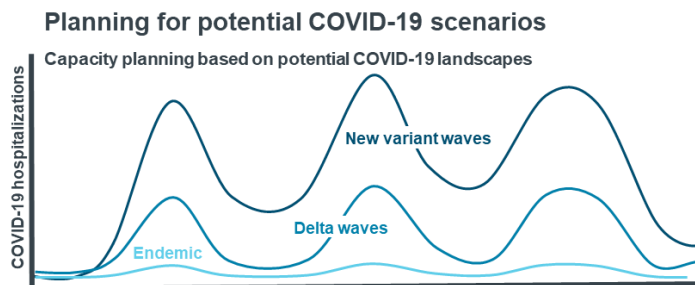
- ▶ The action itself: A high-level action statement.
- ▶ Description: A brief overview describing the action and the challenge or gap it intends to address.
- ▶ Expected outcomes: These statements describe the results that actions should achieve including how the system will be improved by delivering on those actions.
- ▶ Roles and responsibilities: An overview of which parts of the health system will be accountable for delivering each element of the action, and how different groups will need to work in collaboration, where applicable.
- ▶ Timing: The indicative timeframe for achieving the action. The intention is that these timeframes are relative to when the report is accepted by the Government and specific direction is provided on the path forward by the Minister.
- ▶ Additional considerations: This element describes any critical parameters that need to be considered in implementing the action.

As part of the action plan, the EY team conducted additional analyses and collected contextual information in high-priority areas. The effort involved further discussions with AH and AHS, more targeted workstream jurisdictional discussions, as well as research and analyses of the relevant to each workstream topics. Results of those deeper diver exercises can be found in the appendix and is referenced where relevant in specific actions.

2. Implementation considerations

2.1. Future COVID-19 scenarios

The actions described in this document are intended to build capacity and resiliency to meet ongoing demands of delivering essential health care services within the context of COVID-19. Doing so effectively requires that the delivery of the actions be grounded in a forward-looking framework that considers the possible future-trajectory of COVID-19.



While there was hope of achieving 'COVID zero' in earlier stages of the pandemic, we now know that COVID-19 will be with us for the foreseeable future. In the best case, this means that Alberta's health system will need to manage an 'endemic' state of COVID-19, which will require capacity to deliver normal-state non-COVID care needs as well as meet the baseline demands of COVID-19 outside of possible future waves.

In the short and medium terms at least, this endemic scenario is likely optimistic, however. The Delta-driven fourth wave has taught health systems around the world that COVID-19 is capable of spreading extremely rapidly given the right conditions, and that this variant causes significant illness in unvaccinated populations. At a minimum, scenario planning should consider future waves of the Delta variant, and models should be built to understand the impact of those waves given everything we know about Delta and the epidemiological characteristics of Alberta's population.

As this report is being drafted, however, a new variant, 'Omicron', has surfaced and starting to spread in Canada. The scientific community's understanding of this variant is still unclear, but there is early speculation that Omicron could be more infectious and better able to evade an immune response than Delta. It is too early to tell what the implications of this new variant are for Alberta's health system, but it would be prudent to consider a worst-case scenario of future waves driven by a more infectious, more vaccine-resistant variant, whether Omicron or a different future variant.

This conceptual framework broadly guided the development of all of the actions in this document. As implementation plans are developed by AHS, AH, and others, it will be critical that they are grounded in an understanding of the capacity required to respond to these different possible trajectories of the pandemic. Scenario planning is particularly critical for the actions related to acute and critical care capacity. These essential services are where the impact of COVID-19 waves is felt most intensely, and where the largest trade-offs are required in order to respond to dramatic increases in severely ill patients. Given the critical importance of ICU capacity in COVID-19 response, the document goes into additional detail regarding the considerations for ICU capacity in different scenarios, which can be found in appendix D.

2.2. Oversight and delivery of key actions

A consistent theme identified throughout the interim report and this action plan document is the need for AH and AHS to work more effectively together during the response to the pandemic. While our interim report found that AHS did, on balance, respond to the demands of the fourth wave effectively, the organization was challenged to be able to clearly communicate the actions it was taking and the

status of the health system at any given moment to government and elected officials.

AHS is responsible for the operations of a huge proportion of Alberta's health system. During a normal operating state AHS is appropriately afforded significant operational autonomy. At the same time, decision-makers and elected officials are ultimately accountable to Albertans for the provision of a well-functioning health system. Doing so requires that they be able to set policy direction, oversee and evaluate the achievement of policy objectives, and provide key information and analysis to decision-makers. In the case of a pandemic, closer oversight and coordination by Ministries are particularly important for a timely and agile response and were common in every interviewed jurisdiction.

The governance section of this action plan contains actions intended to improve the working relationship between AHS, AH, and the elected government. In addition to the actions within the governance section, several actions in other workstreams also relate to areas of particular importance to government decision makers and elected officials, including workforce planning, ICU capacity and surge planning, and the surgical backlog management.

Given the importance of these areas, AH will likely direct significant attention towards the planning, oversight, and delivery of these actions. For some of these actions, AHS will be accountable to AH for the delivery of these actions and should expect a high level of attention from the department. In other cases, delivery of actions may involve shifting of responsibility and accountability from AHS to AH. In all cases, it will be critical to develop a working approach that brings the right people together from both organizations in a collaborative manner, defines clear and well-understood outcomes, and enables timely and effective communication of approach and progress. The 'roles and responsibilities' sections of the relevant actions provide additional action-specific detail.

The remainder of this document outlines the specific recommended actions and provides additional detail and analysis of higher-priority actions in appendices.

3. Action Plan Recommendations

This section outlines our recommended actions for Alberta's health system. It is critical to note that while the actions are described in this report as discrete pieces of work that need to be delivered, in many cases work is already underway that is aligned and contributes to the achievement these actions.

The leaders and staff at AHS and AH have been working extremely hard to respond to the unprecedented demands and strain placed on the system by COVID-19 and have learned a great deal about how to manage the pandemic through increasingly impactful waves. Important initiatives are taking place across AH, AHS, and other health system organizations to build longer-term sustainability and resiliency in the health system. These actions are intended to provide a framework for prioritizing and aligning that work in a coherent capacity-building program. As detailed planning takes place to deliver these actions, existing initiatives should be integrated into the program of work.

The recommended actions have been developed across the six workstream areas:

1. Workforce
2. Acute, Critical Care & Surgery
3. Primary & Community Care
4. Governance and Decision-Making
5. Public Health
6. Modelling

3.1. Workforce

There is no more essential resource in any health system than the care providers who deliver care and the non-clinical staff who support the operations of the system. Unfortunately, the pandemic has placed an extraordinary strain on the health workforce, with high levels of burnout reported throughout the system, reflected through increases in overtime, sick time, and voluntary attrition. This creates incredible risk within the system at a time when resources are in critical demand, where a shortage of qualified resources could lead to delays for service.

As Alberta continues to grapple with the pandemic, Alberta Health, AHS, and other provider organizations will need to develop creative strategies to utilize, support and retain their existing workforce while also developing the capacity and capability to identify, recruit, and develop their future workforce. The actions below should build on work that is already underway across the health system, including the Integrated Workforce Action Plan currently in development by AHS.

Workforce Actions

3.1.1 Immediate workforce capacity needs

COVID-19 has not only increased the demand and workload for highly skilled clinical staff, such as ICU RNs and respiratory therapists, but also exacerbated existing pre-pandemic staffing shortages to critical levels. The AHS Integrated Workforce Action Plan (2022-2023) currently in development addresses several of these issues at the system level. High-level, long-term initiatives and strategies will be required to sustainably close these gaps, however immediate, focused action at the site or profession level is required to keep the situation from worsening in the face of shorter-term pandemic

pressures. Additionally, there will be a need to build specific policy and oversight capacity within key areas of Alberta Health (discussed in the public health and governance and oversight sections, below)

Action: Create an immediate strategy to address capacity challenges in positions that are critical to the pandemic response and sites with urgent workforce needs. The strategy should include:

- ▶ Clear understanding of which roles and skills are facing critical shortages, as well as where the shortages are concentrated
- ▶ High-level quantification of needs over the next 12 months
- ▶ Specific activities and strategies aligned to each identified need, as well as targets for each strategy over the same timeframe
- ▶ A mechanism for ongoing tracking and reporting of progress and critical staffing needs

Expected outcomes:

- ▶ Ability to respond to short-term staffing pressure from COVID-19
- ▶ Ongoing transparency of staffing challenges across the province
- ▶ Agreement on immediate required steps to address the most critical and urgent labour shortages

Roles and responsibilities:

Alberta Health Services (Lead)	Alberta Health	Others
<ul style="list-style-type: none"> ▶ Refine the immediate workforce capacity action plan with clear capacity requirements and tracking mechanisms ▶ Communicate the strategy to AH and seek input and approval ▶ Regularly report on progress against targets 	<ul style="list-style-type: none"> ▶ Provide input to the action plan development ▶ Review and approve the action plan ▶ Provide any agreed-upon provincial supports identified in the strategy ▶ Provide ongoing oversight of the strategy's execution 	<ul style="list-style-type: none"> ▶ Professional associations and unions: provide input and support the development of the plan and associated strategies ▶ Delivery partners (CSFs, continuing care providers, etc): Consult to ensure workforce efforts are aligned and identify opportunities to collaboratively address shortages

Timing: AHS should continue the development of an action plan and submit it for approval within 60 days

Additional considerations

- ▶ EY has completed an initial assessment of the in-demand roles that may require urgent attention. That initial assessment can be found in Appendix A, as well as additional analysis on specific AHS sites facing significant workforce challenges.
- ▶ The potential impact of a vaccine mandate should also be accounted for in the development of the role and skill gap assessment.
- ▶ This strategy will address the most immediate and critical needs, action 3.1.2 described below is intended to provide an approach to meeting longer-term and ongoing workforce capacity needs

- ▶ AH and AHS should consider working with the AMA to solicit input into how to effectively address areas of immediate physician workforce needs, such as anesthetists

3.1.2 Longer-term workforce plan

The shortage of key clinical staff, already a cause for concern pre-pandemic, has reached critical levels. While the short-term capacity strategy defined in the action above can help to alleviate immediate pressures, a clear plan should be developed to build workforce capacity and supply pipelines to more sustainably meet the ongoing needs of the healthcare system. The plan should consider training and recruitment of new staff, as well as opportunities to leverage different roles and new models of care.

Action: Develop a medium to long-term workforce plan to build a more sustainable supply of key roles and skills. The plan should include:

- ▶ Alignment with the evidence-based forecast of workforce needs and capacity found in the strategic workforce plan (see 3.1.3 for further recommendations on workforce planning) over an appropriate planning window
- ▶ Detailed plans for maximizing recruitment, including consideration of increased bulk-hiring and improved assessment and training of internationally educated nurses (IENs)
- ▶ Specific interventions and strategies to increase the supply of key roles, including ensuring alignment of workforce targets with the capacity and intake of educational institutions, opportunities for on-the-job training and laddering, and removal of administrative and regulatory bottlenecks where appropriate
- ▶ Specific consideration of physician workforce needs, led by Alberta Health
- ▶ Broad consideration of opportunities to use the existing workforce more effectively, including through new models of care and maximizing scopes of practice
- ▶ Specific targets for all identified interventions and strategies, as well as overall targets for key roles and skills
- ▶ A framework for identifying and prioritizing required investments in training and recruiting key roles and skills, as well as in specific geographic areas where appropriate (e.g., rural RNs)

Expected outcomes:

- ▶ Single-system view of required workforce capacity and need, as well as a coordinated provincial strategy for meeting the capacity requirements
- ▶ Training capacity appropriately aligned to provincial needs through long term seat planning for post-secondary institutions integrated into workforce planning for key clinical and public health roles
- ▶ A variety of training and bridging options that can be rapidly scaled up or down to adapt to short-term needs that may result from forecasting gaps
- ▶ Toolkit of incentives and actions to boost retention and recruitment in critical geographic areas
- ▶ Ability to fully optimize the use of scarce and in-demand resources through the use of new staffing models

Roles and responsibilities

Alberta Health Services	Alberta Health (Lead)	Others
<ul style="list-style-type: none"> ▶ Co-develop the plan with Alberta Health ▶ Execute the approved plan, as appropriate 	<ul style="list-style-type: none"> ▶ Co-develop the strategy with Alberta Health Services ▶ Provide ultimate approval of the final plan ▶ Oversee the execution of the plan by various stakeholders ▶ Ensure that the workforce plan includes staff types and demands outside of the scope of AHS (e.g., HCAs for the continuing-care sector) 	<ul style="list-style-type: none"> ▶ AMA, College of Physicians and Surgeons of Alberta (CPSA), Professional Association of Resident Physicians of Alberta (PARA), CARNA, and other colleges and professional associations: Support and provide input into workforce planning ▶ Educational institutions: provide input to the development of the plan and support its overall execution

Timing:

- ▶ A joint AH/AHS working group should submit an interim plan describing the specific strategies and actions that the plan will leverage to build workforce capacity for approval by AH within 90 days
- ▶ The working group should submit a final plan with detailed targets and implementation steps, informed by consultation with appropriate stakeholders, for approval within six months

Additional considerations:

- ▶ Registered Nurses, as the largest group of clinical staff in the province, will be a significant focus of the workforce capacity plan. Appendix B outlines a number of specific challenges to recruiting and training LPNs and RNs in Alberta, as well as potential opportunities to address those challenges. Other health professionals (particularly allied health and medical residents) would benefit from similar strategies, as well as the implementation of proposed initiatives such as the Health Care Aide Optimization Strategy proposed by AHS.
- ▶ Increasing clinical site placements will require additional support from AHS and post-secondary Institutions. It will also require a degree of culture change to increase the prevalence and acceptance of on-the-job teaching responsibilities across all health professions.
- ▶ Increasing opportunities for nurse laddering, and the successful development of a triple track nursing assessment, will require coordination from the three nursing regulatory colleges. Implementing these initiatives, and other similar initiatives in the future would be simplified if nursing regulation was under a single regulatory college (similar to BC, Ontario and Nova Scotia).
- ▶ There are specific geographic demands that the workforce plan will need to address. Strategies such as rural incentives can be considered to respond to the immediate demands, while longer-term strategies are implemented to build reliable pipelines to mitigate future workforce depletion. Appendix B contains several targeted strategies for immediate and ongoing initiatives to address this issue.

- ▶ Industry and professional associations, including the AMA, CARNA, PARA, CPSA, Covenant Health, continuing care providers, CSFs, and CLPNA, should be consulted on the development of the workforce strategy to provide input both into recruiting and retention, but also opportunities to use the existing workforce more effectively through changing models of care and scopes of practice
- ▶ It will be important that AH and AHS work together to ensure that the full workforce needs of the system are considered beyond just AHS-specific roles. This includes roles such as HCAs for the continuing care sector.

3.1.3 System-wide strategic workforce planning capacity

In addition to the targeted short-term and medium-term actions described above, Alberta requires the capacity and capability to conduct ongoing workforce planning on a provincial level and drive action across partner organizations, including providers, regulators, and academic institutions. Presently, workforce forecasting occurs at many different levels (AHS, AH), however is not amalgamated nor tied to specific workforce planning activities. Similarly, accountability for workforce planning is spread across AHS (e.g. three groups are accountable for workforce planning within AHS) and across the province (AH and AHS both have elements of workforce planning accountability). Further work should be done to clarify accountabilities for workforce planning, ensure there is appropriate capacity and clear accountability, and develop processes and linkages between workforce planning and policy and funding decisions.

Action: Build appropriate workforce planning capacity within the department and government and clarify roles and responsibilities for provincial workforce planning and strategy. Doing so should include:

- ▶ Identifying and assigning key accountabilities and responsibilities for strategic health workforce planning to health system organizations and stakeholders, including AH, AHS, broader government, and educational institutions. Appendix C describes common system-wide workforce planning roles and provides suggestions for how they could be allocated within the Alberta system.
- ▶ Building dedicated, focused capacity to effectively predict and fulfil resource requirements for the system through the deployment of modern, evidence-based resource planning practices.
- ▶ Identifying the resources required to adequately conduct strategic workforce planning and staffing as appropriate within the department.
- ▶ Defining ongoing approaches, policies, and governance models for workforce planning and ensuring they are applied consistently and across all stakeholders. See appendix C for additional detail on designing a needs-based health workforce planning framework
- ▶ Ensuring that strategic health workforce planning is effectively integrated with broader health policy changes and health education decisions
- ▶ Ensuring that appropriate data and tools are available to meet the forecasting and analytics requirements of workforce planning

Expected outcomes:

- ▶ Clearly defined roles and accountabilities related to workforce planning across Alberta Health, Alberta Health Services, provider organizations, regulatory colleges and academic institutions.

- ▶ Standardized provincial workforce dataset that enables strategic workforce planning decision making.
- ▶ Provincially-integrated strategic workforce plans for regulated healthcare providers containing supply requirement projections over a 5-10 year time horizon
- ▶ Established processes to consistently link education and funding decisions with provincial strategic workforce plans across multiple provider groups

Roles and responsibilities

Alberta Health Services	Alberta Health (Lead)	Others
<ul style="list-style-type: none"> ▶ Support Alberta Health in building workforce planning capacity ▶ Deliver workforce planning responsibilities, as directed by Alberta Health ▶ Align internal operations with the provincial approach to strategic workforce planning ▶ Provide required data to standardized provincial data set 	<ul style="list-style-type: none"> ▶ Engage with AHS and other partner organizations to confirm accountabilities for strategic health workforce planning ▶ Develop an integrated provincial approach to strategic workforce planning ▶ Build appropriate internal capacity ▶ Lead and oversee provincially-coordinated workforce planning activities 	<ul style="list-style-type: none"> ▶ Educational institutions; other parts of government: Deliver workforce planning responsibilities, as directed by Alberta Health ▶ AMA, CARNA, CLPNA, and other professional associations: Support and provide input into strategic workforce planning activities

Timing:

- ▶ Capacity building should begin in the next 90 days and take place over the next 12-18 months. Planning for capacity building should be informed by the development of the longer-term workforce plan discussed in the action above.

Additional considerations:

- ▶ Once appropriate health workforce planning is in place, a governance mechanism will need to be created to ensure that the actions stemming from the workforce plan are tracked across various organizations, including regulatory colleges, academic institutions, and healthcare providers. The accountability for this governance or process mechanism should fall within AH.
- ▶ Consideration should be given to identifying where existing workforce planning resources currently exist in the health system and could be leveraged or reallocated to support building capacity within AH
- ▶ A provincial workforce dataset should be developed and include clear data definitions and requirements from healthcare providers and regulatory colleges. The various types of data and information required can be found in appendix C.
- ▶ AH could consider contracting external support to provide workforce planning capacity in the short term while it recruits and build internal capacity. If it does so, it will be important to ensure that appropriate provisions are made for knowledge transfer as the capacity transitions from external to internal resources.

3.1.4 Centralized scheduling onboarding

Centralized scheduling allows for easy coordination and movement across units, departments, and sites, and facilitates regularized-relief planning and execution. Only slightly more than 50% of sites are currently using AHS' centralized scheduling function, leading to difficulties in understanding need and effectively directing staff. AHS is currently working to transition the remaining staff into the central function in a phased approach while it builds the function's service delivery capacity in parallel. It anticipates that it can transition approximately 10,000 staff per year.

Action: Prioritize onboarding the units and departments most impacted by pandemic-related staff movement to the centralized scheduling function, and accelerate the overall transition where possible. Doing so should include:

- ▶ Identifying which units and staff types are most impacted by staff movements during pandemic waves and ensuring that they are prioritized for onboarding and given support to smoothly and rapidly transition. Support could include:
 - ▶ Creating standardized scheduling policies and processes to be applied consistently across appropriate staff types and nursing units
 - ▶ Setting clear expectations for the use of centralized scheduling
 - ▶ Developing unit or staff-specific transition plans, timelines, and targets for transitioning to the centralized function
 - ▶ Transferring some activities from centralized scheduling function to prioritized self-scheduled staff and units through design of pre-transition processes to enable their rapid onboarding to the centralized function
 - ▶ Ensuring that appropriate resources are available within the centralized scheduling function to meet the increased service delivery requirements.

Expected outcomes:

- ▶ Flexible and adaptive scheduling that can be shifted quickly to fill urgent gaps or future pandemic and emergency scenarios
- ▶ Improved regularized relief planning and forecasting
- ▶ Province-wide visibility into staff movement and staffing shortages

Roles and responsibilities

Alberta Health Services (Lead)	Alberta Health	Others
<ul style="list-style-type: none"> ▶ Develop a prioritized approach to onboarding remaining staff to centralized scheduling function ▶ Communicate targets and timeline to AH for approval ▶ Facilitate staff transition to centralized scheduling function, including ensuring appropriate capacity within the function 		

Timing:

- ▶ Alberta Health has indicated that it can transition approximately 10,000 staff per year onto the centralized scheduling function, accounting for the need to build capacity within the function in parallel to onboarding new units. Given the approximately 30,000 staff remaining to be transitioned to the function, staff should be fully transitioned within 36 months.

Additional considerations

- ▶ Pre- transition resources should be provided to unit managers, as well as checklists of pre-transition tasks and activities that can be completed by the unit before onboarding by the centralized scheduling department.
- ▶ Adequate scheduling staff are needed to support additional onboarded units; hiring additional staff will require additional funding, consideration of alternative onboarding and training methods and possible recruitment and retention incentives.

3.1.5 Employee listening and well-being

Despite initiatives to support employees throughout the pandemic, leaders indicated high levels of mental health challenges, burnout and exhaustion across all employee groups, and limited understanding of which initiatives were most successful in addressing these challenges. AHS could benefit from developing employee listening strategies and action plans, particularly given the pause of the employee pulse survey early in the pandemic. In doing so, AHS and AH will have visibility to staff morale and be able to identify which wellness and wellbeing (with a specific focus on mental health) initiatives provide the most value to the employees and appropriately track and monitor the desired outcomes. AH has also experienced challenges with staff burnout and retention over the course of the pandemic. The department has seen turnover in key roles, including staff assigned to the provincial operations centre. It will be critical for AH to also ensure that staff have the support they need, including putting in place processes to onboard new staff and rapidly provide them with health sector knowledge and context as appropriate.

Action: Develop employee listening strategies and implement targeted interventions to increase employee wellness and wellbeing. Doing so should include:

- ▶ Immediate action to capture initial employee wellbeing and engagement dataset (e.g. survey, focus groups, etc.) as well as development of a plan for regular updates to this dataset
- ▶ Building capacity for regular wellbeing and engagement reporting of both current state information on staff morale as well as trends across different segments of staff by position type, site etc.
- ▶ Targeted interventions based on results to improve both wellbeing and engagement (examples below):
 - ▶ Continuing to expand the employee and family assistance (EFAP) program and providing on-site mental health support to priorities sites, departments and units
 - ▶ Formalizing peer-to-peer networks and improving dedicated respite spaces for staff on-site
 - ▶ Providing decentralized funding for site-based recognition and groundswell initiatives
 - ▶ Reviewing recognition programs offered across AHS and AH, with an emphasis on non-financial rewards
 - ▶ Reviewing live initiatives and considering a pause on certain non-essential projects

- ▶ Exploring dedicated ‘meeting-free’ or ‘future-focused planning’ work days to help balance workloads for non-clinical staff
- ▶ Formalizing and expanding leave, regularized relief and job rotation programs to ensure highly-strained clinical staff receive breaks from high-stress work
- ▶ Considering compensation reviews for clinical care managers in the short term to limit compression (with the potential for exploring NUÉE compensation reviews in the future)
- ▶ Regular reporting to AH on employee wellbeing and engagement status, initiative planning and impact to date
- ▶ Regular reporting to AH on core health workforce metrics, including OT, voluntary terminations, sick time, and vacancies in a format that allows AH to perform granular analysis when requested.
- ▶ AH should also ensure that they are gathering input from department staff and put in place appropriate training and onboarding to support newly recruited staff and leaders, many of whom may not come from a health background. Strategies could include developing a ‘health system 101’ program or assigning new staff with a ‘buddy’ who has health system experience.

Expected outcomes:

- ▶ Increased wellness and wellbeing of employees - supporting engagement, retention and productivity across the organizations
- ▶ Understanding of burnout and retention risk through quantitative and qualitative employee engagement and wellbeing data across the organizations, allowing for more targeted initiatives
- ▶ Transparency across AHS, AH, and government more broadly regarding the state of the health system workforce
- ▶ Fact-based strategy containing prioritized interventions to support employee wellbeing and engagement across the organizations
- ▶ ‘Crowd-sourced’ ideas to support employees, ranging from transformational initiatives to quick-wins

Roles and responsibilities

Alberta Health Services	Alberta Health	Others
<ul style="list-style-type: none"> ▶ Develop employee listening strategy for AHS ▶ Develop employee wellbeing and engagement dashboard ▶ Develop employee wellness and engagement interventions based on results ▶ Report to AH on wellbeing and engagement status, initiatives in progress and their impact to date 	<ul style="list-style-type: none"> ▶ Develop employee listening strategy for AH ▶ Develop employee wellness and engagement interventions based on results 	<ul style="list-style-type: none"> ▶ Professional association and unions: work with AHS and AH to identify areas of workforce strain and develop/support initiatives to resolve identified challenges

Timing

- ▶ Ongoing

Additional considerations

- ▶ In some instances, interventions may be jointly or independently developed by AHS and AH, depending on their scope
- ▶ Engagement and workforce health datasets should contain capabilities that allow AHS and AH to view status and trends by position type, site and other segments

3.2. Acute, Critical Care and Surgery

As with other jurisdictions, Alberta's acute and critical care system has had to shoulder a significant portion of the burden of responding to COVID-19. As the province began to see increased rates of hospitalization throughout the four waves to-date, the province has had to rapidly surge to care for COVID-19 patients. These surges come at a cost - the province's resources, particularly its clinical workforce, have had to be significantly stretched. The province's capacity is also not infinite - surging up to care for COVID-19 patients comes at the expense of the delivery of other services, including surgeries and critical diagnostic screenings.

AHS has been able to flex its workforce and other resources to meet the demands of waves one to four, but the cost of doing so has grown with each successive wave, as it has in health care systems across the country and around the world. Unfortunately, the demands placed on the system may only continue to grow. Future waves of COVID-19 are not only possible, but already happening, and at the same time, the 'care deficit' caused by pausing non-COVID clinical activities across the health system is mounting. AHS will need to take assertive and pre-emptive action to secure capacity for anticipated future pressures and ensure that the system is resilient and able to meet the normal-state needs of Albertans, while also addressing the care deficit, in particular a significant backlog of elective surgeries.

Acute and critical care capacity needs to be grounded in a reasonable and realistic set of scenarios (endemic state, future delta waves, future new variant waves, etc), so that there is transparency as to the scale of the health challenge and the predicted system response. Trade-offs at different levels of system strain need to be well-understood. The prioritised actions in this section have been developed in consideration of the scenario framework that is described in detail in appendix D.

Acute, critical care, and surgery actions

3.2.1 ICU baseline capacity

As Alberta moves through wave 4 and prepares for ongoing fluctuations in COVID-19 cases, including the potential rise of new variants, it is important that the system is set up to continue to respond to the evolving demands of the pandemic. At a minimum Alberta will need to maintain appropriate ongoing ICU capacity to meet the critical care demands of an 'endemic' period of COVID-19, as well as ensure that a sufficient buffer is available to provide time to surge up capacity in the event of new waves. Prior to COVID-19, Alberta maintained a baseline of 173 adult general-system ICU beds. While this baseline number was generally sufficient to meet Alberta's pre-pandemic needs, it is fewer beds by population than many peer health systems, which may have made it more challenging to respond to the rapid increase in demand experienced through the pandemic. Peer jurisdictions consulted are also considering revisions to their baseline beds in order to have appropriate capacity to respond to anticipated post-wave 4 demand.

Since the start of the first wave, Alberta has generally needed to operate more than its 173 baseline ICU beds and has had to surge well above this number during each of the four waves. While AHS has been able to respond to the demands of each wave, doing so required significant effort and this model has burdened managers and staff, and is likely not sustainable over the long term. Alberta should plan to set and maintain an adjusted pandemic baseline with a sufficient buffer to allow AHS to quickly deploy ICU capacity during times of surging demand. A further number of surge beds should be planned, based on the likely future scenarios (see action 3.2.2 and appendix D for additional detail on surge planning and scenarios). Surge (up and down) protocols must then be developed to allow for

rapid increase and phased decrease of surge capacity as appropriate.

Action: Confirm and sustain appropriate baseline ICU bed capacity to meet the needs of Albertans through and following wave 4. Doing so should include:

- ▶ Applying a conservative approach to surging down post-wave 4 that allows for a consistent buffer (currently 30 beds) over the AHS early warning system (EWS) 'high' scenario.
- ▶ Formalizing the management of all adult ICU beds (general and speciality) as one provincial resource and building out protocols for the allocation of specialist beds to the general pool as a function of demand.
- ▶ Completing an objective assessment to review and set Alberta's ICU baseline requirement as the system moves through a period of post-COVID recovery. See additional considerations below for suggested framework elements.
- ▶ Confirming the staffing requirement for delivering the established baseline and surge operation, and ensuring capacity is available to fulfill those requirements, in alignment with the surge protocols established in action 3.2.2 below.

Expected outcomes:

- ▶ Appropriate ICU capacity to meet ongoing patient care demands between waves for both COVID and non-COVID patients
- ▶ Confidence across the system that resources are being allocated as a function of need and through transparent health planning approaches.
- ▶ Sufficient ICU capacity buffer to enable surging up to meet increases in demand from possible future waves
- ▶ A transparent and objective framework for assessing and reporting on longer-term baseline ICU capacity requirements

Roles and responsibilities

Alberta Health Services (Lead)	Alberta Health	Others
<ul style="list-style-type: none"> ▶ Maintain an appropriate short-term ICU baseline as wave 4 surge capacity is reduced ▶ Develop a framework for determining the appropriate pandemic ICU baseline ▶ Identify any additional resources required to maintain the new baseline and develop a plan to recruit, train, or otherwise obtain them ▶ Maintain the updated baseline on an ongoing basis ▶ Regularly report on ICU utilization and evolving critical care capacity needs 	<ul style="list-style-type: none"> ▶ Review and approve of the ICU baseline assessment framework ▶ Based on the assessment framework, review and approve the new baseline of ICU beds through post-COVID recovery and into the endemic phase of the pandemic ▶ Receive regular reporting on ICU capacity and demand and communicate system status to decision makers as required 	<ul style="list-style-type: none"> ▶

Timing:

- ▶ A new baseline should be determined using the framework and the new baseline, any additional resource requirements, and the plan to obtain the required resources should be presented to AH within 60 days

Additional considerations:

- ▶ The ICU baseline assessment framework should consider, but not be limited to:
 - ▶ All existing critical capacity: All intensive care beds, both general and specialty, should be considered as inputs into assessing the appropriate future baseline so that the full system capacity is included. Furthermore, the system's ability to flex capacity (i.e. the speed at which surge capacity can be opened) should be assessed and considered in identifying the required baseline.
 - ▶ COVID prevalence: Future waves of the COVID pandemic as well as an endemic phase should be considered as part of critical care capacity planning, in a similar manner that flu season is addressed in overall acute capacity planning.
 - ▶ Historical occupancy: Historical occupancy levels both pre-COVID and during the pandemic should be considered as inputs into the assessment framework
 - ▶ Workforce and staffing models: Workforce constraints will need to be considered as they will likely be a limiting factor in overall critical care capacity and the extent to which the baseline can be changed. The use of alternative staffing models during periods of higher demand should be considered as an input into establishing baseline and surge ICU capacity requirements.
 - ▶ ICU admission criteria: Standardized ICU admission criteria, updated based on lessons learned and practice changes from the pandemic, should be used to support assessment of existing capacity and future needs.
 - ▶ Population growth and demographics: Current and future population size and demographics should be considered as inputs into the assessment framework.
 - ▶ New and revised care models: Managing patients traditionally admitted to the ICU on acute and specialty units, thus revising the true demand for ICU beds.
 - ▶ External benchmarks: Baseline level of ICU capacity in other jurisdictions should be considered as reference points for Alberta (e.g. other Canadian provinces have 6 - 13 ICU beds per 100,000 population as compared to Alberta's 5.7). In addition, Alberta should look to other provinces' plans to adjust their baselines. Other jurisdictions (e.g. Ontario, Saskatchewan) are looking to increase baseline critical care beds in the magnitude of 1.4 to 2 times current baseline over a to-be-determined period of time. See Appendix D for additional detail on jurisdictional comparisons.

3.2.2 Operational critical care surge plan and protocols

There is not currently a consistent provincial surge plan that leverages standard data, such as population and public health demand measures and system capacity and occupancy indicators, to guide ICU surge decisions and approaches at different thresholds. The response to each surge of COVID demand has demonstrated value in the early warning system (EWS) as a tool to forecast capacity requirements based on anticipated volumes for the upcoming 3 weeks. AHS has responded to EWS projections at a zonal level with each zone creating a surge plan for the projected capacity requirements. While the zone level plans have been sufficient to respond to previous waves of COVID-19, a more proactive and coordinated provincial approach will be critical to sustainably responding to

potential future waves. This will be particularly important as an increasingly stressed workforce makes it more challenging to ask staff to stretch at short notice. Setting clearly defined measures of demand, system capacity pressures and thresholds to trigger specific actions will enable AHS to monitor and be responsive to internal and external pressures in a coordinated, consistent, and proactive manner. Establishing transparent triggers, clear escalation levels and agreed action protocols will provide visibility to decision-makers, elected officials, and the public on the rationale for the actions being taken.

AHS and AH have recently developed a health system 'common operating picture' (COP) framework to provide decision makers and officials with an assessment of the health system status at any given time. This framework is an important foundation for establishing a detailed critical care operational surge plan; however, it is not sufficiently detailed to meet the specific operational needs of a surge plan. AHS should build from this framework by adding additional operational-level triggers and actions to guide consistent surge planning and operational decision-making across all zones (see appendix D for the common operating picture framework).

Action: Develop a provincial ICU operational surge plan that establishes a transparent and staged approach to ramping surge capacity up and down based on objective and agreed measures. Doing so should include:

- ▶ Defining specific metrics to assess and forecast surge capacity demands. The metrics should include (but not be limited to) population health measures (e.g., new COVID cases), and acute system capacity measures (e.g. number of patients on high flow oxygen, bed occupancy, etc). See appendix D for details on common triggers used in other jurisdictions.
- ▶ Developing thresholds aligned to the metrics at which surge capacity is brought online
- ▶ Defining the specific tools and actions that may be taken to increase capacity at different thresholds (e.g., changes to nursing ratios, transition to team-based care, triage protocols), tested against possible future demand scenarios (see appendix D for detailed discussion of demand scenarios)
- ▶ Implementing the tools and processes required to gather, analyze, and report on the metrics defined in the framework
- ▶ Developing thresholds at which surge capacity is ramped down and returns to baseline levels as demand subsides.
- ▶ Designing a surge governance model and accountability framework that outlines the expectations for monitoring, reporting, decision-making, and risk escalation between AHS and AH, as well as ensuring that zones and sites follow the established protocols and support the reporting requirements

Action outcomes

- ▶ A consistent response to surges in critical care demand, tested against various scenarios to identify realistic actions and trade-offs at different thresholds (see appendix D for additional detail on scenarios)
- ▶ Site, Zone and Province-level actions to respond to triggers based on a whole-system view of capacity and demand.
- ▶ A common province-wide understanding of surge triggers, the actions that will be taken at different levels of demand, and the underlying rationale and trade-offs of those actions

Roles and responsibilities

Alberta Health Services (Lead)	Alberta Health	Others
<ul style="list-style-type: none"> ▶ Develop the detailed surge plan, including defining the metrics, thresholds, and actions ▶ Put in place the tools and processes required to operationalize the plan and meet reporting expectations ▶ Implement the use of the plan and align internal operations across all sites ▶ Report on health system demands and escalate risks and decisions to AH as required 	<ul style="list-style-type: none"> ▶ Review and approve of the surge plan ▶ Establish surge reporting, oversight, and decision-making expectations ▶ Regularly monitor health system demand and facilitate briefing and decisions as required ▶ Enable the delivery of surge actions where required (e.g., out of province support) 	<ul style="list-style-type: none"> ▶

Timing:

- ▶ Development of the plan should commence immediately. The plan should be presented to AH for approval within 90 days.

Additional considerations:

- ▶ The operationalization of the surge plan will require coordination between AH and AHS and should include a governance and accountability framework for the respective organizations to manage the provincial response based on the level of surge. The framework should include, but not be limited to:
 - ▶ Expectations for monitoring and reporting on trigger metrics aligned to the surge levels (e.g. at level 4 acute care occupancy should be reported daily through an executive summary report on capacity)
 - ▶ Expectations for communicating short-term, medium-term, and long-term modelling data to support capacity planning and full transparency across key stakeholders including clinicians, system leadership, and the public
 - ▶ Expectations for response actions that require immediate notification, decision, or approval from AH based on a higher level of required escalation (e.g. less than 30 beds buffer of beds available requiring out of province transfers and the issuance of relevant directives).
- ▶ The plan should ensure that consideration is given to balancing COVID requirements and non-COVID care deficit demands on the system
- ▶ Surge beds sustained above the baseline will need to consider the expected resource requirements (staff ratios, ventilation, etc.) for COVID and non-COVID critical care patients. This should inform the categorization of the beds, specifically the capacity that can quickly transition to caring for ICU patients with COVID.

3.2.3 Surgical resumption plan

Prior to the onset of the pandemic, Alberta had designed and begun implementing the Alberta Surgical

Initiative (ASI) to address a growing surgical backlog and increasing numbers of Albertans who were waiting beyond the clinically-recommended wait times for surgical procedures. Alberta had begun to implement the strategies defined in the ASI, including a significant expansion in the use of Chartered Surgical Facilities (CSFs) to provide more than 40,000 procedures per year. The slowdown of surgical activity due to COVID-19 has delayed the achievement of the ASI targets and led to an additional backlog of patients waiting too long for surgeries. In response to the growing waiting lists, AHS has developed a surgical resumption plan and framework (June 2020, October 2021) to outline target volumes and timelines for increasing surgical activity; however it is not clear what specific strategies will be used to achieve the target volumes. It is also not clear within the plans how volumes will be adjusted based on future waves of the pandemic or capacity requirements (i.e. specific triggers and responses). Building on the work done to date, a refined plan is needed to specifically address the critical service deficit which is of the highest priority for Albertans. The design of a provincial surgical resumption plan will require extensive coordination, effort, and the deployment of extraordinary measures, including expanding the use of CSFs and potentially sending patients out of province.

Not only should AHS and AH recalibrate their ASI targets and solutions to account for the impact of a slow down in surgery due to COVID-19, but it will also be important to build on the planning done to date to design a specific surgical resumption plan that redefines how surgical activity will be expanded in the short- and medium-term to address the care deficit and cases waiting out-of-window specifically driven by COVID-19's impact on surgical capacity. While the resumption plan should be developed independently, it will drive the ASI trajectories and recalibration targets that focus volumes on those waiting outside of clinically-recommended wait-times.

Demand management and waiting validation strategies must form part of the considerations and solutions, and consideration should also be given to how actions and progress will be communicated with the public. Transparent reporting and management of surgical waitlists has been helpful for holding service providers accountable in other peers in Canada.

Action: Building on the ASI, develop a patient first, surgical recovery plan with clear targets and public reporting of objectives and progress. The plan should include:

- ▶ A recasting of the strategic objectives to be expressly patient orientated - focusing on the clinical need, waiting times, and outcomes
- ▶ A public commitment to achieving clearly-set waiting times targets, based on reducing the number of patients waiting longer than the clinically-recommended timeframe for their procedure.
- ▶ Data and public reporting that is clear and consistent, and aligned with the public commitments set, including the establishment of a provincial waiting list for all patients from the point of referral and zone and site level progress against the plan.
- ▶ Strategies for increasing patient engagement and communication. Ensuring patients are fully aware of where they are in their surgical journey and involved in relevant decision making.
- ▶ Specific strategies for increasing surgical volumes, including the expanded use of chartered surgical facilities, expansion of AHS capacity and operating hours, and consideration of other extraordinary measures such as out of province provision of surgery.
- ▶ Regular reporting and monitoring of progress against targets by strategy.
- ▶ Clear leadership and lines of accountability and dedicated and accountable leadership for surgery recovery, possibly in the form of an independent surgical recovery lead.

- ▶ Surgical demand management strategies, including identifying and addressing bottlenecks (e.g., diagnostic services, referral access, etc).
- ▶ Additional detail on the components of the surgical resumption plan can be found in appendix E.

Expected outcomes:

- ▶ Clear engagement and increased involvement of patients in their care journey
- ▶ A primary focus on patients and outcomes through the ASI and recovery plan rather than process and volumes
- ▶ Public confidence in the approach to building surgical capacity through transparent communication of the plan and public reporting
- ▶ Increased transparency and provincial-level reporting on the surgical waitlist and waiting times, with aligned accountabilities for action
- ▶ Clarity on the scale of the increased surgical backlog due to COVID-19 and further unmet need.
- ▶ Increased surgical capacity and fewer Albertans outside of clinically-recommended wait times
- ▶ Focused leadership and accountability for surgical resumption
- ▶ Reductions in the unmet need and ability to address hidden demand
- ▶ The ability for AH to hold service providers accountable for achieving the outcomes

Roles and responsibilities

Alberta Health Services (Lead)	Alberta Health	Others
<ul style="list-style-type: none"> ▶ Develop the surgical resumption plan, working closely with AH, and submit the plan for approval ▶ In collaboration with AH, develop realistic and appropriate strategies and tools for building surgical capacity ▶ Actively manage the full surgical waitlist and maximize the capacity of the system to deliver procedures ▶ Actively validate the waiting list with patients and increase engagement with regarding their wait and their care ▶ Accurately and transparently report a full picture on waiting times and the waiting list. Report on key measures, relating to relevant strategies ▶ Ensure that the rebaselined ASI approach and targets are aligned to the surgical resumption plan 	<ul style="list-style-type: none"> ▶ Facilitate the development of a public commitment around waiting times and surgery ▶ Support the development of the plan, as required and review and approve the plan once drafted ▶ Identify or appoint an executive leader to oversee the development and implementation of the strategy ▶ Define the reporting and governance expectations, in particular regarding public reporting measures ▶ Enhance Health Contracting Secretariat to support and monitor contracting with chartered surgical facilities. 	<ul style="list-style-type: none"> ▶ CSFs: Deliver procedures as contracted and report on key metrics

Timing:

- ▶ Development of the plan should commence immediately and the plan should be submitted to AH within 60 days.

Additional considerations:

- ▶ The plan should be focused on waiting times and reducing patients out of window. Targets to be set should consider case prioritization, keeping in mind equitable access to services and quality of care.
- ▶ A key requirement for effective and timely reporting will be access to high quality surgical data. The plan should consider the establishment of a provincial waiting list, and associated surgical data. This should include the implementation of new tools and the development of consistent processes and data definitions to increase transparency provincially
 - ▶ Reporting on plan progress and surgical volumes should be inclusive of activity at AHS, Covenant and CSFs to provide a complete view of capacity and activity in the province.
 - ▶ Current waitlists should undergo validation to determine true surgical demand
- ▶ In addition to internal reporting, publicly available targets should be considered to support transparency and accountability.
- ▶ It will be important that the plan considers the entire scope of services and activities required to enable surgical volumes, including diagnostic imaging (DI). Alberta is also facing DI capacity challenges, and there may be opportunities to work with private-sector providers, including equipment vendors, to bring on rapid, temporary DI capacity to enable increased service volumes

3.3. Primary and Community Care

The primary and community care elements of the continuum have not only been critical to delivering COVID-19 and non-COVID care throughout the pandemic, but they have also been severely impacted by the pressures of the pandemic, particularly in the facility-based continuing care (FBCC) system during the initial waves prior to the rollout of the vaccines. While these services moved quickly to adapt service delivery models in response to COVID-19, the challenges with providing adequate care in the context of the pandemic has led to a growing 'care deficit', particularly in the areas of primary care, mental health and addictions, and continuing care.

The plan for recovery should not only address the current needs of capacity and access across the primary and community care system, but also ensure the sustainability of the system as "new normal" issues continue to arise in the foreseeable future.

Primary and community care actions

3.3.1 Addressing the growing addictions and mental health challenges

The impact of COVID-19 on addictions and mental health (AMH) is unprecedented and significant effort will be required to meet the growing backlog and future demands. As with all jurisdictions, Alberta's population is showing increasing need for AMH services. For example, the number of 'crisis interactions' with the health system among children has increased dramatically since the start of the pandemic, with the waitlist for children's mental health peaking at 79 days in the Edmonton zone. Likewise, while ED visits for mental health have decreased, the number of primary care contacts for mental health concerns as well as the number of connections to virtual services such as Alberta 211

and the AHS Addiction and Mental Health Helplines have both increased significantly. In terms of addictions, Alberta recorded the highest-ever number of unintentional drug overdoses seen in the first eight months of 2021, with 1026 deaths. 2020 was the worst year on record for overdoses, with a significant spike beginning after the start of the pandemic.

Alberta Health, with the support of stakeholders, community providers and prior advice from the province’s Mental Health and Addictions Advisory Council (MHAAC) and AHS, is actively developing and implementing AMH initiatives and strategies to target critical areas of demand. Appendix H describes the challenges that have emerged during COVID-19 and provides a summary of the initiatives and investments that the province is implementing. While this work is critical to meeting the growing AMH challenges, it will also be important to make sure that it is part of a coherent and coordinated recovery-oriented approach to addressing AMH in the province, with provincial oversight. Accountability for delivery, policy direction, funding and decision making is currently highly fragmented across AH, AHS, other government ministries, and community groups. To address AMH challenges related to COVID-19, in-flight and planned initiatives should be bundled into a consolidated addictions and mental health recovery approach and executed in a coordinated and aggressive fashion with clear lines of accountability and oversight. Given the need to move quickly and work across the broader AMH system, AH will play a critical role in overall direction-setting and oversight of the AMH recovery approach. This may include expanded responsibility for commissioning community mental health services, which would enable a more direct connection between service delivery and funding.

Action: Bundle in-flight and planned AMH initiatives into a consolidated AMH recovery approach, with clear lines of accountability and oversight. This should include:

- ▶ Identifying all the in-flight and planned COVID-19 AMH initiatives and investments across AH, AHS, broader government, and other community partners
- ▶ Leveraging the Alberta Recovery Council (an existing cross-ministry table of executive directors), work with government and health system stakeholders to assess the consolidated bundle of initiatives and prioritize or re-scope as needed to ensure initiatives and investments are appropriately directed towards critical areas of need
- ▶ Developing a high-level framework for reporting on initiative progress and outcomes to AH
- ▶ Aligning overall oversight and direction-setting for AMH recovery under AH

Expected outcomes:

- ▶ A consolidated and coordinated approach to meeting the province’s growing COVID-19 AMH demands
- ▶ Ability for AH to effectively direct provincial AMH policies and hold service providers accountable for accelerated delivery
- ▶ Closer alignment between AMH policy, funding, and service delivery

Roles and responsibilities

Alberta Health Services	Alberta Health (Lead)	Others
▶ Contribute and support the development consolidated AMH recovery approach	▶ Lead the consolidation of initiatives and investments into an overall AMH recovery approach	▶ Alberta Recovery Council: Support the development and implementation of the AMH recovery approach

<ul style="list-style-type: none"> ▶ Continue to deliver services as directed by AH, with a focus on addressing critical needs 	<ul style="list-style-type: none"> ▶ Work with service providers and partners to prioritize initiatives as appropriate ▶ Provide ongoing direction and oversight of the AMH recovery approach ▶ Where appropriate, relevant take responsibility for commissioning community mental health services ▶ Coordinate activities across ministries, service providers, and other stakeholders 	
---	---	--

Timing:

- ▶ The AMH recovery approach should be a consolidation of work already underway, and delivered within 60 days

Additional considerations:

- ▶ Significant work is already underway across the province to build AMH capacity and meet growing demands. This action is not intended to be disruptive or trigger a broad re-evaluation or reorganization of that work, but rather to ensure that it is occurring in an accelerated and coordinated manner
- ▶ Given the broad scope of AMH services and the number of ministries, service providers, and partner organizations involved, it will be important to put in place tools and processes for enabling AH oversight of AMH recovery without overly burdening partners and service providers with rigid reporting and governance requirements

3.3.2 Addictions and mental health funding model

Historically, Alberta’s AMH system has not been funded based on the achievement of specific outcomes or within a well coordinated provincial strategy. Funding has been allocated between AH, AHS, and various other ministries, with limited transparency regarding where the funding has gone or clarity on whether funded projects were successful and provided positive outcomes. By tracking key metrics for each project that is funded, the AMH system can move to an outcomes-based model and fund the projects that provide the most benefit for patients and the broader health system.

The Alberta healthcare system has an abundance of data that can be used to better align funding to specific outcomes. Putting in place outcome-based funding policies, and processes would enable the health system to direct resources at the most effective initiatives, as well as specify funding for initiatives that support vulnerable populations. Alberta’s Mental Health and Addictions Advisory Council has recommended that Alberta implement a Recovery-Oriented Systems of Care (ROSC) in Alberta. The ROSC concept has emerged as a leading-practice approach to provide mental health and addictions services that focus on long-term, person and community-centered, integrated models of care. Aligning to an outcomes-based funding model grounded in building a ROSC system in the province will support the shift towards proactive, evidence-supported, and culturally safe services for the community.

As AH and the broader AMH system design and implement AMH initiatives to address the pressures

from COVID-19, AH and other organizations should establish and deploy funding principles that support measuring and evaluating outcomes related to addressing areas of critical need.

Action: Establish and deploy principles that link funding to specific outcomes and areas of need and support sustainable recovery and care. This should include:

- ▶ Ensuring that proposals for new COVID-19 AMH investments and initiatives are explicitly linked to priority outcomes, including the mechanism or approach to achieving those outcomes
- ▶ Where possible and appropriate, initiatives support the ROSC model
- ▶ Ensuring that initiative owners collect and report on relevant data and metrics to evaluate the achievement of desired outcomes
- ▶ Putting in place a framework for AH to review the progress of in-flight initiatives at key milestones to ensure ongoing alignment with desired outcomes and areas of critical need

Expected outcomes:

- ▶ Close alignment between AMH funding and resolving identified areas of critical AMH need
- ▶ Transparency into the effectiveness of investments and initiatives in achieving desired outcomes
- ▶ Improved access to sustainable AMH services for Albertans
- ▶ Timely and comprehensive insights into the areas of most pressing AMH concern and need

Roles and responsibilities

Alberta Health Services (Lead)	Alberta Health (Lead)	Others
<ul style="list-style-type: none"> ▶ Continue to deliver services and report on outcomes, in alignment with the goals of the AMH recovery approach 	<ul style="list-style-type: none"> ▶ Lead the development of funding principles and approaches ▶ Review and approve proposed initiatives and investments based on achieving specific outcomes ▶ Work with AHS and other ministries to develop and track key metrics to measure the effectiveness of funded initiatives 	<ul style="list-style-type: none"> ▶ Service providers and partners: Continue to deliver services and report on outcomes, in alignment with the goals of the AMH recovery approach

Timing:

- ▶ The funding principles and associated policies should be developed within the next 3-6 months and applied to new initiatives and investments moving forward

Additional considerations:

- ▶ Initiatives should be designed to enable periodic assessment of progress towards achieving desired milestones, and processes should be put in place to enable reporting on the achievement of outcomes to support future funding decisions.
- ▶ Consideration should be given to adopting a portfolio approach to managing AMH initiatives in the longer-term, enabling an annual funding allocation process that can consider the overall performance of the portfolio of funded initiatives.

- ▶ Continuing to improve the quantity and quality of data available to decision-makers will support better identification of specific areas of need and enable more effective targeting and prioritization of investment.

3.3.3 Home care sustainability

The quantity and quality of homecare services decreased during the early stages of the pandemic as AHS reduced the number of authorized home care hours, anticipating that those staff may need to be relocated to other parts of the system, particularly facility-based continuing care. This was driven in part by the significant and immediate resource needs of the facility-based continuing care sector during the first waves of the pandemic, and in part by a wage disparity between home care and facility-based continuing care for similar roles. Both issues have been resolved to some degree - AHS has returned the authorized hours to their previous level, and the government provided additional funding to address the wage disparity. As a result, homecare service hours appear to have broadly recovered since the initial reduction early in the pandemic.

While the recovery of service hours is positive, home care is a critical resource for Albertans, particularly the elderly who rely on home care to maintain their ability to live independently and who are at the highest risk from COVID-19. Building the resiliency to respond to future waves without significant service disruptions will be critical to managing the ongoing pandemic. AH and AHS are engaged in a broader home care transformation project and has set a target of increasing home care capacity by 10%, in part through an upcoming procurement for home care services. This procurement provides an opportunity to work with private sector partners to build resiliency, and capacity to respond to the anticipated demands from COVID-19 should be a key goal of that process. In parallel, AH should ensure that broader health system workforce planning accounts for the needs of the home care system, supporting a sustainable response to future waves.

Action: Embed workforce sustainability into upcoming home care service procurement and ensure that home care staffing is considered in the broader workforce capacity strategy. This should include:

- ▶ Assessing and quantifying the anticipated demand for home care staff as well as the current staffing levels to identify the gap that needs to be closed
- ▶ Working with private sector service providers to ensure adequate supply of resources, and embed service delivery requirements into the upcoming procurement strategy
- ▶ Developing specific strategies to recruit, train, and retain home care staff where appropriate, in alignment with broader home care transformation and procurement initiatives currently underway
- ▶ Ensuring alignment with the broader workforce capacity plan discussed in action 3.1.2 above

Expected outcomes:

- ▶ Homecare services that meet the needs of patients and that are able to sustainably respond to future waves
- ▶ Delivery of high-quality care by both private and public providers
- ▶ Improved culture and experience for those working to provide homecare services.
- ▶ Improved access and quality of life for home care patients and reduced burden on the FBCC system

Roles and responsibilities

Alberta Health Services	Alberta Health (Lead)	Others
<ul style="list-style-type: none"> ▶ Ensure appropriate AHS resourcing to meet service delivery targets ▶ Embed workforce sustainability into the upcoming homecare procurement process 	<ul style="list-style-type: none"> ▶ Ensure home care workforce needs are appropriately considered in broader workforce planning activities ▶ Ensure appropriate system-wide resourcing to meet service delivery targets 	<ul style="list-style-type: none"> ▶ Home care providers: support the development of the workforce capacity strategy as required; deliver high-quality and sustainable services ▶ Community groups: Support the delivery of comprehensive homecare services, where appropriate

Timing:

- ▶ Engagement with third party providers should occur in alignment with the existing timelines for the upcoming procurement.
- ▶ The specific workforce planning strategies and actions should be delivered in alignment with the timelines in the broader workforce planning action discussed above in section 3.1.2

Additional considerations

- ▶ Given that public and privately-run home care service providers will be competing for the same pool of workers, it will be essential to ensure that workforce capacity planning considers the needs of the entire system
- ▶ Workforce culture should continuously be addressed and improved, through additional staff wellbeing supports and tracking of progress through employee feedback surveys, staff turnover, staff absenteeism, and other metrics
- ▶ Consideration should be given to increasing homecare service hours through new models of care that focus on patient needs, with flexibility to access the type of care and service most suitable to their preferences. These new models should also include greater collaboration and partnerships across acute and community care providers.

3.3.4 Facilities-Based Continuing Care recommendation implementation

In 2020, AH commissioned an assessment of the FBCC system's performance. That report resulted in a broad set of recommendations intended to improve the FBCC system broadly as well as address a number of specific lessons from the COVID-19 pandemic. Stakeholders that were consulted as part of the development of this action plan were consistently positive regarding the recommendations in the FBCC review and AH quickly established a comprehensive approach to proceed with implementation. Alberta Health is collaborating extensively with FBCC stakeholders and has prioritized implementing recommendations with a particular impact to managing COVID-19. Many of the initiatives and work undertaken to respond to the pandemic (e.g., to reduce facility outbreaks, limit resident isolation in facility-based settings, etc.) have also been in alignment with the FBCC recommendations.

As AH continues to implement the recommendations from the FBCC review, it will be important to be flexible and aware of any evolving needs due to the pandemic, and to potentially accelerate specific initiatives if required.

Action: Continue to implement priority recommendations from the Facilities-Based Continuing Care report (FBCC). This should include:

- ▶ Seeking cabinet approval for the detailed legislative and policy response in development
- ▶ Periodically evaluating implementation plans and timelines to consider if actions should be reprioritized or adjusted

Expected outcomes:

- ▶ Transformation of facilities-based continuing care through implementation of recommendations in the FBCC review
- ▶ Increased hours of care and more consistent levels of care for FBCC patients
- ▶ Significant growth in home care and the proportion of people who can remain at home rather than moved to a continuing care facility
- ▶ A skilled, effective workforce delivering critical care services in a positive environment
- ▶ Close integration between transformation of the FBCC system and changes to the delivery of community care services (e.g., supportive living, homecare, day programs, etc.)

Roles and responsibilities

Alberta Health Services	Alberta Health (Lead)	Others
<ul style="list-style-type: none"> ▶ Support the implementation of FBCC review recommendations as appropriate 	<ul style="list-style-type: none"> ▶ Continue to lead the implementation of the FBCC review recommendations ▶ Provide oversight and collaborate with system providers (AHS, LTC and DSL operators, etc.) to implement the recommendations in the FBCC review 	<ul style="list-style-type: none"> ▶ Service providers: Deliver high quality services and maintain appropriate capacity to meet anticipated demand

Timing

- ▶ Implement the identified initiatives in alignment with existing plans, including submitting the updated policy and legislative framework to cabinet in 6-12 months.

Additional considerations:

- ▶ No recommendation in the community sector should be implemented without consideration of impact across the broader health system (e.g., pandemic pay for workers in LTC/DSL vs. homecare).

3.3.5 Primary care providers, pharmacists, and emergency medical services (EMS)

The role of PCNs, primary care providers, and other community providers such as pharmacists and paramedics in supporting the management of the COVID-19 pandemic response should be reviewed for opportunities to enable these providers to play a greater role. The PCN model has provided an important foundation for primary care providers to participate in a coordinated pandemic response (over 85% PCPs belong to a PCN), and existing PCN-based initiatives can be evaluated and scaled more

broadly across the province as appropriate (e.g., COVID results communicated to PCP via PCN, COVID positive patients picked up and cared for in the community via PCN, etc.). There are further opportunities to consider expanding the use of additional community providers, including pharmacists, in the delivery of COVID-19-related services such as vaccination and testing. As with other parts of the health system, the EMS system is showing signs of workforce strain and fatigue. AHS is working to relieve these pressures through a number of strategies.

Action: Consider opportunities to expand and formalize the use of primary care and other community care providers to support the response to COVID-19. This should include:

- ▶ Identifying existing initiatives delivered by individual PCNs that could be scaled across the province
- ▶ Establishing provincial guidance and support for the care of COVID-positive patients in the community by primary care providers
- ▶ Assessing opportunities to expand the use of pharmacists and other community care providers for services such as vaccine delivery and testing (see Appendix I for an assessment of vaccine delivery costs)
- ▶ Creating opportunities to receive input from primary care physicians and communicate initiatives, approaches, and clinical guidelines through existing structures such as the Primary Care Alliance
- ▶ Continue to implement planned EMS support initiatives

Expected outcomes:

- ▶ High-quality care for COVID patients in the community, including a reduction in COVID-19 related admissions to acute care.
- ▶ Coordinated engagement through PCNs in ongoing and post pandemic response plans.
- ▶ Cost-effective delivery of services such as COVID-19 vaccinations by community providers who can build ongoing relationships with patients and clients.

Roles and responsibilities

Alberta Health Services	Alberta Health (Lead)	Others
<ul style="list-style-type: none"> ▶ Support AH in engaging with PCs and other community care providers to scale and support opportunities to deliver COVID-19 care and other services in the community ▶ Build EMS capacity to enable a more resilient workforce and sustainable service delivery 	<ul style="list-style-type: none"> ▶ Continue engagement with PCN zone leads to build on successes throughout the pandemic and scale leading practices to other zones and/or provincially ▶ Consider expanding the use of pharmacists in the delivery of vaccines 	<ul style="list-style-type: none"> ▶ AMA, Alberta Pharmacists Association, and other primary care and community stakeholders: Provide input and support the expansion of strategies to provide COVID-19 care and supporting services in the community; support the definition, measurement, and resolution of the COVID-19 care deficit ▶ PCNs: Support the effective delivery of care and services for COVID-19 patients in the community

Timing:

- ▶ Engage PCNs and providers on an ongoing basis and scale/implement opportunities as appropriate

Additional considerations

- ▶ Collaborating with AHS and the HQCA to monitor system level quality data, including metrics and outcomes tied to primary care initiatives, will assist in evaluating initiatives that should be scaled more broadly (e.g., tracking avoidance of admissions).
- ▶ PCNs have an important role to play in the post pandemic recovery, and it will be important to continue engagement and consultation to develop a system wide response inclusive of primary care.
- ▶ Some primary care providers in Alberta do not belong to the PCNs and need to be engaged in developing the system-wide response.
- ▶ Primary care provider burnout and well being should be considered as part of the broader workforce planning and support initiatives.
- ▶ While pharmacists have already been providing vaccine services in the province, many pharmacists and pharmacy companies have expressed an interest in expanding their vaccine delivery support, as well as exploring additional services such as COVID-19 testing. AH and AHS can work with these community partners to share the service delivery burden, however it will be important to ensure that partners work collaboratively to ensure that the system does not become fragmented. Data collection and sharing will be an important component of doing so.
 - ▶ To-date, pharmacists and other primary care providers have only been involved with asymptomatic testing. As the pandemic moves into a longer-term endemic state, the province could explore alternative, patient-centered channels for symptomatic testing, as running dedicated testing sites may become less cost-effective over time.

3.3.6 While the COVID-19 care deficit is a significant concern that will need focused attention to address, it has not been clearly defined or measured. AH and AHS should consider working with the Health Quality Council of Alberta, the AMA, and others to define and measure the care deficit, as well as design specific strategies to address it.

Virtual care tools were rapidly adopted by primary care and mental health providers to enable the continued delivery of care during the pandemic. While this shift was critical to support patients, it was done quickly and is not necessarily appropriate to meet all care needs. Interestingly, Alberta appears to have had lower uptake of virtual care than in other provinces, suggesting that there are opportunities to optimize the use of virtual care in the province. As the pandemic continues, it will be important to identify opportunities to scale and formalize the use of virtual care, appropriately and effectively, while also supporting safe in-person visits to enable delivery of care that requires physical evaluation of patients. This may also include consideration of virtual care fee structures to ensure that hybrid practices are financially viable, building on virtual care fee code work currently underway within AH.

Action: Optimize and sustain the use of virtual care tools to support COVID and non-COVID care where appropriate. This should include:

- ▶ Evaluating existing virtual care policy frameworks to identify opportunities to formalize best practices, remove regulatory barriers to delivery of appropriate virtual care

- ▶ Developing policies and supports to enable the safe delivery of in-person care in cases where virtual channels are not appropriate for meeting care needs
- ▶ Continuing to develop a compensation model for the delivery of virtual care that incentivizes the delivery of care through appropriate channels and supports financial sustainability

Expected outcomes:

- ▶ Continued convenience for patients who choose to appropriately leverage virtual care services, supported by safe and effective availability of in-person services when virtual care is not appropriate.
- ▶ A coordinated and effective provincial policy framework for enabling the appropriate use of virtual care in a financially sustainable manner.
- ▶ Expanded access to critical services, including addictions and mental health services, through the increased and formalized use of virtual care tools.

Roles and responsibilities

Alberta Health Services	Alberta Health (Lead)	Others
<ul style="list-style-type: none"> ▶ Support the development of any required policies to enable effective delivery of appropriate virtual care. 	<ul style="list-style-type: none"> ▶ Lead the development of any required policies to enable hybrid primary care delivery models ▶ Continue ongoing consultation with physicians in the development of virtual care fee codes 	<ul style="list-style-type: none"> ▶ Physicians and other care providers: Support the development of any required policies to enable hybrid virtual and in-person primary care delivery models

Timing:

- ▶ Virtual care fee codes should be developed in alignment with existing work underway within Alberta Health. Additional policy development should take place over the next 6-12 months, as appropriate.

Additional considerations

- ▶ Virtual care policies and related initiatives should be aligned with any broader digital health strategies or initiatives currently underway or developed in the future.
- ▶ Given the significant transformation and innovation potential of virtual care, consider opportunities to gather feedback from a broad range of stakeholder groups, including different types of care providers from across the continuum, as well as private sector partners who are developing virtual care tools and platforms

3.4. Governance and decision making

Alberta’s one-to-one relationship between the health authority (AHS) and the government department (AH) has benefits to the normal-state operation of the health system. During the pandemic, however, this relationship has led to challenges with scaling up systems for provincial oversight and coordination of the pandemic response that more fragmented health systems didn’t experience to the same degree.

In those health systems, the provincial ministry of health is required to play a stronger coordinating role. In Alberta, normal-state operational oversight of the system is fully within the scope of AHS, and as a result, the Department was not able to leverage existing coordinating structures and processes to quickly build and scale an appropriate provincial approach to overseeing the pandemic response. AHS was also not accustomed to the required level of active oversight demanded by the pandemic.

These challenges were further exacerbated by gaps in the Department's capacity and ability to exercise a coordination and oversight role. Addressing these challenges will require building capacity in the department, setting clear expectations for how different parts of the system work together, and ensuring that effective processes and structures are in place to enable information sharing, analysis, and decision making.

Governance and decision-making actions

3.4.1 Information flow and decision making.

In addition to the broader governance outcomes to be achieved from the action above, specific and critical issues related to information sharing and providing useful analysis to decision makers need to be addressed. Alberta Health cannot effectively exercise its oversight of the provincial response to COVID-19 without timely access to data and the ability to conduct analysis and shape the presentation of information in such a way that it meets the needs of senior decision makers and elected officials.

Action: Immediately address and improve execution and quality of information flow between AHS and AH, to enable decision-making, effective system oversight, pandemic response management, and delivery of joint responsibilities. This should include:

- ▶ Defining regular and ongoing data and reporting requirements
- ▶ Establishing protocols, standards and expectations for responding to ad-hoc data requests from Alberta Health, including timeframes for completion
- ▶ Implementing and ensuring appropriate access to data, analysis, and other reporting tools for senior officials and decision makers, both from AHS to AH and from AH to AHS. This should include providing AH with greater and more direct access to key raw datasets and working to collaboratively conduct analysis and develop briefing materials.
- ▶ Designing and implementing a collaborative approach to ensuring appropriate transparency and visibility into AHS operations for decision-makers. AH should be able to understand and brief elected officials and decision-makers on how critical elements of service delivery are being implemented (e.g., testing, contact tracing, ICU surge), based on clear information from AHS
- ▶ Building effective working relationships that allow for information flow and collaboration between AH and AHS at working levels, and clarifying expectations for when issues and decisions require escalation to executive levels and when issues and decisions can be made at lower levels of both organizations
- ▶ Putting in place appropriate and effective decision-making and discussion forums and processes, including defining key engagement interfaces and protocols between the organizations, as well as reassessing and confirm the purpose and approaches to core standing meetings such as DM/CEO.
- ▶ Clarifying the roles and engagement processes between AHS, the AHS board, the department, and the Minister
- ▶ Reviewing any legislative barriers to sharing information

Expected outcomes:

- ▶ Senior government officials, elected officials, and other decision makers have access to actionable data and analysis
- ▶ Health system officials are able to effectively brief leaders on priority issues and provide essential context and background information
- ▶ Key health system measures are regularly and accurately reported to enable a common understanding of the status of the health system and provide officials with transparency into system performance at any given time
- ▶ Ad-hoc requests for information and analysis are prioritized and responded to in a timely manner; relevant parties work closely to understand the purpose of the data and analysis being requested and deliver an end product that meets the needs of the requestor

Roles and responsibilities

Alberta Health Services	Alberta Health (Lead)	Others
<ul style="list-style-type: none">▶ Make requested data available to AH on an ongoing basis▶ Appropriately prioritize and actively respond to ad-hoc requests for data▶ Work closely with AH to respond to requests for data and analysis to ensure that what is prepared and delivered meets the needs of elected officials and decision makers	<ul style="list-style-type: none">▶ Clearly outline expectations for escalation of issues and decisions for approval▶ Define data sharing and reporting requirements and expectations, including regular reporting▶ Ensure that AH data required to support AHS operations is available as required	<ul style="list-style-type: none">▶

Timing:

- ▶ This action should be initiated immediately. Data sharing and reporting requirements should be established by AH within 60 days

Additional considerations:

- ▶ AHS should consider building a small function with experience working within government to facilitate responding to data requests and developing briefing material
- ▶ AH and AHS should work to build common definitions of key metrics and ensure that priority measures are available through appropriate channels
- ▶ Consider reintroducing secondments between AH and AHS to build operational relationships, share knowledge, and build relevant skillsets
- ▶ Where decision-makers require products that must be created by AHS, AH and AHS should work closely to ensure that the requested data products are achievable and that decision makers have the data in a digestible and useful format.

3.4.2 Oversight, coordination, and direction-setting capacity

The department of health has limited capacity to effectively develop and direct operational policy and

manage complex system planning issues, as well as delivering on key operational responsibilities such as public health, workforce planning, primary care, and system transformation. Each of these areas is key to the pandemic response and the ongoing resilience of Alberta’s health system. These challenges have been exacerbated by significant turnover among the senior leadership within AH. Focused recruiting and skill development, in conjunction with the other actions in this section, will be necessary for addressing this issue.

Action: Build necessary capacity within Alberta Health to effectively deliver its responsibilities of health system oversight, coordination, and direction-setting. This should include:

- ▶ Clearly defining the specific roles and responsibilities of the department, and identifying the capabilities needed to meet those roles and responsibilities
- ▶ Conducting a gap analysis to understand which capabilities are present within the department and where new capabilities and capacity is required
- ▶ Develop and execute a plan to recruit or build the necessary capabilities and capacity

Expected outcomes:

- ▶ Capacity and capability within the department to successfully deliver its policy, planning, oversight, and operational roles
- ▶ Improved oversight and coordination during possible future health crises
- ▶ More efficient and effective public policy to steer and oversee the health care system
- ▶ More effective, proactive long-term health system planning to leverage new models of care and emerging technologies, as well as respond to system stressors such as workforce shortages

Roles and responsibilities:

Alberta Health Services	Alberta Health (Lead)	Others
	<ul style="list-style-type: none"> ▶ Conduct capacity assessment, ▶ Develop and implement the plan to build capacity in critical areas within the department 	

Timing

- ▶ The gap assessment should commence in the next 3-6 months. Closing the identified capacity and capability gaps should take place over the next 6-18 months

Additional considerations:

- ▶ Areas that are critical to managing the ongoing pandemic, such as public health and workforce planning, should be prioritized

3.5. Public Health

The COVID-19 pandemic has placed enormous stress on public health systems in Canada and around

the world, in exposing weaknesses but also presenting opportunities to improve monitoring and management of threats moving forward. Many jurisdictions in Canada, including Alberta, are rethinking their public health capacity and structure in the wake of the pandemic. As Alberta prepares for future demands on the system, it is important that the province is adequately equipped with sufficient public health capacity to respond.

Public health actions

3.5.1 Immediate public health capacity

Alberta, like many provinces across the country (see appendix F for jurisdictional comparisons of public health resources), is facing growing public health capacity constraints. The COVID-19 pandemic has exacerbated this problem and identified a number of critical public health capacity gaps within AH, including public health policy and surveillance/modelling. These capacity challenges have led to examples of policy misalignment between AH and AHS. For example, AH has limited communicable disease policy and nursing capacity specifically in contact tracing. Prior to the pandemic there was not a specific position with policy oversight related to contact tracing. Low staffing levels limits the ability to ensure Public Health Management Guidelines are up to date, which can lead to delays in the changes at the operational level.

In advance of developing a broader public health operating model and long-term capacity plan (see action 3.5.2 below), AH should rapidly validate its short-term capacity needs, especially as it relates to public health policy (often delivered by public health nurses) and surveillance/modelling, and recruit/train staff to close these immediate gaps.

Action: Validate immediate capacity needs at AH and recruit or train staff to close gaps. This should include:

- ▶ Assessing areas requiring immediate capacity building (see appendix F for discussion of typical provincial public health responsibilities)
- ▶ Developing an approach to close gaps through recruitment, training, or contracted external support

Expected outcomes:

- ▶ Sufficient staffing levels to meet short-term pandemic-related public health needs, including public health policy development and surveillance/modelling
- ▶ Reduced burden on existing public health staff in the Public Health and Compliance Division and the Analytics & Performance Reporting branch, which has been under particular stress during the pandemic.

Roles and responsibilities

Alberta Health Services	Alberta Health (Lead)	Others
	<ul style="list-style-type: none"> ▶ Validate short-term capacity needs with AH senior leadership ▶ Hire or otherwise procure required short-term capacity 	

Timing

- ▶ The gap assessment should commence immediately. Resources should be hired to close urgent gaps within 90 days.

Additional considerations:

- ▶ AH should validate immediate public health capacity needs, particularly in the areas of:
 - ▶ Public health policy
 - ▶ Surveillance/modelling (see action 3.6.2 for additional detail regarding surveillance/modelling capacity)
- ▶ Non-traditional recruitment methods should be explored to fill these roles quickly, including hiring students, interns, and seconding staff from AHS or other departments.
 - ▶ It may be critical to move quickly to recruit key staff, as Alberta will be in competition with other provinces. Saskatchewan and British Columbia have also indicated that they are recruiting public health policy resources.

3.5.2 Provincial public health operating model

The formation of AHS in 2008 led to public health responsibilities being split between the health authority and AH. While this arrangement was broadly appropriate, a specific formal public health operating model was not defined at the time and has not subsequently been significantly revisited. As a result, the effectiveness of Alberta's public health system is to some degree a result of strong personal relationships between public health officials in the two organizations rather than effective long-term structures and processes. The absence of a formal operating model has become particularly apparent under the stress of the COVID-19 pandemic and has pushed leaders to think about how public health should be delivered at the provincial and local levels to better support the pandemic response and meet ongoing public health responsibilities. Alberta is not alone in this - the COVID-19 pandemic has highlighted public health capacity constraints in health departments across Canada.

Developing a formal public health operating model would reduce the reliance on personal relationships, clarify roles and responsibilities, and enable more effective delivery and coordination of public health policy and operations. The operating model should also be supported by a longer-term capacity plan that defines how the skills and resources needed to deliver the model are recruited, trained, and retained.

Action: Develop and implement an operating model for public health in Alberta, supported by a long-term strategy for public health capacity. This should include:

- ▶ Clearly defining the specific public health roles and responsibilities of the department, AHS, and others and identifying the capabilities needed to meet those roles and responsibilities (see appendix F for additional detail regarding the core public health responsibilities and models in peer jurisdictions)
- ▶ Identifying where the required capabilities exist in the system and can be realigned as appropriate.
- ▶ Identifying where additional capacity will need to be built in the system to meet the required public health responsibilities
- ▶ Defining the lines of accountability between AH and AHS

Expected outcomes:

- ▶ A clearly defined future state vision for public health which articulates Alberta's public health goals, and is supported by guiding principles and objectives
- ▶ Cohesive public health organizational and governance structures, with clear roles and responsibilities for AH and AHS
- ▶ Appropriate skills and capacity to deliver on the province's ongoing the ongoing public health responsibilities
- ▶ Ability to rapidly and effectively respond to future public health emergencies

Roles and responsibilities

Alberta Health Services	Alberta Health (Lead)	Others
<ul style="list-style-type: none">▶ Provide input into the development of the operating model▶ Adjust internal operations as required to align to the updated model	<ul style="list-style-type: none">▶ Develop the operating model and long-term capacity strategy▶ Lead the implementation of the operating model across AH and AHS	

Timing:

- ▶ The operating model should be developed over the next 3-6 months and implemented over the subsequent 12 months.

Additional considerations:

- ▶ The operating model should appropriately define the roles of AH and AHS (see appendix F for additional detail regarding the core public health responsibilities and models in peer jurisdictions). To align to public health structures in other jurisdictions:
- ▶ AH should be responsible for providing policy direction, coordinating and directing broad public health activities, issuing public health orders, and advising government and elected officials on public health decision-making.
- ▶ AHS should be responsible for carrying out the day-to-day operations of public health programs (e.g., screening and environmental health inspections).
 - ▶ Clear and direct lines of accountability should be formalized between AH and AHS to ensure that all pieces of the public health system are covered, and that there are proper channels escalate and resolve issues.
 - ▶ As specific roles and responsibilities are clarified through the operating model, it will be critical to also assess the resources needed to meet these responsibilities.
- ▶ AH will need sufficient capacity to direct and oversee all public health programs (immunization, testing, communicable disease control), as well as play the legislative public health role related to the development and maintenance of the communicable disease regulations.

- ▶ Strategies to rapidly increase capacity in the event of a public health emergency should be considered. These could include leveraging external capacity (e.g., academics), and developing a list of public health resources (“reservists”) within Alberta.
- ▶ In developing an operating model, it will be important to assess where resources currently exist in the health system and what new capacity may need to be built. This includes ensuring appropriate capacity at AH to manage and direct AHS, who employs most of the public health resources in the province.
- ▶ Consideration should be given to formalizing the use of community outreach tables in the event of future public health emergencies. These tables were successful in driving vaccine uptake in Edmonton and Calgary during the spring and summer of 2021. If government decides to establish permanent tables, it will be important to ensure they are integrated and able to coordinate with the broader public health system.

3.5.3 Paused public health activities

Throughout the COVID-19 pandemic, resources have been redeployed from other areas of public health to support the response. While this prioritization has been necessary, it has slowed progress in other important areas of public health, such as screening programs and environmental health inspections. For example, the rapid cessation of some public health activities resulted in 75% decline in restaurant inspections during the first wave of the pandemic, and coverage of routine childhood vaccines (e.g., Measles, Mumps, and Rubella (MMR)) decreased in spring 2020. While immunization rates have returned to normal for the most part, the health inspection rates have not and there is a growing backlog.

AHS should develop a plan outlining an appropriate time to restart these important public health functions, with specific triggers for slowing activities during future waves if required.

Action: Restart paused public health activities. This should include:

- ▶ Quantifying the backlog of public health activities
- ▶ Confirming the appropriateness of redirecting public health staff from pandemic-specific roles back to normal-state operations
- ▶ Developing a prioritization framework and plan to restart activities, phasing the restart as necessary
- ▶ Developing an approach to pausing public health activities in response to future waves

Expected outcomes:

- ▶ An immediate plan for when AHS should resume public health operations that have been slowed or paused during the pandemic
- ▶ A future plan indicating when AHS should slow, and restart public health activities during future waves, outbreaks, or other public health emergencies

Roles and responsibilities

Alberta Health Services (Lead)	Alberta Health	Others
<ul style="list-style-type: none"> ▶ Develop a rapid plan that considers all public health activities that have been paused or slowed during the pandemic ▶ Evaluate the actions that need to occur in order to restart these activities ▶ Develop a forward-looking plan to respond to future waves based on specific needs 	<ul style="list-style-type: none"> ▶ Review and comment on restart plan, as appropriate 	

Timing:

- ▶ The restart plan should be developed in the next 60 days.

Additional considerations:

- ▶ The plan should assess and quantify the backlog of public health activities due to the COVID-19 slow down, and align timelines and resource needs to addressing that backlog.
- ▶ This plan should include appropriate guidelines for slowing activities to respond to future waves as required.
- ▶ The plan will also consider strategies for continuing public health activities during future waves or emergency responses, such as developing a self-reporting tool for restaurant inspections.

3.6. Modelling

From the onset of the pandemic, decision makers around the globe have expressed a keen interest in using modelling to understand the potential trajectory of the pandemic. Decision makers across Canada are no different, and the provinces have used various staffing models to support these modelling efforts (see jurisdictional scan summary in appendix G). Peers in other provinces have leveraged internal capacity, external academic capacity, or a combination of both. Alberta has relied on internal modelling capacity throughout the pandemic, but as the province prepares for future outbreaks, it will be important that Alberta considers the optimal internal/external resource mix to support modelling efforts moving forwards.

Modelling actions

3.6.1 Provincial modelling framework

At the onset of the COVID-19 pandemic, health systems across the globe worked quickly to piece together models to predict infection rates and help decision makers direct the response to the pandemic. While significant and important work was done in Alberta to establish early models, there were challenges with coordinating this work and ensuring it was grounded in a clear understanding of the different types of models and their purposes, as well as the roles and responsibilities of each party (e.g., AH, AHS, government, external academic modellers). Alberta has recently stood up a COVID-19

Modelling and Forecasting Working Group to address remaining modelling gaps. As Alberta moves past the fourth wave, it will be important for this group to build an effective and coordinated modelling framework to reduce duplication of efforts and ensure that decision makers have the information that they need.

Action: Establish a modelling framework that considers the needs of all stakeholders (e.g., elected officials, government policy makers, and AHS) and outlines roles and responsibilities in developing and maintaining models and communicating outputs. This should include:

- ▶ Identifying the officials and stakeholders who require the use of models to inform decision making or policy development
- ▶ Confirming the specific needs that those users require models to meet
- ▶ Identifying the specific roles and responsibilities for developing models to meet those needs

Expected outcomes:

- ▶ Clear alignment between AH, AHS, and senior decision-makers on the purpose and limitations of various types of models and forecasts
- ▶ Specific models and forecasting tools aligned to the needs of elected officials and other decision makers to support evidence-based decisions
- ▶ Clear roles and responsibilities for modelling/forecasting in the province, eliminating overlap in efforts between AH and AHS

Roles and responsibilities

Alberta Health Services	Alberta Health (Lead)	Others
<ul style="list-style-type: none"> ▶ Support the development and implementation of the modelling framework as required 	<ul style="list-style-type: none"> ▶ The COVID Modelling and Forecasting Working Group should develop the framework, with input and approval from decision makers and elected officials 	

Timing

- ▶ The framework should be completed in the next 90 days.

Additional considerations:

- ▶ Building upon work started by the COVID Modelling and Forecasting Working Group, the framework should define the different types of models, their purpose, and limitations. It should be clear when model outputs are relevant to other activities (e.g., surge levels and associated triggers), and the connection between both tools.
- ▶ The framework should consider when to leverage external modelling capabilities, and develop parameters for working with external resources, particularly external academics.
- ▶ A number of provinces leveraged external academic groups to support modelling and public health policy making (see appendix G for additional detail). These groups were valuable for providing arms-length capacity, scenario testing, and transparency, however some jurisdictions raised concerns that

these groups did not always align their work to the specific policy considerations and direction of government. While external academic groups can be a useful resource, parameters should be put in place to ensure the additional capacity is aligned to the needs of decision makers.

3.6.2 Data and analysis capacity

The COVID-19 pandemic has required that health system leaders often make decisions with limited, and often changing, information in an unfamiliar and complex pandemic environment. This has highlighted the importance of having internal capacity to translate data into insights for senior decision makers in order to reduce this uncertainty as much as possible. During the assessment, this was identified as a key gap at AH that should be filled immediately.

Action: Create capacity at AH to provide usable analysis and advice for inquiries from senior decision makers. This should include:

- ▶ Identifying the specific capabilities required to deliver the modelling responsibilities outlined in the modelling framework
- ▶ Recruiting, training, or otherwise obtaining the required capacity and capabilities

Expected outcomes:

- ▶ Senior decision makers have timely access data to make evidenced-based decisions
- ▶ AH has appropriate tools for preparing data and insights for senior leaders

Roles and responsibilities

Alberta Health Services	Alberta Health (Lead)	Others
<ul style="list-style-type: none"> ▶ AHS capacity should be leveraged, where appropriate, in alignment with the governance structure that will be developed as part of the public health operating model 	<ul style="list-style-type: none"> ▶ Identify needed capabilities ▶ Ensure that the appropriate resources and tools are in place to prepare usable insights for decision makers 	

Timing:

- ▶ The capacity gaps should be closed in 3-6 months.

Additional considerations:

- ▶ Reallocate, or recruit if unable to reallocate, staff that are dedicated to responding to requests from senior decision makers that require data/analysis. Resources should be able to synthesize operational data into actionable insights and articulate findings to decision makers.
- ▶ Review available data analysis and visualization tools and determine whether they are sufficient to synthesize the data into useable insights. If required, identify options to fill any gaps.
- ▶ This additional capacity at AH will be a key aspect to carrying out the formalized expectations for ongoing reporting and ad-hoc requests outlined in action 3.4.2.

4. Appendices

4.1. Appendix A: Critical workforce gaps: specific roles, sites, and strategies

COVID-19 has exacerbated many of the underlying issues affecting the AHS workforce across the Province. Workforce health indicators such as overtime worked, rates of vacancies, number of voluntary terminations and sick hours taken all show increases across each of the zones (Table A.1), indicating underlying issues such as burnout and exhaustion. Though trends across the province show increases across all indicators, they were particularly high in rural areas.

	Increase in Overtime Hours as a % of Paid Hours	Increase in Sick Hours as a % of Paid Hours	Increase in Voluntary Termination Rate	Increase in Vacancy Rate
	Q3 FY20 to Q3 FY22	Sep 2019 to Sep 2021	FY2020 to FY2022	Sep 2019 to Sep 2021
Calgary	1.21% to 1.86%: 54% increase	4.50% to 5.84%: 30% increase	2.6% to 7.2%: 180% increase	9.1% to 15.3%: 68% increase
	109,765 additional hrs	61,269 additional hrs	406 additional terminations	4,604 additional postings
Central	1.81% to 3.05%: 68% increase	4.12% to 6.93%: 68% increase	3.8% to 6.2%: 64% increase	9.2% to 13.2%: 43% increase
	54,966 total additional hrs	36,049 additional hrs	*# of terminations decreased (82)	860 additional postings
Edmonton	1.52% to 2.83%: 86% increase	4.46% to 5.81%: 30% increase	3.2% to 4.6%: 42% increase	10.3% to 14.1%: 36% increase
	176,036 additional hrs	48,096 additional hrs	*# of terminations decreased (316)	2,147 additional postings
North	2.63% to 3.84%: 46% increase	4.80% to 6.71%: 40% increase	4.8% to 7.4%: 56% increase	12.3% to 18.6%: 51% increase
	47,944 additional hrs	20,770 additional hrs	*# of terminations decreased (102)	1,287 additional postings
South	1.47% to 2.56%: 74% increase	4.56% to 6.93%: 52% increase	4.1% to 4.9%: 18% increase	10% to 14.5%: 46% increase
	28,561 additional hrs	16,903 additional hrs	*# of terminations decreased (112)	645 additional postings

Table A.1: Average per zone across all indicators

Given the magnitude of the workforce and the lag time in developing and implementing system-wide change, Alberta Health Services will need to consider using a targeted and focused approach in managing retention, recruitment and other challenges for key positions and sites in order to manage the pandemic and maintain quality care. Based on a high-level assessment of AHS data, and interviews with stakeholders, a prioritized list of sites and positions groupings has been developed that may benefit from targeted workforce intervention. It is recommended that AHS consider this list and integrate it into the immediate workforce action planning currently underway.

Priority position groups with critical workforce challenges:

Through interviews, AHS indicated that the position groups under the most strain as a result of the pandemic included RNs (specifically within the ICU), LPNs and Healthcare Aides. Additional challenges exist in Allied Health (specifically Respiratory Therapists, Physiotherapists, Speech Therapists and Occupational Therapists) and front-line clinical leaders.

	Increase in Overtime Hours as a % of Paid Hours (%/Hrs)	Increase in Sick Hours as a % of Paid Hours (%/Hrs)	Increase in Voluntary Termination Rate	Increase in Vacancy Rate and # of Vacancies (%/Positions)
Position (headcount)	Q3 FY20 to Q3 FY22	Sep 2019 to Sep 2021	FY2020 to FY2022	Sep 2019 to Sep 2021
Registered Nurse -ICU (2,435)	3.64% to 6.63%: 82% increase	4.58% to 5.40%: 18% increase	1.3% to 3.0%: 123% increase	7.2% to 7.6%: 7% increase
Licensed Practical Nurse (8,879)	2.23% to 4.10%: 84% increase	5.37% to 7.57%: 41% increase	2.6% to 2.9%: 12% increase	9.8% to 14.8%: 51% increase
Management – Manager – ICU (60)	0% to 2.20%	3.33% to 5.45%: 64% increase	1.5% to 6.9%: 348% increase	5.0% to 13.3%: 167% increase
Registered Nurse (28,862)	3.10% to 5.17%: 67% increase	4.70% to 6.57%: 40% increase	2.1% to 3.2%: 56% increase	8.8% to 13.1%: 49% increase
Speech Pathologist (551)	0.02% to 0.18%: 752% increase	4.11% to 6.99%: 70% increase	2.6% to 7.9%: 202% increase	6.8% to 20.0%: 193% increase
Health Care Aide/Nursing Asst. (7,802)	1.97% to 4.0%: 103% increase	5.08% to 7.37%: 45% increase	4.0% to 5.2%: 31% increase	8.5% to 9.8%: 16% increase
Respiratory Therapist (1,356)	1.21% to 2.57%: 113% increase	4.93% to 5.68%: 15% increase	1.4% to 1.8%: 35% increase	7.4% to 10.9%: 47% increase
Occupational Therapist (1,232)	0.10% to 0.24%: 62% increase	4.98% to 6.47%: 30% increase	3.2% to 5.3%: 67% increase	13.2% to 17.1%: 30% increase
Physical Therapist (1,107)	0.17% to 0.28%: 68% increase	3.62% to 6.44%: 78% increase	3.2% to 3.6%: 14% increase	10.4% to 13.8%: 33% increase

Table A.2: Indicators per position as referenced by AHS

Each of these position groupings is showing significant workforce strain and should be considered for immediate prioritized actions as part of the workforce action plan.

Additionally, based on an analysis of the information provided, 8 additional position groups stood out as areas of concern:

	Increase in Overtime Hours as a % of Paid Hours (%/Hrs)	Increase in Sick Hours as a % of Paid Hours (%/Hrs)	Increase in Voluntary Termination Rate	Increase in Vacancy Rate and # of Vacancies (%/Positions)
Position (headcount)	Q3 FY20 to Q3 FY22	Sep 2019 to Sep 2021	FY2020 to FY2022	Sep 2019 to Sep 2021
Clerical (17,122)	0.59% to 0.92%: 58% increase	5.19% to 6.44%: 24% increase	3.7% to 14.6%: 296% increase	10.9% to 20.7%: 90% increase
Therapy/Rehab Aide (1,809)	2.39% to 7.02%: 194% increase	5.87% to 8.21%: 40% increase	3.4% to 6.8%: 101% increase	10.3% to 11.1%: 7% increase

Other Prof/Tech (4,675)	0.89% to 1.10%: 23% increase	4.18% to 6.63%: 58% increase	3.6% to 6.5%: 80% increase	10.5% to 23.0%: 118% increase
Emergency Medical Services (3,441)	2.90% to 5.44%: 88% increase	4.13% to 6.70%: 62% increase	1.3% to 2.0%: 51% increase	8.8% to 13.9%: 58% increase
Pharmacist (1,482)	0.57% to 0.73%: 28% increase	3.09% to 5.00%: 62% increase	2.4% to 3.8%: 59% increase	5.4% to 13.2%: 199% increase
Social Worker (1,263)	0.25% to 0.43%: 71% increase	5.23% to 6.33%: 21% increase	3.9% to 5.8%: 49% increase	10.0% to 17.7%: 77% increase
Nurse Practitioner (443)	0.57% to 0.51%: 10% decrease	3.57% to 6.08%: 70% increase	2.6% to 6.9%: 170% increase	18.8% to 23.1%: 23% increase
Nurse Practitioner – ICU (53)	0.87% to 0.82%: 6% decrease	3.18% to 14.52%: 356% increase	0% to 8.2%	20.5% to -5.4%: 26% decrease

Table A.3: Indicators per position (top 20%)

In order to support these positions groupings, targeted intervention should be considered or continued, including:

- Further evaluating the care model with a focus on redistributing activities to appropriate staff (e.g. admin or low-level clinical tasks).
- Identifying unutilized, or underutilized, clinical resources (e.g. students, international nurses waiting for bridging) that could temporarily provide additional system capacity.
- Considering a competency-based approach to clinical resourcing, where staff with unique competencies are able to provide specific components of care outside of their standard scope of practice.
- Offering retention bonuses or sign-on bonuses for hard to staff positions, particularly in rural areas.

Priority sites with critical workforce challenges:

In addition to specific roles, we also assessed clinical sites to identify locations that showed large increases in key metrics of workforce health. This analysis identified 16 sites that show indication of being under significant strain.

	Increase in Overtime Hours as a % of Paid Hours (%/Hrs)	Increase in Sick Hours as a % of Paid Hours (%/Hrs)	Increase in Voluntary Termination Rate	Increase in Vacancy Rate and # of Vacancies (%/Positions)
Calgary	Q3 FY20 to Q3 FY22	Sep 2019 to Sep 2021	FY20 to FY22	Sep 2019 to Sep 2021
Sheldon M Chumir Health Centre (1,081 FTE)	0.87% to 1.39%: 59% increase	4.43% to 6.43%: 45% increase	3.2% to 6.1%: 90% increase	12.2% to 22.4%: 84% increase
High River (277 FTE)	1.22% to 2.46%: 101% increase	4.13% to 7.31%: 77% increase	3.5% to 5.1%: 210% increase	9.9% to 14.6%: 46% increase
Central				
Red Deer Johnstone Crossing Community Centre (196 FTE)	0.31% to 1.50%: 378% increase	4.61% to 5.33%: 16% increase	1.4% to 30.5%: 3023% increase	12.7% to 41.6%: 228% increase
Lacombe Hospital & Care Centre (197 FTE)	1.88% to 3.33%: 77% increase	3.12% to 6.39%: 104% increase	3.4% to 3.1%: 77% increase	9.4% to 10.8%: 15% increase
Wainwright Health Centre (132 FTE)	1.05% to 3.06%: 192% increase	5.29% to 7.85%: 48% increase	3.1% to 10.3%: 232% increase	8.9% to 21.0%: 135% increase
Stettler Hospital and Care Centre (160 FTE)	1.01% to 2.72%: 168% increase	4.26% to 6.72%: 58% increase	2.9% to 8.4%: 189% increase	11.4% to 12.8%: 12% increase

North				
High Prairie Health Complex (214 FTE)	6.63% to 8.81%: 33% increase	4.09% to 5.16%: 26% increase	4.4% to 11.7%: 169% increase	15.1% to 23.6%: 56% increase
Peace River Community Health Centre (220 FTE)	4.72% to 5.91%: 25% increase	4.81% to 8.26%: 72% increase	2.9% to 9.4%: 226% increase	13.4% to 21.2%: 58% increase
Cold Lake Community Health Services (54 FTE)	0.46% to 2.17%: 368% increase	5.28% to 6.79%: 29% increase	2.9% to 19.5%: 583% increase	13.9% to 23.9%: 72% increase
La Crete Health Centre (45 FTE)	1.56% to 5.07%: 226% increase	7.47% to 17.74%: 137% increase	3.0% to 11.3%: 277% increase	17.7% to 25.3%: 43% increase
Fort McMurray Public Health (84 FTE)	0.14% to 0.86%: 512% increase	5.13% to 7.03%: 37% increase	6.1% to 13.0%: 114% increase	10.4% to 22.8%: 119% increase
Grande Prairie Public Health (151 FTE)	0.05% to 0.63%: 1129% increase	5.37% to 7.07%: 32% increase	3.4% to 10.8%: 220% increase	12.9% to 26.9%: 109% increase
South				
Medicine Hat Community Health (74 FTE)	1.14% to 2.51%: 121% increase	1.22% to 8.70%: 615% increase	3.2% to 15.9%: 130% increase	3.4% to 46.3%: 1,242% increase
Pincher Creek Health Centre (77 FTE)	2.22% to 3.32%: 50% increase	1.90% to 5.26%: 176% increase	0% to 9.5%	5.5% to 12.2%: 124% increase
Brooks Community Services (20 FTE)	0.02% to 1.50%: 6,919% increase	4.01% to 10.26%: 156% increase	0% to 5.4%	3.4% to 53.0%: 1,438% increase
Lethbridge Community Health Centre (147 FTE)	0.56% to 3.55%: 538% increase	6.51% to 5.62%: 16% decrease	3.3% to 7.9%: 142% increase	6.3% to 45.9%: 635% increase

Table A.4: Indicators per priority site (top 5%)

AHS should assess these sites in greater depth to determine if critical staffing issues exist, and support site leadership in developing a plan to address those issues. Some potential site-based interventions include:

- Offering site-specific employee wellbeing programs including access to resilience programs, on-site supportive resources.
- Offering convenience services, including access to meals, childcare, transportation and reprieve space.
- Begin a new hire peer-to-peer program to match new hires with experienced professionals within the organization to support further retention.
- Offering retention, sign-on or relocation bonuses for hard to staff locations.
- Further embracing virtual care and remote work where possible

4.2. Appendix B: Strategies for building nursing capacity

Current education and career development opportunities for nurses in Alberta appear insufficient to meet demand. Nursing shortages are particularly impacting rural regions, however there does not appear to be prioritized rural pathways for nurse education or rural-focused laddering programs. Additionally, current onboarding and bridging programs for internationally educated nurses (IENs) are at capacity with a significant waitlist, and there appears to be limited room for additional seats in the current system.

Strengthening education and career development pathways is critical to ensuring a reliable pipeline of new nursing graduates to supplement the workforce. Given the lag-time from implementation to results (e.g. the time it takes to train a new RN), these actions should be aligned and prioritized through strategic workforce planning activities.

Recruitment and training of internationally educated nurses has the potential to be the quickest pathway to add additional nurses to the workforce, by reducing the complexity of the application process and reducing wait times for bridging programs. IEN recruitment should be considered as an 'accordion model' that can expand or reduce capacity quickly to address short-term gaps between the availability of trained nurses and immediate needs. Alberta will need to maintain competitiveness for internationally educated nurses as the global nursing shortage is causing other jurisdictions to implement additional incentives to attract talent.

Below is a summary of various pathways in Alberta for prospective or current nurses, including comparisons to other jurisdictions in Canada or internationally, and recommendations on the path forward.

Pathway 1: Canadian residents can complete an approved program at a university or college anywhere in Canada and apply for licensing directly with the applicable regulatory college and complete the licensing exam.														
Challenges and barriers to expansion	<ul style="list-style-type: none"> ▶ Programs do not prioritize admission or reserve seats for rural residents. ▶ Clinical placements are mandatory for all levels of nursing education, however there is limited availability of clinical placement sites and preceptors. Nursing programs must compete with other health training programs for spots, and availability of preceptors has diminished even further during the pandemic. ▶ Recruitment and retention of nurses trained in Alberta to AHS is not optimal, and even more challenging for rural positions (see inset). Covenant Health and the private sector are increasingly attractive options for nurses, as are vacancies across Canada where many other provinces are offering signing bonuses or other incentives. 													
	<table border="1"> <thead> <tr> <th>Province</th> <th>% Nurse Graduates that Remain in Same Province¹</th> </tr> </thead> <tbody> <tr> <td>Quebec</td> <td>98.1%</td> </tr> <tr> <td>British Columbia</td> <td>97.1%</td> </tr> <tr> <td>Ontario</td> <td>95.7%</td> </tr> <tr> <td>Manitoba</td> <td>94.2%</td> </tr> <tr> <td>Saskatchewan</td> <td>93.0%</td> </tr> <tr> <td>Alberta</td> <td>89.3%</td> </tr> </tbody> </table>	Province	% Nurse Graduates that Remain in Same Province ¹	Quebec	98.1%	British Columbia	97.1%	Ontario	95.7%	Manitoba	94.2%	Saskatchewan	93.0%	Alberta
Province	% Nurse Graduates that Remain in Same Province ¹													
Quebec	98.1%													
British Columbia	97.1%													
Ontario	95.7%													
Manitoba	94.2%													
Saskatchewan	93.0%													
Alberta	89.3%													

<p>Jurisdictional Comparisons</p>	<ul style="list-style-type: none"> ▶ Red River College, Manitoba: The nursing undergraduate program restricts one cohort every 3 years at their satellite site to solely residents of Manitoba's Southern Health region. <ul style="list-style-type: none"> ▶ Nursing - Overview :: RRC Polytech Program & Course Catalogue ▶ Tuition Support Program for Nurses, Ontario: The Ministry of Health and Long-Term Care will provide tuition reimbursements to nursing graduates that go to work in rural and remote communities in exchange for return-of-service agreements. The Rurality Index of Ontario is used to calculate community eligibility, and one year of ROS is equal to one year of tuition reimbursed. <ul style="list-style-type: none"> ▶ Early Career - Nursing - Health Workforce Planning Branch - Health Care Professionals - MOHLTC (gov.on.ca)
<p>Opportunities for Alberta</p>	<p>In order to increase clinical student placement sites:</p> <ul style="list-style-type: none"> ▶ Both AHS and the post-secondary institutions should consider increasing the amount of support provided to both the sites and the preceptors for clinical placements. Administrative support for incoming students can help smooth onboarding and scheduling, while teaching resources and support for preceptors improves the learning environment for all parties and creates capacity for more clinical placements. ▶ Post-secondary institutions should consider alternative scheduling for student clinical placements to take advantage of available time slots in the evenings and weekends. Part-time placements over a longer period of time are also often an alternative when full-time, 9-5 hour blocks are not feasible. ▶ Cohort-based placements, increased interdisciplinary pairings, and shared preceptor responsibilities for a single clinical placement can increase capacity within existing sites. ▶ Teaching and supervision expectations should be integrated into nursing culture and scope of practice. Informal culture change to encourage taking students and emphasizing the value they bring to a clinical environment can accompany formal mechanisms of recognition and practice requirements. <p>In order to improve retention and recruitment, particularly to rural areas:</p> <ul style="list-style-type: none"> ▶ Earlier exposure to AHS and rural opportunities at the start of training programs give students more time to consider and prepare themselves for different career options. ▶ Scholarships and tuition funding attached to designated seats within training programs for students coming from rural communities. ▶ Tuition reimbursement for graduates willing to sign return-of-service agreements for rural positions.

¹Canadian Institute of Health Information (CIHI): Health Workforce in Canada, 2020 - Quick Stats

<p>Pathway 2: Internationally educated nurses are assessed by a multi-provincial body, then apply to their respective regulatory college in Alberta. IENs may need to complete bridging programs in order to be eligible to receive their license to practice in Canada.</p>	
<p>Challenges and Barriers to Expansion</p>	<p>The process from start to finish to apply, be assessed, complete bridging and receive a license can take up to 6 or 7 years to complete. Additionally, applicants must interact with three or more different organizations through the process (National Nursing Assessment Service (NNAS), regulatory college, Alberta Registered Nurses Assessment Program (ARNAP) or assessing body, college or university offering bridging program).</p> <p>Competition within Canadian provinces to attract IEN talent is increasing. Since applicants can use their NNAS assessment to be licensed and attend bridging programs in any English-speaking province, IENs will often go to the province where they can be accepted quickest. Many other provinces are already implementing or planning incentives to attract IENs.</p> <p>The waitlist for bridging courses and program is extremely long. With only one college in Alberta offering a complete bridging program (Mount-Royal University), seats are limited to 120 across two yearly intakes (Fall and Winter). Time on the waitlist can span up to 5 years. Other provinces offer multiple bridging programs, allowing them to absorb more IENs into their workforce.</p> <p>IEN applications are only assessed for one profession at a time. For example, if an applicant wishes to be assessed at both the LPN and RN level, they would need to pay an additional fee and ask NNAS to assess their portfolio against both the LPN and RN requirements.</p>
<p>Jurisdictional Comparisons</p>	<ul style="list-style-type: none"> ▶ International Nursing Bridging Programme, UK: The Royal Berkshire Hospital Trust (NHS) developed a 6 month virtual program for IENs that combines theory with practical coaching and support around visa application, job opportunities, employer benefits and adapting to life in the UK. Applicants can take the qualifying exam immediately after the course. <ul style="list-style-type: none"> ▶ International Nursing Bridging Programme (INBP) - Activate Learning International ▶ John Abbott College, Quebec: The college-level RN refresher course is open to IENs, paired with the mandatory Professional Integration into Quebec course. Tuition is covered by the Ministry of Health. <ul style="list-style-type: none"> ▶ Refresher Program For Registered Nurses - John Abbott College
<p>Opportunities for Alberta</p>	<p>In order to reduce the number of IENs on the waitlist for the bridging program:</p> <ul style="list-style-type: none"> ▶ Consider additional government funding to develop a second bridging program at another university or college in Alberta. Increasing capacity significantly at the existing location is limited by physical space in classrooms, labs and simulation centres.

	<ul style="list-style-type: none"> ▶ Additional single-course options for applicants who require only partial bridging. Courses could be made available through both in-person and virtual options, through multiple colleges and universities. <p>In order to allow for simultaneous assessment against multiple roles:</p> <ul style="list-style-type: none"> ▶ Implementation of CARNA’s triple-track assessment initiative to assess NNAS applicants at the RN, LPN and HCA level simultaneously. Applicants who may be on the waitlist for bridging into one level, but meet the requirements for another can then receive a license to practice in the province in the meantime. ▶ Amalgamation of the three unique nursing regulatory bodies (CARNA, CLPNA, CRPNA, CMA) will make assessment and career development consistent and clear across all nursing programs.
--	---

<p>Pathway 3: Practicing LPNs or RNs undertake specialized training to ladder up in nursing (e.g. LPN to RN, RN to NP) or take certificate programs to specialize within their level of nursing (e.g. ICU specialization course: OPACCA).</p>	
<p>Challenges and Barriers to Expansion</p>	<ul style="list-style-type: none"> ▶ Limited recognition for previous work experience or certificate program courses in RN bridging programs. LPNs required to complete a bridging program on top of 2 years of Bachelors of Nursing studies. Post-degree entry programs allow students with any unrelated degree to enter the BN degree at the same point, without bridging. ▶ Programs do not prioritize rural applicants, nor do they guarantee rural clinical placements even during hybrid programs where theory courses are taken virtually. ▶ Nurses, as well as other clinicians, do not have a clear understanding of their career options. Recognition for different initiatives (e.g. research, teaching, specialized certificates) is not always standardized and varies from location to location.
<p>Jurisdictional Comparisons</p>	<ul style="list-style-type: none"> ▶ Grow your own Nurse Practitioner, Ontario: The Ministry of Health and Long Term Care allows a community to sponsor a registered RN to complete their graduate-level Nurse Practitioner training through repurposing funds intended to fill a NP position. Funds can be allocated to salary continuation and tuition reimbursement. <ul style="list-style-type: none"> ▶ Mid Career - Nursing - Health Workforce Planning Branch - Health Care Professionals - MOHLTC (gov.on.ca) ▶ Athabasca University, Alberta: Athabasca offers a unique model in Canada for LPN to RN bridging that does not require completion of a bridging program prior to completion of a partial undergraduate BN degree. <ul style="list-style-type: none"> ▶ Post-LPN Bachelor of Nursing Online learning Athabasca University
<p>Opportunities for Alberta</p>	<p>To increase opportunities for LPN to RN bridging:</p> <ul style="list-style-type: none"> ▶ Provide funding for seat expansion in the Athabasca post-LPN Bachelor of Nursing program

	<ul style="list-style-type: none">▶ Adapt the 'grow your own Nurse Practitioner' program model to fund rural community-based LPNs to become RN's using funding allocated for staffing these positions.▶ Decrease bridging program requirements through re-examination of core curriculums and identification of common elements. Through alignment of LPN and RN training curriculums, students will be better prepared for career development in the future. Curriculum alignment would most easily be accomplished with support from an amalgamated nursing regulatory body <p>To increase rural options and prioritize rural applicants:</p> <ul style="list-style-type: none">▶ Further develop rural satellite campus sites to accommodate lab and simulation courses required for bridging programs. Increase hybrid and part-time options for rural practitioners that guarantee rural clinical placements.
--	---

4.3. Appendix C: Detailed considerations for building workforce planning capacity

4.3.1 Strategic Health Workforce Planning

Health workforce planning is one of the most critical elements needed to support the recovery and sustainability of Alberta's health system both in the short and long term.

Presently, accountability for health workforce planning is fragmented across organizations (Alberta Health and provider organizations such as AHS and Covenant) and clinical resource groups (physicians and other clinical resources are planned separately). There is no consistent and integrated process and governance for health workforce planning across the province.

Based on this, a scan was conducted to identify learnings from international jurisdictions that are considered leaders in the field of health workforce planning. The key recommendations from the scan are provided below, with the key learnings on the subsequent pages.

Key Recommendations:

There are numerous ways health workforce planning is executed across jurisdictions, including different areas of accountability, models used, and outputs produced. What's clear is that health workforce planning is a complex undertaking. It requires both the development of accurate forecasts leveraging multiple data inputs and the execution of complex actions (e.g. policy changes, retention strategies) to influence the available supply of healthcare professionals. Improving health workforce planning in Alberta will require commitment from numerous organizations, including AHS / other providers, Alberta Health, regulatory colleges, and academic institutions. As a starting point, Alberta should:

- ▶ **Establish clear accountabilities across the health workforce planning continuum.** Accountabilities should be clearly defined across participating organizations. The table below provides key elements of workforce planning and suggestions for how they could be allocated in the Alberta context. These suggestions are just intended to be indicative and should be refined and adjusted as detailed capacity-building plans are developed.

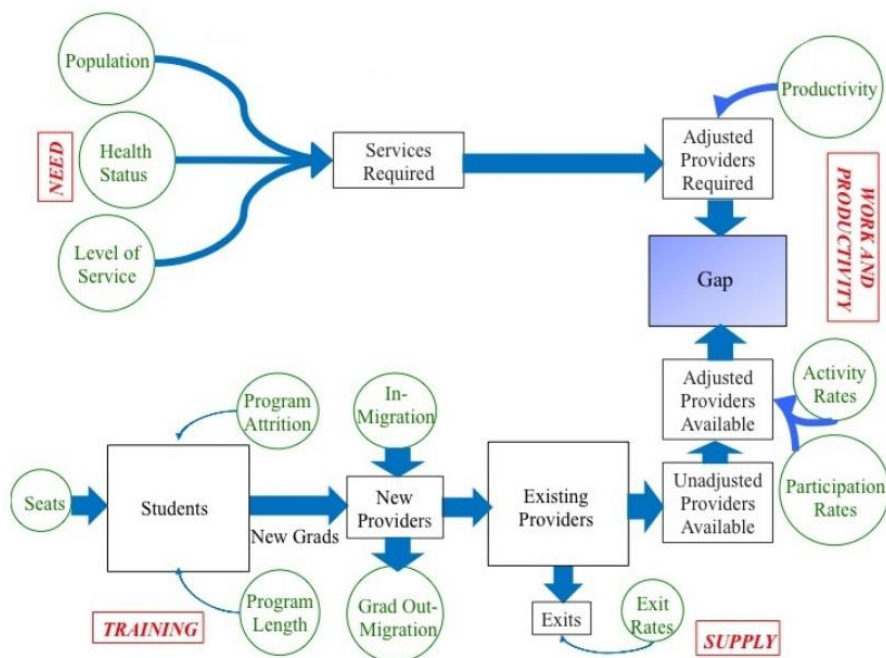
Theme:	Accountability:	Suggested Approach
Data	Data collection	<ul style="list-style-type: none"> ▶ Healthcare providers (including AHS and others) should be accountable for capturing standard service level and workforce data, and regulatory colleges should be accountable for capturing common registrant data ▶ Alberta Health should be accountable for facilitating a process to confirm common requirements for data (timeliness, type and definitions) across provider organizations and regulatory colleges
	Data consolidation and housing	<ul style="list-style-type: none"> ▶ Alberta Health should be accountable for the collection, storage and consolidation of a provincial workforce dataset

Analysis and modelling	Health workforce analysis, modelling and forecasting	<ul style="list-style-type: none"> ▶ Since workforce planning is required at the system level (e.g. how many PTs will Alberta need regardless of work location), consideration should be made to have Alberta Health accountable for analysis, modelling and forecasting of the future workforce needs for the province ▶ Consideration could be made to delegate this work to Alberta Health Services, with the expectation that the workforce supply needs will be planned at the provincial level across all regulated professional groups
	Reporting and plan development	<ul style="list-style-type: none"> ▶ Projections for the health workforce required in the province should be made available to all healthcare providers and regulatory colleges so that they can develop interventions of changes (e.g. models of care if a shortfall is anticipated) ▶ A focus should be made on the availability, accuracy and accessibility of the data, with a consideration for a live, on-demand dashboard that can be accessed across a variety of platforms
Resulting actions	▶ Action planning	<ul style="list-style-type: none"> ▶ Alberta Health should be accountable for facilitating a process between healthcare providers, regulatory colleges and academic institutions where actions are aligned and agreed to based on the supply requirements ▶ Alberta Health, individual healthcare providers, academic institutions and regulatory colleges will be accountable for executing specific actions that fall under their scopes of accountability
	▶ Tracking and monitoring	<ul style="list-style-type: none"> ▶ Organizations should be accountable for tracking against their agreed-upon actions, and a governance mechanism should be established to ensure the desired outcomes are being realized.

- ▶ ***Develop clear linkages between service planning, workforce planning, policy, health education, regulation and other involved organizations or bodies.*** Currently, the linkages between these areas are ill-defined, and processes appear to be fairly ad-hoc. Alberta will require clear

mechanisms, either through governance development, process development, or integration of planning groups.

- ▶ **Collect integrated provincial workforce data.** Currently, workforce and service data collected across provider organizations (AHS, Covenant, private providers) varies in availability, type, and quality. Developing clear requirements for the necessary data captured and provided by provider organizations will be an important first step to projecting workforce requirements. Additionally, the data collected from regulatory colleges is required to understand and accurately project health workforce supply. Alberta should develop consistent requirements around the type of registrant information colleges must collect and the frequency and format in which that information is reported in. As a starting point, Alberta can leverage a conceptual model built in the World Health Organization/Pan American Health Organization (WHO/PAHO) Collaborating Centre on Health Workforce Planning and Research based in Dalhousie University (with the key data required in green):



Source: [Needs-based health workforce planning frameworks and tools \(dal.ca\)](https://dal.ca/needs-based-health-workforce-planning-frameworks-and-tools)

- ▶ **Develop comprehensive health workforce projections.** Presently, projecting health workforce requirements is done within AHS by two separate groups (one for physicians and one for clinical resources), and there is no consolidated, provincial approach to health workforce projections across all health professional types. This presents a clear gap and opportunity for developing provincial need projections for all health professionals across the province to ensure that system levers (e.g. seat decisions, policy levers) address the provincial workforce need, regardless of where or what organization the service is provided from.
- ▶ **Develop a mechanism to develop, execute and monitor actions stemming from workforce planning.** There will need to be governance or a similar structure to ensure that the outcomes of the health workforce planning process are actioned by/within various organizations. This includes a process for determining which actions are required and should be prioritized (AHS did this

effectively as part of their Allied Health Workforce Plan) and a process for centrally monitoring the success of the actions. Various organizations would be accountable based on the type of action (e.g. policy change, seat funding, etc.).

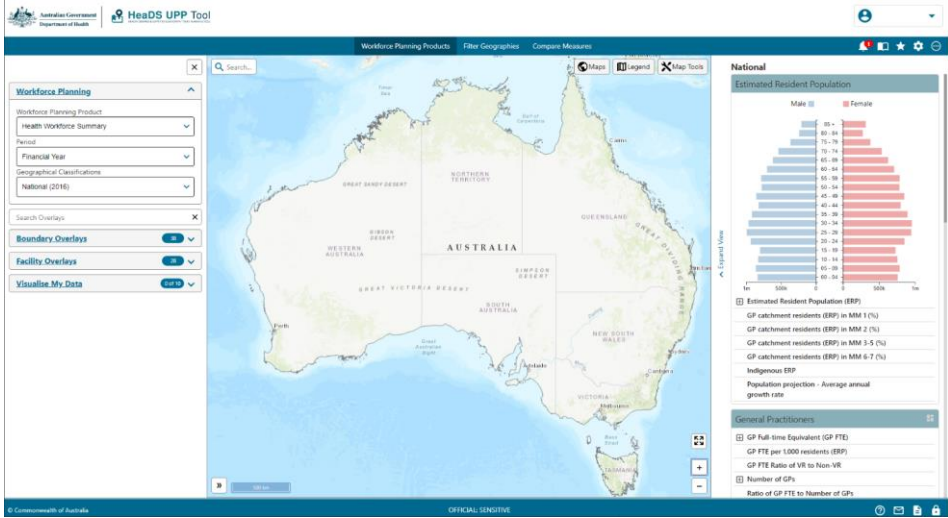
Jurisdictional Scan

Jurisdiction:	New Zealand, <i>Health Workforce Directorate</i>
Accountabilities, process and outcomes:	<p>Accountabilities:</p> <p>Health workforce planning is currently the accountability of the Health Workforce Directorate (formerly Health Workforce New Zealand). The group has accountability for national coordination on workforce issues, including accountability for providing advice on workforce development and regulation, collecting workforce data and intelligence, and investing in health workforce training.</p> <p>Process spotlight:</p> <p>The Health Workforce Directorate leverages a forecasting model to project need across a variety of workforce groups, including physicians and nurses. The model leverages practicing certificate data (similar to Alberta's provincial registry information) to calculate age-specific entry and exit points, ageing of the workforce and population changes. The modelling allows for headcount and FTE forecasting across a long-term time horizon (10 years), supporting education and policy decisions.</p> <p>Outcomes:</p> <p>In addition to the forecasting and modelling, the Health Workforce Directorate manages the Voluntary Bonding Scheme (payments for staff and new grads who register and agree to work in hard to staff professions, communities and/or specialties), Training Initiatives, and administers and reviews Health Professionals Competence Assurance Act (including considering applications for regulation of new professions, and helping to remove barriers that limit practitioners ability to work to full scope of practice).</p> <p>The Health Workforce Directorate also supports a Health Workforce Advisory Board, which is tasked with providing strategic oversight and sector leadership for the health workforce. The Board comprises senior leaders in the health workforce field. It is tasked with (among other things) developing an annual report to the Minister of Health containing recommendations to advance the health workforce agenda across New Zealand.</p>
Takeaways for Alberta:	<p>Several key learnings could apply to Alberta, including:</p> <ul style="list-style-type: none"> • Developing a consistent provincial approach to health workforce forecasting across all clinical groups. • Aligning health workforce planning and modelling with levers to influence supply, including specific bonding programs, regulatory changes, and educational funding.

	<ul style="list-style-type: none"> Developing a strategic advisory board accountable for providing system-level workforce advice to the Minister on an annualized basis.
--	---

Sources:

- [Health workforce | Ministry of Health NZ](#)
- [The evolution of New Zealand's health workforce po.pdf](#)
- [20171129MedicalspecialistsforecastingmodelJournalPaper.pdf](#)

Jurisdiction:	<i>Australia, Health Workforce Division</i>
Accountabilities, process and outcomes:	<p>Accountabilities:</p> <p>The Health Workforce Division within the Department of Health is accountable for i) Collecting Health Workforce Data and ii) Health Workforce Planning. As part of that, they offer a live healthcare workforce planning tool - Health Demand and Supply Utilization Planning (HeaDS UPP) and develop longer-term plans and strategies (in the process of developing a National Medical Workforce Strategy). They also oversee several initiatives and programs, including DoctorConnect (an international recruitment support group) and various incentive programs.</p> <p>Process spotlight:</p> <p>The HeaDS UPP tool leverages data from various national datasets, including Medicare Benefits Schedule, GP Training Data, and National Health Workforce Dataset. To create more actionable data for health service planning, the team has mapped the data to 829 catchment areas across Australia in support of localized planning. They can then show how the community uses and accesses health services and the health workforce.</p>  <p>The screenshot shows the HeaDS UPP Tool interface. It features a central map of Australia with various state and territory boundaries. On the left, there are several panels for 'Workforce Planning', 'Boundary Overlays', 'Facility Overlays', and 'Visualise My Data'. On the right, there is a 'National' data panel with a population pyramid and several key metrics:</p> <ul style="list-style-type: none"> Estimated Resident Population (ERP) GP catchment residents (ERP) in MM 1 (%) GP catchment residents (ERP) in MM 2 (%) GP catchment residents (ERP) in MM 3-5 (%) GP catchment residents (ERP) in MM 6-7 (%) Indigenous ERP Population projection - Average annual growth rate General Practitioners <ul style="list-style-type: none"> GP Full-time Equivalents (GP FTE) GP FTE per 1,000 residents (ERP) GP FTE Ratio of VR to Non-VR Number of GPs Ratio of GP FTE to Number of GPs <p>Today, the tool is primarily used to support the planning of primary care resources (GPs and nurses) but is planned for expansion across all health service types. The intended audience is health workforce planners at the State, system and local levels and is available to various government and non-</p>

	<p>government agencies.</p> <p>Outcomes:</p> <p>The HeaDS UPP tool supports health workforce planning at both a system and regional level, providing a 'single source of truth' using numerous national datasets. This tool informs both localized intervention and national (system-level) intervention.</p>
Takeaways for Alberta:	<p>Several key learnings could apply to Alberta, including:</p> <ul style="list-style-type: none"> Providing a single point of accountability for capturing system-level data (including registration, provider, and demographic data) and creating a comprehensive provincial dataset. Developing accessible dashboards (e.g. PowerBI or Tableau) that can be leveraged by government and non-government agencies to support more localized health human resources planning.

Sources:

1. [Health workforce | Australian Government Department of Health](#)
2. [DoctorConnect | Australian Government Department of Health](#)

Jurisdiction:	England, <i>NHS and Health Education England (HEE)</i>
Accountabilities, process and outcomes:	<p>Accountabilities:</p> <p>Historically, Health Education England was accountable for planning, educating, training and developing the health workforce, while NHS England was accountable for service and financial planning. With the increased spotlight the pandemic has placed on the need for integrated workforce planning, the Health and Social Care Secretary recently announced the merging of the two groups, framing it as “bringing workforce planning into the heart of NHS.”</p> <p>Process spotlight:</p> <p>A large component of Health Education England’s recent mandate was educating and training the future workforce. Over 90% of the allocated budget went to funding education and training for the health workforce. This including part-funding salaries for doctors in training, investing in courses and clinical placements, providing backfill and salary support for targeted professions, and managing continuous training development programs for some regulated professions.</p> <p>With accountability for both health workforce planning, and health education funding, HHE had significant ‘system levers’ at their disposal to influence supply. What was lacking, and part of the rationale for integrating HHE with the NHS, was the separation of service planning and workforce planning and development.</p> <p>Outcomes:</p> <p>As a result of the system levers that HEE was accountable for, it took a leading</p>

	role in supporting the Government’s pledge to increase nursing supply in the NHS but 50,000 by 2024. This has included HEE led initiatives such as conversion of nursing associates and assistant practitioners to registered nurses, direct nursing apprenticeships, and a blended learning degree.
Takeaways for Alberta:	Several key learnings could apply to Alberta, including: <ul style="list-style-type: none"> • Establishing clear accountabilities across service planning, workforce planning and education due to their inherent linkages.

Sources:

1. [Health Education England | Health Education England \(hee.nhs.uk\)](https://www.hee.nhs.uk)
2. [NHS staff from overseas: statistics - House of Commons Library \(parliament.uk\)](https://www.parliament.uk)
3. [Major reforms to NHS workforce planning and tech agenda - GOV.UK \(www.gov.uk\)](https://www.gov.uk)
4. [HEE South East Region Delivery Plan 2021/22](#)
5. [HEE Business Plan 2021-22.pdf](#)

4.4. Appendix D: Critical care surge planning considerations

This appendix provides considerations for effectively planning and managing ICU surge capacity to meet the potential future demands of the pandemic.

This appendix includes:

- A. **Baseline to extreme surge scenarios** - Potential critical care demand scenarios that the province may face beyond the 4th wave of COVID in Alberta. The scenarios range from the recent experiences of surge through to a theoretical maximum level of critical care demand (T-Max). The scenarios describe at a high level the impact on the system and possible scale of response the system would need to activate.
- B. **Surge plan triggers** - The metrics that should be measured and monitored to trigger the ramp up of surge capacity and the actions that will take place at defined thresholds. Based on discussions with jurisdictions across Canada, we have consolidated triggers that are consistently used in peer health systems.
- C. **Key surge plan actions** - Specific actions that would be taken at each threshold of demand to ramp up surge capacity.
- D. **Key considerations for surge plan development** - In addition to the items above, we have included additional considerations for refining surge plans based on the experiences of peer jurisdictions.
- E. **Acute Care Common Operating Picture Framework** - This jointly developed AH/AHS framework outlines a consistent view of the level of strain on the acute care system in Alberta. The framework can be used as a starting point to inform more detailed operational surge plans within AHS.
- F. **ICU baseline and surge capacity jurisdictional comparisons** - An overview of ICU capacity in Alberta and other Canadian provinces

A. System demand scenarios

The existing health system common operating picture framework considers surge planning levels relative to the most extreme circumstances managed through the 4th Wave. Beyond the levels of strain that have been experienced at points during the Alberta COVID journey to date, it is important to consider what the most severe circumstance the system could face might look like. In doing so the province will be able to articulate the most significant measures that maybe required, the scale of the response to address this theoretical maximum capacity need (T-Max) scenario and the longer-term impact on the system.

This section outlines the five hypothetical scenarios with increasing critical care demands, the potential actions required, and the corresponding impacts to the system as demands for capacity increase to the most extreme levels. The scenarios are theoretical, and it is not possible to identify which are most likely or when they may become reality. The T-Max scenario should be considered as a largely theoretical possibility, both in terms of the potential demand and the system's ability to effectively generate the capacity required. The intention of T-Max is to illustrate the massive degree of action and compromise that would be required to respond to an extreme level of pressure, to provide an indication of the maximum limits of critical care capacity.

These scenarios are **not** intended to represent the specific framework or thresholds that should form the basis of the operational surge plan described in action 3.2.2. That plan should define specific scenarios based on detailed analysis of system capacity. Rather, these scenarios represent a theoretical framework that can be used to stress test the operational surge plan once it is developed.

Scenario	Scenario description
<p>Scenario 1 - Pre-COVID Baseline</p> <p>Maintain 173 General ICU beds</p>	<p>The baseline scenario describes the state of the health system when demand on critical care is below the normal-state baseline capacity. At this level of demand, the system can maintain normal levels of activity without strain on the workforce or needing to open additional physical capacity.</p>
<p>Scenario 2 - Endemic COVID-19 baselined</p> <p>Maintain an elevated baseline of general ICU beds to meet COVID-19 demands between waves and manage short-term spikes of surge</p>	<p>This scenario describes an endemic state of COVID where there is an elevated but consistent level of additional demand on the system relative to the pre-COVID baseline. In this scenario, the system is also able to manage expected short-term seasonal pressures (i.e. influenza breakout in winter) requiring some surge beds to be opened and staffed periodically. At this level of demand the system can largely maintain normal levels of activity by managing the increase in demand through operationalization of existing surge plans.</p>
<p>Scenario 3 - Peak historical surge</p> <p>Maximum capacity created during pandemic to date (376 ICU beds open)</p>	<p>The peak historical surge scenario describes the state of the health system when demands exceed the baseline funded capacity and require all planned surge capacity be opened. The system is able to maintain a buffer of at least 30 available and staffed surge beds (similar to wave 4 of the pandemic). At this level of demand the system becomes increasingly strained and compromises in the delivery of non-urgent scheduled activities as well as adjustments to hospital admission and discharge processes are required.</p>
<p>Scenario 4 - Beyond peak historical surge</p> <p>Deliver 425+ beds with maximum occupancy</p>	<p>This scenario describes the state of the health system when demands exceed the ability to maintain a consistent buffer of 30 open and staffed surge beds. At this level of demand the system is significantly strained and requires the creation of capacity beyond AHS facilities and potentially beyond Alberta's borders.</p>
<p>Scenario 5 - Maximum theoretical surge</p> <p>1093 ICU beds based on max levels of ICU capacity created in hotspot jurisdictions - e.g Italy, New York state</p>	<p>This scenario has been modeled after the situations experienced in Italy and New York during wave 1 of the pandemic, where ICU bed ratios in excess of 25 ICU beds per 100,000 population were opened (~1,093 beds when applied to Alberta's population size). In comparison, at the peak of wave 4, Alberta had ~8.5 ICU beds per 100,000 population. At this level of demand, the system would not be able to create enough capacity internally to ensure critically ill patients have access to care. Out of province and out of country capacity as well as critical care triage protocols are required to ensure that scarce critical care resources are used to save the greatest number of lives possible. Significant staffing injections would be required as would the significant control of non-COVID demand</p> <p>Source: Sen-Crowe, Brendon, et al. "A closer look into global hospital beds capacity and resource shortages during the COVID-19 pandemic." <i>Journal of Surgical Research</i> 260 (2021): 56-63.</p>

The table below outline the potential actions (beyond core operating and the management of funded beds) within each of the scenarios, as well as the potential impacts of those actions. It is critical to note

that the actions and impacts described below are illustrative examples to give a broad indication of how the health system may respond at different levels of strain. They are not intended to be exhaustive and the actual actions taken by the system at different levels of pressure will be articulated through the development of the operational surge plan.

Scenario 1: Baseline

Actions	Impacts
N/A - business as usual	N/A - business as usual

Scenario 2: Expected seasonal surge

Actions	Impacts (in addition to previous scenario)
<p>Bed capacity</p> <ul style="list-style-type: none"> ▶ ICU capacity is increased above baseline levels based on pre-identified triggers and corresponding levels within the operational surge plan ▶ Wherever possible, patients are discharged from hospital to maximize acute capacity <p>Staffing capacity</p> <ul style="list-style-type: none"> ▶ Staff are ready to implement team-based staffing models where necessary ▶ Site-specific redeployments of staff where necessary <p>Non-COVID activity</p> <ul style="list-style-type: none"> ▶ Reduction in scheduled surgical activity is decided at a site or zone level as needed, based on day-to-day demand 	<ul style="list-style-type: none"> ▶ Potential for delay in care for some surgical patients, but to a limited/planned extent ▶ Staff and physician well-being will be impacted as a result of a high-surge environment

Scenario 3: Peak historical surge

Actions ¹	Impacts
<p>Bed capacity</p> <ul style="list-style-type: none"> ▶ All potential planned ICU capacity is unlocked, including leveraging unconventional spaces for additional beds ▶ Specialty ICU beds are released for general critical care use as much as is possible 	<ul style="list-style-type: none"> ▶ Patients requiring non-emergent surgical procedures will experience delays in care, which may have impacts on their quality of life ▶ Staff and physician well-being will be impacted as a result of a high-surge environment

<ul style="list-style-type: none"> ▶ Vented patient capacity is created within acute units ▶ Load levelling across sites and zones without requirement for patient consent ▶ Wherever possible, patients are discharged from hospital to maximize acute capacity - ALC zero <p>Staffing capacity</p> <ul style="list-style-type: none"> ▶ Team-based ICU staffing models are leveraged to a maximum ratio of 1:4 ▶ Reserve staffing pools are leveraged as needed (e.g. retired staff, clinical staff in administrative positions, trainees, military, clinicians not yet certified within Canada, etc.) ▶ All non-essential tasks (e.g. documentation) are stopped ▶ Vacations for critical staff are cancelled and hours are extended. Redeployed staff are repatriated ▶ Site and zone-based staffing reassignments are implemented to support areas with the most need. <p>Non-COVID activity</p> <ul style="list-style-type: none"> ▶ Reduction in scheduled surgical activity to an average of ~60% across the province and resources are redirected to critical tasks ▶ All non covid, non urgent/emergent care paused or approved at zone or system level <p>ICU eligibility requirements</p> <ul style="list-style-type: none"> ▶ Where appropriate, effort is made to delay transition of patients to critical care units and provide care in acute wards ▶ Where appropriate, effort is made to discharge patients from the ICU as early as possible 	
---	--

Scenario 4: Beyond peak historical surge

Actions ¹	Impacts
<p>Bed capacity</p> <ul style="list-style-type: none"> ▶ All potential ICU capacity is unlocked, including leveraging unconventional spaces for additional beds ▶ Specialty ICU beds are released for general critical care use as much as is possible ▶ Field hospitals are opened to increase capacity in high patient density locations ▶ Load levelling across sites and zones without requirement for patient consent ▶ Wherever possible, patients are discharged from hospital to maximize acute capacity ▶ The system must consider transfer of patients out of province to receive care in order to increase acute and critical care capacity <p>Staffing capacity</p> <ul style="list-style-type: none"> ▶ Team-based staffing models are leveraged to the maximum staffing ratios in the ICU (1:4) ▶ All reserve staffing is leveraged (e.g. retired staff, clinical staff in administrative positions, trainees, military, clinicians not yet certified within Canada, etc.) ▶ All non-essential tasks (e.g. documentation) are stopped ▶ Vacations for critical staff are cancelled and hours are extended ▶ Site and zone-based staffing reassignments are implemented to support areas with the most need. <p>Non-COVID activity</p> <ul style="list-style-type: none"> ▶ Scheduled surgical activity is reduced to <60% and available resources are redirected to critical tasks 	<ul style="list-style-type: none"> ▶ Patients requiring non-emergent surgical procedures will experience delays in care, which may have impacts on their quality of life ▶ If emergency departments are closed, patients may need to travel further to access care, which may have quality and safety impacts ▶ Staff and physician well-being will be impacted as a result of a high-surge environment. ▶ The system will likely incur significant financial (and reputational) cost of transporting and acquiring care for patients out of province and possibly out of country

<ul style="list-style-type: none"> ▶ Consideration for closing some emergency departments to dedicate certain sites for managing pandemic demand <p>ICU eligibility requirements</p> <ul style="list-style-type: none"> ▶ Where appropriate, effort is made to delay transition of patients to critical care units and provide care in acute wards ▶ Where appropriate, effort is made to discharge patients from the ICU as early as possible 	
---	--

Scenario 5: Maximum theoretical surge

Actions ^{1,2,3}	Impacts
<p>Bed capacity</p> <ul style="list-style-type: none"> ▶ All potential ICU capacity is unlocked, including leveraging unconventional spaces for additional beds ▶ Field hospitals are opened to increase capacity in high patient density locations ▶ Load levelling across sites and zones without requirement for patient consent ▶ Wherever possible, patients are discharged from hospital to maximize acute capacity ▶ The system must transfer patients out of province and out of country to receive care in order to increase acute and critical care capacity <p>Staffing capacity</p> <ul style="list-style-type: none"> ▶ Team-based staffing models are leveraged to levels previously untested in the ICU (e.g. 1:6) ▶ All reserve staffing is leveraged (e.g. retired staff, clinical staff in administrative positions, trainees, military, clinicians not yet certified within Canada, etc.) ▶ All non-essential tasks (e.g. documentation) are stopped 	<ul style="list-style-type: none"> ▶ Patients who would typically be placed in critical care will not be eligible, likely impacting mortality, and public perception ▶ A high patient-staff ratio in the ICU may negatively impact the quality of care able to be provided to critically ill patients ▶ Patients requiring non-emergent surgical procedures will experience delays in care, which may have impacts on their quality of life ▶ Patients may need to travel further to access care, which may have quality and safety impacts ▶ Staff and physician well-being will be impacted as a result of a high-surge environment. In particular, having to implement ICU triage protocols has the potential to have significant emotional and mental impacts on involved staff and physicians. ▶ The system will likely incur significant financial (and reputational) cost of transporting and acquiring care for critically ill patients out of province and possibly out of country

<ul style="list-style-type: none"> ▶ Vacations for critical staff are cancelled and hours are extended ▶ Site and zone-based staffing reassignments are implemented to support areas with the most need. <p>Non-COVID activity</p> <ul style="list-style-type: none"> ▶ All scheduled surgical activity is cancelled and resources are redirected to critical tasks ▶ Closure of some emergency departments to dedicate certain sites for managing pandemic demand <p>ICU eligibility requirements</p> <ul style="list-style-type: none"> ▶ Critical care triage protocols are enacted. Clinician teams must assess patients for ICU eligibility. (e.g. only those patients with a one year expected mortality of approximately > 50% are admitted to ICU.) 	
---	--

¹These actions are contingent on having sufficient workforce to support increased ICU bed capacity. Current and expected future resource constraints will likely significantly limit the system’s options in terms of responding to critical care demand.

²In this scenario, it is likely that Alberta will not be unique in addressing this situation. This will likely significantly impair the ability of other provinces/ countries to contribute beds or staff, which will affect the ability to leverage additional external capacity.

³Even if all outlined actions were implemented in full, it cannot be guaranteed that the capacity outlined in the Scenario 5 description would be reached or that the system could surge capacity to any level beyond the previously defined maximum (425 beds) at the required pace to meet demand. It is also unclear how long the system would take to achieve ICU bed holdings close to T-Max or for how long they may maintain a T-Max level

B. Surge triggers

Effective surge protocols are built upon a set of specific metrics and triggers that indicate the current or expected level of critical care demand for the health system, in order to trigger the surge up (or down) of capacity at specific thresholds to meet the expected demand. The metrics and triggers should be specific and encompass both population/public health data, as well as system capacity measures. Currently AHS depends on its Early Warning System (EWS) to inform surge decisions. While this system has been effective for short-term capacity planning, it does not support planning more than 1-3 weeks out. Peers in other provinces have implement surge protocols that are built on a broader base of indicators with more specific thresholds.

AH and AHS have recently implemented a health system common operating picture framework which does define some measures of health system capacity and demand, aligned to high-level indicative actions. That framework can serve as a starting point for a more detailed operational surge protocol; however, its primary function is to effectively and consistently communicate the state of the health system to officials.

The following table outlines example metrics that are used in surge protocols developed by peer Canadian health

systems.

Theme	Example Trigger metrics to monitor - <i>These are key data points used to support evidence-based surge planning. Used across other provincial systems</i>
Population health - metrics focusing on down stream indicators of future demand on the system.	<ul style="list-style-type: none"> ▶ Number of active COVID-19 cases ▶ Vaccination rates ▶ Testing positivity rates ▶ Acute care outbreak numbers ▶ Cancer screening rates
Patient acuity - metrics focusing on the severity of current and future acute patient illness, translating to demand on the ICU system.	<ul style="list-style-type: none"> ▶ Number of patients on high-flow oxygen ▶ Number of ventilated patients in the ICU ▶ Average length of stay ▶ ICU and general bed occupancy
Staffing capacity - metrics focusing available workforce capacity, indicating the degree to which the system may respond to further demand.	<ul style="list-style-type: none"> ▶ Resource numbers by profession and by site - including the community (long term care and homecare) ▶ Recruitment numbers ▶ Attrition and turnover rates ▶ Day-to-day staffing levels of acute and ICU units
Demand management - metrics relating to wider system demand through patient volumes awaiting acute care.	<ul style="list-style-type: none"> ▶ Hospital and ED admissions ▶ ED wait times ▶ Ambulance transport volumes ▶ Surgical demand and waiting times

C. Surge actions

In response to key trigger metrics, an operational surge plan should establish thresholds and subsequent actions/strategies that the system and wider stakeholders will execute in order to manage demand and surge up capacity. It will be important for these actions to be developed and agreed between AHS and AH. This will ensure that official and decision-makers in government understand the rationale for the actions taken at different levels of demand and can provide appropriate support, as well as communicate the rationale to the public.

The table below provides examples of demand reduction and capacity building strategies that could be used at different levels of demand. The examples below were informed by discussions with health system leaders in peer Canadian provinces.

Theme	Strategies
Demand management - these strategies focus on adjusting the “non-critical” activity and levelling the volume of patients across a region to align with available capacity.	<ul style="list-style-type: none"> ▶ Deferral of scheduled procedures ▶ Load levelling between sites and regions

<p>Physical capacity - these strategies focus on creating additional space to open beds and provide care.</p>	<ul style="list-style-type: none"> ▶ Moving care into unconventional spaces (e.g., expanding into PACU) ▶ Decant hospitals of ALC patients ▶ Manage occupancy through earlier patient discharges through coordination with community supports ▶ Open beds outside of the ICU ward ▶ Add private-sector delivery of publicly funded services to provide capacity
<p>Staffing capacity - these strategies focus on optimizing the deployment of available resources to appropriately align with the level of demand.</p>	<ul style="list-style-type: none"> ▶ Increase provider to patient ratios through team-based models of care ▶ Deploy alternative models of care (i.e. anesthetists supporting respiratory therapists for ventilated patients) ▶ Implement policies for expanded scope of practice for providers in remote and rural settings ▶ Adjustments to clinical guidelines and policies to discontinue non-essential tasks

D. Additional surge plan considerations

Based on discussions with other jurisdictions, there are several additional themes that should be considered when developing an operational surge plan.

Planning horizon for monitoring triggers

Most jurisdictions focus triggers on shorter-term system supply metrics such as staffing levels and hospital occupancy. This approach may support reactive actions to unlock capacity, but plans should also consider public health data metrics that take a longer-term view of demand to proactively manage and prepare for expected periods of surge. This proactive approach is critical to building capacity for the expected seasonal demand (e.g. flu season) on top of the COVID surge that could come with the introduction of a new variant.

Bi-directional management of triggers

While surge triggers are generally focused on short-term indicators of acute and critical care demands to inform decisions to increase capacity, endemic COVID will present new challenges for surge planning as demand fluctuates based on season and presence of variants. As a result of this more uncertain environment, surge plans also need to take into consideration how to inform decisions to ramp down surge capacity to reduce the potential for dramatic changes in active surge capacity. The bidirectionality of the triggers will be critical to ensuring that the system appropriately balances capacity and maintains consistent operations wherever possible.

Demand management strategies

Continued deferral of scheduled surgeries to redeploy staff poses a risk to pushing more patients outside of clinically appropriate wait times. Refined surge plans should consider the ethical framework for prioritizing cases as patterns of surge continue into the future and the growing care deficit requires decisive action to manage.

Physical capacity strategies

As many jurisdictions plan to maintain ICU beds above their pre-pandemic baseline, they are also assessing opportunities to build additional acute care capacity through independent contracted

facilities to support their surgical demand through post-wave 4 recovery.

Staffing capacity strategies

Previous surge plans based on staffing numbers through the first three waves need to be adjusted to align with the current limitations in health human resources. Surge planning needs to consider the strain on other areas of the system when re-deployment strategies are used for prolonged periods of time. Metrics outside of the ICU should be tracked concurrently to have a view of this impact.

E. Acute care common operating picture framework

Objectives:

Objectives of the acute care common operating picture framework are to:

- Define the foundational metrics that can be used to provide a common operational picture of the state of the acute care hospital system
- Ensure a consistent and objective model to understand the current level of stress on the acute care hospital system at various operational conditions (relative stresses)
- Provide a framework to support evidence-based decisions by capturing the complexity of interactions in the broader health system

The framework contains specific metrics given the significant capacity challenges being driven by the pandemic and are based on the experiences over the last 18 months and existing surgical plans. As the state of the pandemic evolves over time, the metrics will need to be adjusted and recalibrated to reflect the health care environment. Additionally, this framework can be used in combination with epidemiological models and forecasts, as appropriate.

Components

The framework consists of three components:

Metrics	Actions	Reports
<ul style="list-style-type: none">• Consistent metrics and thresholds that indicate the level of stress that the health system is under at a given point in time	<ul style="list-style-type: none">• Types of health service delivery actions that can be taken to manage the demands on the system at certain thresholds	<ul style="list-style-type: none">• Objective reports describing the state of the metrics and the impact of any specific actions being taken

Operational Considerations and Next steps

Operationalization of the framework consider:

- How the framework will be applied and assessed provincially and/or a zone basis
- Evaluating the metrics and target ranges over time based on experience
- Governance model for oversight, tracking and reporting including processes for assessing and reporting on metrics and levels.
- Continuous improvement relating to:
 - Metric definitions/inclusion
 - Details/inclusion of indicative actions

- Validation of the ranges in each of the metrics and assessment of the weighting of the metrics in comparison to others to facilitate the reporting on the overall acute care capacity level

Acute Care Common Operating Framework – Metrics, Measures, and Potential Actions

System condition level	Metrics <i>(X of Y required to enact service delivery actions)</i> <i>Indicative examples for discussion</i>	Health System Service Delivery Actions <i>(Indicative Examples)</i>			
		Workforce	Acute & Critical Care Capacity	Surgical Capacity	Other
1	<p>Acute Care Occupancy:</p> <ul style="list-style-type: none"> Acute medical/surgical occupancy (COVID Capable): <90% of baseline 6,089 beds General systems critical care occupancy¹: <90% of baseline 173 ICU beds <p>Workforce:</p> <ul style="list-style-type: none"> General Systems ICU RN Overtime Rate: <5.50% Acute care workforce overtime rate (all disciplines): <3.50% Clinically focused² voluntary termination rates: <4.25% <p>Surgical Activity:</p> <ul style="list-style-type: none"> Scheduled surgery volume: ≥95% of average normative baseline volume Urgent surgeries delayed: None³ 	<ul style="list-style-type: none"> Utilize current care models and staffing practices Maintain regular hiring, recruitment and retention practices based on organizational need 	<ul style="list-style-type: none"> Maintain normal care and readiness for surge capacity including need for temporary facilities. 	<ul style="list-style-type: none"> Maintain normal activity and work to improve wait times. 	

¹ ICU baseline is 173 general ICU adult beds. However, AHS can operationalize up to 27 ICU beds (up to 200 beds) for short periods of time to support typical fluctuations in ICU demand (e.g. during trauma or flu season peaks).

² Non-casual AHS employees in UNA, HSAA and AUPE-AUX.

³ Urgent surgery delays indicator excludes normal postponements at a local and regional level that may occur through normal operational cycles. For greater certainty, urgent surgeries may be delayed for a variety of reasons including in level 1. The metric 'none' means that there is not a sustained or unexpected volume of urgent surgeries postponed. Urgent surgeries are defined as those patients that require surgical treatment >3 days and <4 week timeframe.

System condition level	Metrics (X of Y required to enact service delivery actions) Indicative examples for discussion	Health System Service Delivery Actions (Indicative Examples)			
		Workforce	Acute & Critical Care Capacity	Surgical Capacity	Other
2	<p>Occupancy:</p> <ul style="list-style-type: none"> Acute medical/surgical occupancy (COVID Capable): 90% - 100% General Systems Critical Care occupancy: 90-130% of baseline <p>Workforce:</p> <ul style="list-style-type: none"> General Systems ICU RN Overtime Rate: 5.50-6.99% Acute care workforce overtime (all disciplines): 3.50-3.99% Clinically-focused⁴ voluntary termination rates: 4.25-4.99% <p>Operations:</p> <ul style="list-style-type: none"> Scheduled surgery volume: 85%-94% of average normative baseline volume Urgent surgeries delayed: None² 	<ul style="list-style-type: none"> Increase hours for existing trained staff and physicians to support surge capacity Implement zone and site-based staffing reassignment plans to address potential staffing issues 	<ul style="list-style-type: none"> ICU surge capacity activated to ensure sufficient capacity for AHS EWS high scenario Activate inpatient surge capacity based on distribution of cases include cohorting COVID patient to specific wards. Local redistribution of inpatients if needed to maintain acute care capacity (e.g. between facilities, cities, or zones). May require regional distribution of critical care patients depending on the distribution of cases (i.e. an asymmetrical surge). 	<ul style="list-style-type: none"> Begin targeted activity reductions in surgical, procedural and scheduled care areas (surgery, ambulatory care) Implement phased activity reductions to match the increasing demand for ICU beds and staffing. The degree of activity reductions is proportional to the demand for additional capacity. Divert non-urgent OOP surgical referrals for scheduled surgeries where services are offered in patient's home province. Surgical backlog increases noted 	<ul style="list-style-type: none"> Low and medium AHS organizational priorities begin to be impacted.

⁴ Non-casual AHS employees in UNA, HSAA and AUPE-AUX.

3	<p>Occupancy:</p> <ul style="list-style-type: none"> Acute medical/surgical occupancy (COVID Capable):100-120% General systems critical care occupancy: 130-175% of baseline <p>Workforce:</p> <ul style="list-style-type: none"> General Systems ICU RN Overtime Rate: 7.00-8.50% Acute care workforce overtime (all disciplines): 4.00-4.50% Clinically-focused⁵ voluntary termination rates: 5.00-5.50% <p>Operations:</p> <ul style="list-style-type: none"> Scheduled surgery volume: 60%-84% of average baseline volume Urgent surgeries delayed: Yes⁶ 	<ul style="list-style-type: none"> Cancelling vacation and mandating overtime as required to staff surge capacity Implementation of stage based alternative staffing models Continued re-distribution and redeployment of staffing to critical areas as required at the site and zone level. 	<ul style="list-style-type: none"> Continue to open surge capacity sufficient capacity to meet AHS EWS high scenario Zonal re-distribution of in-patients and ICU patients Divert out of province (OOP) tertiary care patients, where appropriate Consider options for alternative locations for critical care delivery including out of province and out of country trends continue in an upward direction with minimal public health measures. 	<ul style="list-style-type: none"> Further activity reductions in surgical, procedural and scheduled care areas (surgery, ambulatory care) Implementation of cancer surgery triage protocols to support surgery prioritization Delay in diagnosis and treatment with escalation of urgency and acuity of non-urgent care types. Increasing surgical, procedural and scheduled activity reduction leading to increasing waitlists and increases in surgical wait times/out of window target metrics Decreased access to care and increases in morbidity and mortality with delayed surgical care Quality of life impacts for surgical patients that require treatment to support a resumption of normal daily activities Continued diversion OOP surgical referrals for scheduled surgeries 	<ul style="list-style-type: none"> Low and medium AHS organizational priorities are paused until health system pressure resolved, high priority items may be impacted.

System condition level	Metrics (X of Y required to enact service delivery actions) Indicative examples for discussion	Health System Service Delivery Actions (Indicative Examples)			
		Workforce	Acute & Critical Care Capacity	Surgical Capacity	Other
4	<p>Occupancy: Updated daily</p> <ul style="list-style-type: none"> Acute medical/surgical occupancy (COVID capable): >120% General systems ICU critical care occupancy: >175%⁷ of baseline <p>Workforce: Updated weekly</p> <ul style="list-style-type: none"> General Systems ICU RN Overtime Rate: >8.5% Acute care workforce overtime (all disciplines): >4.50% 	<ul style="list-style-type: none"> Continued cancelling vacation and mandating over-time as required Continued implementation of alternative care models in ICU. Crisis and ethical decision support for critical care and surgical teams. Seek external resources from outside of Alberta 	<ul style="list-style-type: none"> Continue to open surge to ensure sufficient capacity to meet EWS high scenario to a maximum of 380 beds with 30 beds available provincially at all times. Provincial re-distribution of in-patients based on load levelling protocols Limit OOP ICU patients Transfer patients out of province if needs expected to exceed 380 beds and 30 beds available. Potential temporary facilities in use. 	<ul style="list-style-type: none"> Aggressive postponements in urgent and scheduled non-urgent surgeries Delays in required surgical diagnosis and treatment for cancer and other urgent and acute conditions leading to increasing disease progression, increased morbidity and increased mortality. Options for alternative surgery delivery implemented – increase CSF delivery of surgery, explore out-of-province/country for targeted surgery depending on need (emergent, urgent, and/or scheduled, depending on need) 	<ul style="list-style-type: none"> Implement triage protocol as required only as last resort if no out of province or out of country support available. Most non-clinical organizational priorities are on hold.

⁵ Non-casual AHS employees in UNA, HSAA and AUPE-AUX.

⁶ Urgent surgeries delayed means that there is a direct correlation to postponed surgeries from sustained healthcare pressure (e.g. actions have been taken that impact the ability to perform normal volume of urgent surgeries) and that a greater proportion of patients are waiting outside their clinically appropriate window for treatment.

⁷ Up to a maximum of 350 total ICU patients with 380 staffed and available ICU beds

System condition level	Metrics <i>(X of Y required to enact service delivery actions)</i> <i>Indicative examples for discussion</i>	Health System Service Delivery Actions <i>(Indicative Examples)</i>			
		Workforce	Acute & Critical Care Capacity	Surgical Capacity	Other
	<ul style="list-style-type: none"> Clinically-focused⁸ voluntary termination rates: >5.50% <p>Operations: Updated weekly</p> <ul style="list-style-type: none"> Scheduled surgery volume: <60% of average normative baseline volume Urgent surgeries delayed: Yes³ 			<ul style="list-style-type: none"> Continued diversion OOP surgical referrals for scheduled urgent and non-urgent surgeries even if the referring province does not have that service capability in the home province. 	

⁸ Non-casual AHS employees in UNA, HSAA and AUPE-AUX.

F. ICU baseline and surge capacity jurisdictional comparisons

The table below outlines a comparison of ICU bed numbers across jurisdictions in Canada both pre-pandemic and at the peak of each wave. The indicated pandemic capacity is from a single point of time during each wave and is not an indicator of the speed at which jurisdictions were able to increase capacity.

	AB	SK	ON	NS
Baseline ICU Beds				
Total ICU Beds	251	75	1970	98
General	173	75	1762	60
Specialty	78	0	208	38
Total ICU Beds Per 100,000	5.70	6.36	13.32	10.01
Wave 2				
Total ICU Cases	224	83	1812	Unknown
Total ICU Capacity	291	89	2136	98
Total ICU Cases/ Total ICU Capacity	0.77	0.93	0.85	0.31
Total Surge Capacity / 100,000	6.61	7.54	14.44	10.01
Wave 3				
Total ICU Cases	224	97	2033	91
Total ICU Capacity	295	117	2650	117
Total ICU Cases/ Total ICU Capacity	0.76	0.83	0.77	0.78
Total Surge Capacity / 100,000	6.70	9.92	17.92	11.95
Wave 4				
Total ICU Cases	291	124	1753	Unknown
Total ICU Capacity	376	138	2382	98
Total ICU Cases/ Total ICU Capacity	0.77	0.90	0.74	0.82
Total Surge Capacity / 100,000	8.55	11.70	16.11	10.01

Notes:

Data was provided by stakeholders in each jurisdiction in charge of managing critical care. Definitions for included information are as follows:

- ▶ General ICU Beds: Non-specialty critical care beds
- ▶ Specialty ICU Beds: Inclusive of CICU Unit Beds, Cardiac Surgery (CV) ICU Beds, Neuro ICU Beds, Burn Unit, other specialty beds, where specifically stated as ventilator capable.
- ▶ Baseline: Baseline bed numbers include all staffed, operational beds existing prior to March 2020
- ▶ Peak surge beds: Peak surge beds represent the actual number of beds opened and operationalized at the point in time identified by jurisdictions as the peak of each wave. This is not necessarily equivalent to the maximum potential number of critical care beds that could be opened if needed based on demand.

Peak number of ICU cases: Peak ICU cases includes the total number of ICU cases (both COVID and non-COVID) that corresponds to the time of the peak number of surge beds, as identified by each jurisdiction.

4.5. Appendix E: Surgical resumption planning

This section of the appendix contains additional context related to developing a surgical resumption strategy.

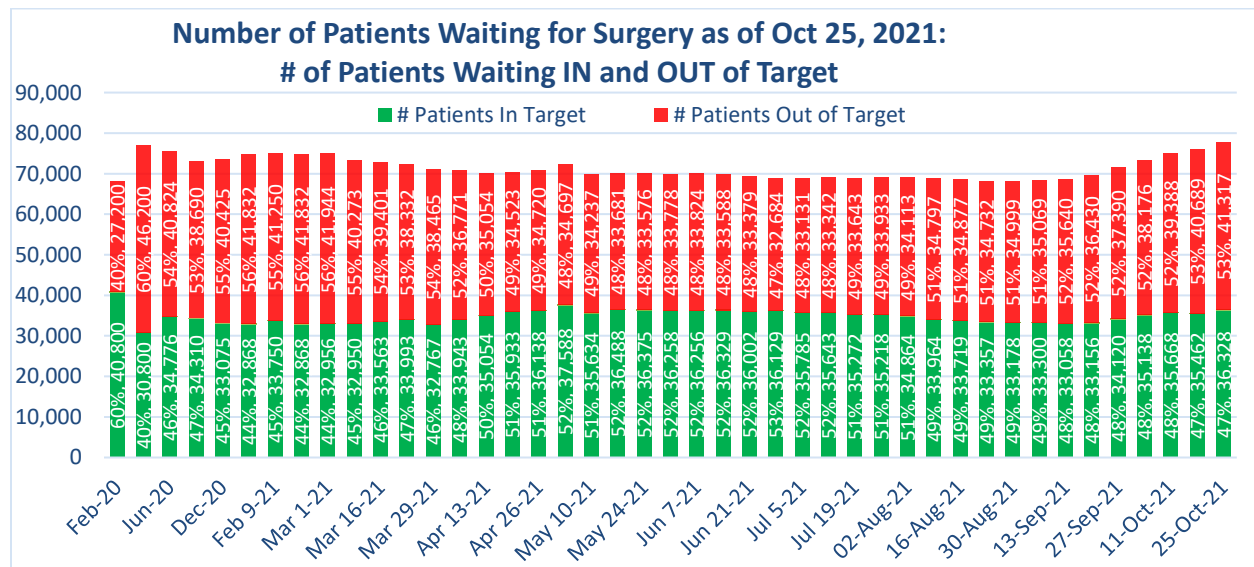
The appendix includes:

- A. **Alberta Surgical Waitlist Current Context** - outlines the current state of surgical waitlists in Alberta.
- B. **Surgical Resumption Plan Components** - outlines the critical components of an effective surgical resumption plan, based on shared learnings from other jurisdictions.
- C. **Surgical Resumption Strategies** - outlines key strategies to both understand and manage demand and optimize and increase capacity. Strategies have been identified based on leading practices and the approach taken by other jurisdictions.

Alberta Surgical Waitlist Current Context

The Alberta Surgical Initiative (ASI) was established in October 2019 with the objective of reducing the number of Albertans whose scheduled surgery surpassed the clinically-recommended wait time target. In order to address these out of target waitlists, Alberta planned to significantly increase surgical capacity within the health system through a number of initiatives including the acceleration of chartered surgical facilities (CSFs) in order to add capacity for a further 50,000 - 90,000 procedures annually. Unfortunately, the pandemic has impacted the percentage of patients waiting out of target and the 4th wave added an estimated 20,000 procedures to the pre-existing backlog. As the province prepares to recover from the most recent wave of COVID, it will be essential to develop a surgical resumption plan that builds on the strategies established through the ASI and defines a clear plan of action and accountability for achieving the waitlist targets.

The graph below illustrates the status of waitlist volumes in Alberta and the growing percent of patients waiting beyond the clinically recommended wait time.



Source: AHS Provincial Surgery Data and Analytics

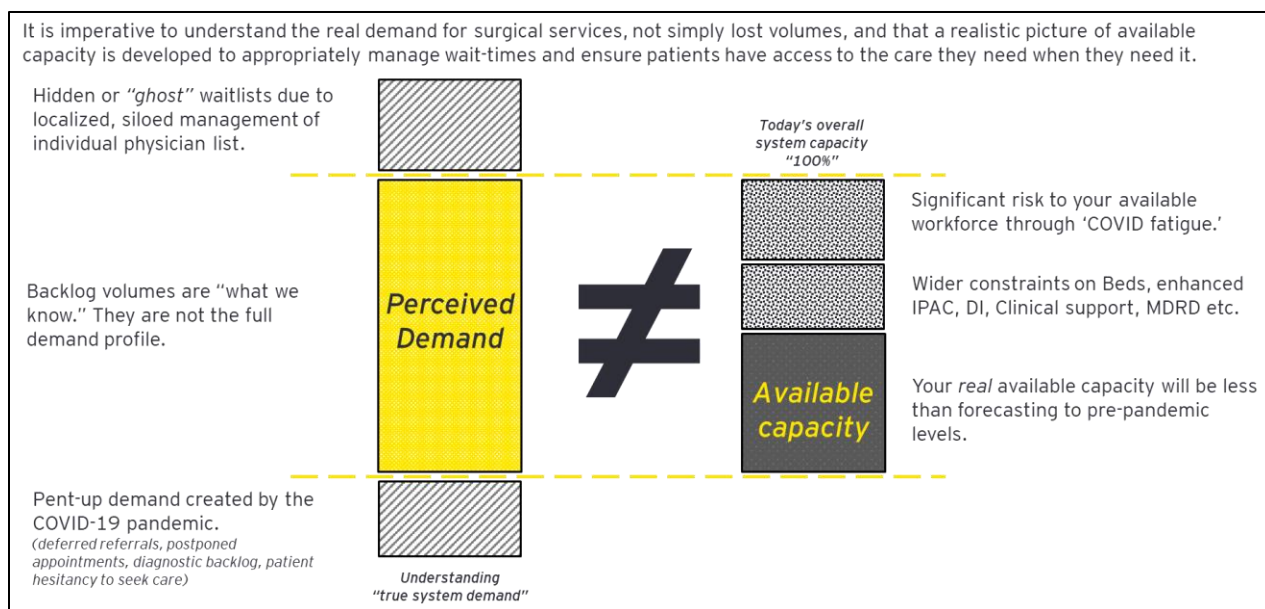
Surgical Resumption Plan Components

In addition to rebaselining the ASI plan and targets, AHS and its partners should develop a specific COVID-19 surgical resumption plan. In addition to tactical solutions to increasing capacity, the system must consider more transformational actions in order to meet the significant demand.

Section	Content details
Guiding principles	Developing a common goal, mission and mandate will provide the foundation for developing appropriate and effective strategies and tools, and will also embed the need for urgent and extraordinary action. The principles should also signal important paradigm shifts, such as ownership of the waiting list, centralization of data, and proactive waitlist management.
Targets and timelines	Set aggressive but achievable provincial targets for surgery, focused on waiting times and % out of window, aligned to specific planned actions.
Actions	Specific and measurable actions to increase and optimize surgical capacity, as well as understand and manage demand. Significant and extraordinary measures should be given strong consideration given the magnitude and urgency of the problem. Actions should also be defined to drive important cultural change, e.g., ownership waiting lists and establishing revised provincial waiting list principles etc.
Prioritization framework	Defined framework prioritizing the most urgent cases, based on clinical need and length of wait time. The framework should also support equitable service access across the province.
Risks and mitigations	Potential barriers to achieving the targets and timelines, and specific strategies that will be taken to mitigate the risks. The actions that will take place if targets are not met should also be clearly defined.
Plan governance, accountability and active management	Clear outline of how the plan, and ultimately the wait list, will be managed to support effective implementation including governance and accountability structures. The framework should include: <ul style="list-style-type: none"> ▶ Key roles and responsibilities with respect to surgical resumption ▶ Oversight structure responsible for monitoring progress and responding as necessary ▶ Escalation and decision-making protocols for deviations from targets ▶ Clearly defined reporting structures and timelines to ensure achievement of define outcomes
Reporting expectations and public communications	Defined expectations for plan visibility to the public and regular reporting on progress

Surgical Resumption Strategies:

Leading practice indicates surgical resumption planning should consider strategies to manage and control demand alongside optimizing and increasing capacity. The image below describes the element of demand and capacity that are often overlooked when managing surgical backlogs.



The section below outlines strategies used by leading jurisdictions to ensure that their surgical recovery plans fully capture and understand the surgical demand, grow available capacity, and are supported by governance and oversight mechanisms to support successful implementation.

Strategies to understand and manage demand.

The demand management strategies considered in surgical recovery plans are focused on addressing the “true system demand,” which includes the demand components illustrated in the graphic above:

- ▶ Known pre-pandemic backlog of patients waiting for surgery (in and out-of-window)
- ▶ Additional pent-up COVID driven demand (e.g. deferred specialist referrals, postponed screening appointments, deferred diagnostic services)
- ▶ Hidden or “ghost” waitlists resulting from localized and siloed management of physician lists

In order to address the true demand, surgical recovery plans need to manage the appropriateness of referrals and destination of care as well as ensure a complete and current view of the waitlist is maintained and actively managed. The following strategies were highlighted in discussions with peer jurisdictions:

Strategy	Strategy details
Manage appropriateness of referrals and destination of care	<ul style="list-style-type: none"> ▶ Optimize referrals to ensure that patients are being referred to the most appropriate facility for their specific procedure ▶ Improve and standardize consult communications between primary care and specialists to support appropriate referrals ▶ Approach referrals in a consistent manner that provides patients the best access across the province (e.g., providing patient choice to see first available specialist) ▶ Leverage multidisciplinary assessment models to ensure alternative treatment options (e.g. active rehab) are explored, and ensure surgical referrals align to the appropriate level of clinical intervention

Waitlist management	<ul style="list-style-type: none"> ▶ Establish a single transparent, coordinated waitlist management approach to understand true system demand ▶ Establish a culture of shared ownership of wait lists, as opposed to accountability sitting at the surgeon-level ▶ Conduct waitlist clean up by following-up with patients ▶ Establish waitlist profiles that clearly articulate provincial standards for clinically approved wait time targets
---------------------	--

Strategies to optimize and increase capacity

In addition to demand management, jurisdictions are also considering the following strategies to increase their surgical capacity and optimize the surgical care pathways in their recovery plans.

Strategy	Strategy details
Surgical capacity	<ul style="list-style-type: none"> ▶ Establish a culture of shared ownership of surgical capacity at a system level, rather than a service or surgeon level ▶ Increase OR time through extended hours and optimizing OR block schedules ▶ Commission out-of-hospital premises to add capacity and increase patient access for lower complexity procedures (e.g. expanding use of CSFs) ▶ Leverage extraordinary measures, such as out of province or out of country capacity as part of contingency planning for potential future waves of the pandemic ▶ Increase workforce capacity by implementing new upskilling training programs and staffing models
Optimize care pathways	<ul style="list-style-type: none"> ▶ Where appropriate, transition inpatient procedures to day-cases to increase patient throughput ▶ Rationalize capacity limiting factors across the full surgical patient pathway to maximize patient throughput (e.g. access to diagnostic imaging).

Strategies for providing accountability and oversight

Jurisdictions highlighted the following key strategies for plan oversight and accountability to support implementation:

- ▶ **Dedicated executive lead:** Identify a dedicated executive lead accountable for surgical recovery to enable clear plan governance and oversight. The lead should work with service provider organization(s) on plan design and implementation, and report directly into the Ministry of Health.
- ▶ **Defined accountability and plan management:** Establish clear roles and responsibilities for all involved parties in the design, implementation, and management of the plan. Define communication, risk management and escalation processes to support implementation efforts.

- ▶ **Clear reporting approach:** Identify a single set of reporting metrics, targets and timelines as well as a standard monitoring and reporting process to support a common understanding across stakeholders of plan progress.
- ▶ **Public accountability:** Clearly set public expectations by publishing metrics to track surgical wait lists and times, along with defined reporting timeframes and targets. Provide regular progress updates to support ongoing public understanding of the state of surgical recovery.

4.6. Appendix F: Key components of a public health response

When responding to a communicable disease outbreak, it is critical for a Ministry of Health to have public health capacity in the following areas:

- 1) Communicable Disease Prevention and Control: communicable disease management and policy, including specific actions largely delivered to the individual (e.g., vaccination, screening)*
- 2) Surveillance: monitor and map the incidence and prevalence of the disease, risk factors, health determinants, population health status and health system use and performance*
- 3) Emergency Preparedness: monitor, assess, and plan interventions to minimize workplace and environmental health risks; preparedness for management of emergency event*

*World Health Organization, 2015

Capacity across these key areas was evaluated through interviews with the Offices of the Chief medical Officer of Health in BC, Alberta, Saskatchewan, Manitoba, and Ontario, and additional context and data was provided by the National Collaborating Centre for Healthy Public Policy**. All of the jurisdictions interviewed, including Alberta, have struggled from insufficient capacity that has hindered their ability to respond to the COVID-19 pandemic. With jurisdictions across Canada planning to bolster their public health capacity, Alberta should consider hiring quickly as the hiring environment is likely to be competitive. For example:

- ▶ Even though BC has a dedicated public health agency (BC Centre for Disease Control), the province is still considering bolstering their policy capacity at the Ministry level to better direct the province.
- ▶ Saskatchewan struggles to keep its small public health team at the Ministry fully staffed as the pool of resources with public health expertise is limited. The COVID-19 pandemic has exacerbated this problem and has made the province consider ways to fill these vacancies and add the additional staff required to properly respond to public health demands.

In addition to the key areas required to respond to a communicable disease outbreak at the Ministry level, each province must be adequately equipped with Medical Officers of Health (MOHs) and public health and preventative medicine specialists to carry out the following responsibilities.

- 1) (MOHs): direct, advise, and report on the public health response at the local level
- 2) Public health and preventative medicine specialists: assess and measure the health of the population and develop interventions to improve population health

The table below compares capacity of these roles across Canada - in summary:

- 1) Alberta has the second fewest MOHs per 100,000 population compared to peer provinces. Only Ontario has fewer.
- 2) Alberta has fewer than the average number of Public Health and Preventative Medicine Specialists per 100,000 population compared to peer provinces.

Role	Measure	Number of resources/roles				
		AB	BC	SK	MB	ON
Medical Officers of Health	Total #	30 ^a	41 ^b	21 ^c	Unknown	34 ^d
	Per 100,000 population ^e	0.68	0.80	1.78	Unknown	0.23
Public health and Preventative Medicine Specialists	Total # ^f	46	73	12	23	135
	Per 100,000 population ^e	1.04	1.42	1.02	1.67	0.91

Note: MOH per 100,000 population are estimates as 2020 population data was used for all calculations while the latest MOH data available in some provinces was from 2019

a PHPC, 2019

b BCMOH, 2019

c 21.10.23 MHO Position Statement Oct 21 2021

d OMOH, 2021

e Population data from Statistics Canada. Table 17-10-0009-01.

f CIHI, 2021

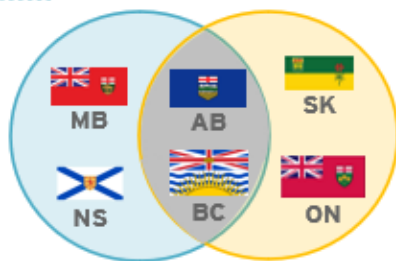
**Smith, R. W., Allin, S., Thomas, M., Li, J., Luu, K., Rosella, L. & Pinto, A. D. (2021). Profiles of Public Health Systems in Canada: British Columbia. Montreal. National Collaborating Centre for Healthy Public Policy.

4.7. Appendix G: Types of COVID-19 modelling capacity

Throughout the pandemic, jurisdictions across Canada have relied heavily on analytics and modelling to make decisions. However, the resource mix (internal vs. external) used to carry out modelling activities has varied between provinces. Some provinces have leveraged internal modelling capacity, some have leveraged external academic or private-sector capacity, and others have utilized a combination of both. The diagram below summarizes the type of modelling capacity that each province has used:

Internal capacity

- ▶ **MB** - relied a single internal expert modeller, but unfortunately that individual resigned which has left a void that the organization has been unable to fill



- ▶ **NS** - relied on an internal analytics working group to provide modelling and analytics directly to the Minister

External capacity

- ▶ **SK** - leveraged an expert at the University of Saskatchewan to support modelling activities, as limited analytics capacity exists internally
- ▶ **ON** - leveraged the Scientific Advisory Table to access the strong academic capacity in Ontario, as limited modelling capacity exists internally

Internal + external capacity

- ▶ **AB** - primarily utilized an internal modeller who leaned on the University of Alberta for support as required
- ▶ **BC** - relied on capacity within the BCCDC who worked collaboratively with modellers at SFU & UBC

There is no perfect model, and what works in one province may not work in the unique context of another province. Below are insights from two provinces who experienced success with their model:

- ▶ Ontario, who utilized external academic capacity to model the COVID-19 pandemic via the Scientific Advisory Table, took advantage of the academic power in the province and was able to successfully use modelling to inform decision making. However, despite a relatively positive relationship with external modellers, occasionally situations arose where the modellers did not support government's decisions related to COVID and aired their concerns to the media. As there was no set rules of engagement established between the government and the Scientific Advisory Table, there was little recourse for the province.
- ▶ Nova Scotia, who utilized internal capacity to model the COVID-19 pandemic, took advantage of the internal analytics strength at the Nova Scotia Health Authority (NSHA) to provide timely and

accurate data and information to elected officials for decision making. At the onset of the COVID-19 pandemic, Nova Scotia rapidly convened an analytics working group with representation from the Department of Health & Wellness and the NSHA, and established clear roles and responsibilities for each party. As NSHA had much of the operational data that decision makers were interested in using for decision making, NSHA sat down with the Minister of Health to develop a dashboard to meet the Minister's needs. This helped build trust between the organizations from the outset, and the groups continue to meet frequently on analytics needs for COVID-19 decision making to this day.

Further, at the onset of the COVID-19 pandemic, the Public Health Agency of Canada (PHAC) established a national modelling working group to support the coordination of modelling activities and encourage collaboration between the various modeling groups across Canada (both within the Ministries and external academic modellers). PHAC was also a valuable resource for supporting specific modelling activity, for example when the modeller in Manitoba departed, the province leaned on this group for additional modelling support.

4.8. Appendix H: Addiction and Mental Health challenges and planning considerations

As discussed in the action plan, it will be critical for Alberta to ensure appropriate capacity exists in the health system to meet the growing addiction and mental health needs being driven by the COVID-19 pandemic.

Canadian Landscape: Focus Points

Through interviews and discussion with several jurisdictions across Canada, it is clear that all jurisdictions are experiencing growing addiction and mental health challenges. Broadly speaking, the following groups were the most adversely impacted by the pandemic:

- ▶ Individuals aged 18-24 experienced the greatest decline in mental health of all age groups (CMHA Wave 2 Data).
- ▶ Those with pre-existing conditions, such as anxiety and depression, saw their conditions deteriorate further.
- ▶ Minority groups, including those with a disability, Indigenous peoples, those who are unemployed, and LGBTQ+ have consistently experienced AMH challenges through the pandemic.
- ▶ There have been increasing visits to the emergency department by children in mental health distress.
- ▶ Rates of eating disorders among youths and adolescents have consistently increased across Canada.
- ▶ Populations with insecure housing have been consistently and significantly impacted, particularly as social distancing and isolation requirements have increased.
- ▶ Substance use has increased significantly throughout the pandemic, including the rate of overdoses.

Overall, 41% of Canadians reported a decline in their mental health since the onset of the pandemic, compared to 38% in the spring of 2021 and 40% in the fall of 2020 (CMHA).

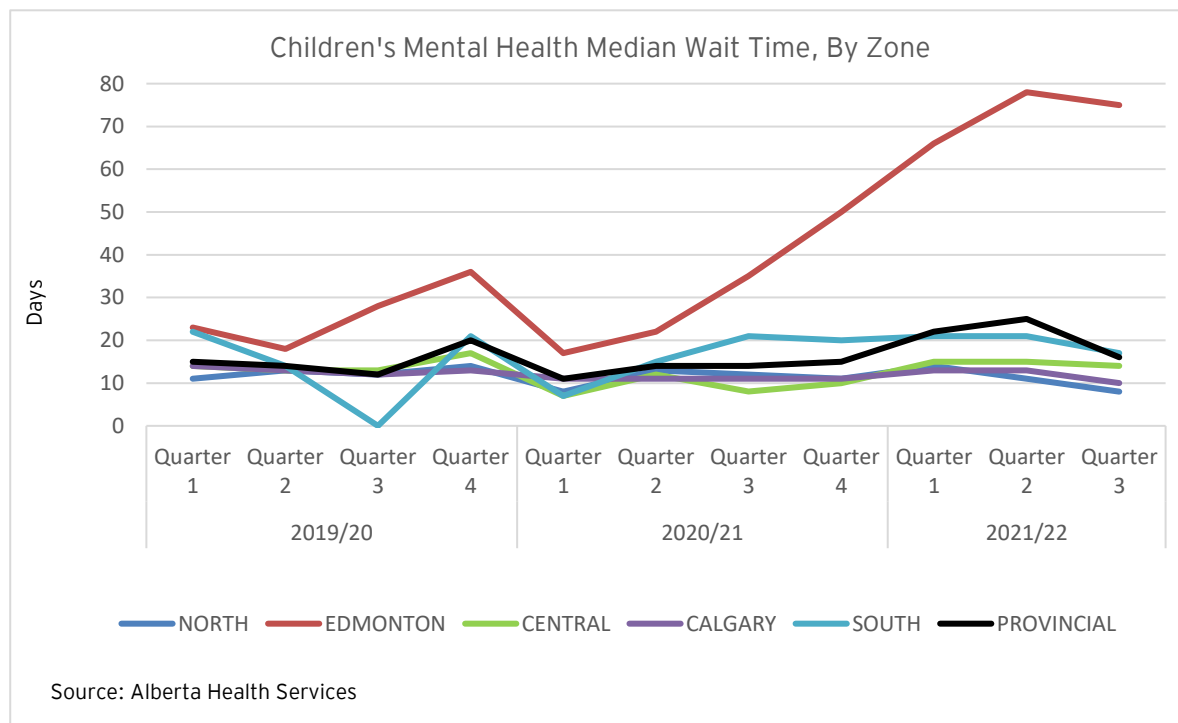
Alberta Landscape: Focus Points

Alberta is similar to other Canadian jurisdictions: individuals with pre-existing mental health conditions,

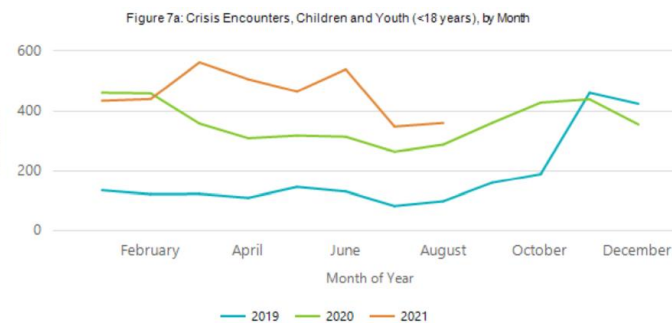
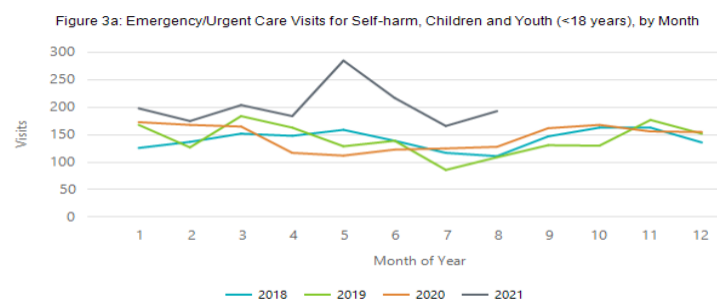
women, Indigenous persons, young adults aged 18-24 and LGBTQ2S+ individuals are adversely impacted by COVID-19 in terms of their mental health and wellbeing. As Alberta defines its response to the COVID-19 AMH challenges, it should consider a number of key areas, discussed below.

Children's Mental Health

The provincial median wait time has increased throughout the pandemic, and children's psychiatrists are very difficult to recruit, especially in rural areas. The Edmonton zone has been hit the hardest by the children's mental health crisis, hitting a peak of a 79-day waitlist for children's mental health services. The current provincial median wait time is about 16 days.



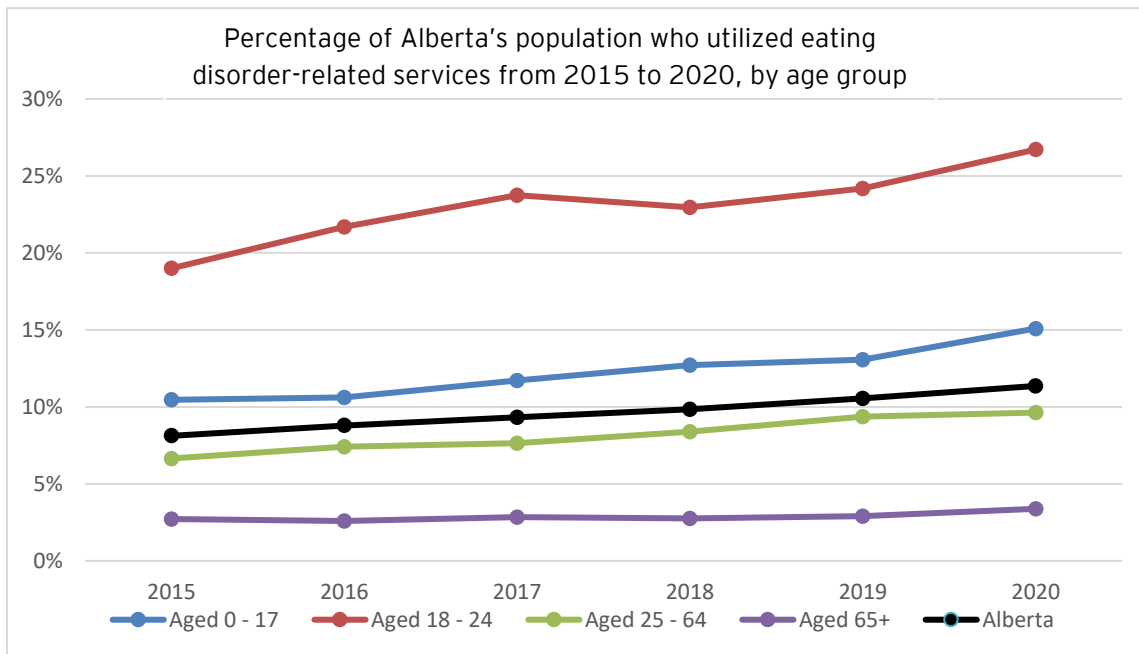
Children and youth emergency visits for self-harm, as well as crisis encounters in the community for addiction and mental health issues have also increased in 2021.



Youth and Young Adults (15-24)

Youth and young adults have experienced the greatest declines in mental health since the pandemic began:

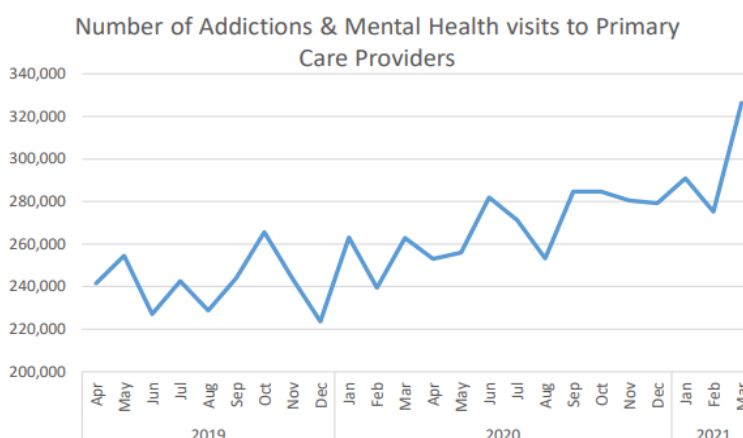
- ▶ The use of mental health services by Albertans aged 18-24 grew by 7.9% between 2019 and 2020, which is a greater increase than seen in other age groups.
- ▶ Most Albertans who utilized eating disorder-related services from 2015 to 2020 were young adults aged 18-24 followed by children and youth aged 0-17. As an impact of COVID, from 2019 to 2020, Albertans aged 18-24 had an increase (10.4%) in service utilization that was greater than its average annual increase since 2015 (7.2%). Albertans aged 0-17 also had an increase (15.5%) in service utilization that was nearly double the average change (7.7%).



Source: Business Intelligence Environment, Alberta Health

General Psychiatry

While children’s psychiatry is in crisis, conversations with officials and stakeholders in Alberta indicated that general psychiatry services are also facing significant pressure. The number of addiction and mental health visits to primary care physicians has also increased, indicating that demand for these services is growing.

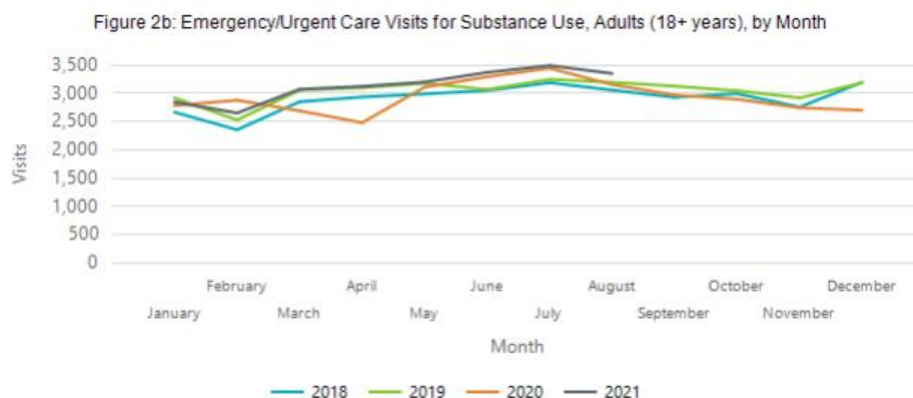


Source: Alberta Health Services

Note: Number of visits were based on visits by a distinct patient to a unique provider on the same day. Multiple claims for the same patient by the same provider were excluded.

Substance Use

In Alberta, the number of emergency care visits for substance use has increased, along with the number of deaths, the number of contaminated supplies, and the number of new drugs in use.



A key area for concern is overdose caused by opioids. In 2021, Alberta recorded the highest-ever number of unintentional drug overdoses seen in the first eight months of the year. From January to August 2021, 1026 individuals died from an unintentional overdose; this is 20% higher than the same period in 2020 (856 drug-poisoning deaths) and 84% higher than the same period in 2019 (559 drug-poisoning deaths). Similarly, from January to October 2021, there were 6,627 EMS responses to opioid related events in Alberta. This is 55% higher than the same period in 2020 (4,264 responses), and 114% higher than the same period in 2019 (3,098 responses).

Capacity Limitations

Limitation	Description	Examples
------------	-------------	----------

Funding	One time grant vs. continuous funding	Historically, AMH projects typically have a one-year annual renewal process which is difficult for the sustainability of services as well as the recruitment of staff.	A provider needed to wait until their grant proposal was successful before rehiring their staff, which caused a delay in services for the community.
	Inflexibility in using grant funding	AMH grants typically outline what the funding can and cannot be used for, with little flexibility to be nimble or address unique circumstances.	Provider wanted to use funding to help patients who could not access digital tools such as virtual care or online resources (e.g., purchase iPad), but the grant does not allow for this type of spending. Provider wanted to use funding to build more space to increase in-person capacity, but the grant does not allow for this type of spending.
Limited staffing and training of staff to provide services	Limited staff that are trained to take care of specialized mental health issues	The quantity of higher acuity patients has increased. While virtual models of care have been useful for several mental health issues, many higher acuity patients cannot be treated virtually and require in-person, specialized support.	Many individuals do not seek help until they have reached a crisis, which typically involves contacting ED or the police; however, most EDs do not have psychiatrists so patients end up on a waitlist which is typically 6 months - 1 year.
	Lack of services for mild to moderate illnesses, which require low-cost therapies that are evidence based	Most of these therapies are not covered by the Alberta Health Care Insurance Plan (AHCIP) and have extremely long waitlists.	For example, cognitive behavioural therapy is recommended treatment for mild to moderate mental health illnesses and is not covered by AHCIP.
Decentralized access	Not all zones have a centralized AMH system that can be easily navigated by	Edmonton has implemented a centralized access model to the AMH system, which has demonstrated positive outcomes to date. Calgary has also implemented centralized access in one	For example, when comparing Edmonton and Calgary, there is a greater number of calls with fewer calls abandoned in Edmonton (19.8%) vs Calgary (26.5%)

	patients.	location; however, the process is not as established. Other zones do not have a centralized model; however, AHS is planning to implement centralized access in the near term.	<i>Reference data:</i> <i>Calgary: 803 calls placed, 590 were answered and 213 (26.5%) were abandoned vs Edmonton: 1,272 calls placed, 1,020 were answered and 252 (19.8%) were abandoned (Source: AHS).</i>
Proactive policy and regulatory changes	New models of care as well as improving on existing models	PHIPA modernization to support a consistent approach and framework to exchange, safeguard, and govern PHI while allowing increased collaboration and new models of care across providers. Shift mental health policy to move from an emphasis on institutionalization of people with AMH illness to a system that depends on effective and accessible services delivered in the community.	For example, due to the lengthy waitlists, in some jurisdictions, patients must be deemed incapable to access urgent in-patient mental health supports.

Actions Underway in Alberta

1. **AMH Playbook:** AHS has an Addictions and Mental Health COVID “playbook” of planned and underway strategies. The playbook provides a three-year plan with \$250M in funding.
2. **AMH Funding:** A total of \$53.4M in funding was approved by Cabinet and publicly announced in 2020 for the following COVID-19 support initiatives:
 - a. \$21.6M to improve access to phone and online supports including expanding helplines such as the Addiction and Mental Health Helplines, Kids Help Phone and Alberta 211.
 - b. \$25M to support the Mental Health and Addiction COVID-19 Community Funding grant program. 230 grants were distributed through three phases of funding
 - c. \$6.8M to support initiatives such as Family Violence Treatment and Primary Care.
3. **Recovery-Oriented System of Addiction and Mental Health Care (ROSC):** Alberta Health is focusing on enabling ROSC-based services in the provinces. The ROSC model involves building a coordinated network of person-centered, community-based services and supports that builds on the strengths and resilience of individuals, families, and communities to achieve a life free of illicit drugs, and improved health, wellness, and quality of life for those with or at risk of alcohol and drugs problems or mental health issues.
4. **Alberta Recovery Council:** A cross ministry table of executive directors with a mandate to implement a recovery system of care across the province. The focus is to design and implement specific policies and programs to support mental health needs, but also implement opportunities for broader system transformation initiatives (e.g., strategies to address COVID’s negative impact on the mental health and well-being of children due to lack of in-person schooling)

5. Virtual Supports

- a. **Alberta 211:** A free, confidential phone service that provides information and referral to a wide range of community, social, health and government services. From April - December 2020, 211 received a heightened call volume of 98%.
- b. **Digital Overdose Response System (dorsapp.ca):** As the majority of overdoses since 2017 have taken place in private residences (60%-70%), the Digital Overdose Response System was funded by the Government of Alberta to support rapid response to overdoses. It is now active in Edmonton/Calgary and areas.
- c. **Alberta's Virtual Opioid Dependency Program:** This existing virtual treatment support program that was scaled up during the pandemic to meet increased demands. It provides opioid dependency care across Alberta from a team consisting of physicians, nurses, addictions counselors, social workers, and professional support staff. There is no waitlist.

Possible additional strategies

As part of this assessment, AMH leaders from peer jurisdictions and organizations were consulted on successful practices and strategies for building AMH capacity.

New models of care that integrate virtual and in-person services

- ▶ Virtual care models worked well for some patients. For example, phone/video therapy options enabled patients to access services more readily.
 - ▶ However, digital inequities caused issues for those who could not access virtual services
- ▶ Many services for higher acuity patients cannot be performed virtually
 - ▶ e.g., Supervised consumption sites, weight monitoring for eating disorders, etc.

Dedicated crisis response teams to alleviate the pressure on emergency and police

- ▶ Example: CMHA is piloting civilian response teams to help deescalate situations and support individuals to make choices for voluntary help. This not only assists to keep people out of the emergency system, but it also provides an opportunity to work directly with patients to identify resources and supports that are most suitable for them.
- ▶ Example: Gerstein Centre provides crisis intervention to adults living in the City of Toronto, who experience mental health problems. The Centre provides supportive counselling for immediate crisis issues, as well as referrals to other services for on-going, non-crisis issues.

Integrating AMH services into primary care with individualized placement support

- ▶ The College of Family Physicians of Canada advocates for closer integration of [AMH services into primary care clinics](#). Providing these services in the primary care system helps to remove barriers to timely access for patients and allows them to receive mental health services in an environment they are already familiar with through visits with their primary care provider (CFPC). This also helps increase resources and capacity for AMH services.

4.9. Appendix I: Community Pharmacies

This appendix contains a high-level assessment of the relative costs of delivering vaccines through pharmacies compared to through AHS.

COVID Vaccine Administration: Cost Per Dose

Currency: \$	Alberta Health		Alberta Health Services				
Domain	Influenza Program	COVID	Avg (Apr-Oct)		Avg (Apr - Jul)	Avg (Aug - Oct)	Proposed 5-11 Cost
Cost per dose	13.0	25.0	24.7		-	-	-
Distribution	0.5	1.5	-		-	-	-
Health Link	-	2.0	2.0		-	-	-
Total	13.5	28.5	26.6		18-28	55-79	32.0

While these costs are comparable during periods of intense vaccine delivery, the large, fixed costs associated with maintaining significant vaccination capacity through AHS resulted in costs per dose that are much higher during periods of slower vaccine delivery. As a result, AH may want to consider how to maximize the use of pharmacists to deliver boosters over longer time periods. See notes below for details on how the cost per dose were calculated.

Notes:

1. Alberta Health

- Additional \$10 premium for doses administered on weekends. Administrations ~21% since the inception of the program (March 2021).
- Health link cost of \$1.96 assumed to be same cost as AHS. All booking and queries for the Province go through AHS Health Link centre, irrespective of administration location.
- Potential opportunity to reassess price per dose as COVID transitions from pandemic to endemic stage.

2. Alberta Health Services

- The average cost per dose is based on total costs of \$73.1 million and total doses of 2.7 million.
- Cost per dose ranged from \$18-\$28 from April to July 2021 largely due to high demand and focused efforts to immunize as many Albertans as possible (e.g., mass immunization clinics).
- Cost per dose has been \$55-\$79 since August as AHS maintained access while demand for doses at AHS clinics decreased.
- The cost is not a full cost model. It does not include usage of personal protective equipment. These costs are tracked centrally, and it is not possible to determine the portion related to COVID immunizations.
- Rapid flow COVID immunization clinics at the Expo Centre in Edmonton and the Telus Convention Centre in Calgary were in operation from April to July 2021. Costs were covered by

the municipalities. Leasing and site support costs such as traffic control and crowd management at the Expo Centre in Edmonton were \$1.3M for a 5.5-month period and it is assumed that costs at the Telus Convention Centre in Calgary were similar. If AHS was charged for these costs, then the incremental cost per dose in Calgary and Edmonton would be higher by approximately \$1.35 for the period that the rapid flow clinics were in operation. This is based on costs of \$2.6M and 1.9M doses delivered in the Calgary Zone and Edmonton Zone while the rapid flow clinics were in operation.

- *AHS' cost per dose for children aged 5-11 is estimated to be \$32. This is a slightly higher cost due to expected longer immunization times per dose based on age group and prolonged timeframe due to anticipated parental hesitancy.*

4.10. Appendix J: Priority actions update and next steps

Priority actions update and next steps

Sustainability and Resiliency Action Plan

31 January 2022

Contents

1. Context and purpose of this document
2. Priority actions and progress
 - Priority action 1: ICU and acute surge plans
 - Priority action 2: Immediate workforce capacity
 - Priority action 3: Data sharing and reporting
4. Post wave 5 priorities
 - Surgical recovery
 - ICU and acute baseline capacity
5. Next steps
6. Appendix: Status of additional AHS-led actions

Context and purpose of this document

- ▶ The EY action plan provides a clear set of actions to support Alberta's health system in responding to three possible future scenarios:
 - ▶ A more sustainable 'endemic' phase marked by fewer and less significant waves
 - ▶ Future delta-variant waves, similar in magnitude and impact as the fourth wave
 - ▶ Future waves driven by a new, more virulent or contagious variant
- ▶ The action plan proposed timelines for a number of key capacity-building actions, however at the time, the scale and severity of the Omicron-driven fifth wave was not yet understood
- ▶ Given the rapid increase in health system demand caused by the fifth wave, three specific actions required more urgent and significant focus in order to support an effective response, and were therefore prioritized:
 - ▶ Acute and ICU surge capacity and protocols
 - ▶ Immediate workforce capacity building
 - ▶ Information flow and decision making
- ▶ AHS began responding to the priority actions at the start of wave 5. The progress made has, to-date, supported the management of the acute-care demands of the fifth wave
- ▶ As the fifth wave recedes, the health system will need to begin to focus on the remaining actions, particularly those that support recovery from the wave, including addressing the surgical backlog and establishing an appropriate acute and ICU bed baseline

This document compliments the 60-day EY report by:

- ▶ Providing an update on the progress towards achieving the actions that were prioritized at the start of wave 5
- ▶ Outlining considerations for moving forward in the immediate period after the wave

Status of priority actions

Priority action 1: Operational surge plan

Overview and current status

Action: Develop a provincial acute care and ICU operational surge plan that establishes a transparent and staged approach to ramping surge capacity up and down based on objective and agreed measures.

Emerging considerations:

- ▶ Omicron has shifted the focus of surge planning from primarily ICU beds to acute beds more broadly
- ▶ This shift to broader acute-bed surge has expanded the scope of surge-capacity strategies that can be considered, allowing for strategies that encompass the full patient pathway, including:
 - ▶ Demand management (i.e., reduced admissions)
 - ▶ Patient flow (i.e., accelerated discharge, optimizing level of care, reducing ALC)
 - ▶ Additional surge beds (i.e., adding new COVID-capable beds, repurposing existing beds to be COVID-capable)

Current status

- ▶ AHS has provided briefings describing its ICU and non-ICU surge plans at a high level
- ▶ The non-ICU briefing material outlines strategies that include:
 - ▶ Demand management:
 - ▶ Increased primary and community care supports (virtual assessments, COVID clinics, physician support for Health Link)
 - ▶ Implementation of COVID Assess, Treat and Release Protocol for EMS
 - ▶ Patient flow
 - ▶ Accelerated ALC transfer
 - ▶ Expedited discharge
 - ▶ Reduced elective surgical activity
 - ▶ Additional surge beds
 - ▶ Repurposed surgical, mental health and rehabilitation capacity for COVID inpatient beds
 - ▶ Opening spaces in non-traditional areas such as hallways, classrooms or rehab gyms
 - ▶ Creating dedicated 'pandemic response units' (PRUs) in Edmonton and Calgary
- ▶ AHS' ICU surge briefing outlines a plan that accounts for up to 1,000 total beds
 - ▶ The plan to surge up to 380 beds is based on the strategies and approaches that were employed in wave 4, including patient load-levelling and reduced surgical activities
 - ▶ AHS envisions creating up to 671 ICU spaces through increasingly significant interventions, such as repurposing non-ICU space, doubling up of patients, and adjusted models of care
 - ▶ AHS envisions that activation of triage protocols would be required to surge to extreme scenarios of ~650-1000 spaces

Priority action 1: Operational surge plan

Considerations

Considerations:

- ▶ AHS' ICU and non-ICU plans were described to AH through the January 10th 2022 PICC briefing.
- ▶ The overview describes high-level strategies for reducing demand, optimizing patient flow, and creating additional space for admitted COVID-patients
- ▶ The AHS briefing outlined defined 'stages' of surge, in which actions will be taken based on identified demand thresholds. These actions appear to be aligned to a specific number of new spaces, which should allow AHS to communicate how much surge space will be created at different levels of demand
- ▶ The acute capacity plan contains 15 increments. Initial increments are focused on repurposing existing beds. Later stages involve opening net-new beds.
 - ▶ This approach allows AHS to maximize the use of its existing resources before needing to find equipment and staff for newly added beds. It is necessarily dependent on some degree of service reduction and staff reallocation at earlier stages
- ▶ To-date, AHS has been able to maintain ICU and acute-care surge capacity above demand, primarily by reducing elective procedures (e.g., surgical volumes for the week of Jan 17-23 was about 90% of typical). ICU triage protocols have not been activated.
 - ▶ As of January 27th, AHS' early warning system was predicting a downward trend in non-ICU capacity demands over the next 3 weeks

Priority action 1: Operational surge plan

Next steps

Next steps:

- ▶ While AHS' surge plan briefings provide a helpful overview of their high-level approach to responding to ICU and non-ICU surges, AH should work with AHS to understand and support specific details and strategies
 - ▶ While AHS' surge plans are designed around specific thresholds and triggers, with incremental surge-up steps, the reporting to-date has not outlined the specific details behind the triggers or where and how the identified beds will be created. AH may want to request this information to understand the potential service impacts at each threshold
 - ▶ The demand-management approaches in the AHS plan rely on significant support from primary and community care providers to deliver care outside of the acute system. AH should work with AHS to ensure that these supports are in place and delivering the necessary level of care across all regions
 - ▶ While AHS' surge plans involve repurposing existing beds, 2,424 beds have been identified as not able to meet the needs of a COVID patient. Opportunities could be considered to more significantly repurpose those beds, either for COVID patients or for non-COVID patients that could be transferred to a lower level of care
 - ▶ Similarly, the AHS surge plans rely on flow management strategies. AH should work with AHS to understand those strategies in detail to be assured that AHS is maximizing the use of its existing bed base
 - ▶ To-date, net-new surge capacity has mostly been created by reducing elective procedures. AH should consider directing AHS to report regularly on point-in-time and anticipated impacts to service delivery

Priority action 2: Immediate workforce capacity

Overview and current status

Action: Create an immediate strategy to address capacity challenges in positions that are critical to the pandemic response and sites with urgent workforce needs

Emerging considerations:

- ▶ Omicron has created significantly more non-ICU acute care demand than previous waves, which has led to a shift in the types of workers needed to support surge (i.e., ICU-capable is less necessary to this point)
- ▶ While the relatively lower rate of ICU admission allows for more flexible use of existing staff to support surge, AHS has had to account for increased staff illness due to Omicron infections

Current status

- ▶ AHS reports deploying a number of specific short-term workforce capacity strategies, including:
 - ▶ Application of emergency provisions of collective agreements (e.g. mandatory OT, cancelling of vacations, involuntary redeployment within zones).
 - ▶ Encouraging increase in hours for PT staff (cannot mandate).
 - ▶ Redeployment of staff with ICU previous experience
 - ▶ Redeployment of surgical and procedural staff to support acute and ICU workforce
 - ▶ Implementing staged pandemic alternative care models
 - ▶ Deployment of NUEE staff to appropriate clinical and support roles as required
 - ▶ Stopping all work that will increase availability of skilled staff
 - ▶ Use of students in direct and supportive clinical and non-clinical roles with training (375 nursing students confirmed to-date)
- ▶ Additionally, AHS has identified but not yet deployed the following strategies:
 - ▶ Consolidation of smaller programmatic services (i.e., rural obstetrical services, small emergency departments, diagnostic imaging and laboratory services) to increase staffing
 - ▶ Redeployment of staff from community response

Priority action 2: Immediate workforce capacity

Considerations and next steps

Considerations:

- ▶ Workforce capacity and availability is the most significant barrier to creating acute and ICU surge capacity, and AHS has considered urgent workforce capacity as part of its broader ICU and acute bed surge plans
- ▶ AHS' urgent workforce capacity approach strategies were communicated to AH as part of their January 10th PICC briefing. To-date, AHS' primary approach to short-term workforce capacity has been to reallocate staff who would have otherwise been supporting elective procedures (i.e., surgical nurses)
- ▶ While AHS has reported some use of alternative staffing models, significant interventions such as ICU triage protocols have not yet been necessary.
- ▶ As outlined in the discussion of the priority action 1, AHS' early warning system is predicting a downward trend in non-ICU capacity demands over the next 3 weeks, suggesting that the wave 5 workforce needs may be reaching their peak

Next steps:

- ▶ As the pressure from the fifth-wave recedes, AHS should complete the delivery of this action by:
 - ▶ More specifically quantifying workforce needs (roles and locations) against specific scenarios, informed by the demands from previous waves
 - ▶ Quantifying the ability of each identified strategy to meet the needs
 - ▶ Developing and implementing tracking and reporting tools and processes to monitor workforce needs and availability during periods of surge

Priority action 3: Information flow and decision making

Overview and current status

Action: Immediately address and improve execution and quality of information flow between AHS and AH, to enable decision-making, effective system oversight, pandemic response management, and delivery of joint responsibilities

Emerging considerations:

- ▶ AHS and AH were working to put in place improved reporting and data sharing processes and tools prior to the start of the fifth wave, including a 'common operating picture' framework that provides a consistent measure of health-system strain
- ▶ The speed at which the fifth-wave commenced and accelerated didn't allow for development of a comprehensive reporting approach, however basic standardized reports were developed

Current status

- ▶ AHS provides AH with a regular capacity update report that describes:
 - ▶ ICU capacity, including occupancy, available beds, current # of surge beds, COVID vs non-COVID breakdown, and ventilated patients
 - ▶ Pediatric COVID patients and pediatric ICU occupancy and capacity
 - ▶ Discharges, ICU transfers, and deaths
 - ▶ COVID admissions and case positivity
 - ▶ Non-ICU capacity, including occupancy, available beds, current # of new surge beds, and current # of repurposed surge beds
 - ▶ Use of high-flow oxygen on inpatient units
 - ▶ Non-ICU capacity projections for the next ~10 days based on the AHS early warning system
 - ▶ Missed Shifts due to illness, self-isolation, employee cancellations, or other
 - ▶ Weekly provincial surgical activity and surgical waitlist status
- ▶ AHS also regularly reports health system status using the common operating picture framework, which assesses the health system against a small number of key measures, such as occupancy, workforce capacity, and elective surgery volumes

Priority action 3: Information flow and decision making

Considerations and next steps

Considerations:

- ▶ The AHS health system capacity updates have evolved over the fifth wave. Initial updates were primarily focused on ICU and acute occupancy. As the wave progressed, additional measures such as missed shifts, surgical activity, and pediatric COVID rates were added
- ▶ The current set of measures in the update document are helpful, however they represent the minimum set of measures that should be regularly reported to the Department
- ▶ The capacity updates are developed manually and transmitted as a word document. There does not appear to be any easily accessible automated or real-time reporting dashboards available to Department decision-makers

Next steps:

- ▶ As the fifth-wave subsides, AH should work with AHS to formally define a broader set of measures to be reported on a regular basis, in order to enable AH to effectively deliver its oversight responsibilities. Measures could include (in addition to measures in the current update report):
 - ▶ Total available clinical staff in key roles (e.g., RNs), total needed staff to meet demand, and total unfilled shifts (i.e., staffing s
 - ▶ Details of surge strategies in place, including use of alternative models of care
 - ▶ Staff reassignment and reallocation details, including any specific associated service reductions
 - ▶ Current ICU and non-ICU surge levels, as well as underlying trigger measures and details of new and repurposed beds
 - ▶ ED admission rates and length of stay

Post wave five priorities

Post wave 5 priorities

- ▶ Since the EY action plan report was delivered in December 2021, Alberta's health system has understandably been focused on managing the demands of the Omicron-driven fifth wave. As a result, actions that supported responding to the immediate demands of the pandemic were prioritized.
- ▶ As the fifth wave recedes, AHS and AH will need to focus on delivering the remaining actions outlined in the action plan. In particular, surgical recovery and assessing baseline capacity requirements will be a priority:
 - ▶ **Surgical recovery:** The surgical waitlist has continued to increase as elective procedures are cancelled to support the fifth-wave response, and 57% of adult patients are currently waiting outside of their target timeline for surgery. A realistic and detailed plan will be developed to address the COVID-backlog, as well as updated ASI targets.
 - ▶ **Acute and critical care baseline capacity:** AHS and AH will assess the baseline (i.e., non-surge) number of acute and ICU beds required to meet health system demand between COVID-19 waves, as well as in a longer-term endemic state.

The subsequent pages provide additional considerations to support the delivery of these "next-priority" actions

Surgical recovery plan

Action: Building on the Alberta Surgical Initiative, develop a patient first, surgical recovery plan with clear targets and public reporting of objectives and progress

- ▶ Alberta was facing a significant surgical backlog prior to the pandemic, and the number of patients waiting longer than the clinically recommended timeframe has only grown under the demands of COVID-19.
- ▶ In order to address this ongoing challenge, Alberta Health will need to ensure that AHS has an aggressive plan in place. That plan should include:
 - ▶ Realistic assumptions about the future trajectory of surgical volume recovery and reduction/elimination of the number of patients waiting beyond the clinical wait time
 - ▶ Specific strategies to increase surgical volumes, including increased use of chartered surgical facilities and consideration of extraordinary actions
 - ▶ An approach for prioritizing specific patients and procedures
 - ▶ Clear targets, as well as an oversight and reporting framework to enable transparency and accountability from service providers, including AHS

Creating a surgical recovery plan that is patient-focused and accountable

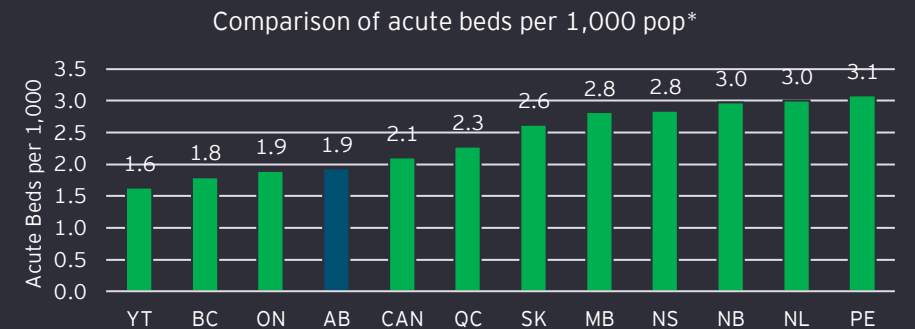
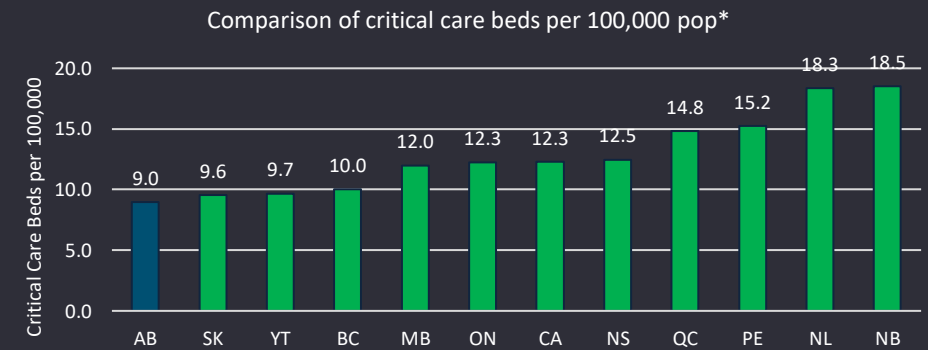
In order to build public confidence in the plan, it will be critical to ensure that it is patient-focused and that decision makers and the public are able to hold service providers accountable. Strategies for doing so could include...

- 1. Appointing an independent and accountable leader**
This leader would oversee the activities of services providers to ensure they are meeting their targets, and will report directly to the Minister on progress
- 2. Connecting with patients**
The surgical backlog represents thousands of individual Albertans who are waiting for care. AHS could reach out to them individually to confirm their needs and let them know when they can expect their surgery
- 3. Transparent targets and reporting**
Publicly communicating the details of the plan as well as specific targets will allow the public to hold the health system accountable. Reports on progress towards the targets can be shared regularly so that Albertans can be confident that the health system is meeting their expectations

Baseline acute and ICU capacity

Action: Confirm and sustain appropriate baseline bed capacity to meet the needs of Albertans through and following wave 4

- ▶ In order to meet the demands of the ongoing pandemic, it will be important to have an appropriate number of baseline beds in the system to care for patients between waves, as well as provide a buffer to support surging up at the beginning of future waves
- ▶ Alberta has the fewest critical care beds per 100,000 population compared to provincial peers. Given this lower baseline and the likelihood of future COVID-19 demands, it would be prudent to increase the number of ICU beds
 - ▶ Alberta would need to add ~144 ICU beds to match Ontario and ~44 beds to match BC in terms of ICU beds per 100,000 people
 - ▶ As a new baseline is assessed, AH and AHS should work together to understand the associated funding requirements. Any additional investments in workforce should be designed to enable flexibly ramping up and down new ICU beds as needed
- ▶ Alberta's non-ICU baseline acute capacity is more in-line with peers in other large provinces
 - ▶ Alberta has slightly fewer acute care beds per 1,000 population than the national average, but more than peers in BC and ON.



EY exists to build a better working world, helping to create long-term value for clients, people and society and build trust in the capital markets.

Enabled by data and technology, diverse EY teams in over 150 countries provide trust through assurance and help clients grow, transform and operate.

Working across assurance, consulting, law, strategy, tax and transactions, EY teams ask better questions to find new answers for the complex issues facing our world today.

EY refers to the global organization, and may refer to one or more, of the member firms of Ernst & Young Global Limited, each of which is a separate legal entity. Ernst & Young Global Limited, a UK company limited by guarantee, does not provide services to clients. Information about how EY collects and uses personal data and a description of the rights individuals have under data protection legislation are available via ey.com/privacy. EY member firms do not practice law where prohibited by local laws. For more information about our organization, please visit ey.com.

© 2021 EYGM Limited.
All Rights Reserved.

ey.com