Alberta EMS Provincial Advisory Committee

FINAL REPORT

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EXECUTIVE SUMMARY

Emergency Medical Services (EMS) are a crucial part of health care in Alberta. Each year, more than 5,600 EMS professionals respond to over half a million events. Various factors have placed huge pressures on EMS – a situation that has been exacerbated by the COVID-19 pandemic and the opioid crisis.

The Government of Alberta is undertaking several efforts to address these challenges, including an independent review of the province-wide EMS dispatch system, a 10-Point Action Plan for EMS by Alberta Health Services (AHS), and the development of a provincial EMS Service Plan.

In addition, the Government of Alberta established the Alberta EMS Provincial Advisory Committee (the "Committee") to explore issues and develop recommendations to ensure a strong and sustainable EMS system for Albertans.

Since its establishment in January 2022, the Committee has engaged over 1000 frontline EMS practitioners for their perspectives and ideas, along with the views of key community and system partners. These views and perspectives were gathered through an online survey, two telephone town halls, written submissions and presentations made to Committee members.

From this wealth of input, a number of concepts and themes consistently emerged. These reflect the individual experiences of EMS practitioners. While not independently validated, they are informative as the Committee undertakes research to better understand the issues faced by EMS practitioners, the factors contributing to EMS pressures and the kinds of changes that would make the EMS system work better for Albertans.

The following were among the themes frequently heard from EMS practitioners:

- Front line EMS practitioners are over-extended and at a breaking point.
- Enhanced mental health supports for frontline providers are required.
- Staffing models often used in rural communities are contributing to stress and burnout among EMS practitioners.
- In a provincewide EMS system with no jurisdictional boundaries, a lack of resources is resulting in a lack of coverage for many communities, especially when those resources get pulled into larger urban areas.
- There is a need for Albertans to better understand the 911 service and when to use it.
- EMS crews wait long periods of time at emergency departments to hand-off a patient to hospital staff.
- Better coordination is needed in planning the movement of inter-facility transfer (IFT) patients within and between health care facilities, to reduce EMS wait times at transitional areas and to determine when it is appropriate for EMS to do this work.
- The transportation of non-urgent patients should be handled differently to reduce pressures on ambulances.
- Patients should be provided health care using alternatives to EMS, whenever possible.
- Air ambulances should be used only for critical patients who require time-sensitive care.
- Medical First Response agencies, which are often operated out of local fire departments, should be more fully integrated in the pre-hospital system to complement EMS.
- It should be possible for appropriate parties to cancel an EMS call when it is clinically safe to do so.

- Capacity enhancements are needed in key areas that have gaps or heavy demands.
- Recruitment and retention of EMS professionals needs to be incentivized.
- Opportunities to enhance training and ongoing professional development are crucial for the EMS system's sustainability.
- Metrics should be clear, guide decisions made about the system, and encompass all available data.

Informed by the input gathered from its engagement activities, the Committee worked to identify and develop recommendations to help ensure the EMS system is strong, sustainable and delivers quality patient care. This was done through a series of five subcommittees that each examined a particular aspect of EMS, including:

- Ground ambulance (including inter-facility transfers);
- Air ambulance;
- Medical first response;
- Dispatch; and
- Workforce engagement and supports.

Recommendations developed by the subcommittees were considered, discussed and approved by the full Committee. They were also simultaneously shared with Alberta Health and Alberta Health Services (AHS), to identify barriers or other factors that might impact their feasibility. This approach enabled the identification of recommendations that could be swiftly moved to implementation, to bring about timely changes that can improve patient care, the experience of EMS practitioners and the efficiency of the system.

Approved Recommendations

Indeed, on May 26, 2022, the Minister of Health announced that the Government of Alberta had accepted and was moving to implement the following recommendations developed by the Committee:

1. **Support the request by Alberta Health Services (AHS) for a temporary exemption from current staffing requirements.** This will enable Emergency Medical Responders (EMRs) to staff ambulances in a greater range of situations, helping to keep ambulances on the road. EMRs are a type of regulated EMS practitioner registered with the Alberta College of Paramedics. The exemptions to staffing requirements will allow EMRs to work on ambulances under certain conditions and on emergent transport ambulances with paramedics. They will also enable EMRs to work on non-emergent transport ambulances with other EMRs. The EMRs hired under the exemption are in addition to existing paramedic positions.

2. **Standardize the response plans of Medical First Response (MFR) agencies, to respond to calls where clinical evidence supports a benefit for the patient.** This will better leverage the expertise of MFR agencies and help ensure more ambulances can be available for emergency and very serious medical situations.

3. **Make sure fire departments are appropriately requesting EMS resources for fire rescue and other calls.** Currently, EMS is automatically dispatched for support to fire department calls, even if it turns out EMS resources are not required. A review of criteria for these requests will help ensure that EMS resources only requested in situations when they

are needed.

4. **Support the first of two pilots in the City of Spruce Grove.** The first pilot project will allow registered Primary Care Paramedics and Advanced Care Paramedics, working in the integrated-fire EMS model, to cancel an ambulance response if they are able to treat patients on-site and refer them to other services. This will reduce duplication and free up other EMS resources faster.

5. **Support the second of two pilots in the City of Spruce Grove.** The second pilot project explores the potential of Spruce Grove's integrated fire ambulance service, which provides emergency medical services in addition to traditional fire department services. This pilot will allow two registered paramedics on duty for fire response to attend calls in an approved ambulance and to transport patients to hospital, if required, by logging the ambulance in as an EMS resource (i.e., an 'active duty' ambulance). This will provide temporary surge capacity to the regional area at busy times, helping reduce delays in getting critical patients to hospital while waiting for an ambulance to arrive.

6. **Support a pilot with Strathcona County Emergency Services**. This pilot will leverage the flexibility in Strathcona County's integrated Fire-EMS model. By reconfiguring the current staffing model, two community response units will stay within Strathcona County to provide Advanced Life Support care in support of responding ground transport ambulances. When a call comes in that requires Advanced Life Support within the county, the goal is to have the community response units begin treatment. This would lead to faster response times to treat patients at the scene or until an ambulance arrives to transport the patient, if needed. The community response units will be in addition to the four ground transport ambulances.

7. **Develop Provincial EMS Waiting Room Transfer of Care Guidelines for the timely and safe hand-off of EMS patients to emergency department waiting rooms.** The creation of provincial guidelines will put clear processes in place that enable ambulances to hand-off patients to hospital staff as safely and efficiently as possible. This will be done in ways that respect the need for triage and support a clinically safe hand-off to an appropriate health professional. Use of these guidelines will enable EMS crews to more efficiently return to the community to respond to other emergency calls.

8. **Form a Provincial Emergency Department Access Task Force.** The Taskforce will bring together a variety of health system partners. The Taskforce will not only work on reducing the time that EMS crews must wait to hand-off patients to hospital staff, but also work on improving patient access to emergency departments and other health services.

9. **Review alternative service delivery options for patients who do not need an ambulance and explore models used in other jurisdictions.** A significant number of calls currently processed by dispatch are non-serious medical events that do not result in ambulance transport. This means more can be done at the point of dispatch to help patients access the health assistance they need, rather than simply sending them an ambulance. Exploring ways of doing this will empower patients to access the care they need. It will also help reduce unnecessary calls for EMS, enabling ambulances to focus on responding to emergency and serious medical situations.

10. **Raise Albertans' awareness about when to call for an ambulance and how to understand suitable options other than an ambulance.** This will help Albertans understand they have alternatives to 911 when seeking care and give them useful

information about how EMS works. It can help alleviate the pressures on EMS while enabling Albertans to obtain the health care they require.

Additional Recommendations

In addition to the recommendations accepted in May, the Committee has developed a variety of recommendations to enhance the strength and sustainability of the EMS system. While many of these can be achieved in the near term, others are more complex in nature and will require the Government of Alberta and AHS to engage and collaborate with external partners.

Performance and Accountability

11. Establish a vision for the future of EMS, built around patient and person-centeredness, with objectives to provide high-quality, high-performance, safe and effective EMS services to all Albertans.
12. Develop a collaborative vision for the Medical First Response Program, to further its expansion and sustainability.
13. Review how Medical First Response agencies are structured within the EMS system.
14. Explore opportunities to expand the Medical First Response Program to Indigenous communities.
15. Ensure province-wide standards are in place for air ambulance services.
16. Implement an accountability framework forapproved recommendations from AEPAC.
17. Establish an advisory body to provide ongoing advice on the delivery of emergency medical services.

Capacity

18. Develop a vision and structure for a provincial Integrated Operations Centre.
19. Mandate the use of centralized referral for inter-facility transfers.
20. Identify and pursue alternatives to dedicated air ambulance for transporting non-urgent patients.
21. Implement a provincial emergency department offload target of 45 minutes across the province.
22. Implement a pilot project that is collaboratively scoped by EMS and EDs to immediately transition clinically appropriate patients to the hospital's waiting area to enable an expedient EMS return to response readiness.
23. Establish a policy that EMS does not have to wait at the hospital when ambulance availability is low.
24. Develop a pilot project to explore the use of patient transition rooms for non-urgent inter-facility transfers.
25. Undertake an analysis of current EMS resourcing.
26. Explore designating separate resources for emergency response and dedicated for inter-facility transfers (i.e. 'split production model').
27. Pursue a pilot project where paramedics treat and refer patients on scene, whenever safe and appropriate.

Operations and Efficiencies

28. Raise awareness among all health care professionals about how the EMS system works.
29. Enable ambulance crews to identify the locations of other ambulance crews.

30. Expanding access to 911, considering current address standards, to support EMS response for First Nations communities, Metis Settlements, and rural and remote communities.
31. Implement a pilot project in Lethbridge where first responders share radio frequencies.
32. Make changes to hospital bypass policies and operational protocols so that rural patients in emergency situations can get to the right hospital faster.
33. Establish an expectation that local diagnostic services are used whenever possible, before calling EMS for non-emergency long distance transport.
34. Enhance funding to air ambulance operators to help recruit and retain pilots.
35. Work with municipalities and partners on continuity strategies to keep air ambulance landing sites operational and to enhance landing sites that are critical for air ambulance services.
36. Provincial deployment of powered stretchers and powered loading systems across all ambulances.
37. Develop innovative programs for underserved communities focusing on local expertise in community.
38. Provide additional supports to Medical First Response agencies to expand capacity.
39. Create inter-professional educational opportunities for EMS practitioners and Medical First Response practitioners.
40. Expand the use of Computer Aided Dispatch with partner agencies.
41. Use common technology to integrate STARS air ambulance dispatch with Alberta Health Services EMS dispatch.
42. Explore the creation of a provincial patient and practitioner safety reporting system.

Workforce

43. Enhance the ability of EMS staff to take scheduled breaks and discretionary time off.
44. Move away from the core/flex staffing model.
45. Move away from extended on-call shifts for air ambulance.
46. Develop options to expand the availability of shorter work shifts.
47. Work with system partners to enhance access to mental health supports.
48. Establish requirements for entry-to-practice mental health and resiliency training.
49. Encourage EMS practitioners to work and upgrade their skills in rural and remote communities.
50. Work with partners to expand student practicums in the EMS system.
51. Pursue a pilot project that tests changes to the end-of-shift policy.
52. Develop strategies for more respectful, diverse and inclusive work environments.
53. Use existing frameworks to ensure opportunities for leadership development are offered at all levels.

The Committee’s recommendations will help put the EMS system on a strong foundation for the future, so that it can continue to provide quality patient care and remain sustainable and effective for Albertans.

INTRODUCTION

The Alberta EMS Provincial Advisory Committee

Emergency Medical Services (EMS) are a crucial part of health care in Alberta. Each year, more than 5,600 EMS practitioners respond to over 500,000 events, by ground and by air. Given its importance, the EMS system must be well positioned to provide timely, high-quality and safe patient care to Albertans when needed.

Various factors are challenging the EMS system. For example, since spring 2021, calls to 911 for EMS have increased 30 per cent. In addition, there have been longstanding concerns about resource levels in the EMS system as Alberta and the health system have grown and evolved. The resulting strains are placing increased pressure on EMS practitioners and the EMS system.

To help address these issues, the Government of Alberta established the Alberta EMS Provincial Advisory Committee (the "Committee") on January 24, 2022.

The Committee's mandate was to explore system pressures that may contribute to service pressures, gaps and human resource/workforce challenges. This includes:

- examining ground ambulance, air ambulance and dispatch services;
- reviewing procedures and policies related to the delivery of EMS services; and
- identifying current and emerging issues that impact EMS delivery in Alberta.

In addition to exploring issues, the Committee was mandated to develop recommendations to enhance the EMS system so that it is strong, sustainable and provides quality care for patients.

Membership of the Alberta EMS Provincial Advisory Committee

- Alberta College of Paramedics
- Alberta Fire Chiefs Association
- Alberta Fire Fighters Association
- AHS Emergency Strategic Clinical Network
- Alberta Municipalities
- Alberta Paramedic Association
- Cold Lake Ambulance Society
- Confederacy of Treaty Six First Nations
- Health Quality Council of Alberta Patient and Advisory Committee
- Health Sciences Association of Alberta
- Metis Settlements Health Council
- MLA – Highwood
- MLA – Grande Prairie
- MLA – Fort McMurray-Wood Buffalo
- Northern Alberta Institute of Technology
- Medavie Health Services
- Red Deer Emergency Services
- Rural Municipalities of Alberta
- Siksika EMS iikoonaapi
- Treaty 8 First Nations of Alberta
- Alberta Health
- Alberta Health Services EMS

Informing Broader Efforts

The establishment of the Committee is among other actions being taken to address pressures and enhance the EMS system.

As described below, these include efforts such as an independent review of dispatch services, a 10-Point Action Plan for EMS by Alberta Health Services (AHS), the development of a provincial EMS Service Plan and the development of EMS Key Performance Indicators.

Dispatch Review

In February 2022, the Government of Alberta initiated the process for an independent review of the province-wide EMS dispatch system. This review underway and is examining the effectiveness and efficiency of the dispatch system, with the goal of identifying pressures and opportunities to improve effectiveness and efficiency.

Alberta Health Services 10-Point Plan

At the same time the Committee was established, AHS announced a 10-Point Plan to bolster EMS capacity and help ensure the most critical patients receive immediate care. Since then, AHS has been working with key community and service partners to implement the 10-Point Plan.

The elements of the plan include:

A. Hiring more paramedics.

B. Launching pilot projects to manage non-emergency inter-facility transfers and replicating successes from those pilots across the province.
C. Implementing an ‘hours of work’ project to help ease staff fatigue.
D. Transferring low-priority calls to other agencies, in consultation with EMS physicians.
E. Stopping the automatic dispatch of ambulances to motor vehicle collisions that do not have injuries.
F. Completing an evaluation by an emergency communications officer to determine if an ambulance from out of area, though it may be closest to a 911 call, is most appropriate to respond.
G. Creating a new integrated operations centre in Calgary, bringing paramedic leads and hospital staff together to improve integration, movement of resources and flow of patients.
H. Implementing a pilot project in Red Deer that will manage most patient transfers between facilities with dedicated transfer units, freeing up ambulances to handle emergency calls.
I. Allowing ambulances to be pre-empted from assignments, instead of being automatically dispatched when a 911 call is received, to ensure more ambulances are available for critical patients.
J. Developing a strategic provincial Service Plan for EMS delivery in the province.

EMS Service Plan

The final point in the AHS 10-Point Plan is the creation of a long term EMS Service Plan for the province. The new Service Plan is currently in development by AHS, in collaboration with Alberta Health, and is on-target for completion in late 2022. The contents and direction of the new Service Plan will be informed by input from key community and service partners, frontline EMS practitioners and findings and recommendations made by the Committee.

Part of a Complex Whole

While the Committee’s mandate was focused on the EMS system, it is important to note that EMS is part of a complex health system that has many moving parts. As such, the challenges identified in this report are not solely the fault or responsibility of EMS. It will take all parts of the health system working together to improve conditions.

It is also crucial to acknowledge that Alberta’s EMS system has many existing strengths, particularly the dedication of its staff. Each day EMS practitioners tirelessly work to meet the needs of patients, often in uncontrolled or dangerous environments. The Committee’s recommendations aim to build on this key strength and dedication.

THE COMMITTEE’S PROCESS

Engaging Front Line Practitioners

The Committee established five subcommittees to carefully and systematically explore issues facing the EMS system. Each of the subcommittees was tasked with examining a particular aspect of EMS, including the identification of challenges and the development of ideas and solutions for addressing those challenges.

The five subcommittees were centered around:

- Ground ambulance (including inter-facility transfers),
- Air ambulance,
- Medical first response,
- Dispatch, and
- Workforce engagement and supports.

To inform its work the Committee engaged frontline practitioners in the EMS system. A number of methods were used to gather views and perspectives about EMS in Alberta, including:

- An online survey, conducted from March 24, 2022 through April 8, 2022, which received 1421 responses. The survey asked EMS practitioners about issues in all five areas explored by the subcommittees. To enable full and frank input, respondents had the opportunity to provide open-ended answers.

- Telephone town halls took place on March 30, 2022 and April 5, 2022. Over 100 unique individuals participated in these town halls, in which they could ask questions and provide their thoughts on any issues related to the EMS system.

- The Committee welcomed written submissions through an email address it had established. A total of forty-four unique submissions were made, in which participants outlined their concerns about EMS and ideas for improving the efficiency and effectiveness of the EMS system.

In addition, the subcommittees received information and solution ideas, by way of guest presenters and additional members. These included representatives of key community and system partners having expertise and perspectives in particular aspects of EMS. A list of these is provided in Appendix A.

While it is a reflection of EMS practitioners' individual experiences, the input gathered through this engagement was valuable in helping the Committee better understand the challenges facing EMS, and opportunities to enhance the EMS system so it can best serve Albertans. The subcommittees worked to develop potential solutions and recommendations in their areas of inquiry, informed by the views of EMS practitioners and drawing on subject matter experts when necessary

Developing Solutions for Improvement

As they were developed, recommendations from the subcommittees were advanced to the entire Committee for broader review, discussion and approval. They were simultaneously sent to representatives of Alberta Health and AHS, to identify any barriers such as legislative issues or other considerations that could impact their implementation. These findings were then shared with the Committee to help inform and refine the recommendations.

This represents a novel approach – one aimed at taking timely and ongoing actions to address a very urgent situation. There can normally be a lengthy period between the time an arm's-length committee makes recommendations and the time government implements those recommendations. In this case, the Committee made efforts to keep Alberta Health and AHS informed and updated, so that solutions generated by the Committee could be implemented as quickly as possible.

Translating Recommendations into Timely Actions

Indeed, on May 26, 2022, the Minister of Health announced a series of actions the Government of Alberta would immediately take to enhance the EMS system. These actions derived directly from recommendations made by the Committee that had potential for immediate implementation.

Since then, the Committee has continued to develop additional recommendations aimed at ensuring the EMS system is strong, sustainable and delivers quality patient care.

This report outlines all of the Committee's recommendations – including those already approved and in the implementation phase, and those which are now included in this report.. In addition, the report summarizes the major themes and issues identified by EMS practitioners, which informed the Committee's work and deliberations.

WHAT WE HEARD

Through the Committee's engagement activities, EMS practitioners provided rich input about the challenges they see and experience in the EMS system. They also offered a wealth of perspectives about potential enhancements to the EMS system and the broader health system.

The following is a summary of the major concepts and themes that consistently emerged from the engagement input, along with suggestions for action most frequently made by survey respondents. This summary reflects the subjective perspectives that the Committee heard from frontline EMS practitioners, without independent validation. Although subjective, this input was informative as the subcommittees undertook further research to better understand the current state of the EMS system and actions that can be taken to drive improvements in efficiency, effectiveness and patient care.

- ***Front line staff are over-extended and at a breaking point.***

  The strains faced by the EMS system are causing EMS practitioners to experience very challenging working conditions. Among these are situations of forced overtime, an inability to use holiday time or banked time, and not being able to take discretionary time off work. Some practitioners report not having sufficient time to eat or use the washroom while on shift. Practitioners feel overextended and exhausted and warn that such conditions are neither sustainable nor safe, for themselves or the patients they assist. Practitioners are often performing 16-hour shifts when scheduled for 12 hours.

  > *"There needs to be staff levels and policy that ensure shifts can end on time to allow for a healthy work life balance. The pace of work requires staff to be consistently working their entire shift and managing an unreasonable amount of work. Mandatory breaks must be implemented to prevent burnout."*

- ***Enhanced supports for mental health are required.***

  The work of an EMS practitioner can be challenging on their mental health in normal times. Practitioners provide assistance in very difficult circumstances and bear witness to emotional, violent and distressing events. This can contribute to post-traumatic stress disorder and other mental health issues – all of which is compounded by workload. Practitioners indicate that EMS is experiencing lower morale and that some colleagues are exploring opportunities to leave the profession. Practitioners emphasize the need for regular, sustained and effective mental health check-ins and supports. Practitioners say that "in-house" or "on-staff" supports would be beneficial, so they can have easier access to mental health assistance.

  > *"More support is needed for the mental health and well-being of practitioners. With the lack of downtime available due to the increased call volume, practitioners do not get time to process or decompress from the ongoing calls."*

Most frequent suggestions from survey respondents regarding workforce planning

Increased staffing levels / Have more full-time positions available: 29%

Better mental health support for staff: 24%

Better staff retention / Recruitment: 22%

Better scheduling / Shift rotations / Eliminate core/flex: 21%

More support from management: 19%

Prioritize transfer planning: 19%

- ***Core/flex scheduling is not working for many practitioners.***

  One work arrangement of particular concern to practitioners is “core/flex”, which is often used in smaller communities with lower call volumes. This has practitioners complete a certain number of “core” hours, after which they move to an on-call status for the balance of a 24-hour shift. While on-call they are not required to be in uniform but carry an EMS radio and are expected to immediately report to the EMS station when alerted to an event. In the event a practitioner is on active duty for 14 hours cumulatively, they are automatically placed into an eight hour rest period. Although core/flex remains an effective approach in some communities, practitioners say that in many other communities it is no longer sustainable due to higher call volumes and longer hours of work. Given these circumstances, core/flex can be contributing to exhaustion among EMS practitioners in certain communities.

- ***Resource constraints are contributing to a lack of EMS coverage for many smaller communities.***

  > *“Provide enough ground units to larger centers so they don't utilize rural resources and leave those resources for coverage in the rural community.”*

  Practitioners argue that in an environment where there is a lack of resources, a borderless approach has caused unintended consequences in practice. Most notably, EMS resources in some municipalities can be dispatched away from their communities for hours. They are thus unavailable when an event happens in their home community. The current system sees a different EMS unit from another community sent to respond. This significantly prolongs response times. The net result is lengthier response times all-around. One observation is that rural communities can be hardest hit, as local EMS units are often sent away in response to higher event volumes in urban areas. Practitioners say this approach is not working in a resource-constrained environment and needs to be abandoned or, in the alternative, seriously adjusted to address the problems that are arising in rural communities.

  > **Most frequent suggestions from survey respondents regarding dispatch**
  >
  > Better response times / Resource management: 36%
  >
  > Better trained dispatchers (e.g., medically trained, ability to prioritize): 26%
  >
  > Encourage the use of alternatives instead of ambulances and the emergency department: 21%
  >
  > Better feedback / More collaboration / Improve communication: 16%
  >
  > Bring back localized dispatch: 13%
  >
  > Better mental health support for staff: 13%

- ***Dispatch practices and response needs are not always aligned.***

  Practitioners indicate that the protocols used for dispatching EMS are contributing to system pressures. It is said, for instance, that callers to 911 are asked which services they need. If a person says they need an ambulance then EMS is dispatched, regardless of whether the caller actually requires an ambulance. The dispatcher is limited in their ability to provide alternatives in cases where a caller requires different services. This can lead to cases where EMS practitioners are dispatched to an event only to find it was not a true emergency or the circumstances were not serious. Some suggest that dispatch practices should include the involvement of registered nurses or physicians who can work with a caller to triage the seriousness of a situation and better rationalize the need for EMS response. Another suggestion is that 911 operators inform callers about the availability of EMS (e.g., that there are no ambulances available or that they face a wait), so that callers can make informed decisions about how to best seek medical care.

  > *“Dispatchers should be able to ask additional questions to see if the call maker wants or even needs an ambulance if no immediate life or limb threats are identified.”*

- ***Hallway hospital waits for transfer of care to emergency departments and other areas in the hospital are a major challenge.***

  A longstanding concern is the lengthy amounts of time that EMS practitioners can find themselves waiting in hallways and emergency departments upon bringing a patient to hospital. Current practice requires EMS practitioners to remain with patients until they are admitted to hospital. This can represent hours during which EMS units are effectively unavailable for emergency response. EMS practitioners can also spend prolonged periods waiting with non-urgent patients in areas for IFTs such as Diagnostic Imaging and Outpatient clinics. Barriers such as a lack of physical beds or lack of supporting staff at health care facilities can compound the challenge, with EMS crews waiting lengthy times before they can be cleared to respond to emergency events. Practitioners emphasize that the role of EMS is to serve as pre-hospital treatment, and not in-hospital treatment. Many argue that once a patient has been brought to the hospital, nurses and other staff at the hospital should be able to take over care of the patient. Some suggest that processes be changed to encourage resolution of this issue. For instance, a decision could be made that a hospital is duty-bound to take a patient upon arrival, thereby freeing up EMS to respond to other events.

  > *"Ending the hospital waits will help with volume but in conjunction with this we need a profound public education campaign on what you do and do not call an ambulance for!"*

- ***More public education about when to call 911 could help alleviate demands on EMS.***

  A lack of information about EMS and the 911 service among members of the general public may be contributing to system challenges. Practitioners say they frequently respond to 911 calls that are not emergencies, including matters such as prescription renewals. It is said that some members of the public have the impression that if they travel to hospital by ambulance then they will be admitted sooner. Many suggest that government and its partners undertake a public awareness campaign to address myths and improve understanding about appropriate use of the 911 service and EMS. Providing this clarification might help reduce the number of non-emergency calls that use up EMS resources.

  > **Most frequent suggestions from survey respondents regarding ground ambulance**
  >
  > Prioritize transfer planning: 26%
  >
  > Encourage the use of alternatives instead of ambulances and the emergency department: 23%
  >
  > Increase hospital capacity / Less wait for accepting patients: 19%
  >
  > Better response times / Resource management: 17%
  >
  > Increased staffing levels / Have more full-time positions available: 16%

- ***Poor coordination of the movement of patients can create unnecessary workload.***

  A lack of coordination in the movement of patients can cause inefficiencies throughout the EMS system. These can take the form of situations such as a facility not having a patient prepared for EMS, administrative delays in admitting a patient, inaccurate identification of a patient's priority, and miscommunication within a hospital about a patient's admission, discharge, whereabouts or destination. Many observe that EMS plays a critical role in transporting patients, yet EMS practitioners feel they are not involved in planning the movement of patients. EMS practitioners express a sense of powerlessness and describe a system that creates confusion and safety risks to practitioners. They are ordered when to show up, even when it does not make sense, or when other health professionals are not yet ready for a patient or a patient is not ready for transport. This leads to a belief amongst EMS practitioners that they

are neither respected nor valued. Feedback to the Committee notes that addressing power imbalances and introducing accountability would go a long way in helping improve the coordination of patient movements and enabling the proper and safe deployment of EMS professionals.

- ***Better scheduling of inter-facility transfers is needed.***

Ambulances do not only respond to emergency situations. They also perform a large number of inter-facility transfers (IFTs), which essentially entail transporting patients between different hospitals. EMS practitioners note that patients with non-urgent conditions do not require the skills of a paramedic in order to be transported, and that having ambulances perform IFTs of these patients is an unnecessary stress on the EMS system. One view is that different transportation arrangements should be explored for IFTs that involve non-urgent patients, so that paramedics can be focused on situations where their skill levels are required. Many suggest that transport by friends or family, third-party transportation providers, or other non-ambulance transport systems, should all be used by default. Others suggest that dedicated patient transport crews be created to perform IFTs of non-urgent patients. Still others suggest that financial and other accountability structures be put in place to ensure EMS units are not tied-up with performing IFTs of non-urgent patients.

> *"Require hospitals to justify why routine transfers are not being done remotely or through telehealth. Many are routine consults and appointments that the patient is not physically required to be present for."*

> *"Give more access to Telehealth, and phone consultation to prevent rural crews from being sent for routine check-ups from surgeons. By doing this more ambulances will be available in their area for emergency events."*

- ***Patients should have access to care by using alternatives to EMS, whenever possible.***

One view among EMS practitioners is that the health system could be more diligent in diagnosing, triaging and exploring alternatives before requesting EMS or before patients are sent to emergency departments. The suggestion is that patients are too often sent to hospital emergency departments by default, even if their situations are not emergencies and could be addressed in the community. EMS practitioners note that Albertans have become more familiar and more comfortable with remote and virtual services, so options such as TeleHealth and videoconferencing ought to be maximized. This could help reduce demands on hospital emergency departments and EMS. One idea is to allow paramedics to treat and refer patients to other health services when those patients do not require a hospital visit.

> **Most frequent suggestions from survey respondents regarding air ambulance**
>
> Prioritize emergency transports over non-emergency transfers: 20%
>
> Better asset allocation (e.g., fixed wing and rotor wing): 19%
>
> Better response times / Resource management: 17%
>
> Prioritize transfer planning: 15%
>
> Better scheduling / Shift rotations / Eliminate core/flex: 11%
>
> Prioritize transfer planning: 19%

- ***Air ambulance should be used for critical patients.***

EMS practitioners working in air ambulance raise concerns about expensive air ambulance assets being used for IFTs of non-urgent patients. One view is that some rural and remote health practitioners will use air ambulances as a way of providing patients with fast transportation at no cost, even if those patients do not have life-threatening conditions and

do not require paramedic care. Although they acknowledge it may not be desirable to spend time travelling lengthy distances, EMS practitioners stress that this may not be the best use of air ambulance services. Instead, they say, air ambulances should be used for emergency situations and IFTs of patients with serious conditions who need time-sensitive care. This would help avoid sending ground ambulances on lengthy road trips.

> *"An ambulating/independent patient should never be repatriated on an air ambulance! We need to consider alternatives such as family members capable of transport, commercial busses or flights. Facilities and practitioners booking air transfers should be held accountable to the abuse of a 'quick/free ride to a facility'."*

- ***Medical First Response agencies should be structured as key system partners.***

A growing number of communities have Medical First Response (MFR) agencies. Often operated out of local fire departments, MFR agencies often have paramedics on staff. As community resources, they can respond quickly to an emergency and deliver assistance until EMS arrives. While EMS practitioners appreciate the work of MFR agencies, it is noted that the services provided by MFR agencies can vary from community to community. The capacity levels, equipment and training of MFR agencies can also vary between communities.

Many suggest that MFR agencies can be powerful in strengthening the effectiveness and efficiency of pre-hospital care, working in collaboration with EMS. Leveraging MFR agencies in this way, however, will require them to be more integrated with the overall health system. This would mean having MFR agencies available in all parts of the province and supporting them to provide consistent service levels under consistent protocols. It is said that MFR practitioners would need to receive consistent, standardized training so that they are well positioned to function in the roles expected of them.

> **Most frequent suggestions from survey respondents regarding MFRs**
>
> Better response times / Resource management: 31%
>
> Better utilization of MFRs / Stood down on scenes to free up ambulances: 23%
>
> More support from management: 16%
>
> Increased funding / Increased resources: 12%
>
> More EMS training programs for MFRs: 12%

- ***It should be possible to cancel an EMS call when EMS is not required.***

One factor contributing to heavy event volumes is that, once dispatched, an EMS unit must always attend an event. This commits EMS resources to locations and situations even when it is clear that EMS is not required. EMS practitioners describe a dynamic wherein no one appears to have the authority to cancel an EMS unit after it has been dispatched. Building this discretion into the system, they say, would improve efficiency. For example, if MFR practitioners arrive at an emergency and determine there are no injuries and no one requires transport to hospital, they could cancel the dispatched EMS unit. This would free up the EMS unit to respond to a different event where they may be required. Some suggest that EMS paramedics should have discretion to decide if they are required at an event.

> *"Perhaps a deep dive into the statistics of what calls are dispatched versus what the patient actually required would help us refine the dispatch system into something that we could be confident in sending the correct resources to."*

- ***Capacity enhancements in key areas are suggested.***

Many EMS practitioners say that changing the way the EMS system is operated would help address pressures, but that certain capacity enhancements are also needed. For instance, some suggest that certain regions may require additional air ambulance capacity, such as southern and eastern Alberta. EMS practitioners also would like to see efforts made to expand the fleet of ground ambulances and hire more paramedics, particularly in urban locations that are experiencing heavier event volumes.

> *"Provide enough ground units to larger centers so they don't utilize rural resources and leave those resources for coverage in the rural community."*

- ***Explore incentives to keep people in the profession.***

  Many who provided feedback to the Committee express concern that increasing numbers of EMS practitioners are exploring opportunities outside of the profession because of challenging working conditions. Many emphasize the need for incentives to attract and retain skilled professionals. Among the suggestions are better pay and benefits. Many note that paramedics are not paid on par with others undertaking similar work, and that pensions and full time roles are often elusive. Another observation is that there are limited opportunities for people to evolve in the profession and that the system tends to only reward years of service. Expanding the variety of roles and responsibilities of paramedics could help retain EMS practitioners.

- ***Training enhancements should be considered.***

  Some EMS practitioners express concern that training provided by educational institutions is not sufficient for the modern realities of EMS. One suggestion is that paramedic training ought to take the form of a degree program, rather than a diploma program, and should be more clinically rigorous. Many express a view that EMS trainees are not given sufficient practicum time as part of their education. Practitioners also suggest that education and training for EMS should build psychological resiliency in individuals and teach stress management, so that graduates are better prepared for the day-to-day realities of working in emergency medicine.

- ***Enable more people to train for and enter the profession.***

  Long hours of work and staffing challenges point to the need for more people to enter the paramedic profession. EMS practitioners recommend improved access to paramedic education. This could perhaps include the provision of programs that are accessible to people currently working at other jobs and wanting to change careers. It is also said that Alberta should make it easier for those trained outside Alberta to work in the EMS system, without onerous fees or complicated red tape.

- ***Ongoing professional development needs to be strengthened.***

  EMS practitioners indicate that ongoing professional development appears to have gone by the wayside. It is said that professional development opportunities were previously provided by and within the EMS system, but that this is no longer the case. Having more in-house training capacity would enable EMS practitioners to have ongoing and more frequent professional development that keeps their skills fresh and demonstrates they are valued. Furthermore, EMS practitioners express a desire to undertake regular training with

colleagues from other parts of the EMS system (such as ground and air ambulance training together). They also feel there would be value in training with other emergency responders, such as MFR practitioners, since they are often working shoulder-to-shoulder in the field. One concern, however, is that EMS practitioners find it difficult to find time for professional development amid higher call volumes and forced overtime

> *"Training should transition from in class lectures to video and online learning. This way people can complete the training when they have time, like perhaps when their kids are in bed. It relieves the pressure of needing a sitter."*

- ***Metrics should be clear and guide changes in the system.***

  Many EMS practitioners call for enhancement to the performance indicators and overall metrics that drive decision-making in the EMS system. Some say the desired outcomes of the EMS system are not clear. For instance, is the EMS system being planned and operated to minimize response times, to minimize costs, or to deploy the right resources to deliver the best possible patient care? A number of EMS practitioners suggest the performance measures currently used to inform decisions might not be useful or aligned with desired outcomes. They suggest that using patient-based outcomes might be a beneficial approach to ensure the EMS system is strong, sustainable and meets the needs of patients in communities across the province.

APPROVED RECOMMENDATIONS

Based on the input gathered from its engagement activities, the Committee identified a number of ways to enhance the EMS system. As discussed earlier, recommendations were developed through a process that involved parallel consideration by Alberta Health and AHS. Through this approach, a number of recommendations were identified as being good candidates for immediate implementation.

On May 26, 2022, the Minister of Health announced the acceptance and immediate implementation of several recommendations developed by the Committee. The resulting initiatives, as described below, have the aim of quickly realizing improvements to better meet the needs of patients in Alberta.

Recommendation #1: Support the request by Alberta Health Services (AHS) for a temporary exemption from current staffing requirements.

Emergency Medical Responders (EMRs) are a type of regulated EMS practitioner that are registered with the Alberta College of Paramedics. With the EMS system facing significant demands, it makes sense to enable EMRs to perform more duties that align with their level of training. To this end, the Committee recommended the Minister of Health approve exemptions requested by AHS under the *Ground Ambulance Regulation*, to allow EMRs to undertake expanded roles in EMS.

The exemptions allow EMRs to staff more ambulances with higher-trained practitioners for emergency response. When needed, two EMRs will be able to transfer non-emergency patients without the need for a paramedic to be onboard. This is consistent with practices in British Columbia, Saskatchewan and Manitoba.

This will help keep more ambulances in service, by quickly adding more practitioners to the system to fill shift vacancies that would otherwise sideline ambulance resources. In addition, having paramedics and EMRs work together will ensure patients get the quality emergency care they require while enabling the EMS system to respond to more calls. The exemptions will also provide opportunities to explore the future roles that EMRs could fulfill in the EMS system in the longer term.

Recommendation #2: Standardize the response plans of Medical First Response agencies, to respond to calls where clinical evidence supports a benefit for the patient.

The evolution of MFR agencies in Alberta represents a strong foundation on which the province can build. Since the launch of the MFR Program in April 2015, the response plans of MFR agencies have been highly flexible and customizable. The types of events that MFR agencies attend is largely defined by each MFR agency.

Ideally, MFR agency response plans should focus on time-critical and life-threatening events that truly require emergency responders. This will enable MFR agencies to have the greatest patient impact possible. Taking this approach will also help bring about a dynamic where more Albertans in more communities consistently benefit from MFR agencies and their expertise.

The Committee recommended that, in the near term, AHS work to refine the strategy and principles that guide the MFR Program. The Committee also recommended that, in the medium term, based on the refined strategy and principles, standardized MFR response plans be piloted to evaluate their effectiveness and impact on EMS call volumes.

Recommendation #3: Make sure fire departments are appropriately requesting EMS resources for fire rescue and other calls.

Currently there are 2,100 different types of calls that EMS is automatically dispatched to attend, even if it turns out EMS resources are not required. (For example, incidents of burnt food or extinguished fire may not require EMS paramedics and MFR practitioners could capably assess and handle these events.)

Recognizing this, the Committee recommended that a review be undertaken of the types of events to which an ambulance is automatically dispatched. This review will help ensure the time and resources of EMS are properly focused on the types of serious and emergency calls for which EMS paramedics are truly needed.

Recommendation #4: Support the first of two pilots in the City of Spruce Grove, to allow registered Primary Care Paramedics and Advanced Care Paramedics to cancel ambulance dispatch if they are able to treat patients on-site and refer them to other services.

The response approaches of Medical First Response agencies and local fire departments may be helpful in reducing pressures on EMS while enhancing services for local residents. Recognizing this, the Committee recommended the Minister approve pilot projects in certain communities with municipally run, integrated fire-EMS services. The pilot projects are designed to realize operational efficiencies.

The Committee recommended the Minister of Health support the first of two pilots in the City of Spruce Grove. In that pilot, MFR practitioners in Spruce Grove will be able to cancel ambulances in clinically appropriate circumstances. If the MFR practitioner is able to treat the patient on scene, and it is determined the patient does not need to visit a hospital emergency room, then the MFR practitioner will have the ability to cancel the inbound ambulance. This will free up the ambulance to attend other emergency calls, helping to reduce wait times for ambulances and improve patient care.

Recommendation #5: Support the second of two pilots in the City of Spruce Grove, to explore the potential of Spruce Grove's integrated fire ambulance service, which provides emergency medical services in addition to traditional fire department services.

The Committee also recommended the Minister support the second of two pilots in the City of Spruce Grove. In the second pilot, Spruce Grove's integrated fire-EMS service will make use of its role as a licensed ambulance operator and the expertise of staff who are cross-trained as firefighters and paramedics. Through a temporary policy change, the pilot will enable cross-trained staff to attend calls as Medical First Response practitioners. This will expand the number

of responders who are available to the province's EMS system, helping to reduce response times and reach patients quickly.

Recommendation #6: Support a pilots with Strathcona County Emergency Services to leverage the flexibility in Strathcona County's integrated Fire-EMS model.

The Committee recommended that the Government of Alberta also support a pilot in Strathcona County. In that pilot, Strathcona County Emergency Services plans to create two community response units that have Advanced Care Paramedics. The two community units will stay within Strathcona County, providing wider coverage for urgent events requiring Advanced Life Support. At the same time, the County will continue to staff its existing four ground transport ambulances, providing a combination of Advanced and Basic Life Support units. This approach will offer added flexibility, enabling the right type of resource to be deployed to an emergency call. The goal is to help realize faster response times so that patients receive immediate on-scene treatment, or until a transport-capable ambulance arrives.

Recommendation #7: Develop Provincial EMS Waiting Room Transfer of Care Guidelines for the timely and safe hand-off of EMS patients to emergency department waiting rooms.

There are no standardized guidelines for how and when EMS practitioners transfer a patient from their care to the emergency department waiting room. This contributes to the challenge of EMS crews spending hours in hospital hallways while awaiting the admission of the patient in their care.

The Committee recommended that the Government of Alberta take action to develop provincial standards for the timely and clinically safe hand-off of patients from EMS to hospital emergency waiting rooms. Having such guidelines in place will lead to clear processes that enable ambulances to respond to other emergency calls as safely and efficiently as possible.

Recommendation #8: Form a Provincial Emergency Department Access Task Force.

As noted earlier, EMS practitioners can spend hours in hospitals, including emergency departments and areas such as Diagnostic Imaging and Outpatient Clinics for IFTs, waiting to hand-off patients to hospital staff. This practice ties up EMS crews that could otherwise be responding to other emergency calls. Addressing this challenge, however, requires changes in concert with other parts of the health system, since a patient's health journey often goes beyond the emergency department.

To that end, the Committee recommended the formation of a Provincial Emergency Department Access Task Force. This will bring together a variety of health system partners to work on reducing EMS delays at hospital and improving patient access to emergency departments and other health services.

Recommendation #9: Review alternative service delivery options for patients who do not need an ambulance and explore models used in other jurisdictions.

Feedback from EMS practitioners, along with available data, shows that not all calls for medical help require the attendance of paramedics and the use of ambulances. There are many less urgent and non-serious events that can be handled safely through other options. Approximately 30 per cent of calls currently processed by dispatch are classified as non-serious medical events. Of these, approximately 40 per cent do not result in ambulance transport.

This suggests that more can be done at the point of dispatch to help a patient access medical help, rather than simply sending an ambulance. That pathway to assistance might be a doctor or nurse practitioner, the use of TeleHealth, or some other service that is well positioned to assist the patient.

The Committee recommended that AHS review how to provide more options to patients at the point of dispatch. This will enable patients to get the appropriate care for their actual needs, while reducing unnecessary demands on EMS resources.

Recommendation #10: Raise Albertans' awareness about when to call for an ambulance and how to understand suitable options other than an ambulance.

A key learning from the Committee's work is that there are misconceptions among Albertans about the EMS system and the 911 service.

Since 2010, call volumes to 911 have more than doubled, increasing by 59.8 per cent. Many of these calls come from Albertans with non-urgent medical conditions that do not require the attendance of EMS. Although they are very familiar to people, the 911 service and the emergency department can inadvertently be seen as a quick way to access health care, rather than a doctor's office or other primary care provider. This can contribute to higher event volumes for EMS and crowded emergency departments. The health system and the roles of EMS paramedics have evolved over time, yet the way many Albertans understand the roles of EMS and 911 have not evolved in tandem.

The Committee recommended the Government of Alberta undertake a public awareness campaign to better inform Albertans about 911 and the EMS system. The campaign should be effective in helping Albertans:

- understand the health care options available that are alternatives to 911;
- have realistic expectations about receiving ambulance care when calling 911; and
- dispel myths about the EMS system (such as the notion they will not have to wait in the emergency department if they call for an ambulance).

This awareness-raising will need to strike the right balance so that patient safety is never compromised. The goal is for Albertans to be mindful of the purpose of 911 and use it in the most appropriate ways, but to never hesitate in calling 911 if they feel the need to do so.

Providing people with better information about 911 and the EMS system will help on many fronts. Albertans will be better positioned to make decisions about their health needs, including the various ways they can access services without having to visit and wait in busy emergency departments. The COVID-19 pandemic helped give rise to several innovations in health (such as the ability to connect with a nurse or doctor after standard business hours and virtual care). Helping Albertans become more aware of the different ways they can see a doctor or other

health care provider can help alleviate pressures on EMS while enabling Albertans to obtain the care they require.

ADDITIONAL RECOMMENDATIONS

The Committee has developed a series of additional recommendations for Minister's consideration. They represent actions the Committee believes will have meaningful, lasting and positive impacts on various aspects of Alberta's EMS system and, in turn, the quality of patient care.

Many of the recommendations can be accomplished in the near term, through changes to policies and/or processes. Other recommendations are more complex and strategic in nature and will require engagement and collaboration with external partners and additional time to implement.

Performance and Accountability

The EMS system is complex in nature and exists in an interconnected and, ideally, integrated relationship with the overall health care system. As such, the Committee recognizes that addressing EMS in isolation will not solve all of the current issues. Instead, there is a need to take a broader view of the health care system and the pinch-points where EMS intersects with other aspects of the overall system, such as hospital emergency departments.

The Government of Alberta must consider the evolution of the EMS system as a whole. This includes addressing significant questions about the desired outcomes of EMS, how it relates to other parts of overall health system, and how to measure its performance. Doing so will help put the EMS system on a strategic path for continued strength and sustainability and enhance public confidence in its ability to meet the needs of communities and patients.

This chapter outlines recommendations that call for specific changes to parts of the EMS system and processes that impact the EMS system. While these recommendations will make a positive impact in the system's efficiency and ability to meet the needs of patients, the Committee believes these changes should happen within the context of a broader plan.

Recommendation #11: Establish a vision for the EMS system, built around patient and person-centeredness, with objectives to provide high-quality, high-performance, safe and effective EMS services to all Albertans.

The Committee's first new recommendation is for the Government of Alberta to develop, articulate and commit to a comprehensive vision for the future of the EMS system. Having such a vision will help guide decision-making about the EMS system, including how it interfaces with the overall health system and how it will meet the needs of communities and patients.

The vision should be based on foundational principles that include:

- *Patient-centered, high-quality care.* Alberta's EMS system should be a high-performance system that is focused on meeting patient needs by providing safe, high-quality medical care and transport where and when patients need it.

- *An engaged and stable workforce with clear career options in a safe and supportive work environment.* EMS practitioner safety and well-being is a top priority. Practitioners should be well rested, alert, take regular breaks and vacations, and only work overtime occasionally. The system should have adequate staffing, including adequate surge capacity and strong support for staff mental and physical well-being. Paramedic students and EMS practitioners from other jurisdictions will be eager to enter Alberta's EMS system anywhere in the province.

- *The EMS system has a dual role integrated in both public safety and health care within communities.* The importance of partnerships with other emergency services such as fire, rescue, police, and disaster response is well recognized, as is EMS integration within communities. As EMS is part of health care, it performs best when associated health care sectors function well, such as primary care, emergency medicine, acute care, continuing care, diagnostic imaging, and mental health and addictions care.

- *Public accountability of the EMS system.* Publicly reported performance measures with set performance targets that are reported at regular intervals on a provincial, zone and local basis are key to ensuring public accountability and transparency. Key performance indicators and targets need to be comprehensive and include patient care, patient safety, patient outcomes, efficiency, and effectiveness. While 90th percentile reporting is the current standard used in system measurement, the inclusion of all data outliers can provide a more holistic understanding of system performance in all parts of the province. The reporting will be understandable to the public, frontline practitioners, and community and service delivery partners. The work underway by the Health Quality Council of Alberta should inform the performance indicators and metrics used.

- *Focus on quality improvement.* The system should be focused on improving the quality of care to Albertans while supporting the workforce delivering the care.

- *Improved response times.* The system establishes realistic, sustainable response time targets, encouraging public confidence in the system and continuously works to meet or exceed stated targets.

- *Sustainability.* The Government of Alberta allocates sustainable, predictable operating funding for EMS that supports a high-performing system for years to come. There is transparent and consistent reporting of all system costs across the province.

Recommendation #12: Develop a collaborative vision for the Medical First Response Program, to further its expansion and sustainability.

In many communities, an MFR agency is often serving as the first available emergency responder, providing life-saving care to patients until the arrival of EMS. Amid higher 911 call volumes and strain on the EMS system, MFR agencies have proven valuable in helping meet the needs of patients. As noted by EMS practitioners, there are opportunities to better integrate MFR agencies within the pre-hospital care system, by strengthening the consistency and coordination of MFR resources.

The gradual expansion of MFR agencies in Alberta has reached an important evolutionary point. Today, municipalities can choose whether they wish to deliver MFR, and have flexibility in terms

of the levels of service their MFR agency will provide. Realizing the full potential of MFR agencies, however, will require more than this ‘opt-in’ culture. There is a need for a comprehensive vision for how MFR agencies can work as full partners in the overall pre-hospital care system.

Accordingly, the Committee recommends:

- establishing a collaborative vision for MFR in partnership with MFR practitioners that recognizes the value and quality of care that they provide and ensures appropriate funding is allocated to support this vision; and
- developing strategies to enhance the profile of MFR programs and ensure that community and service delivery partners have an ongoing process for engagement, consultation and advice on the system, including a sustainable funding model.

This will help further expand the use of MFRs across the province, yet in ways that are systematic and fully leverage the potential of MFRs in pre-hospital care. The result will be greater efficiency in the pre-hospital system that includes MFR agencies, EMS and other responders working seamlessly to provide quality patient care.

Recommendation #13: Review how Medical First Response agencies are structured within the EMS system.

As a key component of recommendation #12, it is recommended to review how MFR agencies are structured within the EMS system. MFR agencies can vary from community to community, but often employ individuals who are trained as Advanced Care Paramedics, Primary Care Paramedics, Emergency Medical Responders, and/or advanced first aid resources. If MFR agencies are more effectively structured within the EMS system, then these skilled professionals can be used more effectively. This way, the pre-hospital care system can provide increased patient care and ensure the most effective resources attend each call.

To bring this about, it is recommended that AHS consult with MFR agencies and AHS EMS leaders to:

- review the current structure and governance of MFR agencies within AHS;
- research models in other jurisdictions; and
- develop options for funding opportunities to use MFR responders.

Recommendation #14: Explore opportunities to expand the Medical First Response Program to Indigenous communities.

As the provincial MFR program evolves as part of Alberta’s pre-hospital care system, there are opportunities for MFR agencies to be established in Indigenous communities. For a variety of reasons, including geographic remoteness, the Committee heard that many First Nations communities and Metis Settlements have a lack of emergency service capabilities and experience longer EMS response times. Expansion of the MFR program could help mitigate these challenges and support better patient outcomes in these communities.

It is recommended the Minister of Health explore opportunities for partnerships with First Nations communities and Metis Settlements to expand the MFR Program. Ideally, communities could self-administer MFR agencies in their communities.

Recommendation #15: Ensure province-wide standards are in place for air ambulance services.

Air ambulance services are delivered by a number of different partners across Alberta. As operators of aircraft, these partners must observe applicable legislation and standards from Transport Canada. In addition, air ambulance service partners are required to comply with expectations in their contractual arrangements with AHS.

Coordination among ground ambulance, air ambulance and other EMS resources is important for the EMS system to operate as efficiently and effectively as possible. It is easier to improve coordination when there is consistency in standards across all EMS providers.

Although expectations already exist for certain aspects of air ambulance operations, they do not for other aspects (e.g. staffing and equipment). It is recommended that Alberta Health, in consultation with service delivery and regulatory partners, ensure province-wide standards are in place for airplane and helicopter ambulance services, to help ensure consistency in service delivery, practitioner safety and patient care. This should involve:

- identifying where gaps in standards exist;
- developing appropriate standards to address those gaps; and
- endorsing and integrating appropriate standards that already exist.

Every effort should be made to ensure that the province-wide standards do not duplicate existing requirements in other legislation, in order to avoid confusion and unnecessary red tape. Since it will require regulatory change, this recommendation is likely to take some time to implement. However, it will ultimately help support better coordination, which can support patient and provider safety, faster response times, and better patient care.

Recommendation #16: Implement an accountability framework for approved recommendations from AEPAC.

The Committee's recommendations will only be effective if there is ample follow-through on implementation. It is acknowledged the Government of Alberta will want to review, consider and respond to the Committee's recommendations. For those recommendations that are accepted, it is recommended the Government of Alberta implement an accountability framework to monitor and report on progress of implementation.

An accountability framework is important for two central reasons. First, it will help maintain forward momentum on enhancing the EMS system. As the saying goes, "What gets measured gets done."

Second, having an accountability framework in place will help bolster trust and confidence among EMS practitioners, other front line delivery partners, communities and Albertans.

Such a framework should set out clear expectations, including timelines for implementation and mechanisms that help ensure tracking and reporting on implementation progress. This should be complemented with oversight and reporting processes. Where appropriate, the framework

should also make provision for evaluation of pilot projects and actions, to inform potential scalability province-wide.

Recommendation #17: Establish an advisory body to provide ongoing advice on the delivery of EMS.

While the recommendations made in this report are extensive, the enhancement of Alberta's EMS system does not end with their implementation. There should be a focus of continuous improvement within the provincial EMS system.

To support that, it is recommended that the Government of Alberta establish an advisory body to provide ongoing advice on the delivery of EMS in Alberta, which:

- has a scope that include all facets of EMS delivery, including dispatch, air ambulance and ground ambulance;
- has direct-line-of-sight reporting to the Minister; and
- has the authority to request, collect, analyze and report on EMS data and performance in the province; and
- makes recommendations for improving the EMS system.

It is suggested the advisory body's membership include a variety of community and service delivery partners, such as municipal leaders, EMS service delivery operators, community partners, frontline Paramedic representation, healthcare and educational partners, labour associations, and professional colleges, to ensure broad representation from across the province.

Providing an independent perspective, the advisory body could help foster greater confidence in the EMS system among the public, communities, patients, and EMS practitioners and the public. It would also help ensure the EMS system continues to benefit from external advice on ways it can be adjusted to remain strong and sustainable and deliver quality care to patients.

Capacity

There are likely some areas in the EMS system where capacity enhancements are required. However, the most significant challenge is that the capacity of the existing EMS system is not being maximized due to various processes and practices. By making a number of process and practice changes, the Government of Alberta can improve coordination within the EMS system and between EMS and other parts of the overall health system. This will reduce bottlenecks, freeing up EMS resources to be deployed where and how they are truly needed by patients.

Recommendation #18: Develop a vision and structure for a provincial Integrated Operations Centre.

Currently there is an Integrated Operations Centre (IOC) in Edmonton, which operates on a 24-hour, 7-day-a-week basis. It is designed as a "strategic tri-ad", meaning it handles patient flows for EMS and inter-facility transfers, community care services, and Addiction and Mental Health, within the City of Edmonton. One can think of the IOC as a traffic controller for care. It plans

ahead for the movement of patients, helping to minimize wait times for health services. The Committee learned that the IOC has been expanded to Calgary.

The IOC model offers potential for better coordinating the flows of patients province-wide. Such coordination could reduce unnecessary delays, helping ensure that ambulances are available for emergency situations. It is therefore recommended the Government of Alberta develop a vision and structure for a provincial IOC, building on the successes and strengths realized by the Edmonton and Calgary IOCs.

This recommendation is expected to contribute to a systemic approach to decrease patient wait times, improve patient and provider experiences and outcomes, and enhance efficiency throughout the whole system. This includes the development of partnerships and improving integration with other key patient flow coordinating agencies, such as AHS EMS Dispatch and the Referral, Access, Advice, Placement, Information & Destination (RAAPID) service.

Recommendation #19: Mandate the use of centralized referral for inter-facility transfers.

As noted earlier, the EMS system performs a substantial number of inter-facility transfers (IFTs), which essentially involves the transportation of patients between hospitals or other health care settings. The EMS system needs to be able to effectively coordinate pre transport activities for IFTs among ground ambulances, air ambulances and alternative transportation services, so that the right resources can be deployed to meet the needs of each IFT request. Additionally, the right hospital destination can be determined that considers both specialized patient needs and the ability of sites to accept patients based on available beds. Feedback from EMS practitioners suggests there is room to improve the level of pre transport coordination. For instance, there can be situations where ambulances are unnecessarily used to transport non-urgent patients, during which time they are unavailable for emergency response.

One way of improving coordination is through the RAAPID call centre, which is operated by AHS. RAAPID is a central point used to respond to IFT requests that are made by health practitioners. It helps coordinate IFTs so that the right resources are used to provide patients with the care they need at the most appropriate destination. This minimizes unnecessary IFTs.

It is recommended the AHS mandate use of the RAAPID service for clinically appropriate emergency and urgent IFTs.

This would help ensure that air and ground ambulances are used for IFTs when they are truly needed for that purpose, thereby enabling them to focus as much as possible on responding to emergency situations. It would also enhance the predictability and reliability of IFTs, helping improve the continuity of health care for patients who need to receive health services from different facilities.

Recommendation #20: Identify and pursue alternatives to dedicated air ambulance resources for transporting non-urgent patients.

The use of airplane ambulances in Alberta has increased by approximately 40 per cent since 2017. One contributing factor has been a jump in the use of air ambulances for IFTs of non-urgent patients.

There are times when patients require transport by air ambulance to receive time-sensitive care at a hospital that is located a significant distance away. This is often the case for Albertans who live in rural and remote communities that do not have local hospitals capable of treating serious and urgent medical situations.

However, in other cases there is not a compelling medical need to transport a non-urgent patient using a highly specialized air ambulance and air medical crew. In those cases it would be preferable to use alternative transport. However, a lack of commercial transportation options and long travel distances can make it difficult to find and use alternatives. Consequently, air ambulances can end up being used. This is not only an inefficient use of limited health resources but also risks interfering with an air ambulance's ability to respond to a serious emergency event.

Finding a better way forward is vital, so that Albertans in rural and remote areas can access the health care they need while also ensuring air ambulance services are sustainable. It is therefore recommended the Government of Alberta examine the feasibility of alternative long distance transport options for patients who do not require emergency care. Identifying and using those alternative options would enable air ambulances to focus on emergency responses and improve the efficiency and effectiveness of the health system overall.

Recommendation #21: Implement a provincial emergency department offload target of 45 minutes across the province.

A recurring concern heard by the Committee is the amount of time that EMS crews find themselves waiting at hospital emergency departments. An EMS crew is unavailable to attend emergency calls while it is waiting to hand-off a patient to hospital staff. This serves as a major efficiency barrier in the overall EMS system. Data was provided and reviewed to support what was heard by the committee.

There are many complex and related factors that contribute to EMS crews waiting at emergency departments, some of which are beyond the control of the emergency department. For example, bottlenecks that occur in the movement of patients within a hospital, or between a hospital and another facility, can cause backups that are ultimately felt by the emergency department.

For some time, the health system has had wait time targets in place for EMS crews at emergency departments. The current target is 90 minutes, which is intended to allow 45 minutes for wait at the hospital and another 45 minutes for documentation and cleaning. As things currently stand, no one clearly holds responsibility for the target being met. In addition, many health service partners inaccurately believe 90 minutes is the overall target time for EMS crews to wait for a patient hand-off – in other words, it is acceptable and an expectation that EMS crews would stay with patients for at least 90 minutes.

It is recommended the standard provincial emergency department wait time target be revised to no more than 45 minutes. Furthermore, there needs to be clear accountability established for meeting the target, including the identification of actions and associated timelines that will remove barriers to achieving the target.

Implementing this recommendation will not be straightforward, as emergency departments are a key part of the broader health system. Care will need to be taken to assess and address the broader system impacts that will result from changing the wait time target.

Recommendation #22: Implement a pilot project that is collaboratively scoped by EMS and EDs to immediately transition clinically appropriate patients to the hospital's waiting area to enable an expedient EMS return to response readiness.

Each day there are a number of patients with non-urgent medical conditions transported by ambulance to a hospital emergency department. Were these patients to arrive at the emergency department through other means (such as by personal vehicle or taxi), they would be triaged by the emergency department's triage nurse and placed in the public waiting room to await treatment based on clinical priority.

Instead, because they arrived by ambulance, these patients often wait with EMS resources. In the meantime, the EMS crew cannot attend calls that might involve patients with serious conditions who truly need EMS. The amount of time that these patients wait to see an emergency department doctor does not change; the only difference is how they wait.

It makes no sense for a non-urgent patient to wait in a different manner solely because of how they arrived at the hospital. If there is no medical need for a patient to have ongoing EMS care, then EMS resources should not be required to remain with that patient – especially if the patient is within the walls of a hospital.

Ideally, a non-urgent patient that is transported to hospital by ambulance can, when clinically can be placed in the public waiting room with other patients. This would free up the EMS crew to return to the field and respond to other calls.

To that end, it is recommended to develop a pilot project where a non-urgent patient that is transported to hospital by ambulance can, when clinically appropriate, be placed in the public waiting room with other patients. Under such a pilot, the EMS crew would not wait with the patient but instead return to the field to respond to other calls. This would result in improved ambulance availability, more timely responses to emergency events, and improved patient care.

It is worth noting that other provinces, such as Nova Scotia and British Columbia, have piloted similar concepts and ultimately adopted the approach as part of their standard operations.

Recommendation #23: Establish a policy that EMS does not have to wait at the hospital when ambulance availability is low.

Having EMS crews wait at hospital emergency departments is especially problematic during periods of limited ambulance availability. In these situations there are risks posed to public health and safety if EMS crews are unable to respond to emergency events because they are waiting with patients they have transported to hospital.

To reduce these risks, it is recommended the Government of Alberta direct AHS to develop and implement a provincial policy that enables EMS to immediately transition patients at emergency departments when EMS resources in a community meet a predetermined minimum threshold.

Such a policy would be similar to other 'surge' strategies that are used in other parts of the health system. The policy would need to be developed in a way that ensures that patient hand-offs to hospital staff are done in ways that are legal, ethical and clinically appropriate.

The Committee heard that similar approaches are already in place at some Alberta hospitals, in some communities. Establishing a province-wide policy would bring about consistency and help give communities assurance of a minimum level of ambulance availability.

Recommendation #24: Develop a pilot project to explore the use of patient transition rooms for non-urgent inter-facility transfers.

Among trends in health care is the increase in need for specialized assessments, diagnostics and treatments of patients. This is contributing to a rising number of non-urgent inter-facility transfers of patients to hospitals. Bottlenecks can arise during the IFT hand-offs between EMS and hospital staff in these assessment and diagnostic areas. Reducing these bottlenecks would reduce the amount of time ambulances spend waiting at hospitals, which would help improve EMS response times and availability.

One approach that could reduce these bottlenecks is the establishment of patient transition rooms at hospitals or other appropriate sites for non-urgent IFT patients, similar to the practice at the Edmonton International Airport Air Operations Centre.. Patient transition rooms are dedicated to caring for patients who are coming to or leaving a hospital while waiting for transition into hospital or into a transport ambulance. Staffed by appropriate professionals, with appropriate caregiver-to-patient ratios, the rooms would help streamline patient hand-offs. For example, the staff of a patient transition room would receive patients and reports from incoming ambulance crews and coordinate with hospital staff on the next steps of patient movement into the hospital. They would receive patients from the hospital awaiting ambulance transfer to other communities or facilities.

The AHS patient transfer room at the Edmonton International Airport has yielded positive results, serving as a tool to enable the coordination of patients awaiting air ambulance and ground ambulance transfer. The processes and criteria for that patient transfer room could be used to inform the establishment of others and provide physical space coordinating agencies could use to enhance systemic patient flow.

It is therefore recommended the Government of Alberta support a pilot project to investigate the use of patient transition rooms and their impacts. The selection of a site for this pilot should be informed by available data, using a site that has a high IFT volume or known transportation corridors between AHS zones. Pursuing the pilot at such a location will enable useful measurement of impacts, helping to evaluate the potential for further rollout of patient transition rooms in Alberta.

Recommendation #25: Undertake an analysis of current EMS resourcing.

As noted earlier in the report, EMS is under significant pressure and has had significant volume increase. Therefore, it is timely to examine whether more resources are needed for the EMS

system to meet current service demands. The results of this examination could serve as a useful starting point for long-term planning.

The Committee recommends the Government of Alberta direct that a resource allocation analysis be immediately conducted. The analysis should cover all ground-based modes of transport, including responses to requests for EMS received by AHS EMS dispatch;

- emergency and non-emergency response;
- inter-facility transfers;
- patient transports;
- ground support for air ambulance services; and
- community paramedicine/mobile integrated health.

The study should focus on whether the resource levels are sufficient to meet demand and should assess the current operational policies around deployment and community/station coverage. Areas for improvement, identifying any gaps in resource levels, gaps or inefficiencies in how current resources are currently used, and best practices in EMS should be the outcome of the study.

Recommendation #26: Explore designating separate resources for emergency response and dedicated for inter-facility transfers (i.e. 'split production model').

As noted earlier, ground ambulances in Alberta not only respond to emergency situations but also perform non-urgent IFTs. Balancing these functions can be challenging from day to day, amid changing patient flows and higher 911 call volumes.

Most ground ambulances in Alberta provide dual roles for emergency and IFT response. Efficient IFT depends on a high degree of coordination among several parts of the health system and having reliable access to resources. This can be difficult to achieve because emergency events occur unpredictably. On the flip side, ground ambulances are sometimes dispatched to perform IFTs for non-urgent patients who do not require Advanced Life Support or Basic Life Support, or in fact, any medical care. This unnecessarily ties up specialized resources that could otherwise be available for emergency calls.

One way to make the system more efficient and more reliable is to pursue a 'split production' model. In this approach, certain vehicles and personnel would be specifically designated for IFTs while others would be specifically designated for emergency response. The Committee recommends the Government of Alberta explore such an approach.

Doing so would help ensure resources are reliably available for IFTs, which would enable better scheduling, systemic patient flow, coordination and patient outcomes. At the same time, it would enhance the availability of ground ambulances in communities to respond to 911 calls. Dedicated resources for IFTs would also provide unique work opportunities for EMS practitioners. For example, work in an IFT-only setting could serve as an entry-level pathway for new EMS practitioners, or for paramedics who would like a change from emergency response.

Recommendation #27: Pursue a pilot project where paramedics treat and refer patients on scene, whenever safe and appropriate.

The default approach familiar to most Albertans is that EMS responds to an emergency call and transports a patient to a hospital emergency department. Hospital staff then examine, treat and refer the patient based on their needs – which might include discharging them, or referring them to a doctor or specialist in the community.

EMS crews are increasingly responding to patients whose medical conditions are not serious enough to warrant a visit to hospital, but who might need other health supports. Instead of transporting such patients to hospital, it would be better if paramedics were able to treat and refer these patients to appropriate health services. This would help patients receive the appropriate care they need in a more timely manner in community, reduce unnecessary pressure on emergency departments, and avoid EMS crews waiting at emergency departments. Studies of such 'treat and refer' approaches have shown they result in fewer 911 service requests, fewer emergency department visits, and increased patient satisfaction.

This 'treat and refer' approach would be unfamiliar territory for many paramedics, so it is recommended the Government of Alberta pursue a pilot to test the use of referral pathways by on scene paramedics. The pilot could make use of any learnings from Alberta's 811 Health Link service, which has extensive experience and expertise referral approaches. In developing the pilot, clear criteria should be established to assist paramedics in making referrals.

Operations and Efficiencies

A number of operational changes on the front lines could bring about some significant shifts in how patients receive health services. These would help reduce unnecessary demands on EMS and, at the same time, improve the ability of EMS crews to respond faster, deliver services more efficiently, and collaborate with other responders to provide high-quality care to patients.

Recommendation #28: Raise awareness among all health care professionals about how the EMS system works.

Public calls to 911 represent a portion of the overall requests that are made for EMS. Many other calls for EMS come from health care practitioners in other parts of the health system, such as doctors, nurses and health care aides. Not all of these requests are necessary. There are many situations where a provider other than EMS would be more suitable for a patient's care. This is especially true for interfacility transfers and patients being discharged.

Currently there is no broad education provided to health care practitioners about the EMS system, appropriate use of EMS, and available alternatives to EMS. Enhancing awareness on this front would help ensure that EMS is called when it is truly required.

It is therefore recommended the Government of Alberta develop and undertake an awareness campaign to better inform non-EMS health care practitioners about the EMS system and its core functions. This campaign could provide information on:

- how the EMS system works;
- appropriate use and alternatives to calling 911;
- how IFTs are scheduled and prioritized; and
- transport guidelines on when to call dispatch.

Recommendation #29: Enable ambulance crews to identify the locations of other ambulance crews.

One concern among EMS practitioners is that they cannot easily determine the locations and status of other EMS crews that are on shift and deployed for calls. In the past, EMS crews had the ability to view the live locations of other EMS crews through an automatic vehicle location system, but they currently do not.

There is value in giving EMS practitioners access to the automatic vehicle location system in the ambulances. Having access to the locations, statuses and crew types of other EMS units would allow for increased awareness of the status of the system and may influence decision making around patient care, approach to scenes, and overall safety. Additionally, increased awareness may reduce radio communication traffic.

It is therefore recommended that paramedics are enabled to vehicle locations of all other EMS crews. If this is deemed successful, the Government of Alberta could consider expanding the policy and technology to enable other first responder agencies, such as MFR agencies and fire services, to be integrated into the automatic vehicle location system.

Recommendation #30: Expanding access to 911, considering current address standards, to support EMS response for First Nations communities, Metis Settlements, and rural and remote communities.

The current 911 system only recognizes four “addressing schemes” – essentially, the technical standards that are used to identify the addresses of homes, businesses and other locations for emergency responders. Communities that do not have one of these addressing schemes in place cannot obtain direct 911 services.

Problems with addressing can make it challenging for EMS and other responders to determine the locations of emergencies, resulting in longer response times and risks to patient care. This is a particular problem in rural, remote and First Nations communities and Metis Settlements, many of which lack a standardized addressing scheme recognized by the 911 system.

Technology changes are underway to move towards a “Next Generation 911”, including a required shift to a National Emergency Number Association (NENA) i3 Standard for addressing. This transition has been mandated by the Canadian Radio-Television and Telecommunications Commission. The current 911 system is scheduled to be decommissioned by March 2025.

Expanding access to 911 should improve response times and patient outcomes in rural, remote and First Nations communities and Metis Settlements by improving the ability of EMS crews and other first responders to locate emergencies.

Recognizing that the federal government has a role to play in helping First Nations communities move to the new addressing standard, it is recommended the Minister of Health send a letter to the federal Minister of Indigenous Services requesting funding for First Nations located within Alberta to:

- complete addressing according to the National Emergency Number Association (NENA) i3 Standard; and
- install road and facility address signage.

It is also recommended that Ministers of Health and Municipal Affairs should collaboratively consider potential ways of supporting rural and remote communities to update their addressing to meet the NENA i3 Standard.

The independent Dispatch Review has also been asked to consider access to EMS Dispatch services as part of their work. Additional considerations may be brought forward in that process for consideration.

Recommendation #31: Implement pilot project in Lethbridge where first responders share radio frequencies.

Presently a great deal of radio communication must take place when coordinating responses among EMS and other emergency responders. Dispatchers from separate responders often must work with each other to coordinate a dedicated radio channel, and then switch to that channel during an event. These additional steps are awkward and inefficient. They add radio cross-talk and can consume precious time when EMS is responding to an emergency event.

Investments have been made by the Government Alberta to establish an Alberta First Responder Radio Communications System (AFRRCS), to provide a common communications platform that first responders can use. There are opportunities to leverage AFRRCS in order to improve radio communications between EMS and other responders.

Specifically, the Committee learned of a potential pilot project in the City of Lethbridge, in which AHS would provide Lethbridge Fire and Emergency Services with AHS EMS radio frequencies. This would enable Lethbridge Fire and Emergency Services to communicate with EMS on a common platform, which in theory could bring about efficiencies in emergency response.

The Committee recommends the Government of Alberta support and evaluate this pilot for a two-year trial period. The pilot should also be evaluated for possible expansion to other integrated services holding contracts with AHS.

Before implementing this recommendation, the government will need to undertake an in-depth privacy impact assessment. The sharing of radio frequencies envisioned in the pilot may needs to be compliant with legislation such as Alberta's *Health Information Act* that outlines how personal health information is managed.

Recommendation #32: Make changes to hospital bypass policies and operational protocols so that rural patients in emergency situations get to the right hospital faster.

Air ambulances are often used in rural Alberta when time sensitive patients need a higher level of care that is not available at a local ED. In some cases, those patients are located in local EDs. In other cases ground ambulances respond to high acuity patients in the field that require long distance travel to a higher level of care. Air ambulances can rendezvous with ground

ambulances at local airports or landing sites and transport patients directly to tertiary care centres, bypassing the local ED. The ability of air ambulance crews to be consistently mission ready is crucial to the success of hospital bypass.

The time advantage can be hampered when an emergency patient in rural Alberta is first transported by ground ambulance to a community hospital, only to be transported by air ambulance to the hospital that has the tertiary care they need. In cases where it is clinically appropriate and safe, it is better to bypass the community hospital, and have an air ambulance transport the patient directly to the right hospital. There are currently protocols in place for this to happen, yet more patients could potentially benefit from community hospital bypasses.

Accordingly, it is recommended that the Government of Alberta direct AHS to:

- review the community hospital bypass protocol and its implementation, including event criteria to which it applies, to ensure it effectively enables time dependent care;
- investigate improvements to the coordination of critical care transport and consider options to strengthen it based on best practices from other jurisdictions; and
- implement pre-alerts to assemble crews for rotary and fixed-wing air ambulances for events that may require community hospital bypass.

These efforts will help patients in emergency situations in rural areas receive the care they need when time is of the essence. They will also support more efficient use of EMS resources.

Recommendation #33: Establish an expectation that local diagnostic services are used whenever possible, before calling EMS for non-emergency long distance transport.

EMS is often called to transport non-urgent patients long distances to receive diagnostic services in a different community. While this is sometimes unavoidable, there are other times when the patient could have received the diagnostic service in their originating community. These instances place unnecessary strain on the EMS system and unnecessary hardship on the patient, who ideally would receive the diagnostic service in or closer to their home community.

Why this happens is not entirely clear, but it could be the result of issues such as staff deployment decisions, or a lack of awareness about services that are available in the community. It may be that calling EMS is the easiest solution that comes to mind for a patient in need of care.

To reduce such instances, it is recommended AHS develop a position statement that sets out an expectation of using local diagnostic imaging resources before using an IFT for non-urgent patients. This would have immediate benefits, helping to reduce unnecessary demands on the EMS system. This could be done in conjunction with Recommendation #28 regarding awareness of non-EMS health professionals and appropriate use of EMS.

Recommendation #34: Enhance funding to air ambulance operators to help recruit and retain pilots.

A major challenge heard by the Committee is an ongoing shortage of pilots for air ambulances in addition to pending regulatory changes impacting pilot workdays. Across Canada, there has

been a reduction of approximately 400 per cent in the number of active Airline Transport Pilot Licenses for Helicopters, as compared to the number in 2015.[1] This has fueled increased competition among airlines and other aviation providers for trained and qualified air pilots, making it more difficult for air ambulance operators to recruit and retain pilots. This threatens the sustainability of air ambulance services and is contributing to pilot attrition and pilot fatigue.

It is recommended the Government of Alberta increase funding to air ambulance operators to help address pilot workforce issues, where appropriate. Providing such funding would strengthen operators' ability to recruit and retain the trained pilots required to maintain air ambulance services. It would also help reduce rates of pilot fatigue and turnover, better enabling air ambulance services to meet the needs of patients. It is further recommended that increases in funding be linked to the Consumer Price Index. Implementing this recommendation is likely to take some time, since AHS has contractual arrangements with air ambulance operators. Given that public funding is limited, it makes sense to target funding increases where there are demonstrated needs.

Recommendation #35: Work with municipalities and partners on continuity strategies to keep air ambulance landing sites operational and to enhance landing sites that are critical for air ambulance services.

In order to respond to emergency situations and serve patients effectively, air ambulances need access to well-maintained airplane and helicopter landing sites. A landing site that is in disrepair or does not conform to federal standards cannot be used by an air ambulance.

Many landing sites are operated by municipalities. The committee learned that a number of factors – including knowledge gaps, operational costs and understanding of maintenance requirements – can result in some landing sites being unavailable. When these situations occur, an air ambulance is forced to land farther away than it might have otherwise landed. This makes it more challenging to coordinate with ground ambulances and contributes to delays in getting patients the care they need.

It is recommended that the Government of Alberta and AHS work with appropriate organizations, governments, EMS providers and aviation providers to develop guidelines and protocols for airplane and helicopter landing sites, to provide clear guidance to municipalities responsible for maintaining these sites. This will better empower them with information about landing site expectations and maintenance requirements.

Additionally, the Government of Alberta should direct AHS to:

- provide data and information to municipalities about the utilization of municipal landing sites to support evidence-informed decisions about this infrastructure; and
- work with municipalities responsible for operating landing sites to improve air ambulance access and safety.

An advisory committee should also be established, having representation from municipalities, AHS and air EMS providers, to identify and prioritize strategically important air ambulance landing sites based on geography and utilization.

[1] The number of in force Airline Transport Pilot Licences for Helicopters fell from 1,081 in 2015 to only 249 in 2021. Transport Canada. (2022). *Aviation personnel licensing statistics.* Government of Alberta. Retrieved at https://tc.canada.ca/en/aviation/licensing-pilots-personnel/aviation-personnel-licensing-statistics

These efforts will help ensure that a larger number of landing sites are kept in good repair and can be used by air ambulances. This will help avoid longer travel times for ground ambulances and enable patients to receive assistance more quickly.

Recommendation #36: Provincial deployment of powered stretchers and powered loading systems across all ambulances.

Each year a number of EMS practitioners experience injuries on the job. Several injuries are due to lifting, lowering or loading patients in and out of ambulances. These injuries could be reduced or minimized through the use of powered stretchers and powered loading systems, rather than manual or power stretchers alone.

The average weight of a patient on a stretcher is 129 kg (or 284 pounds); 93 kg of this is represented by the patient and another 36 kg by the stretcher. It is easy to understand why paramedics experience high incidence levels of work-related injury from repetitive lifting.

Recognizing this, the Workers' Compensation Board – Alberta provided funding in 2017 to retrofit 350 ambulances in Alberta with power load stretcher systems. This was done to provide safer lifting conditions for paramedics, in an effort to reduce work-related injuries from heavy lifting. The project was regarded as a success.

A similar effort was undertaken by AHS in 2015, with the installation of electronic lifts in certain vehicles. No lift injuries were reported with these vehicles for the next 18 months, while during the same period 84 patient-handling injuries were reported from EMS practitioners working on vehicles that did not have the lifts.

Given these facts, it is recommended the Government of Alberta mandate the use of powered stretchers and loading systems in standard emergency response and IFT ambulances in Alberta and install them as soon as possible. In addition, AHS should explore installing specialized equipment for the transport of certain patient populations. (For example, the transport of Level 2 Bariatric patients can involve weights of more than 650 pounds.)

This recommendation would have immediate benefits. Standardizing power stretchers and loading systems would dramatically reduce injuries among EMS practitioners, helping to mitigate staff shortages and to keep ambulances in service. Furthermore, the use of power stretchers would enhance the safety and well-being of patients who are being transported by EMS.

Recommendation #37: Develop innovative programs for underserved communities focusing on local expertise in community.

The Medical First Response program has been expanding over time to involve more municipalities. However, there are communities in which Medical First Responders may not be immediately nearby to provide care until EMS arrives. This is particularly challenging in situations where time is of the essence, such as cases of sudden cardiac arrest.

Currently there are some mechanisms to help provide care in such situations. For instance, members of the public can access public Automatic External Defibrillator (AED) devices to use on fellow citizens. There is also dispatch-assisted cardiopulmonary resuscitation, which can help guide members of the public during emergencies. While valuable, these options are sometimes limited in availability and remain time intensive.

The rise of social media offers opportunities to pursue innovative approaches to strengthen emergency responses in underserved communities. For example, a mobile application could be developed that enables people to easily identify the locations of AED devices and crowdsources trained rescuers in the community. People are increasingly familiar with smartphone applications that use crowdsourcing. Leveraging this could help improve responses to out-of-hospital cardiac arrest and other situations where care needs to be delivered quickly.

It is recommended the Government of Alberta support the development of such innovative programs for underserved areas and, specifically, the development of a mobile application that provides an easily accessible AED registry. This would help increase response capability in communities across the province, and theoretically help improve survival rates from out-of-hospital cardiac arrest.

Recommendation #38: Provide additional supports to Medical First Response agencies to expand capacity.

Among evidence examined by the Committee were results from AHS' 2021 Medical First Response Agency Survey. These indicated that one of the top priorities of MFR agencies is increased access to training and equipment, including procurement of equipment and supplies and additional medical training modules offered by the MFR Program.

Other recommendations made by the Committee envision MFR agencies becoming better integrated in Alberta's pre-hospital care system. Consistent with this, it makes sense for equipment and training of MFR agencies to be well supported. With the right training and equipment, MFR practitioners can be better positioned to provide emergency response in the community until the arrival of EMS, helping promote better patient outcomes.

It is recommended the Government of Alberta support expanding the capacity of MFR agencies for training, equipment and supplies. While this would have a funding impact, it could result in immediate benefits for patients.

Recommendation #39: Create inter-professional educational opportunities for EMS practitioners and Medical First Response practitioners.

Increasingly, MFR practitioners are interfacing with EMS practitioners on the front lines. As the government works to better integrate MFR agencies in the pre-hospital care system, it makes sense to examine opportunities for collaboration on education and training. Such arrangements would see EMS and MFR practitioners jointly participating in educational and training opportunities. This would help foster productive and seamless working relationships between MFR and EMS practitioners on the front lines and help build clinical competencies overall. This would have a positive impact on patient care and help realize efficiencies.

It is recommended the Government of Alberta direct AHS to develop initiatives that support inter-professional education among EMS and MFR first responders. While further exploration and analysis will be required to determine the specific education opportunities that can best be leveraged, training in the following areas warrant serious consideration:

- Disaster and emergency management
- Incident Command System
- BLS and ALS opioid response and patient care
- EMS vehicle and equipment orientation
- Triage and multiple casualty incidents
- Clinical patient handover of care
- High performance CPR/cardiac arrest post-event feedback
- Incident debriefs
- Health and wellness initiatives, including mental health initiatives.

Recommendation #40: Expand the use of Computer Aided Dispatch with partner agencies.

Over the longer term, there are opportunities to markedly improve information sharing among emergency responders through the use of Computer Aided Dispatch (CAD). An advantage of CAD is that event information is passed to other responding agencies in real time and seamlessly. This reduces delays in communication and improves accuracy, helping to reduce the response times of EMS and other responders.

The use of CAD can take pressure off dispatchers, giving them more capacity and reducing stress levels. On the front lines, the use of CAD can empower EMS practitioners with more timely and better information to help them make decisions, helping to enhance patient care.

AHS currently uses CAD interfaces with seven partners. This has resulted in improvements in notification times and information sharing, so expanding the approach makes sense. It is therefore recommended the Government of Alberta have AHS pursue more CAD to CAD connections with other responding agencies. Having more of these connections province-wide will help improve the efficiency of EMS responses and support better outcomes for patients.

It is recommended the Government of Alberta instruct AHS to:

- pursue Computer Aided Dispatch interface connections with Fire/Rescue and law enforcement agencies that are not currently interfaced; and
- work with existing dispatch agencies that are not connected with AHS to scope and plan Computer Aided Dispatch integration.

The implementation of this recommendation is likely to have financial impacts and there may also be potential privacy implications that need to be addressed. Given this, it is suggested that the independent Dispatch Review take time to assess the expansion of CAD to CAD connections and provide advice on the best way forward. Further, it is recommended the Alberta Health independent review of the EMS dispatch system review best practices of other jurisdictions in this area.

Recommendation #41: Use common technology to integrate STARS air ambulance dispatch with Alberta Health Services EMS dispatch.

One of several sources considered by the Committee was the *Helicopter emergency services report 2021*,[2] which examined ways of sustaining helicopter EMS resources to meet the needs of rural and remote patients. Among other matters, that report recommended further integration of the STARS dispatch with the AHS EMS dispatch system.

Presently, STARS is responsible for dispatching helicopter ambulances in Alberta. This is done through the STARS Emergency Link Centre. One constraint of this setup is that AHS is not always able to access the real time locations of ground, airplane and helicopter EMS resources. This makes it difficult to coordinate EMS responses.

Improving the integration of helicopter EMS is desirable, because it would give dispatchers greater ability to send the right EMS resources to calls. This would help improve the efficiency and effectiveness of the overall EMS system. Greater integration also makes sense in order to realize the full benefits of the Government of Alberta's recent investments in helicopter EMS. In Budget 2022, for instance, the Government more than doubled funding to STARS, from $7 million to over $15 million.

It is recommended the Government of Alberta request that STARS and AHS work to technologically integrate the STARS Emergency Link Centre with AHS EMS Dispatch. This would see AHS install necessary logistics (i.e., Computer Aided Dispatch) and provide training so that STARS staff can work on an AHS workstation. In pursuing this approach, the results of the Dispatch Review should first be considered, to help inform the best path toward integration.

Recommendation #42: Explore the creation of a provincial patient and practitioner safety reporting system.

Emergencies frequently involve chaotic and dangerous scenes, with many different emergency responders converging on a location to render assistance. In the midst of this, there can be risks to the safety of responders and patients. Sometimes there are "near-misses" – that is, instances where an injury or accident to a responder, patient or other individual nearly occurred due to hazards on scene or due to process. These near-misses serve as important learning opportunities, to help avoid similar instances in the future.

Presently there is no standardized reporting process for safety incidents. For instance, AHS-contracted EMS providers do not report near-miss incidents to AHS reporting systems. AHS has two platforms for safety reporting: MySafetyNet for workplace safety incidents and the Patient Reporting and Learning System for clinical events where patient safety is directly impacted. However, only the latter is accessible by contracted EMS providers, meaning there is a gap in workplace safety reporting. As a result, AHS may not be aware of all instances involving the safety of EMS practitioners. This also undermines the opportunities to learn from history and mitigate risks.

The Committee recommends the Government of Alberta explore the feasibility of a provincial patient and practitioner safety reporting system. Such a system should have sufficient reach to include reporting by AHS and other system partners (including contracted providers, integrated

[2] Alberta Health. (2021). *Helicopter emergency services report 2021.* Government of Alberta. Available at: https://open.alberta.ca/dataset/0c2c1188-db57-43c5-8a14-b2f92f7c4bf1/resource/c4f13970-ddc1-4e0c-bdb3-3d5342269061/download/health-helicopter-emergency-medical-services-report-2021.pdf

fire/EMS and MFR agencies). With such a system in place, there can be better safety reporting across the EMS system, helping to enhance the safety and performance of the system. This will help reduce risks and help improve the quality of patient care.

In tandem with this, the Government of Alberta should explore the creation of a shared review process (such as an inter-agency joint workplace health and safety committee) to review near-misses, implement control measures, and share results across EMS system partners to build a collective culture of safety.

Workforce

Many of the Committee's recommendations have implications for the EMS workforce and will help alleviate pressures faced by EMS practitioners. In addition, the Committee has identified a number of initiatives the Government of Alberta can pursue to help strengthen the capacity and sustainability of human resources across the EMS system. These recommendations recognize that people are the heart and soul of the EMS system. In order to have an effective EMS system that delivers quality care, there must be action to take care of the caregivers.

Recommendation #43: Enhance the ability of EMS staff to take scheduled breaks and discretionary time off.

Amid the pressures on EMS, it has become more difficult for EMS practitioners to take breaks or book discretionary time off work. This is contributing to fatigue, stress and burnout among EMS practitioners.

It is recommended that the Government of Alberta direct AHS to:

- examine the barriers and enablers for discretionary time off approvals and scheduled breaks;
- identify and implement opportunities for improvement, and
- report on these activities to Alberta Health.

Taking these steps would improve the work-life balance of EMS staff, which in turn would help the EMS system recruit and retain skilled talent. Having well-rested EMS practitioners is also important for maintaining the quality of patient care.

It is suggested this recommendation be regarded a starting point, as it reflects the consensus that could be achieved by the entire Committee. It should be noted that some members of the Committee feel that this recommendation, as currently constructed, does not go far enough in addressing the issue. Ultimately, there is a need for the issue to be effectively addressed.

Recommendation #44: Move away from the core/flex staffing model.

As noted earlier in this report, a model called core/flex is used to staff EMS resources for many rural communities. In core/flex, EMS practitioners are on-call for four days in a row (96 hours continuously), followed by four days off.

The core/flex model is intended to provide flexibility, given the lower call volumes in rural communities compared to those in urban settings. However, the model is generally considered to be unpopular with EMS practitioners. The Committee heard concerns that core/flex undermines work-life balance, makes it difficult for staff to have predictability in their lives, interferes with sleeping patterns and can pose risks to quality patient care.

This is not the case everywhere. There are some communities where, due to call volumes and location, the core/flex model is attractive to some EMS practitioners. However, it is likely safe to say that the core/flex model is making it harder to recruit and retain EMS practitioners and contributing to challenges in the overall EMS system.

It is recommended that AHS be directed to:

- review the current staffing model and move away from utilizing core/flex scheduling in the system;
- use existing data for all communities to redistribute EMS resources based on needs; and
- provide regular reporting to the Minister of Health about the utilization of core/flex shifts and their safety.

Moving away from the core/flex staffing model would better support the mental health of EMS practitioners and reduce disadvantages that rural communities have in attracting and retaining EMS staff. Importantly, there would also be benefits for patients. The use of assembled crews (instead of on-call core/flex crews) would contribute to lower response times.

The Committee emphasizes that regular reporting to the Minister of Health on this recommendation is necessary, so there is transparency in actions to move away from core/flex.

Recommendation #45: Move away from extended on-call shifts for air ambulance.

Presently, air medical crews at eight of Alberta's 11 airplane ambulance bases work extended on-call shifts. These shifts, which can be 24 hours or more in length, can result in inconsistent sleeping patterns and contribute to poorer mental health. This, in turn, can have an impact on patient care and patient outcomes. Extended on-call shifts also impact the availability of air ambulance services due to staffing issues that can arise, such as practitioner fatigue, burnout and staff departures.

Recognizing these challenges, several other jurisdictions in Canada have deliberately moved away from 24-hour shift patterns. Alberta should do the same.

Accordingly, it is recommended the Government of Alberta support AHS' plan to eliminate extended on-call shifts and move to assembled air medical crews (i.e., 12-hour shifts). This would help reduce practitioner fatigue, better support practitioners' well-being, reduce risks of air ambulances being unavailable or delayed, and enable better patient outcomes.

Recommendation #46: Develop options to expand the availability of shorter work shifts.

The length of work shifts may be contributing to staffing challenges in the EMS system. Typically, AHS practice is to offer 12-hour shifts to casual employees and as overtime to full time employees. Amid increased call volumes, practitioner fatigue and burnout, these shifts do

not stand out as appealing – especially in the wake of COVID-19, which has shifted expectations about work arrangements among employees and employers alike.

The Committee heard that staff in the EMS system would appreciate having more flexibility when it comes to work shifts. Having the ability to work shorter shifts (i.e., less than 12 hours) would support better work-life balance for staff and improve employee engagement. Moreover, it was suggested that AHS' 12-hour shifts do not always align with operational needs. If this is the case, then expanding the availability of shorter shifts could improve the overall efficiency of the EMS system, benefitting communities and patients.

It is also important to note that research indicates that risks of occupational injuries rise with shifts longer than eight hours.

Changing the scheduling of EMS practitioners cannot happen haphazardly, but having more options for shorter shifts needs to be explored.

It therefore recommended the Government of Alberta direct AHS, in compliance with any applicable collective agreements, to:

- develop options for shorter shifts to be made available to casual staff, or as overtime for full-time employees, to align with operational needs and staff preferences; and
- launch a pilot, in alignment with any applicable collective agreements, to study the impacts of shorter shifts on staffing challenges, workforce engagement, and operations.

Recommendation #47: Work with system partners to enhance access to mental health supports.

There is an immediate need to enhance the accessibility of mental health supports for EMS practitioners. Situations and events experienced by EMS practitioners can be emotionally trying or traumatic at the best of times. The increased call volumes and other factors that have strained the EMS system have exacerbated mental health concerns among EMS practitioners, fueled by a more rapid pace of work, chronic stress, forced overtime and exhaustion.

A number of supports for mental health currently exist. The Committee heard that the AHS EMS Peer Support Program, for example, is considered valuable by practitioners. However, there are concerns that practitioners cannot always access the program due to workload pressures, and that levels of awareness about the program might need improvement. Similarly, the Employee and Family Assistance Program is considered valuable by AHS EMS staff, but there may be a low level of knowledge about the program's existence.

There are also ongoing concerns among EMS practitioners about stigma that might result from accessing mental health supports. This can serve as a key barrier to the uptake of mental health supports and suggests that these support programs might need to be changed or enhanced.

Supporting the mental health of EMS practitioners is critical. A failure on this front has widespread impacts on the EMS system, including on staffing levels, the availability of ambulances, the effectiveness of coordination in emergency response, and the quality of care that is delivered to patients.

It is therefore recommended that AHS be directed to align, in collaboration with EMS contracted providers, current mental health education, resources and supports available to EMS practitioners (including Emergency Communication Officers) with the goals of:

- identifying and reducing challenges relating to the availability and/or accessibility of existing resources and supports;
- increasing awareness about existing supports in collaboration with unions and associations;
- developing strategies to reduce stigma associated with accessing mental health supports; and
- assisting contracted service delivery partners, to the extent possible, in strengthening mental health supports available to EMS practitioners working for them.

Recommendation #48: Establish requirements for entry-to-practice mental health and resiliency training.

Having mental health supports in the workplace is necessary, but is a reactive approach. There is also value is taking approaches that will proactively support the mental health of EMS practitioners. One way this can be accomplished is through the curriculum at post-secondary institutions that train EMS practitioners. Ideally, EMS practitioners can receive robust, practical and effective training that enhances their psychological resilience and prepares them for the realities of work in EMS.

Wellness and resilience programs as well as training for EMS practitioners can vary considerably between post-secondary institutions. Establishing a standardized curriculum would help better prepare EMS practitioners for on-the-job stressors and trauma.

Education standards for EMS practitioners are set by the Alberta College of Paramedics, which approves training programs for paramedics' entry-to-practice. It is recommended that Alberta Health engage the Alberta College of Paramedics to establish a standardized approach to wellness and resiliency curriculum for EMS practitioners. Consistent with the approach established by the College, Alberta Health should establish requirements for wellness and resilience training for Emergency Communication Officers' entry-to-practice, to better prepare these practitioners for stressors and trauma they may face on the job.

It is recommended that the Government of Alberta engage the Alberta College of Paramedics to establish requirements for a standardized approach to wellness and resiliency curriculum offered by post-secondary institutions, and establish mandatory entry-to-practice resiliency and mental health training for Emergency Communication Officers consistent with the College's standardized approach

Recommendation #49: Encourage EMS practitioners to work and upgrade their skills in rural and remote communities.

More action is needed to ensure the EMS system has sufficient EMS practitioners to maintain ambulance services in the short term and long term. This is particularly the case for rural and remote areas of the province, which tend to have greater difficulties in recruiting and retaining EMS practitioners.

Incentivizing and supporting EMRs and PCPs working in rural and remote areas to upgrade their skills and advance in the paramedic profession is one approach to easing the staffing challenges in these areas. This would have a positive impact in communities, as patients would receive higher levels of care from practitioners who have more advanced training.

In pursuing the introduction of these incentives, Alberta Health should work closely with Alberta Advanced Education, post-secondary institutions and the Alberta College of Paramedics to explore ways of delivering training through remote means. More work-integrated learning opportunities will need to be created in order to facilitate EMRs and PCPs advancing their designations.

The Committee recommends that the Government of Alberta:

- consider introducing a financial education incentive program to increase the number of Emergency Medical Responders and Primary Care Paramedics working in rural and remote areas during the temporary *Ground Ambulance Regulation* exemption;
- develop accessible and affordable pathways to incent EMR and PCP to advance their designation, particularly those working in rural and remote areas; and
- work with post-secondary institutions and the Alberta College of Paramedics to develop remote delivery options for Primary Care Paramedic training, including the expansion of work-integrated learning opportunities in the province.

Recommendation #50: Work with partners to expand the availability of student practicums in the EMS system.

Many recommendations in this report will directly or indirectly assist in the recruitment and retention of EMS practitioners. Going forward, however, there is a need to enhance the training of newer EMS practitioners. An issue frequently raised is that practicum placements for students are too difficult to secure. The lack of practicum spots is a barrier to growing the number of paramedics in the province and increasing the number of paramedics available to staff the EMS system.

There appear to be several factors contributing to this situation. For one thing, call volumes and staff shortages have led to a situation where many EMS practitioners are forced to work overtime, are tired, and face stressful paces of work. Amid these dynamics, taking on practicum students is understandably difficult.

Practicum opportunities are not only important for meeting educational requirements. They also serve as vital work-integrated learning that helps prepare students for the realities of work in the EMS system. Students that benefit from quality practicum experiences are better positioned to work collaboratively with other emergency responders and provide quality care to patients.

The Committee recommends the Government of Alberta undertake a number of actions to facilitate the expansion of practicum opportunities.

It is recommended the Ministry of Health engage the Alberta College of Paramedics to:

- review and further communicate new or existing incentives for practitioners to complete approved preceptor training including additional continuing education credits;

- investigate the use of regulatory tools (such as standards of practice and mandatory continuing education) to encourage its members to complete preceptor training and take on paramedic students; and
- require all PCP and ACP programs to use the HSPnet system, which AHS uses to manage many health science placements, as a condition of program approval.

It is also recommended the Ministry of Health:

- require all licensed ground ambulance operators to become active users of HSPnet to ensure that all Alberta clinical placements opportunities are available only through HSPnet and operators in planning for implementation;
- review whether there are sufficient PCP and ACP clinical placements throughout the province; and
- uses the findings of the review to formulate a policy that requires all EMS ground ambulance service providers in the province to accept clinical placements based on targets set by the province.

Additionally, it is recommended:

- the Government of Alberta engage educational institutions to offer preceptor training at no cost to interested practitioners selected by the employer;
- the Minister of Health consider funding opportunities (E.g. grant funding) to support employers with the employee compensation requirements associated with collective bargaining articles pertaining to compensation for preceptor training; and
- the Ministry of Health work with EMS providers to explore incentives (i.e., time off credit or paid education) for practitioners to take on PCP and ACP students on a rotational basis.

Recommendation #51: Pursue a pilot project that tests changes to the end-of-shift policy.

The Committee heard a great deal of concern from EMS practitioners about forced overtime. This is one of several factors contributing to exhaustion and burnout among practitioners, which can lead to reduced availability of ambulances, longer response times, and risks to patient care.

Currently, AHS' end-of-shift policy stipulates that metro EMS crews will only be dispatched to high-acuity events during the last 30 minutes of a shift. This policy is intended to give EMS crews appropriate time to complete their shifts and transition with an on-coming EMS crew. The policy is intended to ensure that crews are not dispatched towards the end of their shifts unless they are needed for a serious emergency response.

One challenge, however, is that the definition of "high-acuity" or what is meant by a 'serious medical condition' is too broad. As a result, EMS crews are being dispatched too often during the last 30 minutes of their shifts. This is contributing to forced overtime and undermining the work-life balance of paramedics, leading to fatigue and creating risks to patient care. A better end-of-shift policy is needed.

Since a change in this policy can have wide-ranging impacts, it is recommended the Government of Alberta develop and evaluate a pilot project that tests potential changes to the end of shift policy. This pilot should be undertaken in a metro environment and surrounding service areas, and its timing should be sequenced with other EMS existing initiatives underway that are also expected to significantly reduce end of shift overtime.

While further details must be worked out, the pilot should involve the following:

- During the last 30 minutes of their shifts, EMS units are dispatched to life saving resuscitative events.
- More specifically, this means an EMS unit may only be dispatched to 911 calls where the Dispatch Evaluation Tool indicates the need for life saving resuscitative event efforts, and a backup replacement unit will be dispatched to provide assistance and transport when required.
- During the last 30 minutes of an EMS crew shift, if that EMS crew on scene has completed an appropriate medical assessment and no critical or time-sensitive medical requirements have been identified, that EMS crew is provided with a replacement unit for the purpose of transport to hospital or consolidated in hospital.

Essentially, this pilot would place greater limitation on the types of calls to which EMS crews are dispatched during the last 30 minutes of their shifts, while aiming to ensure EMS is available for serious situations where it is needed. It is expected this pilot would reduce forced overtime, help reduce staff shortages and improve the psychological well-being of EMS practitioners.

Recommendation #52: Develop strategies for more respectful, diverse and inclusive work environments.

One important way to improve recruitment and retention of EMS practitioners is to provide respectful and supportive work environments that support diversity and inclusion. In 2022, these are bedrock expectations among employees and potential employees.

There are undoubtedly ways that EMS providers can enhance their efforts to provide respectful, diverse and inclusive work environments. For example, the Committee heard representation of women in EMS has increased such that women now comprise approximately 40 per cent of regulated members of the Alberta College of Paramedics. While the proportion of the workforce that identify as diverse and/or Indigenous is not know, there is likely opportunity to increase their representation at all levels, including in supervisory and other leadership positions.

With its substantial size and capacity, AHS can assert leadership on this front and encourage EMS providers to further take up effective strategies. Accordingly, it is recommended the Government of Alberta direct AHS to:

- work with EMS providers to develop strategies for more respectful, diverse and inclusive work environments; and
- as the provincial health authority, host a biannual forum for any EMS provider open to sharing best practices and outcomes.

Recommendation #53: Use existing frameworks to ensure opportunities for leadership development are offered at all levels.

Having a strong and sustainable workforce depends in part on the strength and sustainability of that workforce's leadership. As with any complex organization or system, there are always opportunities to foster further leadership development. This is not limited to senior executives. Leadership development has value at all levels of an organization, as it can help nurture better

communication, better workplace relations, lower staff turnover, higher staff morale and the ability to undertake succession and other forward-looking planning.

The Committee learned that AHS has created the AHS EMS Leadership Development Initiative, which is designed for all leadership levels across AHS EMS. Senior leaders in EMS undertook initial sessions with the Leadership Development Initiative in early 2021. However, further rollout of the Initiative has been paused since mid-2021 due to system pressures, including the demands of responses to the COVID-19 pandemic.

As efforts proceed in implementing the Committee's recommendations and as responses to the COVID-19 pandemic evolve, it stands to reason that the pause can be lifted.

It is therefore recommended that the Government of Alberta direct AHS to resume delivery of the Leadership Development Initiative. As part of this, AHS should ensure there is a formal leader competency evaluation framework and individual leader development plans to support their ongoing development.

Moving forward with the Initiative's rollout will help bring about many benefits, including reduced EMS practitioner work stress, higher employee morale and engagement, and improved retention of EMS practitioners. This will, in turn, help ensure that Albertans continue to benefit from an EMS system that is strong, sustainable and provides quality patient care.

THE WORK CONTINUES

Since January 2022, the Alberta EMS Provincial Advisory Committee has undertaken considerable work to learn about the challenges facing the EMS system and to identify solutions that can enhance the efficiency and effectiveness of EMS for Albertans. The Committee strove do this in a collaborative way, with representatives from many disciplines, including numerous emergency response professionals, having open and frank dialogue.

It is important to view the Committee's report and recommendations as a new beginning. From the start, the Committee was realistic about the task ahead. Pressures on the EMS system have been growing for over a decade; a single report cannot possibly address the complex challenges single-handedly.

Instead, the enhancement of Alberta's EMS system will require the efforts of many partners working collaboratively – to both implement the Committee's recommendations and to continue identifying and acting on opportunities that will reduce barriers, improve efficiencies and enhance the quality of patient care. On this latter point, the Committee stresses the importance of useful and comprehensive measurement. Being able to effectively address a challenge requires a solid understanding of what is working well and what is going wrong.

On a related note, the Committee also emphasizes the need for robust evaluation of the pilot projects and other recommended actions as they are implemented. Understanding the impact of the recommendations will be important to inform continuous improvement, and to provide Albertans with assurance that the EMS system is heading in the right direction.

The Committee appreciates the many EMS practitioners who contributed their views and ideas about Alberta's EMS system. This valuable input enabled the Committee to develop and advance recommendations that will help the EMS system be strong and sustainable.

Timely, robust and ongoing actions to implement these recommendations will yield many benefits. Ultimately, they will enable Albertans to have increased confidence in an EMS system that features highly skilled and well-supported EMS practitioners, better alignment between the needs of communities and pre-hospital care resources and, most importantly, the continued delivery of quality patient care.

APPENDIX A

List of Sub-committee Additional Members and Presenters

Subcommittee	Organization
Dispatch	Municipal Affairs
	STARS Air Ambulance
	Niagara EMS
	Lethbridge Fire and Emergency Services
Air	Shock Trauma Air Rescue Service (STARS)
	Helicopter Air Lift Organization (HALO)
	Helicopter Emergency Response Organization (HERO)
	Advanced Paramedics Limited
	Alberta Central Airways Limited
	Alberta Central Air Ambulance
	Can West Air
	AHS Referral, Access, Advice, Placement, Information and Destination (RAAPID)
MFR	City of Spruce Grove Emergency and Protective Services
	City of Leduc Emergency Services
Ground Ambulance	Strathcona County Emergency Services
	AHS Edmonton Integrated Operations Centre
	AHS RAAPID
	Western Canadian Paramedical Consulting
Workforce	Regional Municipality of Wood Buffalo
	Red Deer Emergency Services

APPENDIX B

Summary of Recommendations

Approved Recommendations

1. Support the request by Alberta Health Services (AHS) for a temporary exemption from current staffing requirements, to enable Emergency Medical Responders (EMRs) to staff ambulances in a greater range of situations, helping to keep ambulances on the road.
2. Standardize the response plans of Medical First Response (MFR) agencies, to respond to calls where clinical evidence supports a benefit for the patient.
3. Make sure fire departments are appropriately requesting EMS resources for fire rescue and other calls.
4. Support the first of two pilots in the City of Spruce Grove to allow registered Primary Care Paramedics and Advanced Care Paramedics to cancel ambulance dispatch if they are able to treat patients on-site and refer them to other services.
5. Support the second of two pilots in the City of Spruce Grove to explore the potential of Spruce Grove's integrated fire ambulance service, which provides emergency medical services in addition to traditional fire department services.
6. Support a pilot with Strathcona County Emergency Services to leverage the flexibility in Strathcona County's integrated Fire-EMS model.
7. Develop Provincial EMS Waiting Room Transfer of Care Guidelines for the timely and safe hand-off of EMS patients to emergency department waiting rooms.
8. Form a Provincial Emergency Department Access Task Force.
9. Review alternative service delivery options for patients who do not need an ambulance and explore models used in other jurisdictions.
10. Raise Albertans' awareness about when to call for an ambulance and how to understand suitable options other than an ambulance.

Additional Recommendations

Performance and Accountability

11. Establish a vision for the future of EMS, built around patient and person-centeredness, with objectives to provide high-quality, high-performance, safe and effective EMS services to all Albertans.
12. Develop a collaborative vision for the Medical First Response Program, to further its expansion and sustainability.
13. Review how Medical First Response agencies are structured within the EMS system.
14. Explore opportunities to expand the Medical First Response Program to Indigenous communities.
15. Ensure province-wide standards are in place for air ambulance services.
16. Implement an accountability framework for approved recommendations from AEPAC.
17. Establish an advisory body to provide ongoing advice on the delivery of emergency medical services.

Capacity

18. Develop a vision and structure for a provincial Integrated Operations Centre.
19. Mandate the use of centralized referral for inter-facility transfers.
20. Identify and pursue alternatives to dedicated air ambulance for transporting non-urgent patients.
21. Implement a provincial emergency department offload target of 45 minutes across the province.
22. Implement a pilot project that is collaboratively scoped by EMS and EDs to immediately transition clinically appropriate patients to the hospital's waiting area to enable an expedient EMS return to response readiness.
23. Establish a policy that EMS does not have to wait at the hospital when ambulance availability is low.
24. Develop a pilot project to explore the use of patient transition rooms for non-urgent inter-facility transfers.
25. Undertake an analysis of current EMS resourcing.
26. Explore designating separate resources for emergency response and dedicated for inter-facility transfers (i.e. 'split production model').
27. Pursue a pilot project where paramedics treat and refer patients on scene, whenever safe and appropriate.

Operations and Efficiencies

28. Raise awareness among all health care professionals about how the EMS system works.
29. Enable ambulance crews to identify the locations of other ambulance crews.
30. Expanding access to 911, considering current address standards, to support EMS response for First Nations communities, Metis Settlements, and rural and remote communities.
31. Implement a pilot project in Lethbridge where first responders share radio frequencies.
32. Make changes to hospital bypass policies and operational protocols so that rural patients in emergency situations get to the right hospital faster.
33. Establish an expectation that local diagnostic services are used whenever possible, before calling EMS for non-emergency long distance transport.
34. Enhance funding to air ambulance operators to help recruit and retain pilots.
35. Work with municipalities and partners on continuity strategies to keep air ambulance landing sites operational and to enhance landing sites that are critical for air ambulance services.
36. Provincial deployment of powered stretchers and powered loading systems across all ambulances.
37. Develop innovative programs for underserved communities focusing on local expertise in community.
38. Provide additional supports to Medical First Response agencies to expand capacity.
39. Create inter-professional educational opportunities for EMS practitioners and Medical First Response practitioners.
40. Expand the use of Computer Aided Dispatch with partner agencies.
41. Use common technology to integrate STARS air ambulance dispatch with Alberta Health Services EMS dispatch.
42. Explore the creation of a provincial patient and practitioner safety reporting system.

Workforce

43. Enhance the ability of EMS staff to take scheduled breaks and discretionary time off.
44. Move away from the core/flex staffing model.
45. Move away from extended on-call shifts for air ambulance.
46. Develop options to expand the availability of shorter work shifts.
47. Work with system partners to enhance access to mental health supports.

48. Establish requirements for entry-to-practice mental health and resiliency training.
49. Encourage EMS practitioners to work and upgrade their skills in rural and remote communities.
50. Work with partners to expand student practicums in the EMS system.
51. Pursue a pilot project that tests changes to the end-of-shift policy.
52. Develop strategies for more respectful, diverse and inclusive work environments.
53. Use existing frameworks to ensure opportunities for leadership development are offered at all levels.

GLOSSARY

Advanced Care Paramedics (ACPs) are regulated health professionals and are often the first responders at scenes where people are in need of emergency medical care. They administer pre-hospital medical care, which may include stabilizing an injured or ill person who needs to be transported via ambulance to health care facilities for further treatment. ACPs have the broadest and most advanced set of health services they can provide, which includes checking and monitor vital signs, measuring blood glucose levels and using other diagnostic procedures. They perform cardiopulmonary resuscitation (CPR), provide oxygen, administer medications including intravenous (IV) treatments, perform bandaging and splinting, assist in childbirth and provide initial treatment to trauma patients.

Advanced Life Support (ALS) ambulance: ALS ambulances are able to respond to more complex medical situations with a staff of at least one Advanced Care Paramedic and more life saving equipment on board.

Air ambulance: Air ambulance includes both fixed-wing airplanes and helicopters.

Alternative service provision: alternative options to ambulance transport such as non-medical transport, primary care appointment access/referral or other specialized services such as a community paramedic.

Basic Life Support (BLS) ambulance: BLS ambulances are staffed with Primary Care Paramedics (PCP) or Emergency Medical Responders (EMR) with a standard level of equipment to provide essential medical care for patients.

Borderless EMS system: Prior to EMS transition to AHS, municipalities were responsible for providing EMS primarily within the boundaries of their local municipality or district. Because dispatch was restrained by geographic boundaries, the local ambulance was typically called regardless of its location, even if another municipality's ambulance was closer to the emergency. With one provincial EMS dispatch system, dispatchers know where all EMS resources are located in real-time through the use of automated vehicle locating technology or GPS technology. This allows EMS Dispatch to send the closest, most appropriate resource to respond to each emergency.

Community response unit: A community response unit is an EMS resource that will provide Advanced Life Support services to support EMS responses and is limited to the geographical boundaries of a specific community.

Core/flex: Scheduling that means paramedics and EMRs work 24-hour shifts, often consecutively, where they spend a portion of their time at an ambulance station and a portion of their time on-call in the community. There is a policy that requires crews to get eight hours of rest after they have been working for 14 hours. If this threshold is met and the crew is resting, their ambulance is taken out of service.

EMS dispatch: EMS dispatch centres evaluate incoming calls and sending ambulances to respond to requests for service. Calls may be for pre-hospital emergencies, inter-facility transfers, or air ambulance requests.

Emergency Communications Officers (ECOs): Emergency communications officers (also known as ECOs) are responsible and accountable for emergency medical services (EMS) call answering/triaging and EMS dispatching.

Emergency Medical Responders (EMRs) are regulated health professionals, often responsible for transporting ill or injured patients from scenes of emergency and/or between facilities. They operate ambulances or other modes of transportation, assess emergency scenes and patients, and provide treatments such as emergency medical care, ventilation or oxygen administration, and automated defibrillation. EMRs have a basic set of health services they can provide, as compared to paramedics.

EMS practitioners provide EMS to patients and including Emergency Communication Officers, paramedics, Emergency Medical Responders and sometime other health care professionals working on air ambulances.

EMS Service Plan: This Service Plan is under development and will look to inform the next 5 years of EMS Operations. The Service Plan will provide the direction, guiding principles and priorities that will inform EMS' annual operating plans.

Hours of Work Project: Alberta Health Services is adjusting working hours, shifts, and scheduling at some ambulance stations, to help to alleviate fatigue among staff.

Integrated Fire/EMS: The integrated model means that organization serves as a fire department and ambulance operator. Typically frontline staff are cross trained as both fire fighters and paramedics.

Inter-facility transfer: moving patients between care centres by both ground and air ambulance.

Licensed ambulance operators are organizations approved under the *Emergency Health Services Act* and *Ground Ambulance Regulation* after it is determined they have met the legislated criteria. Only licensed ambulance operators can operate ambulances and provide publicly funded EMS in Alberta.

Medical First Response (MFR) Program: Medical First Response (MFR) agencies such as fire departments and community-based volunteers contribute a valuable role in the care of patients before they arrive at a hospital. MFR agencies are key partners with Emergency Medical Services (EMS) that provide timely aid to patients and assist EMS when requested.

Primary Care Paramedics (PCP) are regulated health professionals who are responsible for transporting ill or injured patients from scenes of emergency and/or between facilities. PCPs may treat patients by administering some medications, utilizing Basic Life Support (BLS) airway adjuncts, and engaging in semi-automated defibrillation. PCPs can provide larger set of health services than EMRs but smaller than ACPs.

Telehealth: electronic and telecommunications technologies and services used to provide care and services at-a-distance.

Tertiary care: highly specialized medical care.