



## OPERATIONAL SUSTAINMENT MODERNIZATION STRATEGY - TRANCHE 2

### Health Services Modernization

# MODERN AND READY: A VISION FOR THE CAF HEALTH SYSTEM



National Defence  
Défense nationale

Canada



## Vice Chief of the Defence Staff Foreword

The dominant theme of Canadian military history features a citizenry that always meets its responsibilities for the defence of Canada by voluntarily accepting the statutory authority of the chain of command which compels members to perform any lawful duty within an unlimited liability in the covenant of an unwritten social contract between the member and the State. Correspondingly, the Canadian Armed Forces reciprocates, on behalf of the Government of Canada, its moral commitment to the continuing health, welfare, and wellness of its members and their families. By pursuing *“Modern and Ready: A Vision for the CAF Health System”*, we demonstrate a focus on our mission, one which prioritizes the wellbeing of our people.

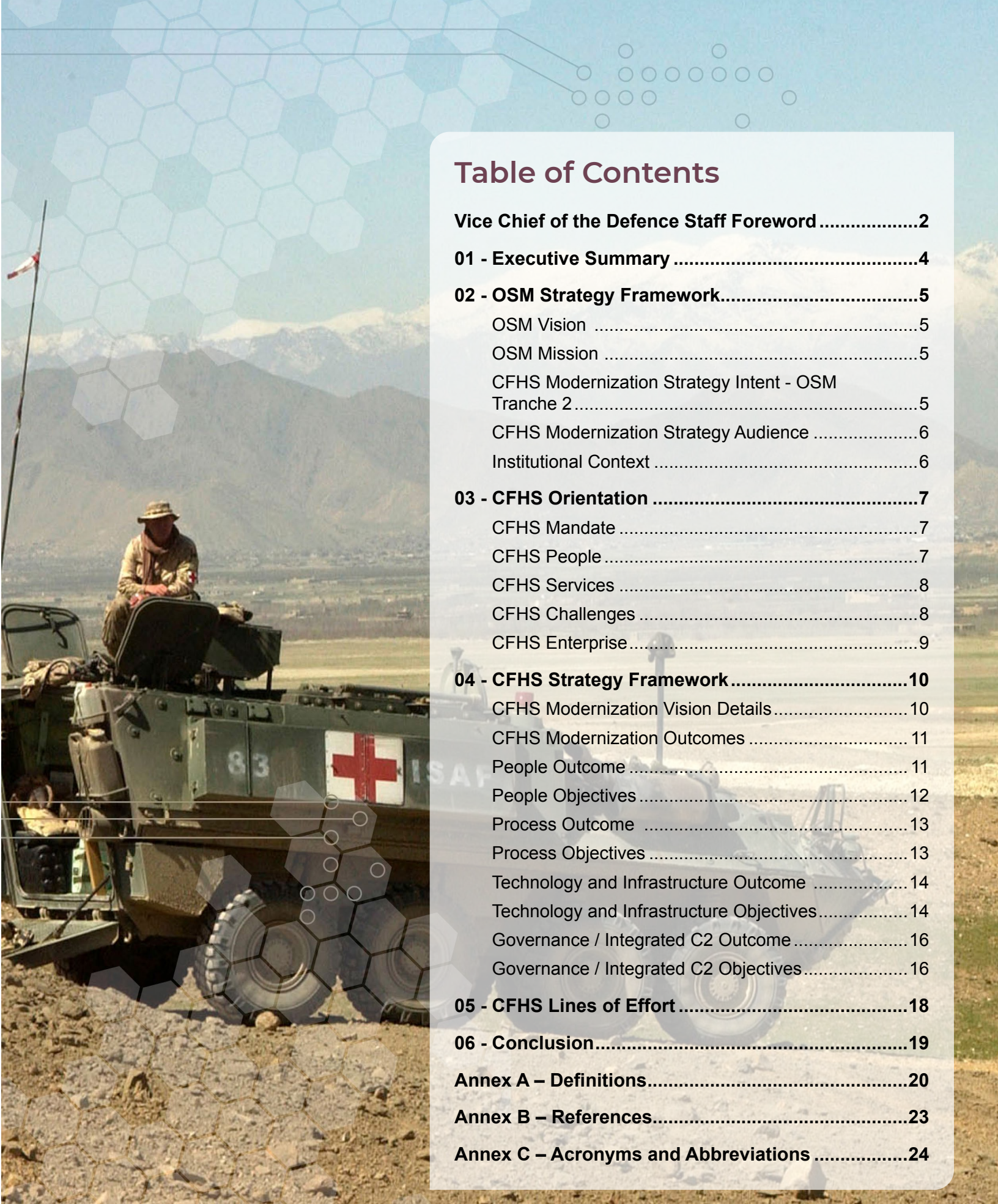
No CAF organization personifies that applied commitment to the health and wellness of the force more than the Canadian Forces Health Services (CFHS). Based on the innovative work required for the modernization and transformation of CFHS to move from the status quo to an interoperable, data-driven force enabler is an operational imperative. Even more so, it is a key component of the inherent cornerstone ‘enabling capability’ that underpins CAF operational viability, while aligning with both the Chief of the Defence Staff Reconstitution Directive and the Digital Campaign Plan.

An achievable CFHS modernization strategy is therefore of paramount importance to the continued sustainment, functionality, and the operationalization of Canada’s Defence Policy, Strong, Secure, Engaged. CFHS modernization is a priority line of effort to advance the Operational Sustainment Modernization Strategy agenda. This will position the CFHS as a ready, agile, doctrinally grounded, and fully operationalized joint enabling capability.

A handwritten signature in blue ink, consisting of a stylized 'F' followed by a horizontal line.

Lieutenant - General Frances Allen  
Vice Chief of the Defence Staff





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# 01 - Executive Summary

This Canadian Forces Health Services (CFHS) Modernization initiative represents Tranche 2 of the Operational Sustainment Modernization (OSM) strategy for the assisted transformation of CFHS to meet the intent of Canada's Defence Policy: Strong, Secure, Engaged (SSE). As a key joint enabler, the modernization of the CFHS will positively impact all facets of operational readiness, structure, function, and overall interoperability with NATO Allies.

There are many internal and external socio-economic and pan-domain challenges facing CFHS. These include shifting demographics, clinician attrition, dated infrastructure, changing technology, pandemic effects, jurisdictional scope of practice constraints, skill fade, and the spiraling demands on domestic and operational healthcare delivery, especially as it relates to our NATO commitments. The resulting demands on HS clinical capabilities are misaligned with capacity and challenged to meet expectations. This is a critical operational deficiency that requires a holistic remedial/modernization strategy.

While the overarching OSM strategy is a joint Force Development (FD) initiative outlining the requirement to modernize all Operational Sustainment (OpS) enablers, Tranche 2 focuses on the modernization of CFHS specifically in the areas related to OpS. This is a critical first step in optimizing operational readiness, CAF reconstitution, and DND/CAF enterprise data-centric culture-change management.

OpS for CFHS is made up of the core military medicine corporate elements. It includes the medical supply chain, the training establishments and programs, as well as the health programs that support our CAF population at home and abroad. OpS is also the FD and capability development required to analyze, plan, and sustain these unique operational military healthcare requirements.

A comprehensive operational analysis has been conducted. This CFHS modernization vision affirms a transformative capability functioning within an Enterprise Resource Planning (ERP) system that is operationally viable, NATO interoperable, and digitally enabled. This vision will optimize support for the dual Health Services

mandate (Operational deployments and Base/Wing healthcare). It aligns people, processes, technology, and governance to enhance operational readiness, extend healthcare reach, and enhance the patient experience.

The modernization of CFHS is driven by the integration of the Pan-Domain Command and Control (PDC2) and Electronic Health Records Platform (EHRP). This interface empowers clinical governance and data practitioners at all levels by digitizing capabilities, connecting internal and external stakeholders, managing a distinct health data domain, and providing access to hybrid care options. The strategy will enable end to end data and analytics for program effectiveness, decision support, and Person Partnered Care (PPC). This enables real-time, evidence-based health advice to commanders, as well as enhances care access and improves program effectiveness.

Inherent in the process of CFHS modernization is the requirement for investment to address deficient infrastructure and adherence to healthcare industry standards. Key shortfalls to address include Base/Wing infrastructure, medical logistics storage that is compliant with Good Manufacturing Practices (GMP), a harmonized healthcare supply chain, and a digitally networked storage centre. In addition, operational capability shortcomings require investment, including platform agnostic damage control resuscitation (DCR), and damage control surgery (DCS) capabilities; supported by an enhanced blood program. These enhancements are crucial for saving lives during operations.

Similarly, the cumulative effects of these systemic deficiencies are seen in CFHS's inability to meet NATO commitments. MEDEVAC interoperability is impacted by a shortage of casualty extraction vehicles, understaffed Primary Reserve (PRes), and the need for a data driven culture. This is key to multinational integration where PDC2 will bolster strategic coherence across all joint enabling capabilities.

"Modern and Ready: A Vision for the CAF Health System" is a holistic strategy that outlines the way ahead for CFHS to evolve as a joint enabler.

## 02 - OSM Strategy Framework

### OSM VISION

The CAF will be sustained by a fully integrated OpS function that can drive capability development, generate decisive military advantages, and maintain operational readiness across all domains.

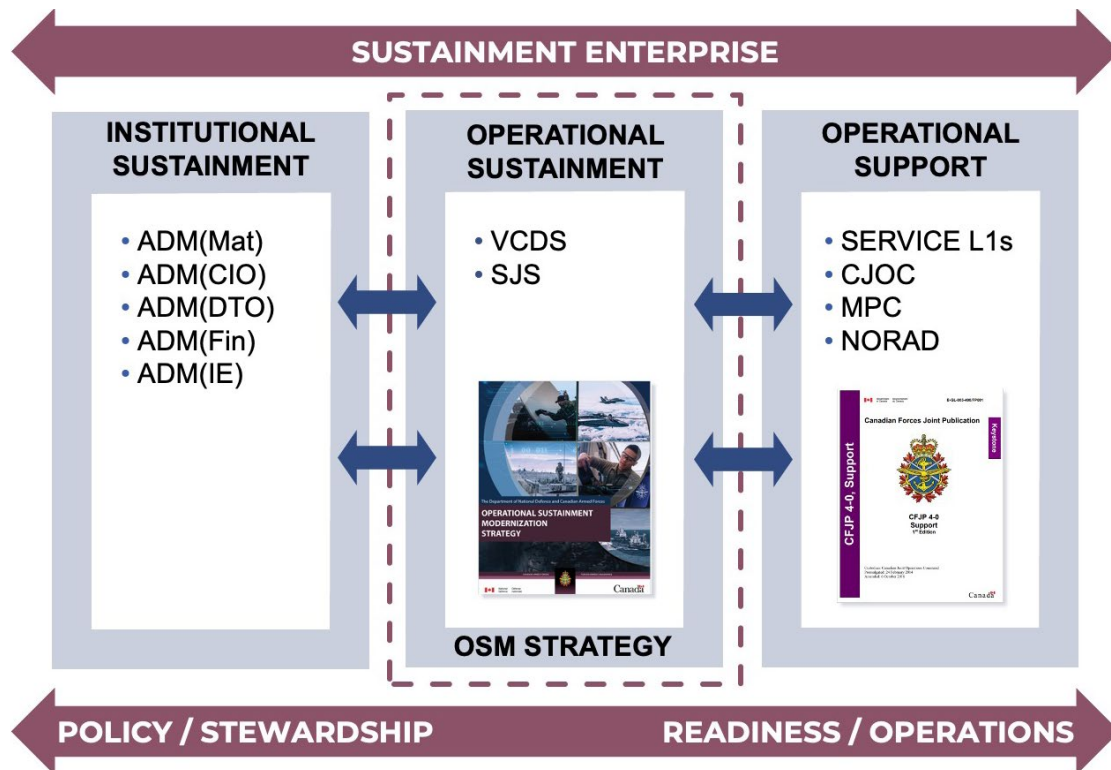


Figure 1: OSM Strategy Framework – Components of the Sustainment Enterprise

### OSM MISSION

To strengthen the linkages within the Sustainment Enterprise between Operational Support and Institutional Sustainment by aligning people, processes, technology and governance to enhance readiness and extend operational reach.

### CFHS Modernization Strategy Intent - OSM Tranche 2

The overarching OSM Strategy is a joint FD initiative that outlines the imperatives for modernizing all OpS enablers in accordance with current defence policy and the CAF's overall modernization and reconstitution efforts. In Tranche 2, the OSM intent is to support CFHS with the strategic direction and guidance necessary to effect the HS Modernization Strategy, and to enable continuous

HS modernization and enhanced PPC. This in-flight OSM activity will sensitize senior leadership to the fact that HS modernization is not only an operational imperative but also a major contribution to the horizontal integration of all joint enabling capabilities as a key Operational Support agency.

## CFHS Modernization Strategy Audience

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This HS strategy focuses on FD of CFHS, affecting all Level 1s readiness and operations. As such, the core

audience for this strategy is all DND/CAF leaders and all personnel within CFHS.

### Institutional Context

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**External Context.** The combination of Great Power competition and the continuing Russo-Ukrainian war has had a significant impact on the present operating environment. The multiple change-management challenges include demographic, technological, social, inflationary, and residual effects of the global pandemic. Battlefield casualty estimates have intensified the potential demand for domestic and operational healthcare. The resulting 'new normal' places added pressure on the global supply chain for all countries and all commodities. This in turn challenges the programming for operational sustainability, impacts strategic stockpiles, and questions the resiliency of domestic and international healthcare supply chains. To compensate, all NATO and allied partners are correspondingly moving to modernize, ruggedize, and integrate their HS capabilities towards a common-to-all digitized 'plug and play' interoperability. This supports a fully integrated and resilient multinational HS supply chain. National participation within these collaborative HS alliances is proportional to the degree of national commitment to this progressive modernization initiative.

**Canadian Context.** CFHS operates as a unique healthcare jurisdiction within a provincially regulated, and highly complex health care structure. CFHS is mandated to provide a dual and concurrent health services delivery system to all eligible in both a domestic (Base/Wing) and operationally deployed context. CFHS structure reflects a spectrum of 19 HS occupations (13 externally licensed) and is impacted by a disparate spectrum of regulatory licensing, certification, and 'scope of practice' constraints. The rationalization of our military hospital structure of the 1990s gave way to a variety of out-sourced public mediums. This introduced challenges associated with access to key mission supports and related enabling functions such as maintenance of clinical readiness, scope of practice, recruiting, retention/attrition, access to surgical care, civilian collaboration, and dependency on contracted services.

**CAF Context.** The optimized intent of Canada's Defence Policy: SSE, mandates a proactive culture change management imperative. CFHS is also following the CDS Reconstitution Directive while modernizing to align with the OSM Strategy and the CAF Digital Campaign Plan. CFHS depends on several external DND L1s including ADM(IE) for real property considerations in medical and dental clinics, ADM(Mat) for healthcare supplies, and CIO Group for electronic healthcare record (EHR) management. Investing in CFHS processes, domestically and operationally, is critical to keep pace with current and future threats.

**PDC2 Context.** The CAF is engaged in a PDC2 concept of operations (CONOPS), for a metric driven analytical decision cycle, which includes a data-driven culture, real time asset tracking, and a 'system-of- system' mindset.

**Digital Transformation.** The CAF requires an Electronic Health Record (EHR) system capable of providing modern clinical decision-support tools, advanced analytics, and a patient experience commensurate with its provincial and foreign defence partners in order to promote and maintain the health and mental well-being of CAF members. Accordingly, the Electronic Health Record Platform (EHRP), will be the cornerstone of CFHS digital transformation, allowing an interface with other key systems (e.g. DefenceX and HRMS/Guardian). This achievement will in turn bolster tactical efforts by providing the CAF with real time, data driven health services advice.

**Business Transformation.** In accordance with the CAF Digital Campaign Plan and DM intent, CFHS is perfectly positioned to be a lead agent in digital enterprise transformation. This is related to the fact that CFHS is inextricably linked to both a DND Structure and a CAF Operational domain.

## 03 - CFHS Orientation

### CFHS MANDATE

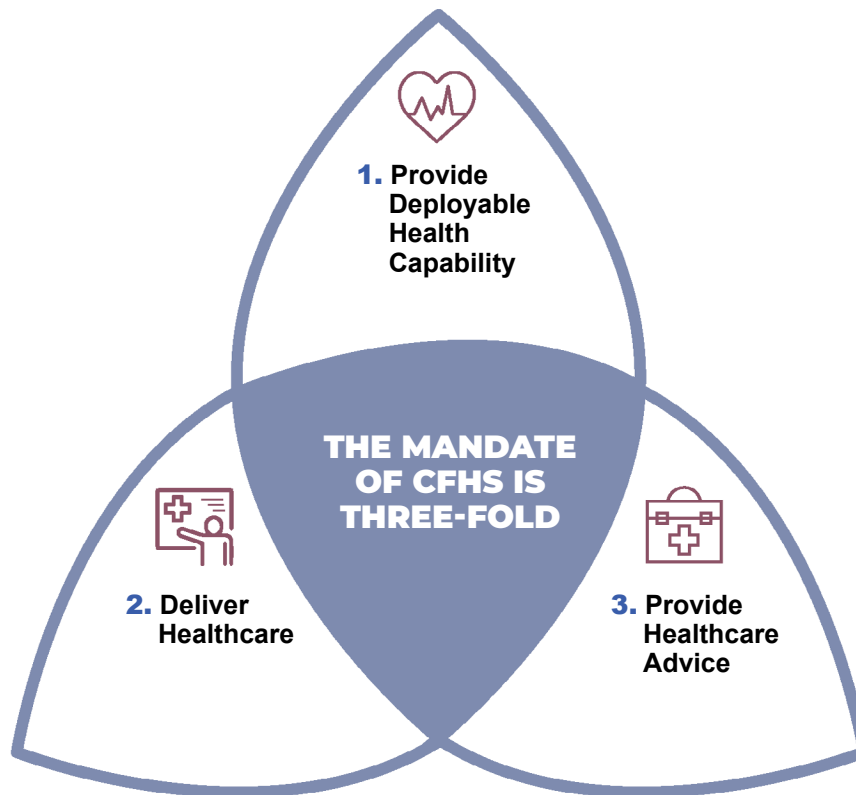


Figure 2: The CFHS Mandate

Under the rubric of military health care, CFHS is a joint enabling capability that supports all elements of the CAF. CFHS is considered a Level 2 organization functioning within the domain of the Chief of Military Personnel (CMP). Located in Ottawa, the Surgeon General/Director General Health Services reports to CMP and the Commander Health Services reports to Chief Military Personnel Command (CMPC).

CFHS HQ is responsible for the 106 units and detachments spread across the country, which function within a Base/Wing support structure. These disparate unit structures include medical and dental clinics, field ambulances, health services training establishments, a research establishment, a medical equipment depot, and 1 Canadian Field Hospital. The key tasks within this CFHS mandate are as follows: to provide a deployable health capability, deliver healthcare, and provide healthcare advice.

### CFHS People

CFHS plays a vital role in the readiness of the CAF by striving to put people and patients first. This is achieved through a CAF Health System supported by a team of over 6,500 personnel, which includes: 4,500 Regular Force and PRes positions, in association with over 1,500 public servants and 500 contractors; with a fiscal year

2023/24 funding envelope of \$575M. This large team supports Base/Wing and operational healthcare, as well as the necessary functions to train CFHS personnel, support operational requirements at home and abroad, and deliver essential healthcare supplies needed to enable the military medical system.

## CFHS Services

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CFHS provides various clinical services and oversees several DND/CAF health-related programs. These varied and disparate programs contribute to the medical fitness of CAF personnel, and support CAF readiness and operational effectiveness. The variety of programs and the inherent infrastructure challenges associated with this extensive list of clinical services needs to be contextually understood and appreciated. These services include (but are not limited to): primary care access to specialists, occupational medicine, release/transitioning (exit medicals), dental care, pharmacy, laboratory testing, diagnostic imaging, mental health and

social work support, physiotherapy, travel medicine, population health management, infectious disease control, home care coordination, support to deployed operations, enrolment screening, CAF Return to Duty programme, and support to CAF related sports programs. These are orchestrated within the supportive functions of: clinical governance responsibilities (including credentialling and investigations), fiscal and program analytics, key healthcare resource management considerations such as medical and dental logistics, the training of military Health Services occupations, occupation management, and provision of health advice.

## CFHS Challenges

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A global/national shortage of health resources is impacting both civilian and military health systems. Credentialling constraints are imposed by external healthcare regulatory agencies that set the standard for healthcare provider certification which is an essential requirement for CFHS to care for CAF patients. To maintain these specifications, CAF healthcare occupations work diligently to avoid skill fade by balancing military training requirements against access to clinical training before and after reaching Occupational Functional Point (OFP).

CFHS must also contend with the challenge of meeting NATO commitments. As a result of systemic shortfalls, CFHS is dependent on the civilian health care system for many diagnostics, surgeries, hospital, and specialist care requirements. Civilian education facilities and related collaborations are leveraged to deliver the Maintenance of Clinical Readiness Program (MCRP). CFHS is therefore vulnerable to both fluctuations in

funding for training and clinical skills maintenance, as well as the preceptorship capacity limitations of external partners. These can have profound effects on training and skill acquisition opportunities. In addition to the direct impact on quality of care, these issues can also affect levels of career satisfaction, leading to major concerns in practitioner retention, attrition, recruiting, and PRes optimization.

The digitalization of HS is required to meet a PDC2 need to effect CoC decision making and to facilitate interoperability (EHRP/DefenceX). CAF investment and financial allocations have not kept pace with the increasing costs of healthcare delivery. Other challenges include degrading infrastructure and IT, clinical equipment, medevac capabilities, and an outdated supply system. Lastly, CFHS lacks an internal capability development capacity to analyze and address these many challenges.





## CFHS ENTERPRISE



### INSTITUTIONAL SUSTAINMENT

#### GoC ARA

- Health Canada
- Professional Bodies
- Accreditation of our Health Services

#### DND

- ADM(HR-Civ)
- ADM(Mat)
- ADM(IE)
- ADM(CIO)
- ADM(DTO)
- DRDC

#### External

- PHAC
- VAC
- MoH – P/T

STRATEGIC



### OPERATIONAL SUSTAINMENT

#### CAF

- MPC
- VCDS
- CCSI, CFD & CPROG

#### Surgeon General/ DGHS

- Clinical Programs
- Corporate Functions
- Medical Advisors
- Capability Development
- Health Services Logistics
- Quality & Performance

#### NATO and Key Allies

STRATEGIC/OPERATIONAL



### OPERATIONAL SUPPORT

#### Health Services Group Commander

- Base/Wing care at CFHS Centres

#### Mission Care

- Field Ambulances(Reg/Pres)
- CMED
- 1 Cdn Field Hospital
- Aeromedical Evacuation

#### Customers

- SERVICE L1s
- CJOC
- NORAD

TACTICAL

Figure 3: Example of some of the key CFHS enterprises



## 04 - CFHS Strategy Framework

### CFHS MODERNIZATION VISION

A modern, resilient, integrated, digitally enabled, effective and efficient, and operationally responsive healthcare system that respects, understands, and meets the unique needs of those who serve.

### CFHS Modernization Vision Details

**People.** People are the most important consideration when it comes to what the CFHS achieves and how it achieves it. Our approach to care must adapt and evolve to meet the unique needs of the diverse population we support. CFHS personnel are constrained by various professionally regulated 'scope of practice' jurisdictions, which are provincially regulated. This creates a patchwork of different policies affecting a wide range of clinical skill sets required in different parts of Canada. CFHS strives to mitigate related challenges when conducting domestic operations and establishing coherent force generation standards for expeditionary purposes.

**Digitally Empowered Practitioners.** Fully digitalized clinical and health system decision support, through new capabilities such as EHRP and DefenceX, will enable front-line decision makers to optimize health outcomes, patient safety, and medical logistics.

**Operating Environment.** Increasing geopolitical instability and the rise of misinformation, fast paced changes in technology such as the use of drones to transport patients, highlight the multiple areas of CFHS health system vulnerability. A modernized CFHS will adapt to the rapidly changing military medical support realities including the skills to care for patients in austere environments and during large scale combat operations.

**DCR/DCS Investment.** There is a requirement for investment in DCR, and surgical capabilities (DCS) functioning within an enhanced blood program. It is essential to develop DCR across RCAF Tactical Aviation Fleets, DCR/DCS onboard the joint supportship (JSS), and highly mobile DCR/DCS for the CA. These capabilities will enhance patient survivability, combat effectiveness, as well as nato interoperability.

**CMED Modernization.** Fully dependent on the establishment of a strategically sited, GMP compliant, and modernized medical logistics framework (DefenceX compatible) that allows for the storage and strategic stockpiling of blood products, vaccines, and other medical counter measures. This requires medical health supply chain, distribution, and storage centre networks, and a modernized electronic medical supply system of record that supports DCR and DCS compatibility and a resilient blood program.

**MCRP Enhancement.** MCRP is designed to support the CAF mandate of maintaining a ready healthcare force. This can be achieved by providing the military healthcare providers integrated civilian- military opportunities (including in-person, virtual, simulation) to maintain and/or enhance clinical competencies that cannot be maintained at their normal place of duty. This must be prioritized for operations.

**MEDEVAC Enhancement.** Based on current NATO doctrine, CFHS MEDEVAC platform requirements far exceed current allocations. Support for NATO interoperability through Allied/Joint MEDEVAC is therefore significantly impacted. The ACSV (Armoured Combat Support Vehicle) is one of many possible future MEDEVAC platforms and represents an example of the deficit of MEDEVAC assets, a challenge that also includes aeromedical evacuation. These shortfalls will contribute to future delayed casualty extraction, reduced survivability, and incur prolonged casualty care (PCC) requirements. This will impact casualty holding capability further forward in the Future Operating Environment (FOE) negatively affecting morbidity and mortality rates.

**PRes Optimization.** Revisiting the Health Services Primary Reserve mission while realigning the Medical Assistant trade will set the conditions to maximize PRes operational integration. The key to PRes optimization resides in the culture-shaping articulation of a communications and recruiting strategy that will offset the establishment shortfall of 800 position.

## CFHS Modernization Outcomes

### PEOPLE OUTCOME

A CFHS that supports and empowers its personnel with resources required to optimize the health of those who serve by ensuring the skills, training, scopes of practice, and evidence-based advice are supported by data and a culture of continuous quality improvement, positioning the CAF and CFHS for operational readiness and success.

People: compassionate, expertise, leadership, resilience, accountable		
The way we've been operating so far...		...where HS Modernization will take us.
Demand driven clinical augmentation...	becomes	...System of clinical progression and professional challenges that are predictive, resilient, and transparent to enable retention.
Rigid approach to training, leadership, and appointments...	becomes	...Progressive career management system with clearer articulation of expectations and requirements.
CFHS is challenged to meet concurrent Base/Wing care and expeditionary commitments...	becomes	...Digitization initiatives will prove effective in all functional areas.
Critical staff shortages and under scoped capabilities...	becomes	...modernization of infrastructure and clinical capabilities will support recruitment and reduce attrition.
limited provincial/territorial health care assets...	becomes	...innovative collaboration in CIMIC and hospital within hospital cooperation will maximize asset utility.



## People Objectives

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**Proactive Recruitment and Retention.** Demographic trends in recruiting and retention demonstrate that the CFHS must innovate to remain operationally viable. New and different outreach opportunities will engage a range of academic and media interests to enhance the CFHS profile as an inclusive employer of choice. The modernization of our clinical equipment, spectrum of care and scope of practice will heighten our appeal to future recruits. This will also serve to motivate, engage and support retention of serving CFHS and CAF members as articulated in “The CAF Offer - our value proposition”.

**Occupational Analysis.** Resilience is a priority for the current occupation review process. Our current priority is Medical Technicians with other CFHS occupation reviews underway to ensure alignment with operational needs. Sustainable staffing levels and diversity objectives can be achieved in the context of optimized, merit-based talent management. The related evolution of qualification standards, force development models and optimized advanced training decisions will also fortify the occupation structure. The result will be an inclusive approach which delivers advanced clinical care more effectively to where it is needed most.

**Professional Development (PD).** There is value in synchronization of career paths for key Individual Training and Education (IT&E). This would include MED TECH/MCRP while preserving traditional MED TECH to PA occupation opportunities. Mission enablers, include Health Services Management Officers. There is also value in supporting PD programs such as specialist Nursing Officer, and Nurse Practitioners. These will all be backed by an IT&E communications plan.

**PRes Capability Modernization.** Annual Military Occupation Review (AMOR) leveraged to maximize Medical Technician/Medical Assistant functionality. This would benefit from a clarified mission and career path, thereby generating increased PRes recruitment.





**Enabled and Continuous Modernization.** CFHS is constrained by various professionally regulated ‘scope of practice’ jurisdictions which impact operational readiness and effectiveness. Health Services modernization will affirm the mandate to deliver a ‘best practices’ data-driven culture. This will support both a domestic and operationally deployable CAF community.

**PPC.** CFHS modernization will introduce a healthcare industry standard of PPC virtual and patient interactive diagnosis and treatment modalities, while serving to reduce contractor- clinician dependency and optimizing evidence- based care.

**CIMIC Optimization.** CFHS modernization will reflect an enhanced application of CIMIC concepts to reinforce broad accreditation themes. Relationships with our civilian counterparts can be leveraged to address concerns associated with clinical skills fade and ensure the reliability of deployable Health Services resources. This includes the MCRP, which is an important initiative delivering significant operational impact by prioritizing pre-deployment clinician refresher training in civilian settings. MCRP also serves to bolster Base/Wing quality of care and healthcare provider morale, which makes the program an important CAF retention tool.

## PROCESS OUTCOME

A career-focused member-responsive CFHS will integrate the positive contributions of internal and regulatory stakeholders and accredited services in the process of tailoring an agile, ready, resilient, interoperable, and operationally deployable health service capability; all systemic aspects of care will be streamlined accordingly.

<b>Process: Interoperable, balanced, accredited, agile system which is high-quality</b>		
<b>The way we've been operating so far...</b>		<b>...where HS Modernization will take us.</b>
Manual processes, hard copies, clip boards...		...Digitally enabled clinicians with real-time decision support tools to enable clinical flexibility and efficiency, while achieving high-quality care.
On-demand medical advice to CAF senior leadership provided as required...		...Pro-active Medical insights that are predictive with evidence-based advice that is readily accessible to all levels of the CAF.
Clinical capabilities are aligned with dated organizational structures and infrastructure...		...Operationally focused to be more agile with organizational reach-back enabled by technology.
Clinical expectations have increased, and requirements are not broadly understood...		...Enhanced strategic and operational mission planning and leadership communication to enable PPC.

## Process Objectives

**Base/Wing Care Optimized.** Base/Wing Care is a cornerstone for CAF operational readiness. Relevant, real-time Performance Measurement metrics and analytics are needed to ensure best use of limited resources and programs. EHRP, spectrum of care review through AFC, and virtual care will introduce new and more inclusive ways of providing care. This will pave the way to a proactive and sustainable CONOPS.

**Operational Capability Enhancements.** The quality of the CFHS field deployable care will be supported by enhanced versatility in operationally deployable clinicians (PRes optimization), vehicles, materials and medical evacuation resources (such as armoured ambulances). Investments in damage control resuscitation and surgical capabilities (DCR/DCS) and an enhanced blood program will ensure life-saving medical capabilities are provided where they are needed most. A focus on civilian partnerships will become more important, especially when military logistics become fiercely contested.

**Digital Modernization of Operational Support.** A data driven modernization will lead to a more deployable and operational ready CFHS. This in turn will align with HS PRes optimization while enhancing NATO interoperability (logistics, communications, and host nation support services). Benefits include expedited procurement processes, diagnostic decision-making, and triage.

TECHNOLOGY AND INFRASTRUCTURE OUTCOME

A modernized CFHS, linked to a digitally networked medical logistics system, will reflect a contemporary medical industry standard of digital metric and analytic connectivity. This is nested within an AI-enabled CAF/CMP data-driven corporate and enterprise culture. CFHS modernization will reflect a robust NATO-standard Information Management (IM) level of interoperability and deployable capability.

Technology: Current, interoperable, accessible and analytically enabled		
The way we've been operating so far...		...where HS Modernization will take us.
Infrastructure initiatives pursued on a case-by-case basis...	becomes	...Long-term Health Services infrastructure modernization plan pursues CAF synergies.
Clinical support approaches vary and are often restricted to outdated processes due to technological shortfalls...	becomes	...Virtual care technology optimized, including support to operations.
Analogue Health Data System...	becomes	Digital Health Data System- to provide real time data analytic
Lack of coherence in digital transformational training and data-based culture-change management	becomes	Focused information management (IM) training and data-driven culture-change management- supported by a comprehensive communications strategy.

Technology and Infrastructure Objectives

**EHRP Established.** This represents CFHS contribution to the CAF digital campaign plan. The EHRP project will sustain and enhance the CAF's Digital Health capability by providing a commercial-off-the-shelf (COTS) EHR system that will offer modern operational and clinical decision-support tools, secure access to health information, advanced analytics and a patient- centered experience that is equal to provincial and Defence partners. EHRP has the potential to consolidate data in a way that will generate prompt and highly actionable healthcare advice to commanders. Efficiency gains will enhance operational readiness by improving access to care and optimizing program morale.



**DefenceX.** Ensures the establishment of a synchronized, effective, responsive, and resilient medical supply chain that is linked to the EHRP and reflects not only end-to-end asset visibility, but also provides for trusted joint logistics readiness information and a data- analytic capability.

**Digitally Enabled Clinical Capability.** CFHS must transition from a 20th century analogue service to a contemporary (organic AI expandable) digitized and data-driven healthcare system. It is required to be versatile enough to meet accreditation standards (domestic) while also offering the potential to interface with NATO.

**Virtual Care Technology Optimized.** Despite the geographic reality of our Bases and Wings, CFHS must improve existing infrastructure, clinical practices, information management (IM) and WIFI-digital connectivity. This will enhance and enable access to care for our diverse and dispersed population.

**MEDEVAC Modernization.** CFHS is significantly under-resourced in medevac capability for operations and training. Although some vehicle capability enhancements have been achieved through the support of the environments with the ACSV armoured ambulance project as an example, there remains a disconnect between doctrinal medevac requirements and current procurement allocations. CFHS modernization has an incentive to leverage future technological advances to confront this challenge which might include access to remotely piloted systems. Ground Role 1 evacuation vehicle modernization is an operational imperative for any HS NATO interoperability function or capability.

**Central Medical Equipment Depot (CMED) Upgrade.** Fully dependent on the establishment of a strategically sited, GMP and PHAC compliant, EHRP compatible (DefenceX) and networked resource. This would include end-to-end asset visibility, medical health supply chain, distribution, and a medically sensitive storage centre

network. Ruggedized against global supply chain disruptions and resilient to 'contested logistics' through an established partnership with Canadian military industry and provincial hospitals.

**Health Security and Resilience.** Necessitates a pan-national, whole-of-government, Public Health and Safety networking capability to respond to future challenges. This would support CAF operational deployments or domestic operations within a provincial/territorial health system interface.

**Clinical Infrastructure Modernization.** Healthcare infrastructure initiatives such as the National Capital Region Health Centre (NCRHC) and CMED modernization are complemented by facilities that can accommodate the introduction of IM that embraces a data-driven culture. This protects patient data assets and harnesses metrics and analytics to drive deliberate decisions while fostering innovation. This includes remote and austere infrastructure such as the CAF Arctic Training Center (CAFATC).

**Northern Ops Capability Development.** CFHS modernization will include deployable Northern Operational functions and capabilities, based within the CAFATC. It will be important to leverage a whole of government approach and will be networked to the wider Canadian clinical community, applying a tele/video/med link.

**Data Management.** The CAF Digital Campaign Plan and DND/CAF Data Governance Framework identify the centrality of data to operational transformation. Healthcare Data Domain definition ensures the stewardship of Personal Health Information (PHI) in compliance with federal and provincial legislation, as well as evolving international standardization and interoperability requirements. CFHS has already established its primary office to meet CAF Health Services accreditation requirements. EHRP modernization efforts will strengthen the PHI stewardship.

## GOVERNANCE / INTEGRATED C2 OUTCOME

Integrated CFHS governance to support evidence-based decision-making, institutional credibility, force management (FM), FD, and strategic supply chain sustainment to respond to changing DND/CAF and external NATO interoperability requirements aligned with broad DND/CAF priorities.

### Governance/Integrated C2: Institutional credibility, aligned modernization, transparency, risk mitigation, realistic advice

The way we've been operating so far...		...where HS Modernization will take us.
Rx2000 primary care renewal initiative (PCRI) was only partially implemented with sufficient accreditation results. Limited ability to evolve care delivery models due to organizational constraints. Modernization is reactive ...	becomes	...Continue CFHS modernization to maintain high-quality care and enable decision-making. Proactive culture of constant change management and continuous improvement.
Operational HQ limited resources and capacity...	becomes	...CFHS HQ established with the required staff to both plan and conduct readiness and operational requirements.
CFHS as a Joint Enabler is not well integrated into CAF governance	becomes	...CFHS is integrated within CAF governance for FD, FM and strategic sustainment. HS aligned with OSM.

## Governance / Integrated C2 Objectives

### Constitutionally Separate Health Jurisdiction.

Modernization will upgrade the CFHS collaborative licensing, certification, accreditation (and governance matrix, to reflect the 19 HS occupations (13 external licenses/11 self-regulating). These issues are particularly important when delivering care in the non-operational setting. However, healthcare delivered while on CAF operations must also take into consideration Canadian professional regulatory frameworks as well as the unique limitations related to the military healthcare environments.

**DGHS Capability Modernized.** CFHS modernization and digitization will enhance HS: FD, FM, PRes

optimization, Doctrinal and Program delivery. This has the potential to revitalized CAF operations, sustainment, and the Base/Wing care model. This will permit specific policy on Health Services governance to be drafted and integrated into broader DND/CAF institutional governance. CFHS is working with its Level 1 to enhance the FD capability that will be required to align with a joint enabling operational mandate.

**CFHS Multinational Linkage.** Necessitates the C2 connectivity to work within a NATO-centric 'plug and play' operating environment.

**CAF Partnerships.** CFHS modernization will enable integrated C2 linkage to internal support enterprise capabilities via CMP. This also extends to external partners such as Canadian Forces Morale and Welfare Services (CFMWS) for the Personnel Support Programme (PSP) and for other health and wellness related programmes.

**PDC2.** Modernization will replace CFHIS and enable the CFHS to accommodate digital communications across multiple domains. This will allow real time asset/casualty tracking, a system-of-system view, standardized enterprise processes, and Command risk management. This will pave the way to evidence-based tactical to strategic-level medical advice to support sound decision making (DefenceX/CAF CBC2).

**CFHS Enhanced Governance.** CFHS modernization will establish a distinct CFHS structure that will pursue FD, Force Generation (FG), and Force Employment (FE) that respects the needs of all CAF stakeholders. This will

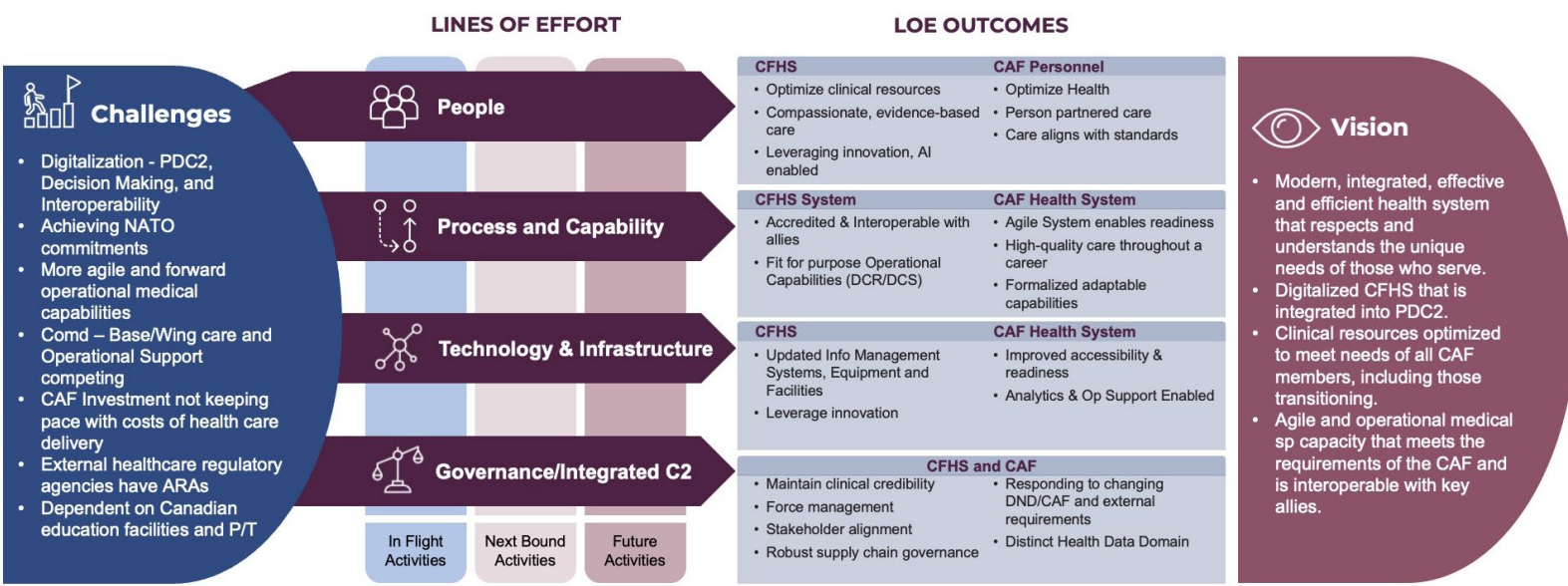
represent a Management Readiness Framework for HR capabilities, liaise with external accreditation and regulatory bodies, and generate the CFHS evidence-based performance metric-analytic reports and returns. The current structure of simultaneously supporting the Base/Wing care and operations is not sustainable. Solutions to address this issue are faced with challenges related to costs, FG, support, and governance frameworks.

**EHRP to Replace CFHIS.** The CAF requires an Electronic Health Record (EHR) system capable of providing modern clinical decision-support tools, advanced analytics, and a patient experience commensurate with its provincial and foreign defence partners in order to promote and maintain the health and mental well-being of CAF members. This is not available in the current EHR system, and unless a replacement solution can be implemented, the gap between CAF members' digital health experience and that of their fellow citizens will continue to grow.





05 - CFHS Lines of Effort





## 06 - Conclusion

The phased modernization of CFHS is not only a DND requirement, but a CAF operational imperative. This forthright operational analysis has clearly outlined the position that CFHS is facing multiple challenges that make it difficult to address all expectations.

A focused re-investment strategy is essential to ensure that the demands on CFHS clinical capabilities are aligned with capacity, and that excellence in operational support can be maintained.

Trends associated with CAF investment in CFHS have not kept pace with the healthcare needs of our members at home and in the rapidly changing operational environment. This has contributed to inherent and systemic capability shortfalls, which have been rapidly overtaken by geo-political events and exacerbated by 21<sup>st</sup> century exigencies. This includes technology, enterprise digitization, CAF combat operations, and the burgeoning requirement for Base/Wing supportive services to diverse membership.

Maintaining the status quo is not an option in an environment of changing operational healthcare needs, and an increasingly important civil-military healthcare relationship. This also applies to the challenging nature of healthcare practitioner recruiting, retention, professional certification, and the intricacies of 'scope of practice' maintenance and development.

This Modernization vision shapes the direction that CFHS, as a critical joint enabler, must take. It will inform future campaign plans, analysis, and resource allocation as it is planned and implemented.

CFHS's ability to define a renewed mandate and enabling it to forge ahead, requires a determined CAF modernization effort. This will pave the way for a more responsive and adaptable 'joint operational enabling capability' aligned with an overarching OSM strategy: *"Modern and Ready: A Vision for the CAF Health System."*



# ANNEX A – DEFINITIONS

1. The definition of the Sustainment Enterprise and of its sub-components have not been fully defined within CAF joint doctrine. Only some functions of the Sustainment Enterprise (i.e. Operational Support) are officially defined. It is important to note that the definition of Operational Sustainment, Operational Sustainment Modernization, and how CFHS Modernization is defined and how it fits within this Tranche-2 of the OSM Strategy are being defined in this document. Currently established definitions are as follows:

**Capability:** Is defined as the ability to contribute to the achievement of a desired effect within a given environment, within a specified time, and the effective sustainment of that effect for a designated period.

**Capability Domains:** Within the capability-based planning process, capability domains reflect a conceptual capability framework that categorizes specific capabilities within six capability domains (Command, Sense, Act, Shield, Sustain, and Generate).

**Operational Functions:** Consist of five functions (Command, Sense, Act, Shield, and Sustain) that are integrated into all operational and tactical levels of war.

**Operational Support (OS):** Operational support is the action of a force, or portion thereof, which directly aids, protects, complements, or sustains the operations of another force. OS is provided by a supporting command either within a theatre of operations or along the strategic lines of communication.

**Sustainment:** Sustainment is the ability to maintain effective military power to achieve the desired effects. It includes the planning for all administrative arrangements necessary for the successful implementation of the campaign plan, including logistic and personnel support. Ensuring a sound sustainment plan is part of the operational planning process.

**DefenceX:** Formerly known as the Defence Resource Management Information System Modernization initiative, the project was rebranded as DefenceX because it reflected more than just a technology upgrade

for the DND/CAF; but rather an organizational change management and business transformation initiative. DefenceX aims to ensure the establishment of a seamlessly synchronized, effective, responsive, and resilient medical supply chain that is linked to the EHRP; which reflects not only end-to-end asset visibility but also provides for a trusted joint logistics readiness information and data-analytic capability.

**Institutional Sustainment:** Is a component of the Sustainment Enterprise and the doctrinal function of Sustain. It constitutes the integrated strategic sustainment activities that function horizontally within DND Level 1 organizations (largely excluding CAF), within other government departments and industry, to deliver the readiness requirements of the CAF. Strategic sustainment activities generally include, but are not limited to, the exercise of Departmental functional authority for the policy and processes that enable the execution of Operational Sustainment and Operational Support.

**Joint Enabling Capability:** Reflects a CAF organizational and pan-domain grouping, which is defined by distinct personnel, training, process, role and governance parameters aimed at delivering military sustainment effects within the Sustainment Enterprise. The joint enabling capabilities are: Joint Logistics, Health Services Support, Royal Canadian Electrical Mechanical Engineers, Communications Information Systems, Military Police, and the Joint General Support Engineers.

**Operational Sustainment:** Is a component of the Sustainment Enterprise and the doctrinal Function of Sustain. It provides for a communicating and alignment function between Operational Support and Institutional Sustainment, which encompasses all joint enabling capabilities.

**Operational Sustainment Modernization:** Is defined as the requisite alignment of people, processes, technology, and governance/C2 needed to create a cohesive sustainment effect, across all joint enabling capabilities within the Sustainment Enterprise.



**Sustainment Enterprise:** Reflects all of the DND/CAF organizations, people, equipment, and data engaged in the provision of sustainment effects which enables defence readiness and the conduct of operations; it broadly encompasses Institutional Sustainment, Operational Sustainment and Operational Support.

**Operational Sustainment for CFHS:** Encompasses all of the core military medicine corporate elements, such as the medical supply chain, the training establishments and programs, and the health programs that support the CAF population both in-garrison and on operations. CFHS operational sustainment also reflects the force development and capability development required to analyze, plan, and sustain these unique operational military healthcare requirements.

**Total Health Care:** This new approach will favour an all-inclusive, comprehensive approach to patient care - known as Total Health and Wellness. This approach considers psychological wellbeing in the workplace, the physical work environment, and personal health; including physical, mental, spiritual and familial aspects of well being.

**Public Health:** Public health is defined as the science of preventing disease, prolonging life and promoting physical health and efficacy through organized community efforts. This is achieved through the sanitation of the environment, the control of communicable infections, and the education of the individual in personal hygiene. It is accomplished through the organization of medical and nursing services for the early diagnosis and preventive treatment of disease, and the development of the requisite social machinery which will ensure every individual in the community with a standard of living adequate for the maintenance of health.

**International Health:** Is defined as the global application of the principles of public health to problems and challenges that affect low and middle-income countries and to the complex array of international and domestic forces that influence them.

**Global Health:** Global health is derived from public health and international health, which, in turn, evolved from hygiene and tropical medicine. However, although frequently referenced, global health is rarely defined.

**Electronic Health Records Platform (EHRP):** The EHRP project will sustain and enhance the CAF's Digital Health capability by providing a commercial-off-the-shelf (COTS) Electronic Health Record Platform (EHRP) system, that will offer: modern operational and clinical decision-support tools, secure access to health information, the provision of advanced analytics, and an industry standard patient-centered experience.

**Central Medical Equipment Depot (CMED):** The CMED is a critical National Level Unit facility with the primary mandate to manage and provide Class VIII materiel in support of deployed and domestic operations. This includes the full spectrum of medical equipment, medical countermeasures, pandemic stockpiles, and high readiness medical kits.

**Damage Control Surgical Capabilities (DCS):** A DCS provides for a surgical intervention where the completeness of the immediate surgical repair is sacrificed to achieve haemorrhage and contamination control, in order to avoid a deterioration of the patient's condition. The potential deterioration of a patient's condition is normally the result of the initial trauma combined with possible physiological consequences of surgery. The DCS aim is to be able to provide damage control surgery within one hour but no later than two hours of wounding.

**Damage Control Resuscitation (DCR):** A DCR is a systematic approach to dealing with major trauma. It combines the catastrophic bleeding, airway, breathing and circulation paradigm with a series of clinical techniques, ranging from immediate lifesaving measures up to surgical interventions in order to minimise blood loss, maximise tissue oxygenation and optimise outcome. DCR measures are commenced by emergency medical personnel within one hour of wounding.

**Person Partnered Care:** Reflects an inclusive approach to healthcare which makes the patient the central focus and a contributing partner in the provision of services; instead of being simply the beneficiary by incorporating the inherent skills, expertise, and lived experiences of the patient.

**HRMS/Guardian:** Is the CAF Human Resource Management System of record responsible for the effective management, development and compensation of CAF members.

**Canadian Forces Health Information System (CFHIS):** The CFHIS (2002-2005) is the electronic-based replacement for paper health files. Correspondingly, the portability and electronic access to health information for Canadian Forces Health Services (CFHS) healthcare providers has been greatly improved. CFHIS is a “system of systems” and consists of several software products including the Purkinje® Electronic

Health Record, which is in turn integrated with separate laboratory, radiology, and dental software applications.

**Occupational Functional Point (OFP):** The OFP denotes that point in a CAF career where all qualifications required for initial employment within a military occupation have been achieved, and the individual can then be posted from the basic training or subsidized university training list to a trained effective strength position.

**Maintenance of Clinical Readiness Program (MCRP):** The MCRP is a training initiative designed to support the CAF mandate of maintaining a ready medical force, by providing military healthcare providers with the opportunity to preserve and enhance clinical competencies, which cannot be maintained at their normal place of duty. Most MCRP training is conducted at civilian hospitals and it is mandated annually as a ‘best practice’ requirement.

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# ANNEX C – ACRONYMS AND ABBREVIATIONS

ACSV - Armored Combat Support Vehicle	DOpS - Directorate of Operational Sustainment
ADM(DTO) - Assistant Deputy Minister Digital Transformation Office	DRBM - Defence Resource Business Modernization
ADM(CIO) - Assistant Deputy Minister Chief Information Officer	DRMIS - Defence Resource Management Information System
ADM(Fin) – Assistant Deputy Minister Finance	DSC - Defence Supply Chain
ADM(IE) – Assistant Deputy Minister Infrastructure and Environment	EHRP - Electronic Health Records Platform
ADM(Mat) - Assistant Deputy Minister Material	EMI - Enterprise Modernization Initiative
AMOR - Annual Military Occupation Review	ERP - Enterprise Resource Planning
ARA - Authorities, Responsibilities and Accountabilities	FOE - Future Operating Environment
ARRC - NATO Allied Rapid Reaction Corps	FD - Force Development
C2 - Command and Control	FE - Force Employment
CAF - Canadian Armed Forces	FG - Force Generation
CAFATC - CAF Arctic Training Centre	FI/CO - Finance/Comptrollership
CBC2 – Cloud Based Command and Control	FM - Force Management
CCSI - Chief of Combat Systems Integration	FOE - Future Operating Environment
CDS - Chief of Defence Staff	FVEY - Five Eyes
CFD - Chief of Force Development	GoC - Government of Canada
CFHS - Canadian Forces Health Services	GMP - Good Manufacturing Practices
CFHIS - Canadian Forces Health Information System	HLMR - High Level Mandatory Requirements
CFMWS – Canadian Forces Morale and Welfare Services	HR - Human Resources
CFJP - Canadian Force Joint Publication	HRMS - CAF Human Resource Management System
CMPC - Chief of Military Personnel Command	IM - Information Management
CIMIC - Civilian Military Cooperation	IT - Information Technology
CISM - Conseil International du Sport Militaire	IT&E – Individual Training and Education
CJOC - Canadian Joint Operations Command	JSS - Joint Support Ship Logistics
CMED - Central Medical Equipment Depot	L1 - Level 1
CMP - Chief Military Personnel	LOE - Line of Effort
CMPC - Chief of Military Personnel Command	LOG - Logistics
Comd - Commander	MCRP - Maintenance of Clinical Readiness Program
CONOPS - Concept of Operations	MEDEVAC - Medical Evacuation
COTS - Commercial Off the Shelf	MI - Materiel Identification
DCR - Damage Control Resuscitation	MM - Materiel Manager
DCS - Damage Control Surgical	MPC - Military Personnel Command
DFPS - Defence Forces Public Safety	NATO - North Atlantic Treaty Organization
DGMSSC - Director General Materiel System and Supply Chain	NCRHC - National Capital Region Health Centre
DGJIOS - Director General Joint Integration and Operational Support	NORAD - North American Aerospace Defense
DG Sp - Director General Support	OGDA - Other Government Department and Agency
DM - Deputy Minister	OFP - Occupational Functional Point
DND - Department of National Defence	OS - Operational Support
DOS - Director of Staff	OpS - Operational Sustainment
	OSM - Operational Sustainment Modernization
	PA - Physician Assisted
	P/T- Provinces/Territories
	PCC- Prolonged Casualty Care
	PDC2 - Pan-Domain Command and Control

PHAC - Public Health Accreditation Canada  
PHI - Personal Health Information  
PPC - Person Partnered Care  
PRes - Primary Reserve  
PSP - Personal Support Program  
SJS - Strategic Joint Staff

SSE - Canada's Defence Policy, Strong, Secure,  
Engaged  
Strat J4 - Strategic Joint 4  
WM - Warehouse Manager  
VAC – Veterans Affairs Canada  
VCDS - Vice Chief of Defence Staff