

Exercise Trillium Cura: Health System Preparedness as National Defence Strategy



Presented by:

- **Brigadier-General Colleen Forestier, M.D.**, Director General of Clinical Services, Canadian Forces Health Services
- **Dr. David Pedlar**
Professor, Queen's University and former Scientific Director of the Canadian Institute for Military and Veteran Health Research

May 9th, 2025

Centre for International Policy and Defence,
Queen's University

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Exercise Trillium Cura Report



Presentation Overview



- Purpose and strategic framing.
- Exercise structure and leadership.
- Key insights (lessons learned) across system domains.
- Implications for health and defence policy.
- Recommendations and next steps.



Within the scope of
Exercise Trillium Cura



Role 3 care and
limited Role 4 care



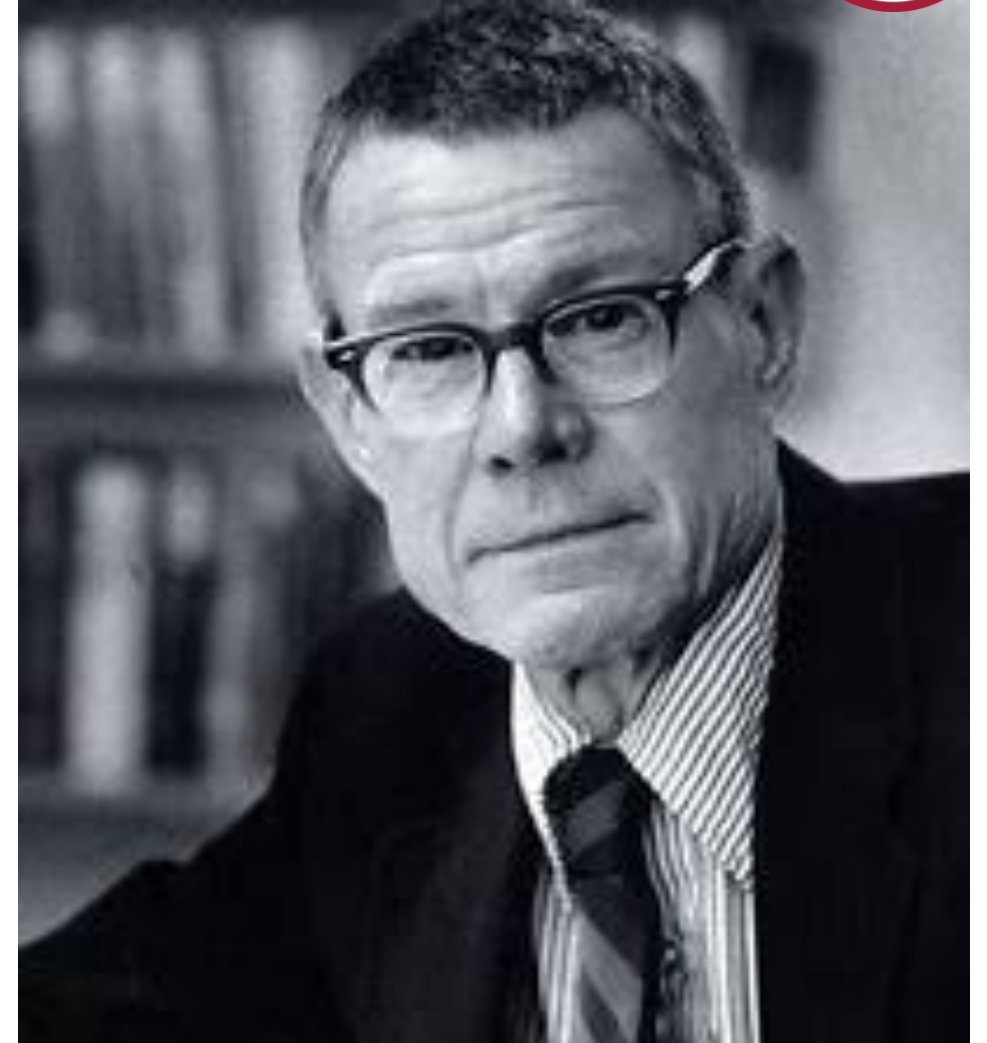
War Game Theory



*“Games have one quality that separates them qualitatively from straightforward analysis and permits them to generate insights that could not be acquired through analysis, reflection, and discussion. **That quality can be illustrated by the impossibility theorem:** one thing a person cannot do, no matter how rigorous their analysis or heroic their imagination, is to draw up a list of the things that would never occur to them.”*

Thomas Schelling (1987)

Economist, Professor, and Game Theorist



Exercise Leadership



Nationally Led and Clinically Anchored

- Coordinated by leaders in defence, trauma care, public health, and military-Veteran research.

Key Organizers

- **Dr. Adalsteinn Brown**, Dean of the Dalla Lana School of Public Health, University of Toronto.
- **Brigadier-General Colleen Forestier**, Director General, Clinical Services, Canadian Forces Health Services.
- **LCol Andrew Beckett, MD FRCSC**, CAF Trauma Advisor, Director of Trauma St. Michael's Hospital
- **Anthony Robb, David Redpath**- Canadian Forces Joint Warfare Centre
- **Dr. David Pedlar**, Professor, Queen's University and former Scientific Director, Canadian Institute for Military and Veteran Health Research.
- **Dr. Dan Klein**, Emergency Physician, Unity Health Toronto.



Exercise Framing and Purpose



Strategic Tabletop War Game Ex

- Conducted November 2024.
- Simulated sustained repatriation of injured military personnel.
- Tested system coordination, not clinical procedures.
- Designed to reflect real-world operational stress and uncertainty.

Framed as National Defence Strategy

- Focused on system integration and readiness.
- Informed by “all-hazards” and whole-of-government lens.



Exercise Participants and Observers



Public Health
Agency of Canada

Dalla Lana
School of Public Health

Public
Health
Ontario

Santé
publique
Ontario



HARVARD
UNIVERSITY

nova scotia
health



Canadian
Blood
Services

BLOOD
PLASMA
STEM CELLS
ORGANS
& TISSUES



Public Safety
Canada

Sécurité publique
Canada

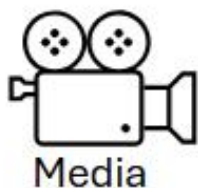


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Strategic Rationale



Strengthening Civilian-Military Health Integration through an "All Hazards" Lens

- Canadian Armed Forces depend on provincial systems for specialized and inpatient care.
- No dedicated military hospitals in Canada.
- Large-scale casualty repatriation would require coordinated national response.
- Opportunity to reinforce operational partnerships across health and defence sectors.
- Health system readiness deserves consideration as a strategic pillar of Canadian security strategy.

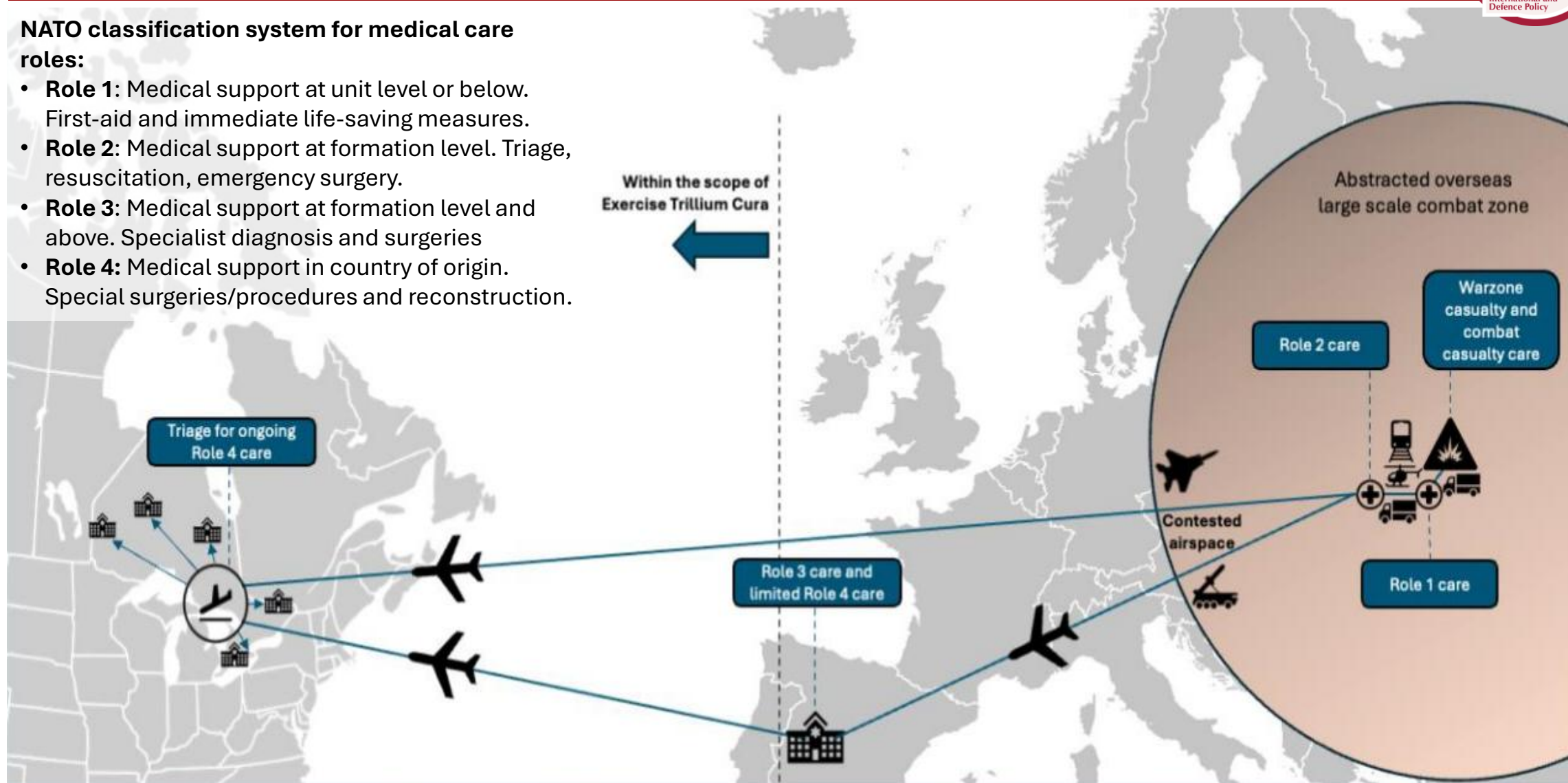


Canada's Strategic Evacuation Plan (STRATEVAC)



NATO classification system for medical care roles:

- **Role 1:** Medical support at unit level or below. First-aid and immediate life-saving measures.
- **Role 2:** Medical support at formation level. Triage, resuscitation, emergency surgery.
- **Role 3:** Medical support at formation level and above. Specialist diagnosis and surgeries
- **Role 4:** Medical support in country of origin. Special surgeries/procedures and reconstruction.



Timeline and Exercise Format

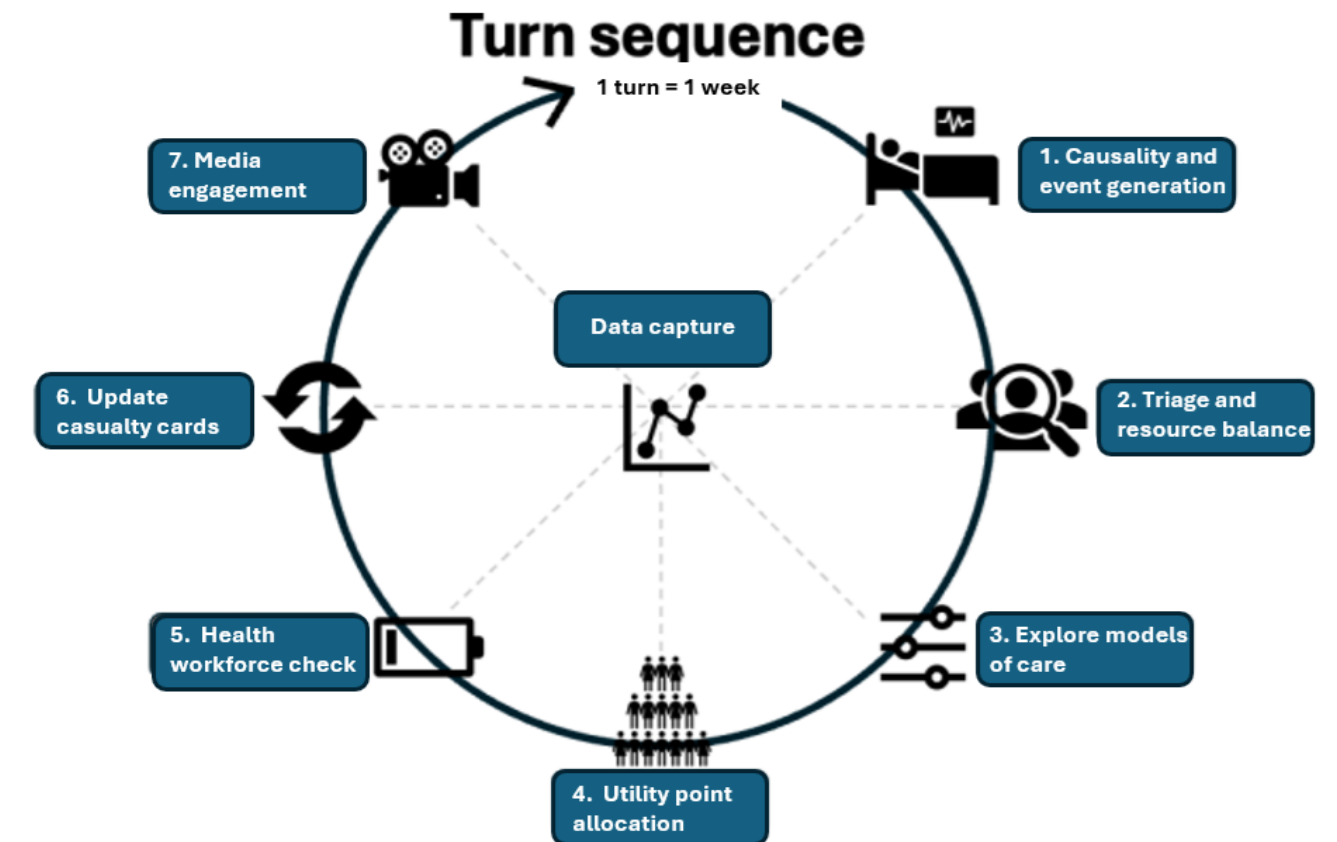


Collaborative Design and Execution

- Concept developed: June 2024.
- Multi-agency planning: July–October 2024.
- Exercise conducted: November 6–8, 2024.
- Hosted at Unity Health Toronto (St. Michael's Hospital).

Format

- Strategy-level tabletop exercise.
- Real-time injects, structured decision-making roles.
- Framed around sustained operational pressure and system-wide coordination.



Lessons Learned: Leadership and Governance



Defining and Coordinating the Casualty Management Process

- Managing and tracking casualties repatriated back to Canada requires national-level oversight and command and control.
- Provincial Patient Evacuation Coordination Cell structure needs to be defined with clear roles and responsibilities.
- Strengthen alignment across federal, provincial, and clinical systems.
- Embed risk communication and public trust, and family engagement strategies.



Lessons Learned: Service Delivery & Operational Capacity



Planning and Operationalizing Triage and Pathways to Care

- Identifying organizational responsibility is essential for efficient transport across casualty pathway from repatriation to onward care.
- Consider a national repatriation hub to support strategic evacuation and re-triage.
- Consider incident management structures.
- Artificial intelligence (AI), guided by an ethical framework, to support swift and effective triage.
- Casualty pathway algorithms needed to ensure coordinated care.



Lessons Learned: Service Delivery & Operational Capacity



Ensuring Health System Readiness to Deliver High Quality Care for Complex Casualty Injuries.

- Contingency plans must be developed to expand health system capacity with actionable plans for surge-readiness that includes personnel, infrastructure, and supply strategies.
- Management and care of non-Canadian casualties, including captured persons, requires inter-agency administrative readiness.
- Ongoing rehabilitation and mental health care requirements must be considered.



Lessons Learned: Health Workforce



Building a Scalable and Supported Workforce

- Workforce resilience is foundational to sustained operations.
- It is essential to plan for expanding health workforce capacity, expediting specialized training and “burnout” prevention.
- Enable inter-provincial licensure of health professionals for rapid deployment.
- Embed robust mental health supports for the health workforce.



Lessons Learned: Medical Products and Technologies



Optimizing Strategic Supply Chain Readiness

- Ensure coordinated access to trauma- and burn-specific products.
- Clarify roles across federal, provincial, and institutional stockpiles.
- Plan for transportation, storage, and surge distribution logistics.
- Integrate supply planning into operational readiness frameworks.



Lessons Learned: Information Systems



Developing Robust Systems for Information Management and Sharing

- Privacy, legal, and technical protocols for interoperability is essential for sharing casualty information.
- Military, federal, and provincial health systems of record/management must address key interoperability gaps.
- A trauma registry or pan-Canadian patient registry is essential.
- Include efforts to strengthen cyber-security as part of preparedness planning.



Implications for the Canadian Health System



Health Preparedness as National Defence Capability

- Reinforces Canada's sovereignty and response leadership.
- Civilian-military integration enhances resilience across sectors.
- Builds public trust through visible, coordinated action.
- Supports continuity of care during protracted emergencies.
- Positions Canada to lead internationally on health security policy.



Strategic Recommendations



Strengthening Canada's National Readiness Posture

1. Establish a Patient Evacuation Coordination Cell with clear mandate.
2. Expand surge planning for specialized services and workforce deployment.
3. Integrate supply chain and information systems into national planning.
4. Advance civil-military governance and communication protocols.
5. Embed public trust, mental health supports and family engagement in all readiness efforts.



Future Directions



Toward a National Tabletop Preparedness Exercise

- Fall 2025: Expand scenario to full repatriation continuum.
- Include multiple provinces, civilian and military partners.
- Test governance, logistics, and long-term care coordination.
- Position Canada as a global leader in health emergency strategy.

Conclusion and Q&A



Health System Readiness is National Defence

- Exercise Trillium Cura highlights Canada's strengths and strategic opportunities.
- Civil-military cooperation is essential for sustained national emergencies.
- Preparedness is a shared responsibility — across jurisdictions and sectors.
- Next steps are already underway.

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