

Improving Healthcare Support to Allied Military Operations

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In the North Atlantic Treaty Organization (NATO) Allied Nations are responsible for their fighting force and rely on their own systems of command and control in order to **monitor and manage the quality of healthcare** during combat operations. **Multinational medical initiatives grow constantly and require an unprecedented coordination for a supranational level of clinical governance.** Best agreed standards of care must be developed to reduce interoperability gaps in delivering best practice in a continuum of care starting as close as possible to the fighting force.



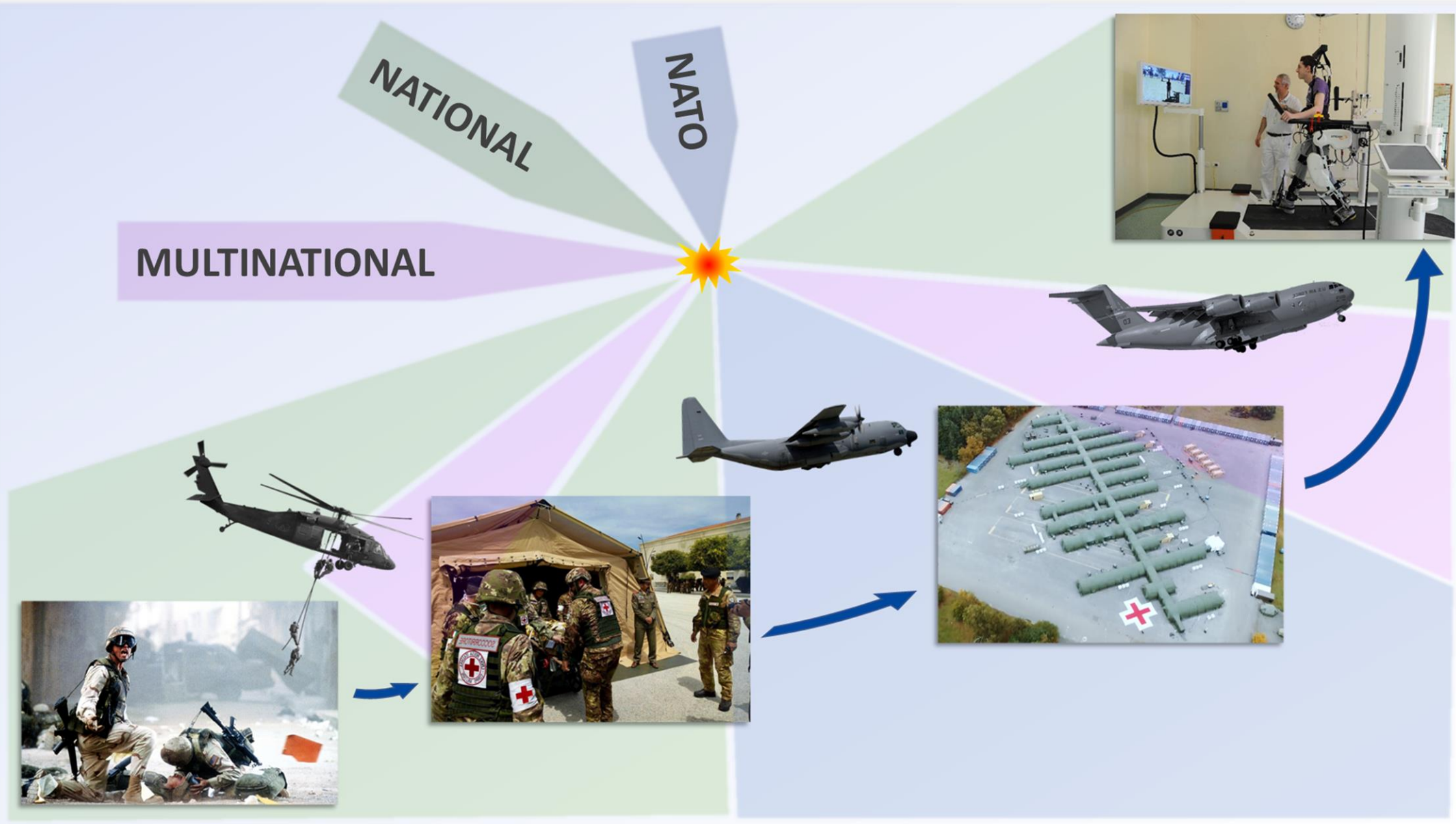
Clinical governance in operations is also specific for each combat environment and the health-related risk mitigation **must be rapidly adaptive according to evolving situations.** Continuous Improvement in Healthcare Support to Operations (**CIHSO**) represents an evolution of clinical governance in NATO policy to translate evidence in quality of healthcare services. CIHSO is the result of three main features of modern multinational military healthcare organizations: accountability for safety and risk management, quality in the selection of the standards, and improvement in performance.

ACCOUNTABILITY

In Allied operations, **three levels of medical responsibility** are immediately clear according to the degree of delegated authority that nations hand over to the collective delivery of medical services:

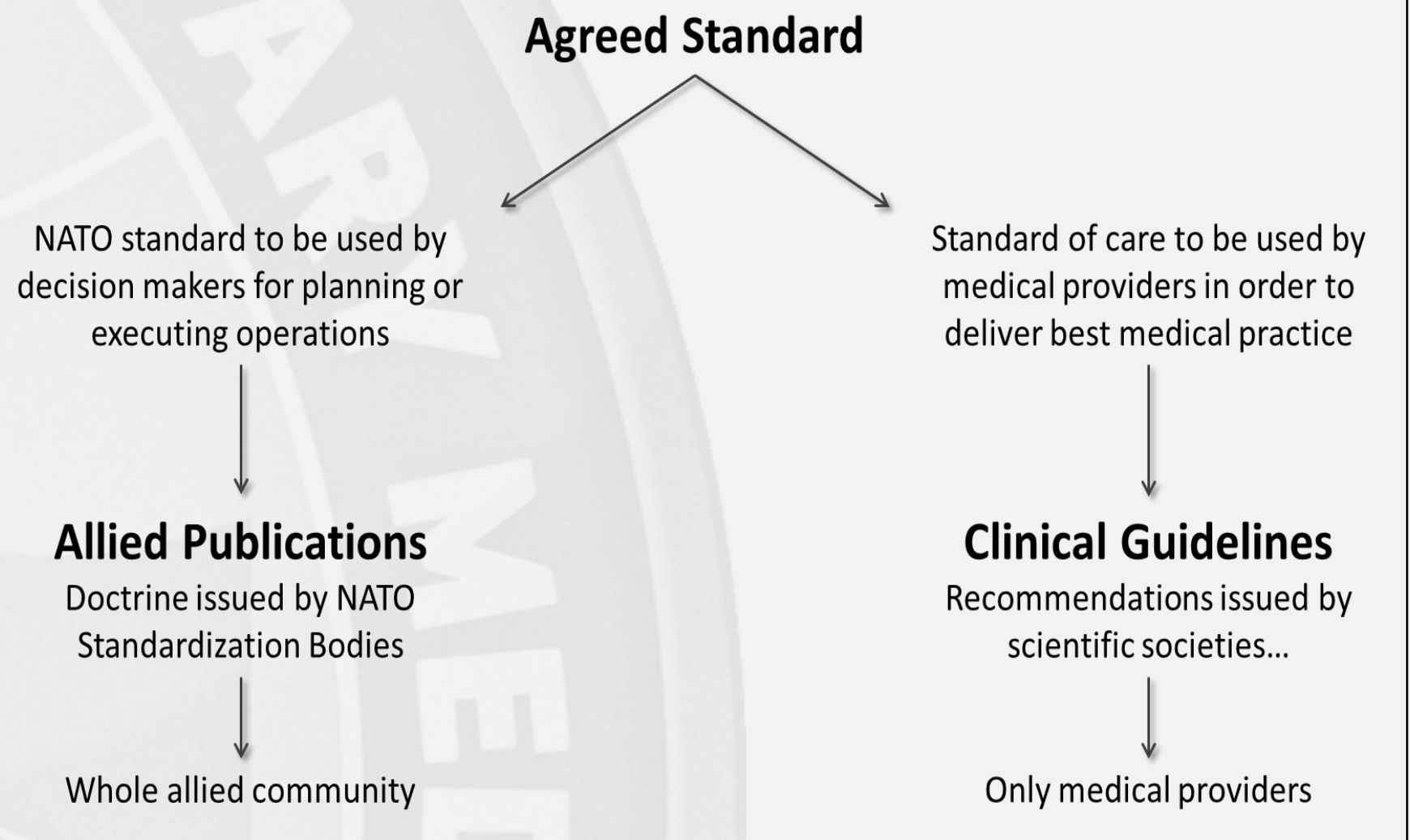
- Nations are the risk owners for their own troops and develop support capabilities in accordance with their level of ambition.
- Multinational agreements provide a cost-effective solution to share and contribute to common medical services.
- NATO commanders and their medical staff represent the only authorities to regulate theatre medical assets and to be aware of the current practical options across the whole battlespace.

Without the corresponding development of a quality management system **the growing number of customized solutions may imply more fragmentation in accountability and lack in transparency** in the organization of medical services.



STANDARDS

NATO standards are documents, established by consensus among Allied Nations that **provide, for common and repeated use, rules, guidelines or characteristics for activities or their results, aimed at the achievement of the optimum degree of order in a given context.** Medical standards in Allied Publications are directions for a wide military community to plan, train and conduct operations (i.e. the NATO 10-1-2(+2) guideline) and should not be interpreted as clinical rules for the practice of medical providers. In order to tell a target medical community how to deliver best practice, the right format is with clinical practice guidelines (i.e. The Use of Blood Products in Combat Operations). Military medical leaders select, adapt and relay applicable guidelines to their clinical environment in order to achieve a uniform distribution of validated knowledge.



IMPROVEMENT

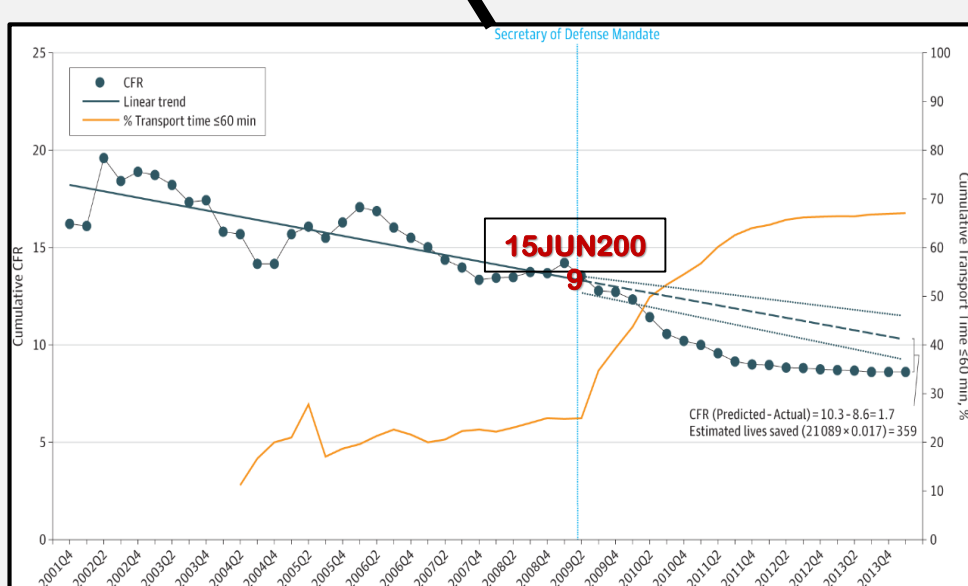
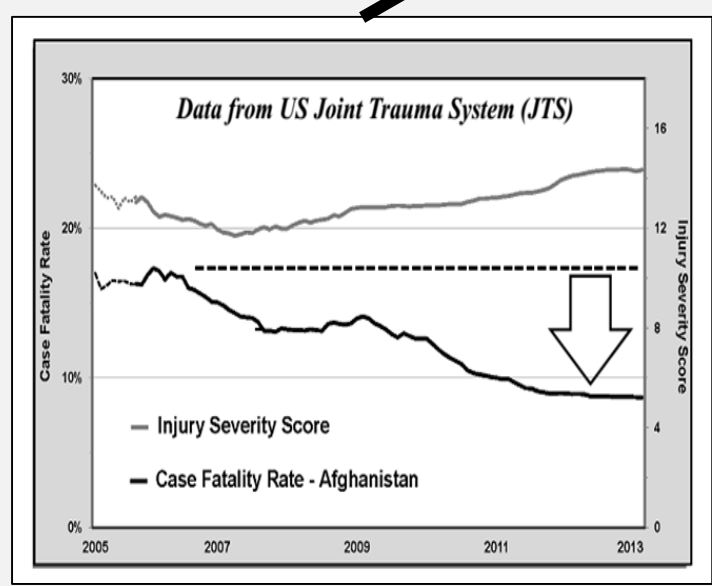
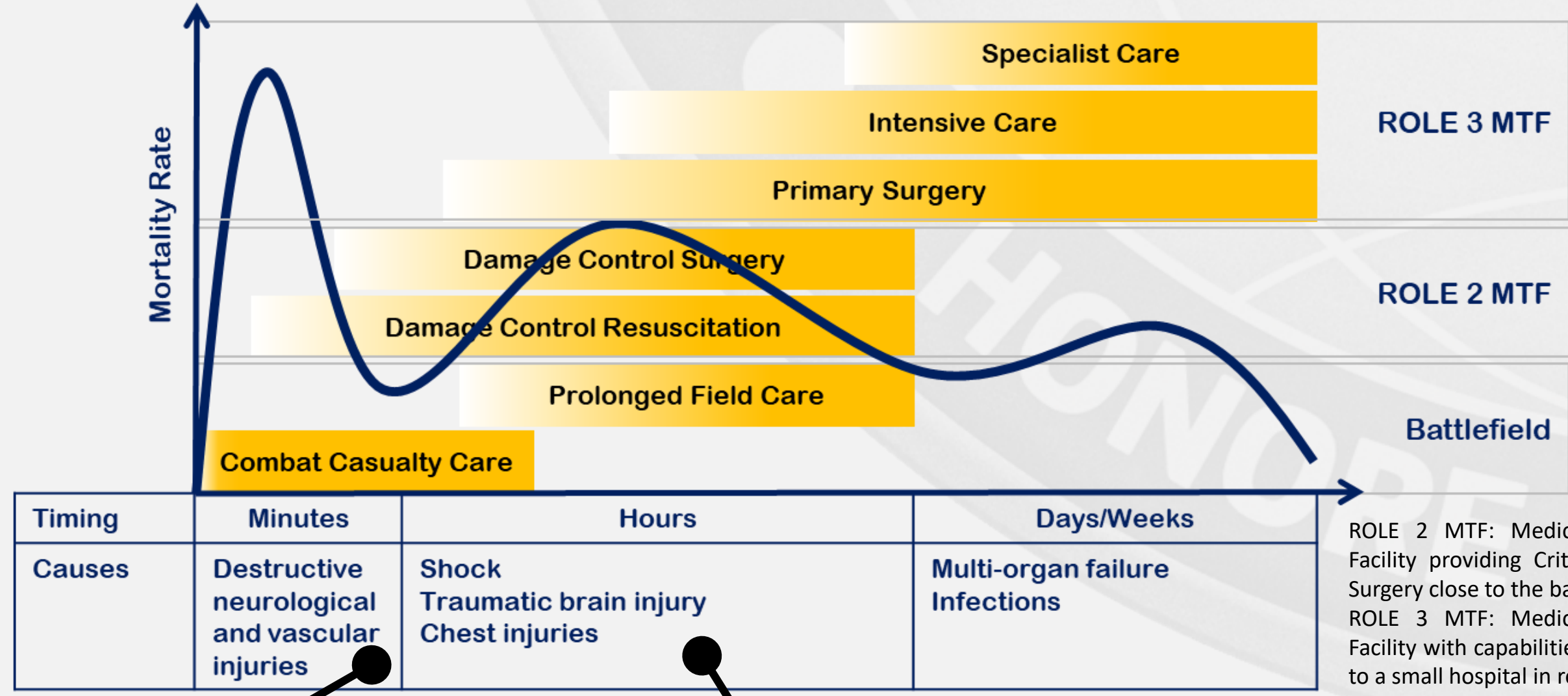
In a learning organization, improvement refers to the optimization of already existing solutions and considers future as a **result of the integration of experience with evidence so that remedial actions lead to predictable patient outcomes.** Differently from civilian organizations, military healthcare support systems are part of wide operational community driven by military requirements and military objectives. A **comprehensive awareness of the battlespace** and a deep understanding of the medical requirements are primary **requisites to assess how and if clinical evidence that supports clinical solutions in clinical environments is also applicable to military campaigns.**

A **typical deployed healthcare system has two core clinical pathways (CP), one for major trauma and one for disease.** The two (or more) pathways are networked by the evacuation assets like in a hub-and-spoke organization so that all medical capabilities can be accessed by all patients as needed. The separation of care in clinical pathways helps medical managers to **better monitor the relative performance and focus the necessary interventions to improve quality.**

MAJOR TRAUMA PATHWAY (based on surgery)

Characterized by surges of serious injuries in austere unsafe locations
Blast and penetrating injuries, burns; higher forces than civilian stats
~35% severe trauma; ~85% die prehospital; ~20% potentially survivable

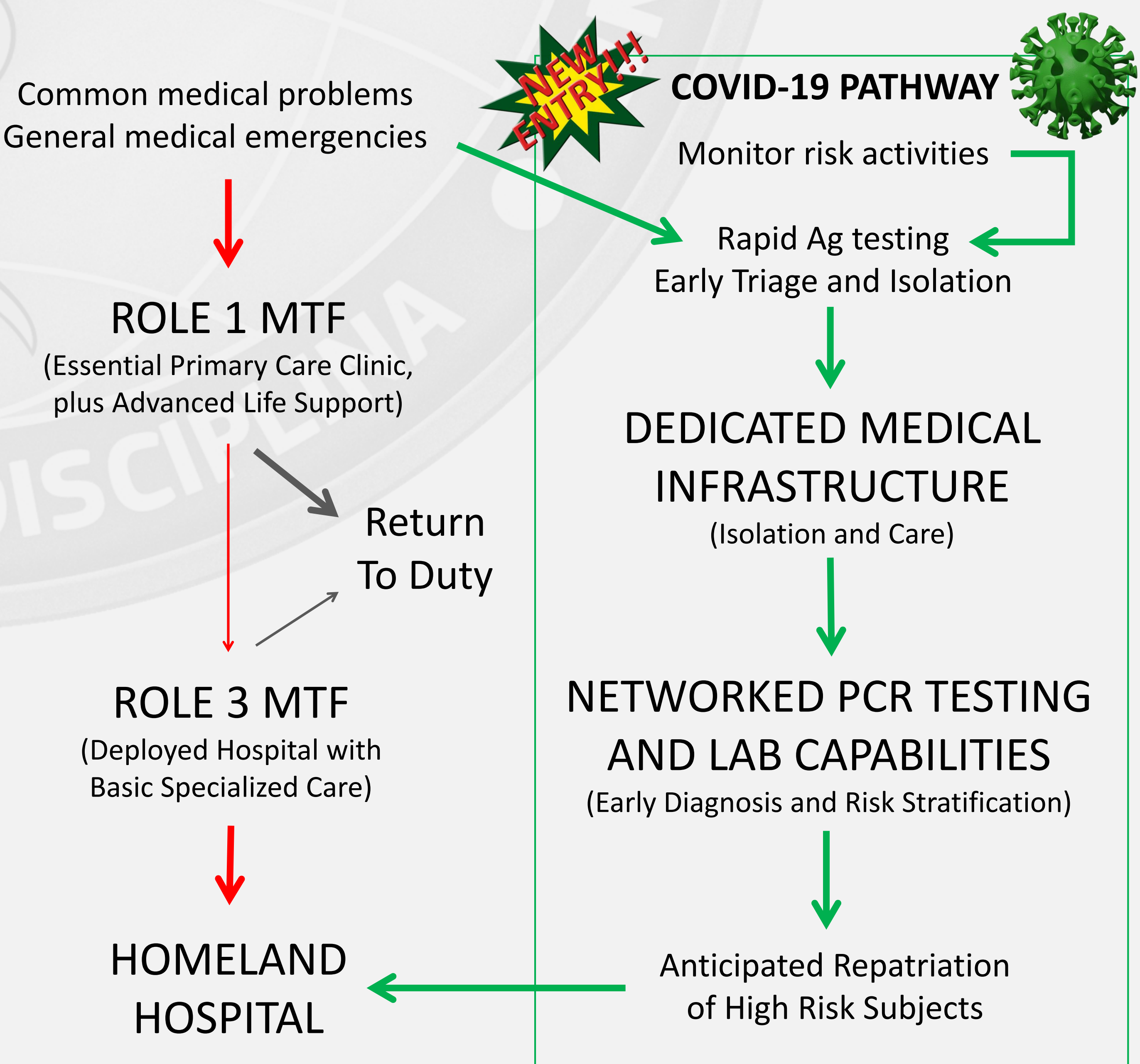
Mortality Rate of severe trauma patients over time and medical strategies used to mitigate lethality of injuries



Case Fatality Rate
= **15,8% vs 9,4%**
Vietnam Iraq/AFG

DISEASE PATHWAY (based on primary care)

Characterized by constant flow of minor problems
Musculoskeletal complaints, common sickness, mental support.
~0,1-0,3% of the force/day; ~16% evacuated; <5% emergencies



SUMMARY

CIHSO is an evolution of clinical governance to ensure quality in deployed healthcare systems. Clinical governance can succeed in delivering best medical practice deep into NATO campaigns if accountability is acknowledged at all levels of leadership. NATO uses CIHSO as a framework for clinical governance to mitigate interoperability gaps with accountable decision makers. Consequently, it is important to rely on agreed medical standards with separated requirements for medical providers and the whole military community. In highly dynamic military systems exposed to mutable threats, allied healthcare support must be able to adapt quickly and improve by setting measurable targets of performance, reduce vulnerability in applied methods and keep an acceptable balance between feasibility of medical solutions and their sustainability in an operational environment.