



# Quality Improvement Plans in Allied Air and Space Commands. A Case Study from the NATO STEADFAST JUPITER-JACKAL 2020 Exercise.

Maj. Jacopo Frassini, MD<sup>1</sup> – LTC Giovanni Biondi, MD<sup>2</sup>

<sup>1</sup>NATO Centre of Excellence for Military Medicine – <sup>2</sup>Italian Air Force - Aerospace Operations Command

## BACKGROUND



NATO is an evolving organization with now 30 member States. **Different systems must be harmonized to be interoperable** and effective in the accomplishment of the Alliance core tasks.



Geopolitical scenarios evolve rapidly, and allied commands may have limited opportunities to have their **multinational personnel trained together** in collective exercises.

In the difficult context of multinational combat operations, **patient outcomes are negatively affected** by scarce adherence of medical solutions with the changing requirements of military campaigns and **by fragmentation in medical and non-medical decision making**.



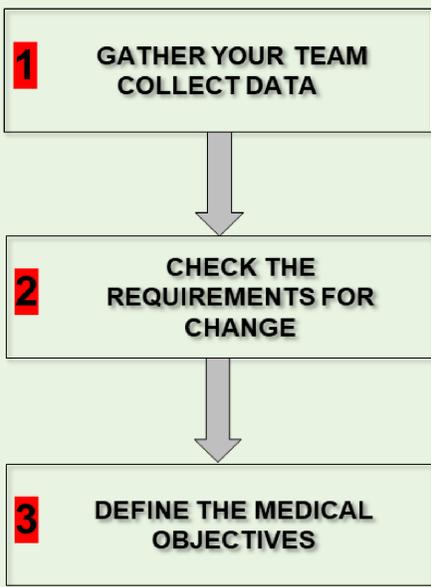
**Clear plans are needed so that quality in healthcare is maximized for the operational context.** Medical solutions need to be constantly harmonized with other functions of the headquarters and negotiated with stakeholders with little common background but in critical roles for the successful delivery of healthcare support improvements to the force.



## THE (ASPIP) PLAN DESIGN

### HEALTHCARE QUALITY APPROACH

- Organize a teamwork where different contributors collect information about:
  - the affected community
  - status of supplies
  - available capabilities, resources
  - outsourcing/contracting opportunities...
- Wargame/brainstorm practical solutions with other relevant medical/non-medical stakeholders according to the acquired information and risk assessment in the context.
- Define/prioritize medical interventions, examining different options with other medical staff elements (consider teleconferencing with Flight Surgeons in lower/higher formations, other experts...)

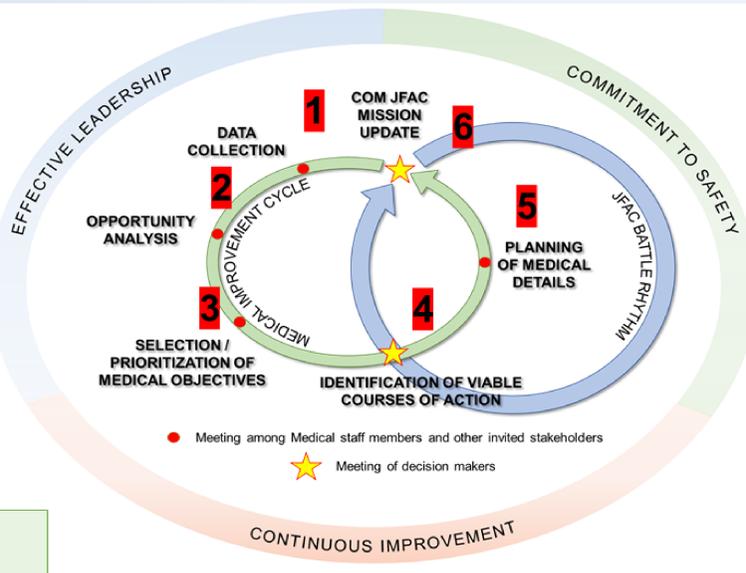


What happened?  
Define the problem.

Is it really worth changing?

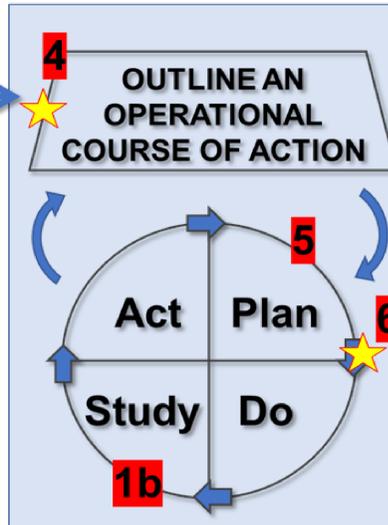
State the objective/s in measurable terms.

Medical end-state is identified but operational synergies not yet



### OPERATIONAL ALIGNMENT

- Intercept decision-makers in the battle rhythm of the Air Command (JFAC) to finalize and coordinate viable courses of action.
- Design an action plan to achieve the stated medical objective/s
- Accomplish the Commander's approval and authorization to deliver the action plan
- Continue monitoring the evolution of the tactical situation and modify as needed the action plan according to reports from the field or new knowledge that may be helpful to improve the outcomes.



How can medical changes/improvements be delivered to the population at risk in the current operational circumstances?

**Plan** - 5Ws&H (What, Who, Where, When, Why, How) of the process to deliver the changes

**Do** - Administer the plan and control the execution

**Study** - Analyse, compare and summarize results

**Act** - Finalize changes and identify new requirements

## METHODS

**Context:** A novel approach for a military command, shaped as an Aeromedical Safety and Performance Improvement Plan (ASPIP), was conducted during a large command post computer-assisted joint forces NATO exercise in a Non-Article 5 Crisis Response Operation.

**Strategy for Change:** Implementation of an ASPIP capable of connecting medical with non-medical decision-making in the air and space operational command

**Scenario:** the Medical Branch assigned to the Joint Forces Air Component Command (JFAC) was challenged receiving a report of a dangerous complication of an otherwise trivial endemic infectious disease occurred in an aircrew member (see the situational report in the picture on the right about the fictional Southern Wind Ophthalmic Disease - SWOD). The development of complications was related to the exposure to cabin conditions. The clinical outcomes in the crews could have compromised the safety of all air operations and the sustainment of the whole military campaign. A medical response was needed in order to protect the personnel and the mission.

**Data Analysis:** For the specific design of military exercises, the outcomes of the ASPIP are assessed according to the observations provided by the training audience to improve applied practices.

## RESULTS

OBSERVATION	LESSON IDENTIFIED
The ASPIP introduced the idea of having a <b>COMMON MINDSET</b> to coherently and reliably direct the efforts towards the maximization of healthcare outcomes for the personnel at risk	Organizations should promote methods for: 1. effective leadership, 2. safety as a common concern and 3. quality improvement as an adaptable multidisciplinary process.
The development of a viable medical plan to respond to the new threat had a <b>TIME LIMIT</b> of 72 hours in order to be issued in conjunction with the Air Tasking Order (ATO) to lower formations	Medical meetings should last 30 min or less in order to fit the standing workflow in the command and involve all needed non-medical stakeholders (i.e., log, admin, finance, plans, operations).
The COVID-19 restrictions reflected in a <b>REDUCED NUMBER OF PARTICIPANTS</b> at the meetings than expected.	4 to 7 people successfully attended the technical medical meetings (red dots in the Medical Improvement Cycle of "The (ASPIP) Plan").
The combination of small teams and limited time fostered prompt <b>SHARED UNDERSTANDING</b> of final goals, available means and core requirements, focused on most relevant issues.	Urgent medical measures can be anticipated, selected and implemented ahead of the release of the action plan within 24 hours in the simulation.
Non-medical and medical participants reported a <b>BETTER EXPERIENCE</b> in organizing their tasks when working on clearly formulated medical objectives.	Clearly stated measurable medical objectives served as a common reference to direct and prioritize the efforts in a single multidisciplinary course of action.

## CONCLUSIONS

- Aeromedical Safety and Performance Improvement Plans (ASPIP) may represent keystone documents for medical advisors in allied air and space commands to assist the harmonization of aerospace medical solutions with combat requirements.
- Synergies achieved in a structured team-based decision making can enhance the synthesis of multidisciplinary information to generate aerospace medical situational awareness and the development of solutions to accomplish quality in operational military healthcare with optimized effectiveness and efficiency.