NATO CENTRE OF EXCELLENCE
FOR MILITARY MEDICINE
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SUBJECT: **STRATEGIC GUIDANCE FOR KNOWLEDGE MANAGEMENT FOR NATO CENTRE OF EXCELLENCE FOR MILMED COE**

Introduction

In October 2014, the Chiefs of the Medical Services in NATO (COMEDS) designated MILMED COE as the Knowledge Management (KM) hub for NATO Military Medicine. This designation was supported by IMS and NCS and has been added to the Program of Work for the MILMED COE. Since that time the COE has been developing a KM capability within its website. The aim of this KM capability is to capitalize on the extensive network of Subject Matter Experts (SMEs) within and associated with NATO Health support services and to provide an avenue for the flow of information and knowledge between key stakeholders within and outside the alliance. It is also intended to improve the collection and sharing of medical information and to facilitate the interactions of SMEs. The resources made available through this process will support the transformational goals of NATO by providing relevant data, information and knowledge on topics related to Health Support Services especially for missions abroad within a military context and to support the work of MILMED COE.

As the amount of data, information and knowledge increases it is becoming more critical that organizations develop and use processes for sharing, de-conflicting and fusing available input to benefit the entire organizations. In order to address this growing challenge, NATO developed a Knowledge Development Pre-Doctrinal Handbook in 2011 which provides Command level guidance for developing Knowledge Management systems within the NATO context.

One challenge facing Military Medical systems, as noted in MC 326-3 (5), is "the public expectations of high quality medical support continually increase and the aim of military medical support on operations is to support the commander's intention through timely and effective health and medical services to the troops to achieve outcomes of medical care equating to best medical practice." A related challenge concerns the broad range of sources of new and existing information and the amount of resources required to provide cutting edge health support services.

The organization, presentation and use of data and information that allows the creation of knowledge is known as Knowledge Management (KM). KM is a systematic approach to achieving organizational objectives by optimizing the use of knowledge. To achieve this, individuals locate and capture existing knowledge, identify links and promote exchange and distribution. The primary agents for functional KM are people, their skills, cooperation and interactions.

For these challenges NATO Military Health Support Services needs a KM management process that is efficient and responsive and is general enough to collect information concerning all aspects of Health Support Services primarily within military organizations but also capitalizing on knowledge, skills and expertise of civilian counterparts but that has organized the collected input to allow easy cross-linked access for the users of the system.

Terms and definitions

To implement a KM system an understanding of the concept of "knowledge" is needed as well as a grasp of the existing assets that can be leveraged for the system. Knowledge is different from data and information. Data represents something perceptible, such as a quantity of an item for instance, information is data that is considered within its context or after it has been processed by a person; there may be a quantity of an item but it is not where it need to be when it needs to be there. Knowledge is information combined with capabilities and skills to solve an issue and in the case discussed would include how to move the item to where it needs to be but to also determine why it was in the incorrect location in the first place and what system adjustments need to take place to reduce the likelihood of that occurring again.

When considering the assets available for the KM system, the MILMED COE has built up a significant pool of partners and resources able to be applied to the creation and maintenance of the KM system. Those assets include and extensive network of military-medical SMEs, developing Communities of Practice or Communities of Interest (COP/COI), and a network of relationships with Health support services related entities in addition to an existing mechanism for collecting, processing, and sharing information within the LL process.

Also the Centre has technical tools to support KM system development and staff assigned to plan, coordinate and execute the KM strategy.

As with any KM system, the strength of the MILMED COE's KM is its network and support from Subject Matter Experts (SMEs), their skillset and knowledge, the already captured and verified knowledge and ability to make that information and knowledge readily available and enhance cooperation for all stakeholders.

Knowledge Management and its Core Process:

The core processes for KM are listed below and the KM cycle is depicted in the figure. These items are all part of a mature system and the COE's implantation of the KM for health support services will necessarily develop and implement them in a manner dictated by the evolution of the system.

- Knowledge identification refers to the analysis and description of what knowledge is pertinent to the stakeholders.
- Knowledge acquisition concerns the collection of knowledge and ensuring input from sources outside of the organization is critical to limit entrenched thinking.

- Knowledge development focuses on taking the acquired knowledge and producing new skills, new products, better ideas and more efficient processes.
- Knowledge sharing and distribution considers what data, information and knowledge are available to which participants. Consideration of the classification of the information and potential ramifications of certain information is critical to ensure the trust of stakeholders.
- Knowledge use is the main purpose of KM systems and organized review of the access to and use of the KM system will help improve the return for investments of time and energy.
- Knowledge preservation is a key part of KM and is specifically addressed within the Lessons Learned facet of the KM system.
- Knowledge goals or what are the desired results of the efforts to establish a KM system collect help drive the implementation and focus of the system development.
- Knowledge assessment is the active consideration of the collected and processed information in order to ensure the collected information addresses the needs of the users.
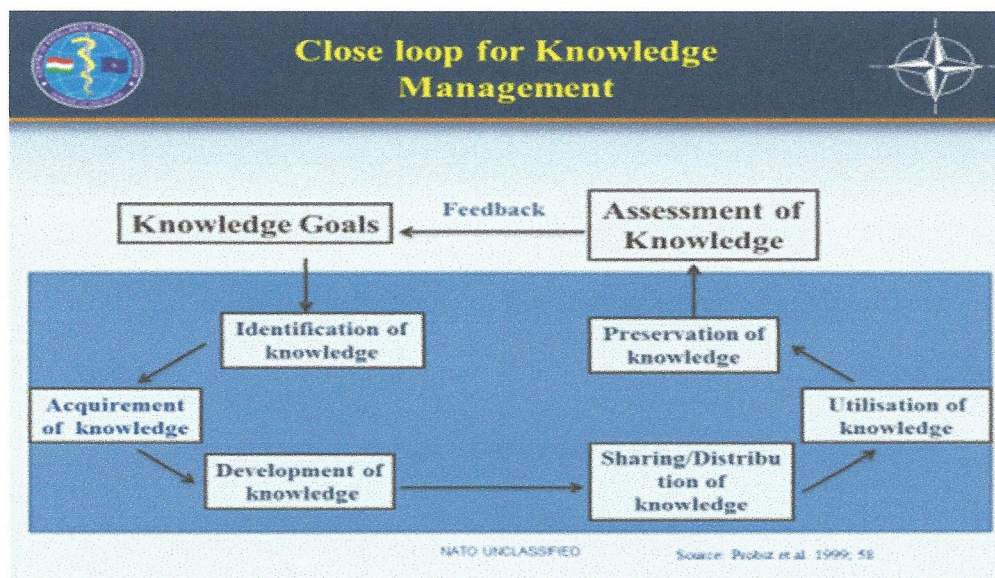
Probst, G., Raub, S., Romhardt, K. (2010). Wissen managen. Wie Unternehmen ihre wertvollste Ressource optimal nutzen. 6. Auflage. Gabler, Wiesbaden, page 32

Military Medicine and Health Care Process

While the developing system is focused on NATO Military Medicine, neither NATO nor Military Medicine exist in isolation and close interrelations exist between NATO, its member and partner nation militaries and civilian health systems. The techniques, processes and advances within the civilian health sector inform and guide the same aspects within Military systems and vice versa. Additionally, national health laws, the legal status of military personnel and international laws and agreements impact the delivery of military Health Support Services. It is within this interconnected framework that NATO Health Support Services must function and therefore it is required that the KM system for NATO Health Support Services is developed with these needs and connections in mind.

Knowledge Management Strategic Goals

The overarching goal of the MILMED COE KM system is to provide to the Alliance and its partners, a central hub for supporting the optimization of Health Support Services by acting as the coordinator and facilitator for communication between and amongst its stakeholders. The collection, organization and sharing of data, information, knowledge, good and best practices and the provision of a platform for connections between SMEs and participants, will ensure the continued excellence of the provision of Health related services to missions abroad.

In order to collect the correct information and resources the KM process will focus on the general topics of Interoperability, Best Practices and Lessons learned, Evaluation of medical units or capabilities and Collective and Individual Training.

Target audiences and stakeholders

As implied above, the KM system of the MILMED COE is not intended solely for the COE staff or for NATO Health Support Services but will only be successful if it can reach those audiences and stakeholders but also the wider group of NATO member and NATO partner nation military Health Support Services as well as all other affiliated entities. Therefore the KM system is closely connected to the overall professional communication efforts of the MILMED COE and the two efforts should support each other. By definition the KM system will target the professional audience of the MILMED COE (see Communications Strategy), but its products will potentially feed into the overall communication efforts of the organization. Based on this, we can identify the following distinctive stakeholders:

- Subject Matter Experts: as SMEs are the primary source of knowledge and expertise, the MILMED COE aims to identify these SMEs and offer them a platform for collaboration organized along COIs and COPs as indicated by membership, issues and along the MILMED COE's Program of Work items,
- Organizational stakeholders: many organizations already handle vast amount of information that could feed into the MILMED COE's KM system (NATO bodies, NGOs, academia, etc.) and these sources need to be analysed and included / linked to the MILMED COE KM system,
- KM system operators: MILMED COE staff and close partners providing the framework of the KM system (creating the COIs' collaboration groups on the online platform, organizing / administrating the flow of information on these platforms).

The collaboration within the KM system aims to ensure that the stakeholders are both benefiting from the system and also contributing to it which agrees with research on KM; the primary focus for all activities for Knowledge Management are the people and their skills - the cooperation and interaction of these people.

To be a successful in Knowledge Management, NATO MILMED COE must focus on the people participating in the KM system. The two main points within the system for connecting and supporting the individual participant concern garnering input and supporting knowledge transfer. This approach, to have the individual in the centre of our focus, has to be the guiding directive and is the key for success.

A positive feedback loop can be developed by building a culture of trust by ensuring that those providing input to the system receive timely acknowledgement of their efforts and for the system to strive for the rapid inclusion of contributions and observations. The skills and the cultural background of the individuals, who are involved in the cooperation, play an important role for sharing and distribution of knowledge.

The provision of knowledge, "knowledge transfer" is the other point of contact between the system and the individual. This transfer required mutual confidence between the knowledge provider and the receiver of knowledge and it is at this "human level" that individual participation is engendered and keeps the flow of knowledge alive.

KM and Relationship with MILMED COE's Communication Strategy

The Communication and Strategic Overarching Goals of MILMED COE are as follows:
- Excellence as an Information Knowledge Management Hub in the field of military medicine, including military medical LL
- Excellence in Force Health Protection Coordination with an emphasis on health surveillance
- Excellence as the Military Medical Evaluation Centre
- Excellence in the Department Head Function for the Medical Support Discipline
- Excellence in Doctrine and Policy development in order to increase Interoperability
- Excellence in Military Medical Training (Individual and Collective)
- Excellence in supporting the NATO Command Structure at all levels

The Strategic KM goals must be in line with these goals and should not only support them but also provide tools for achieving those overarching Communication goals. In order to achieve the Strategic goals of the KM system, a general selection mechanism needs to be in place that assist with focusing efforts on the most relevant input. This "selection filter" must be specific enough to help weed out irrelevant input but must also be general enough to allow collection of possibly related information to allow "out of the box" thinking and connections to be identified and capitalized upon. As an initial "filter" the MILMED COE KM system will focus on Health Support Services concerning missions abroad.

Program Objectives:

Based on the strategic aim of the Knowledge Management of NATO MILMED COE the following objectives are in development:
- Building, extending and maintaining the SME / stakeholder network on the military-medical field, by setting up the Community of Practice for multinational medical support, Communities of practices for special technical medical topics, Workshops or expert meetings
- LL / Best Practice Databases, which includes the development of a medical lessons learned process
- Establishment of a searchable military medical database
- Visualization of knowledge and knowledge carriers with possible instrument like knowledge maps and Blue Pages
- Develop a collection of Clinical pathways, evidence-based and clinical guidelines, technical literature and STANAGS for missions abroad
- Links to other knowledge data systems

- Building and maintaining a robust technical platform to enhance the cooperation of stakeholders and to disseminate knowledge, building on the already available assets – COE's external portal
- Creating and constantly reviewing the processes connected to KM by assessment of the impact of the Knowledge Management on the medical support process in mission abroad
- Building and maintaining Student Portal for MILMED COE individual training activities.

Main Tools and Key Performance Indicators:

The COE utilizes multiple tools to build up and maintain its KM system and also will monitor the effect of the efforts to build and maintain the system. There are two main divisions of resources utilized by the system; technical and human. Both of these divisions will be assessed by monitoring information that identifies how users feel the system provides the information they require in a user friendly manner. Initial Key Performance Indicators are presented within the list below.

- Technical resources can be further divided to the following categories:
  - Password-protected website, the ExtraNET portal of the COE: the most visible part of the KM system, this tool will incorporate the online platforms and collaboration tools required by the stakeholders (the User Operational Requirements)
    - KPIs: visits' statistics, user count and activity, user feedback, number of resources
  - Open website: as the simplest form of data repository, key products from the ExtraNET can be published here after proper evaluation
    - KPIs: visit's statistics, search engine ranking, user feedback, number of uploaded resources
  - Other means of technical information / knowledge sharing: all information-technology supported activities other than the ExtraNET, including simple email exchanges or cross-linking to existing databases
    - KPIs: case-by-case, for example number of web sites linking to the COE KM
- Human resources:
  - SMEs from the COIs and COPs formed along the COE's various projects, as described above
    - KPIs: Initiation and utilization of topic specific COIs
  - SME's knowledge provided by organizational partners
    - KPIs: Number of participants in COP/COI, quantity of independent exchange within COP/COI that are only hosted by MILMED COE

The final tool for system monitoring and improvement are directed questionnaires for users about following capabilities of KM to include:
- ease of use, including ability to quickly locate relevant and related data,
- appropriateness of content
- robustness of links between knowledge and SME resources
- currency of provided resources

Implementation and way ahead:

This strategy will be reviewed at least on a yearly basis and / or by the request of the DIR. The actual KM plans and directives will reference this strategy and will be developed as separate documents. The officer in charge of the development and facilitation of the resulting plans is the PR / Knowledge Management Officer with the support of the KM Implementation Officer (Lessons Learned Branch Chief).

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