

CONSIDERING WHAT COUNTS - MEDICINE & HEALTHCARE AT SEA

This year, healthcare and medical information very quickly came to the forefront for all industries around the world. The outbreak of the Coronavirus (COVID-19) demonstrated the fragility of many aspects we normally took for granted and the entire world was faced with significant challenges. In the maritime industry, ships were quarantined, ports closed, and crew changes restricted. **CEO and Founder, Marine Medical Solutions Dr Jens Tülsner, MD** provides us with an analysis on the current state of medicine in the industry and the new possibilities with smart digital solutions, written amid this global pandemic.



For some time now in shipping, 'Digitalisation' has been on everyone's lips. Whilst many technical and nautical aspects are already using such technologies, this is rarely the case in medical related areas.

Ashore, digital technologies have been providing extensive possibilities for medical care for some time. This includes monitoring one's daily physical strain, sleep and movement, Big Data and Artificial Intelligence to support reliable diagnosis, and precision medicine for individualising treatments based on genetic and life-environment data... the list goes on.

These standards should now be made more readily available at sea, organised in collaboration with shore-based medical expertise and delivered via a dedicated platform, as offered, for example, by Marine Medical Solutions and Tritan Software. This is an enterprise solution specifically designed for the maritime industry. It allows companies to centralise and optimise medical information and reporting, whilst also gaining critical real-time insights to help better monitor and take action where needed.

Medical training and education

To put it into perspective, medical care on board is the Captain's responsibility – actually one of the few positions in international law which is entitled to perform a diagnosis and intervention without a medical license.

As part of nautical training, there are various mandatory medical courses that officers must complete and update at regular intervals. This provides basic knowledge and training in medical care whilst at sea. However, experience has shown us that the knowledge curve flattens out over time, all the more so if the area in question is beyond the scope of one's own expertise or has been rarely been put to practice.

To help keep seafarers up-to-date, the new edition of the Medical Handbook at Sea, for example, has QR codes that provide direct access to the necessary forms and legal basis, whilst instructional videos explain medical measures step-by-step and in a way that is easily understandable. It would be a relatively easy task to have this further streamlined on a digital platform, where it can remain dynamic and updated, engaging and always available on board.

Telemedicine

Currently, medical consultations via radio or e-mail are common practice at sea, however do have their obvious limitations. These can be overcome with the assistance of new digital tools.

Together with appropriate devices on board, vital data can be transmitted online with minimal bandwidth and IT support, and done so in a highly secure/private environment. Crucially, such medical teleconsultations are supported by audio and visual, thereby bringing the doctor on board, or at least much closer.

For instance, allowing a medical expert to better observe the situation, ask questions and interact:

- Suspected stroke: how can the extremities be moved?
- Burn: what is the extent of the injury?
- Procedures to be performed - online instructions, video switching, chat or telephony

With this, one can achieve more sound and efficient medical care on board, thereby also allowing ships to maintain their course more often when seafarers fall ill, such as not needing re-routing, accelerated travel, repatriation, or medical disembarkation.

Marine medical solutions now highly advanced; interactive, secure and more beneficial for shipping companies



“ Digital smart solutions allow shipping companies to manage their medical operations while connecting and collaborating with information across their entire fleet of ships, crewmembers and medical providers ”

Case management and reporting

The basis of every good diagnosis and treatment, apart from the examination, is personal medical history, such as prior symptoms, previous diagnostic findings and treatments. Particularly in maritime, where medical consultations or requirements are mostly done virtually, access to such data can be tremendously important for a more precise and quick response, especially vital in an emergency.

It can also form the basis for good and standardised documentation for other important operational matters, such as with legalities, further case processing, status and treatment of chronic diseases (such as arterial hypertension), traceability of infection chains, among other.

In the past, this information was seldom available on board. It can now be maintained and delivered securely via digital channels, for instance, integrated in a company's crew portal or other application and made accessible only when needed, of course in strict compliance with data privacy regulations.

Likewise, a ship's **Medicine Chest** can also be handled remotely, with added control from ashore, such as for procurement and in providing clear and updated instructions for formulary and the use of each medicine.

Overall, together with the assistance of medical professionals, such digital smart solutions allow shipping companies to manage their medical operations while connecting and collaborating with information across their entire fleet of ships, crewmembers and medical providers. This means more efficient processes and improved management visibility and control at all levels of an organisation, while mitigating the high risks involved with overseeing medical operations.

Telemedicine at sea - brining the doctor on board, or at least much closer!

