

The doctor is in

Telemedicine - remote medical help - is just one of the useful practical applications of satellite communications onboard vessels

The bulk of maritime safety legislation focuses on offshore areas and the interface between the land and the sea, where most incidents take place. Although most deepsea journeys take place safely and without incident, there can be no more stark reminder of how isolated and exposed seafarers really are than when they fall ill in the middle of the ocean, far from qualified medical help.

The introduction of satellite communications and broadband-like internet connectivity has now made it possible to provide remote medical help to seafarers in emergencies, essentially bringing the doctor to the patient via a satellite link. Companies such as Remote Diagnostic Technologies (RDT), MedAire and Global Medical Assistance (GMA) have taken advantage of the enhanced capabilities of satellite communications. RDT, for example, provides a 'little orange box' which can monitor pulse, temperature, blood pressure, breathing and other vital signs, and transmit them ashore to a doctor, who can then monitor the situation in real-time. While the safety and the health of the crew is paramount, shipping companies have a desire to avoid false alarms and diversions where they can. According to RDT, this is where telemedicine truly shows its value.

MedAire

MedAire is another provider of telemedicine services. According to Bill Mahaffy, maritime product manager, there are three components to MedAire's service: Medlink, a call-in service; equipment and the training required to use it properly; and an advisory service.

The equipment, or telemedicine device, is carried onboard the ship and applied to an injured crew member. The device transmits physiological data from the vessel to a call centre, allowing the physicians to make more accurate decisions on the condition of the patient and to determine whether or not the ship needs to divert.

"There have been situations where vessels have diverted in situations where it appeared that a major heart attack was underway," says Mahaffy, "but upon getting into port they would find that the situation was in fact less severe. That's one of the true advantages of the telemedicine concept of having a device onboard that can transmit electrocardiogram, blood pressure, temperature, pulse and respiration: if they can transmit to a centre that understands the nature of the industry and the environment, then those decisions can be more accurately made and in many cases will not require diversion."

MedAire also offers a variety of courses on health care at sea, some of which are approved for the purposes of the STCW Convention, as well as providing the unique service of providing support to other telemedicine companies, such as RDT.

GMA

GMA, a Belgium-based company providing telemedicine services, connects the vessel by e-mail to a network of doctors around the world. The company also offers medical data management software, fitness examinations and case management. The onboard medical data management application, called Medi-Assist, can be customised according to the requirements of the user. "This is a more complex system to be administered by a trained crew member," says general manager Elisabeth Lemmens. The results of all medical examinations are logged in the system and full records are kept for each crewmember. These files can be easily transferred from ship to ship as and when the seafarer changes vessels.

GMA recently signed a contract with the land earth station operator Xantic, which will see the e-mail communication required to contact a GMA doctor go over Xantic's AmosConnect communications backbone. "The important thing about GMA is that it takes basic information for each crew member, which means that if someone calls for help, the doctors already have the basic information on the patient and don't need to go through a whole questionnaire before they get going on the nitty-gritty of what's wrong with the person," points out Paul Ashton, maritime innovations director of Xantic.

Although GMA does not provide the kind of real-time, live service that companies like RDT offer, Ashton says that he believes that communicating via e-mail is just as, if not more, effective. "I find giving support over e-mail actually does work very well because when people write something down it's structured and the person responding to it is also being structured in his reply. And as it's being received in writing, there is a clarity to it. This is true whether you're supporting someone in the use of a computer or supporting someone in a medical situation," he says.

Those who wish to sign up for the service can go directly to GMA itself, or to Xantic. The service costs \$100 per month per vessel and includes the Medi-Assist software and the standby service; there is an additional charge of \$250 for each medical case that is dealt with. The service is open to users of all brands of communications software, but existing users of AmosConnect get a 10 per cent discount.