

# Naval Telemedicine

## presentation in English

MARIA ANGELICOUSSIS  
NASSAU  
IMO 928703



Theano Yfanti & Ioannis Chondropoulos

# Telemedicine and Telehealth

Telemedicine: The use of technologies to remotely diagnose, monitor, and treat patients

Telehealth: The application of technologies to help patients manage their own illnesses through improved self-care and access to education and support systems

MARIA . ANGELICOUSSIS  
NASSAU  
IMO 926705





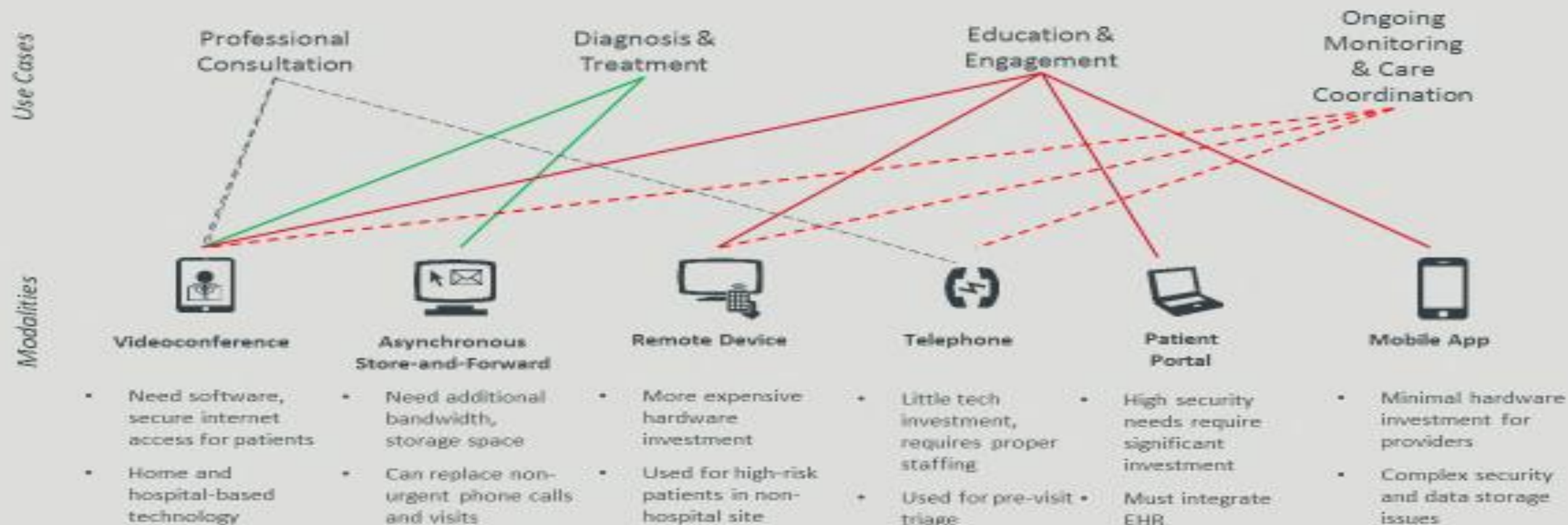
**World Health Organisation :**

**Telemedicine** is the provision of health care professionals, where distance is a critical factor, using information and communication technologies for the exchange of valuable information for the diagnosis, treatment, prevention of diseases and for continuing education of health professionals, as well and research and evaluation, and for all that are in the field of interest for the improvement of health services in society.


# What is Telemedicine?

## Use Cases May Be Achieved Across Multiple Modalities

Telehealth Use Cases, Relevant Modalities, and Investment Required



Source: Marketing and Planning Leadership Council interviews and analysis (Advisory Board)



## Landmarks in the history of telemedicine

- 1906: Transmission electrocardiogram held in Eindhoven
- 1957 : Telemedicine in space on the occasion of the rocket launch Sputnik2
- 1964: The first application in the field of telepsychiatry in the psychiatric institute of Nebraska



# History of Telemedicine

1924: The first report on telemedicine, as shown on the cover of the magazine "Radio News" in April 1924 and in which a doctor could speak with the patient in real time via radio.




# History of Telemedicine



installed telemedicine station provided medical services 24 hours in 24 hours in the airport employees as well as emergency travelers

Boston Logan Airport to Massachusetts General Hospital  
1967



Cases  
necessitate  
the use  
of methods  
and  
telemedicine  
applications

- Naval
- Disabled
- isolated areas
- Elderly
- Emergencies
- Cases trained physician absence



# Areas of telemedicine that can be applied to the Naval Medicine

*Psychiatry*

dermatology

ophthalmology

cardiology

emergency  
care

**Crew mental health actions  
by e-mail, sms, web-based  
actions,  
virtual reality (second life),  
games (tetris, online role games,  
World of Warcraft),  
cognitive-behavioral applications**









# Medical devices & equipment

**oximeter**

**spirometer**





# Medical devices & equipment

**ophthalmoscope**



**camera**



# Telemedical devices & equipment





# Telemedical devices & equipment



# Telemedical devices & equipment



# Telemedicine Medical Devices & equipment - Stethoscopes





# Telemedicine Medical Devices cardiograph & RhythmCard



# Medical devices & equipment

electrocardiografer

holter



# Telemedicine Medical Devices

## electronic Blood Pressure







# Medical devices & equipment ultrasound





# Robotics application





# Robotics application





# Telemedicine for Education Deployment



# MERMAID



Provided comprehensive multilingual medical care in emergency situations through sophisticated forms of communication, both terrestrial and satellite. To MERMAID project sponsored by the European Union under the Healthcare Telematics program for the global implementation of a telemedicine network to provide medical services to seagoing ships, which are provided with an innovative two-way transmission of images for medical telemonitoring.



# MERMAID (medical emergency aid through telematics)

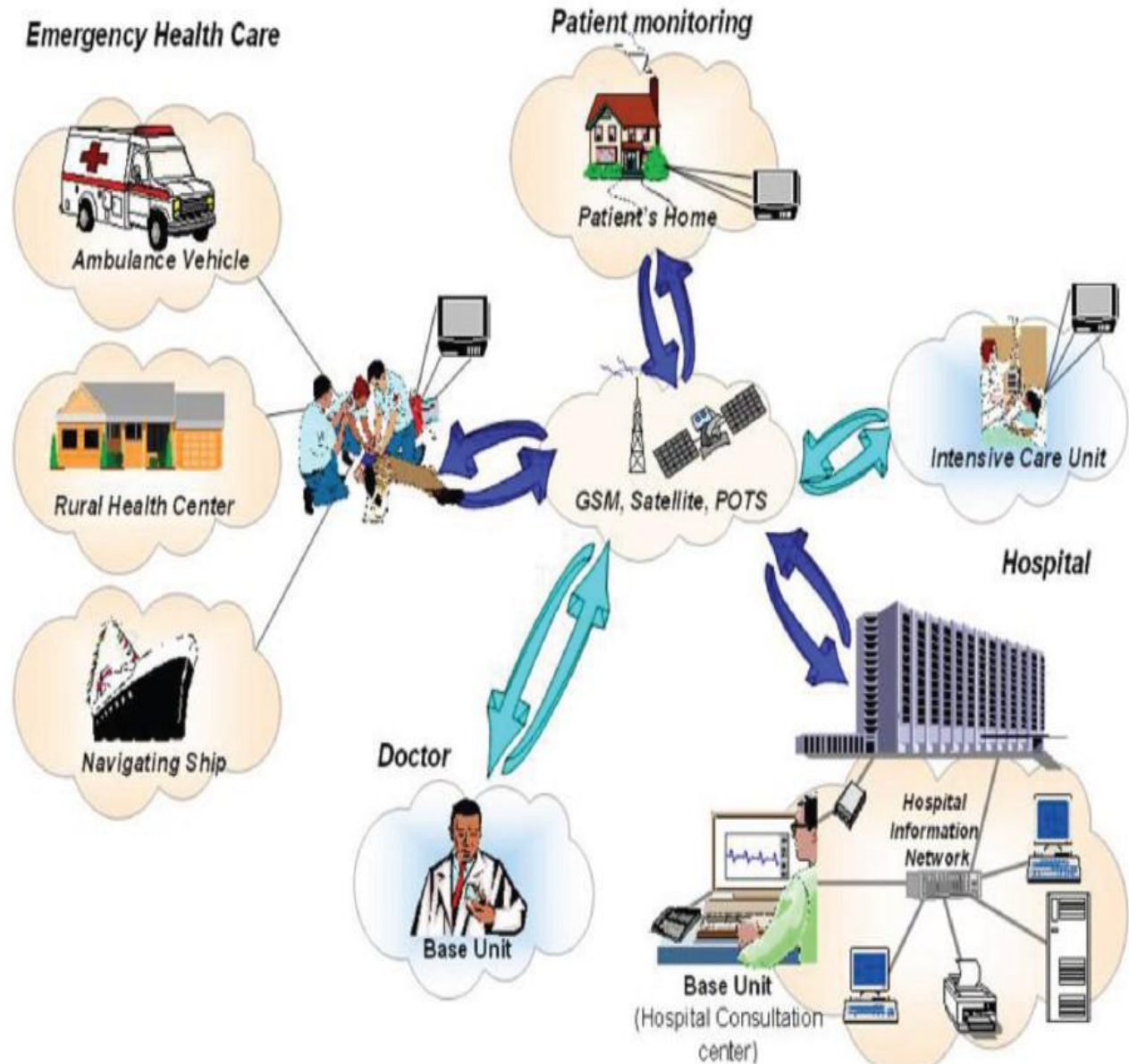


- The MERMAID telecommunications software should include:
- i) A medical records system useful for recording the patient's history.
- ii) A Help option will be offered via a multimedia application to quickly find assistance in the form of medical advice.
- iii) A database with all data relating to medicines and medical equipment.

# MEDASHIP



- MEDASHIP founded and sponsored by the European Union, in collaboration with four European centers of Italy, United Kingdom, France and Greece,
- on ships, require the existence of two video cameras, ECG and an ultrasound (US)
- teleconference can provided on the ship





# Model Maritime Telemedicine Solution

The (MTS) uses the most advanced tools and systems available today.

it offers:

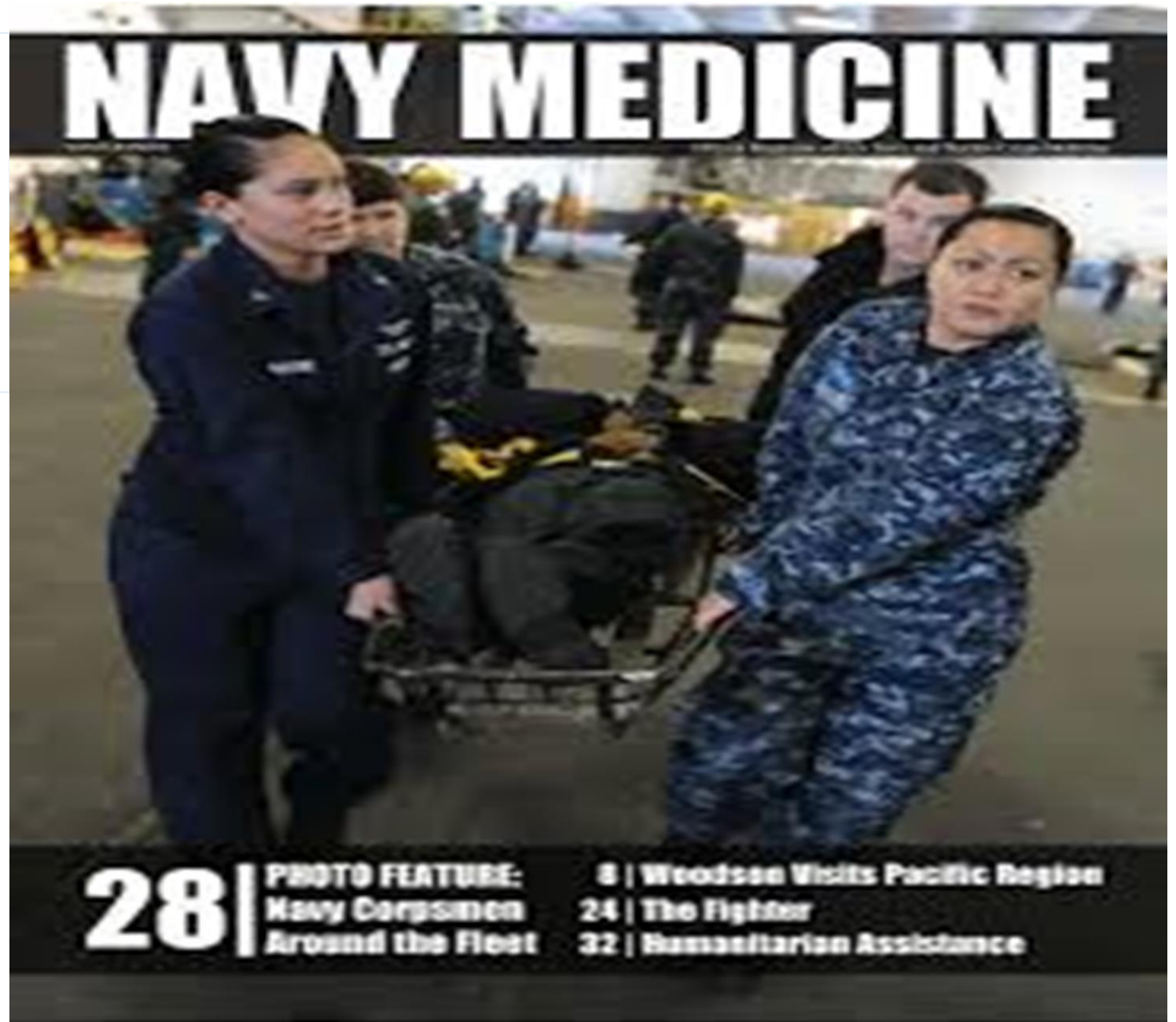
an examination and  
online diagnosis  
remotely services on  
board





# Other telemedicine programs and applications on ships

- WETS
- GALENOS
- NIVEMES
- TELE-IASIS





## Improving the Social Environment

Continual improvement of the health and living conditions aboard fleet vessels is provided through enhanced facilities, to the benefit of the seafarers' welfare.

Installation of a broadband internet connection to all new building vessels

Installation of a broadband internet connection to the existing fleet vessels

Installation of a Satellite TV to all new building vessels

Installation of a Satellite TV to all existing vessels

Upgrade the gym & entertainment equipment aboard the fleet vessels



## Improving the Work Environment Life-saving tools at sea

- Continual improvement of the level of medical care aboard fleet vessels.
- Implementation of the "TELEMEDICINE - Emergency telecardiographic monitoring and medical advice" service aboard fleet vessels
- Supplying fleet vessels with Automated External Defibrillators with the view to provide first aid in case of a sudden cardiac arrest
- Organizing on an annual basis a shore training program on "medical first aid"



# RISKS AND SAFETY REQUIREMENTS

These risks come

- either by **accident** or by **deliberate acts** (by malicious users or attackers) and result in the theft and sale of confidential information to unauthorized users, destruction, forging or alteration of the information and then interrupting the system operation .
- **integrity** of information, namely the 'prevent unauthorized information change; as falsification or deletion, including unauthorized data creation.
- **availability** of information, namely the possibility of direct access and use of a computer system when required



***THANK YOU***



I HAVE TO DOWNLOAD  
A SOFTWARE PATCH  
FOR MY eyePHONE.



CLINTON