USING TELEMEDICINE TO MANAGE THE WOUND CARE SERVICE IN THE ITALIAN PUBLIC HEALTH CARE SYSTEM

Prof Sergio Pillon, Director of Telemedicine, San Camillo-Forlanini Hospital, CIRM Medical Director, Rome
Lessons Learned: to succeed with telemedicine are needed...

- Scientific Background
  - References
- Detailed Project
  - Budget,
- Clinical Governance
  - Quality Control
- Social impact evaluation
  - Training
- Check points and external evaluations
  - Dressing Strategy
Strong scientific background and strong references

Guidelines and past experiences
from radiomedicine to telemedicine:
85 years of lessons learned
OGGETTO: Centro internazionale di radio comunicazioni mediche


I Comandi di bordo che intendono avvalersi dell'opera del Centro radio-medico, potranno utilizzare il Codice internazionale dei Segnali - Ediz. 1931 (Volume II - radio - parte V - capitolo medico-sanitario) entrato in vigore il 1° gennaio 1934.

Qualora i segnali del Codice non fossero ritenuti sufficienti per fornire con ogni esattezza al "Centro", le necessarie notizie, i Comandi delle navi potranno anche compilare "in chiaro" i marconigrammi relativi. I marconigrammi in linguaggio chiaro concernenti richieste di consigli medici da parte di navi estere potranno essere redatti in italiano oppure in francese ed inglese.

Dovrà, in ogni caso, essere indicato anche il tipo di cassetta medicale di cui la nave è munita.

Il "Centro", risponderà usando il Codice dei segnali, oppure, se necessario, "in chiaro". I marconigrammi provenienti o diretti a navi nazionali sono esenti dal pagamento delle tasse radiotelegrafiche e telegrafiche.

Sono pure esenti dal tale pagamento i messaggi medici provenienti o diretti a navi estere appartenenti ai seguenti Paesi che hanno apposita organizzazione radiomedia e forniscono gratuitamente consigli medici alle navi di qualsiasi nazionalità: Australia, Belgio, Danimarca, Finlandia, Guatemala, Honduras, Nicaragua, Norvegia, Paesi Bassi, Panama, Stati Uniti d'America, Svezia.
ADOPTION OF AMENDMENTS TO THE INTERNATIONAL AERONAUTICAL AND MARITIME SEARCH AND RESCUE (IAMSAR) MANUAL

1 The Maritime Safety Committee (MSC), at its eighty-fifth session (26 November to 5 December 2008), having been informed that the International Civil Aviation Organization (ICAO) had approved the amendments to the IAMSAR Manual prepared by the Joint ICAO/IMO Working Group on Harmonization of Aeronautical and Maritime Search and Rescue, and that they had been endorsed by the Sub-Committee on Radiocommunications and Search and Rescue (COMSAR) at its twelfth session (7 to 11 April 2008), adopted the annexed amendments in accordance with the procedure laid down in resolution A.894(21).

2 The Committee decided that the amendments should enter into force on 1 June 2009.

Chapter 1

1.4.1 Any SAR system should be structured to provide all SAR services:
- Receive, acknowledge, and relay notifications of distress from alerting posts;
- Coordinate search response;
- Coordinate rescue response and delivery of survivors to a place of safety; and
- Provide medical advice, initial medical assistance or medical evacuation.

Glossary

- Add the following text on page xi:

  “Telemedical Assistance Service (TMAS) A medical service permanently staffed by doctors qualified in conducting remote consultations and well versed in the particular nature of treatment on board ship.”
Virtually Hospitalized Patients

![Graph showing the number of virtually hospitalized patients from 2009 to 2014. The number of patients increases each year.]
Triage Code

44%
43%
12%
1%
33%
10%
Ships Activities
- Freight: 95%
- Other Activities: 5%

Other Activities
- Cruise: 13%
- Ferry: 27%
- Coastal Fishing: 26%
- Yacht-Leisure: 25%
- Airplane: 3%
- Oceanic Fishing: 6%

Freight
- Cargo: 37%
- Tanker: 57%
- Container: 6%
Communications 2012

- e-mail: 81%
- telefono: 18%
- fax: 1%

Communications 2015

- e-mail: 92%
- telefono: 0%
- fax: 8%
Thursday 15th May 2003

08.30  Registration, Trade exhibition and coffee
09.15  Introduction and chair Dr Chris Andrews, UK

9.25    MEDICINE OF EXTREME ENVIRONMENTS
        Professor Des Lugg, Chief, Medicine of Extreme Environment. NASA, Washington, USA

10.05   MEDICAL FACILITIES IN ANTARCTICA
        Mr Peter Marquis Manager, BASMU UK

10.30   THE BRITISH ANTARCTIC SURVEY MEDICAL UNIT
        Mr Iain Grant, Senior Medical Officer BASMU

10.55   Coffee and Trade exhibition

PSYCHOLOGY Chair Dr Claude Bachelard, France

11.15   PERSONNEL SELECTION FOR ISOLATED COMMUNITIES
        Professor Larry Palinkas, University of San Diego, USA

11.40   DOES PSYCHOLOGICAL SELECTION WORK?
        Professor Holger Ursin, University of Bergen, Finland

12.05   LIFE IN CAPSULES
        Professor Peter Suedfeld
        University of British Columbia,Vancouver, BC Canada

12.45   Lunch and Trade Exhibition

LIVING IN THE DARK Chair Dr Antonio Peri, Italy

13.55   SHIFT WORK
        Professor Jo Arendt, University of Guildford, UK.

14.25   IMMUNOLOGY IN ANTARCTICA.
        Professor Des Lugg, NASA, Washington, USA

FREE PAPER SESSION A Chair Professor Rob Sneyd U.K.
14.45   4 papers of 10 minutes each + 5 minutes questions
15.45   Tea and Trade exhibition

HOW USEFUL IS TELEMEDICINE? Chair Mr Iain Grant, UK

16.15   TELEMEDICINE IN SCOTLAND
        Mr James Ferguson, Consultant in A&E Medicine 
        Aberdeen Royal Infirmary

16.50   TELEMEDICINE AND ANTARCTICA - A DEMONSTRATION
        Dr Sergio Pillon, Italy

17.30   End of Sessions
19.00   Dinner at RMB Stonehouse
The designation was made by the WHO Regional Office for Europe and its department in Barcelona, the WHO European Centre for Integrated Health Services. Like all WHO collaborating centres, NST is also a collaborating centre for WHO headquarters in Geneva.

www.telemed.no 10 years ago....
Parallel Session 17: Visit Kroken Nursing Home; The Learning Workplace

- Visit a nursing home which has created methods for motivating health personnel to take responsibility for own learning about their profession and use of technology. The first nursing homes in Norway which was given the opportunity to:
  
- receive electronic laboratory reports and discharge notes from hospital
  
- exchange secure e-mail with GPs
  
- take digital photos of patients’ wounds for sending by secure e-mail to the specialist at the hospital for consultation
  
- access to specialists’ updated procedures

Transport will be arranged.
Symposium on Advanced Wound Care

...the largest gathering of multi disciplinary wound care clinicians in the United States...
The Annual Symposium on Advanced Wound Care (SAWC) is the largest gathering of multidisciplinary wound care clinicians in the United States.

Telemedicine for Problematic Wound Management: Enhancing Communication Between Long-Term Care, Skilled Nursing, and Home Caregivers and a Surgical Wound Specialist
“My former position was Vice President and Chief medical officer for a major Medicare health plan in South Florida, and I am happy to be speaking on behalf of the Wound Technology Network.

During the last 2 years we ran a trial of 2 wound care companies’ side by side. Wound Technology Network had a significant volume of our patients along with another wound care company. We had the ability to take a look at the outcomes data, utilization data and cost data and found that Wound Technology Network did a significantly better job, in fact the data showed a 50% improvement in both cost and actual time to heal the wounds.

So we were very, very happy with Wound Technology Network and that actually led us to contract with them as our sole provider for wound care going forward...It was an excellent experience”.

John McGooohan, D.O. Senior Vice President Medical Affairs Vista Health Plans of Florida
Wound Technology Network, 2015, US, good results....

Woundtech provides the highest level and most cost-effective managed woundcare, wherever the patient may be.

We are the nation’s leading physician based provider of wound management services.

Because Woundtech provides expert woundcare services wherever the patient resides, we save time and eliminate the cost of co-pays and transportation expenses.
Wound Technology Network, 2015, US, good results....

Negative Pressure Wound Therapy (NPWT e.g.: VAC) Reduction Program

80% of NPWT patients that enter the Woundtech System with NPWT have it removed

NPWT utilization of less than 0.5%

Cost Savings

50% Reduced wound care costs up to 50%

Woundtech statistics

95% Overall healing rate

98% Patient satisfaction rate

3+ million Covering more than 3 million lives

20+ Health plans Provider to more than 20 major health plans

Our services reduce the following

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Detailed Project

Protocol, Budget, Quality control.
Practically

1. We have an outpatient asking for visit, medication and color coded duplex scanner
2. Open a medical record
3. Define the dressing protocol
4. Start the treatment, when “stabilized”, teaching...and **Telemedicine**
5. Patient gives his/her informed consent
6. Two letters: the first one for the «caregiver» the second is for the GP
7. We give him/her the materials for the next group of dressing
8. After each dressing he/she send us the digital photos and any other relevant information to  [ulcere@scamilloforlanini.rm.it](mailto:ulcere@scamilloforlanini.rm.it)
9. We answer in 24 ours

**BLUE= TELEMEDICINE**
Protocol:

1. Email:
   1. Pictures
      1. Dressing in place
      2. Dressing opened, showing the face in contact with the wound
      3. The wound
      4. The wound cleaned
   2. Any other information
      1. Pain
      2. Temperature
      3. .......
   3. Phone: they can use the phone to ask any other question

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Strong Shoulders...

A good Idea isn’t enough…,
Budget,
Clinical Governance
Quality Control
Social impact evaluation
Training
Check points and external evaluations
Dressing Strategy
Clinical Governance
Social Impact
Titolo: LA TELEMEDICINA E LE FERITE DIFFICILI

Problema:
L’arrivo di internet, della telefonia cellulare e della posta elettronica, non solo sta modificando profondamente l’interazione tra le persone e le istituzioni, ma sta portando cambiamenti anche nel nursing.
L’avvio, nell’ambito della telemedicina, del progetto sulle lesioni difficili, ha evidenziato la necessità che gli operatori coinvolti acquisiscano ulteriori competenze professionali che supportino la capacità di assumere autonomamente la responsabilità del processo assistenziale e che consentano di rispondere adeguatamente ai bisogni degli utenti.

Destinatari:
il corso è rivolto agli infermieri del DH (n° 2) e dell’Ambulatorio Angiologico (n°2), della Chirurgia Vascolare (n°2), del Day Surgery (n°2) , della Diabetologia (n°1), della Chirurgia Plastica (n°1), della Reumatologia (n°1) e della Dermatologia (n° 1) per un totale di circa 24 operatori.
Dressing Strategy...

- Easy to apply
- Easy to clean the wound
- Easy secondary medication
- Easy to stay in place

- ONE SIMPLE PRODUCT, in many formats by size, shape, border...
Facing scientific community and colleagues..
LE FERITE DIFFICILI

Classificazione

A1
Già operativa, con una gestione a regime di almeno tre mesi, che coinvolga almeno:

- un Ente pubblico, oppure
- una struttura assistenziale sanitaria pubblica, o privata accreditata, oppure
- una struttura socio assistenziale pubblica o privata

rivolta ad un target (tipologia già indicata nel documento - vedi Parte Prima) inferiore a 100 utenti presenti sul territorio

Ultimo aggiornamento: 07-11-2008
Email for Problematic Wound Care Management

Web address of the case: http://scf.gosp.it/twiki/bin/view/GovernoCIn...
Country of the case: Italy
City/region: Rome, Lazio
Wound Management | e-mail | telemedicine services

Posting Date: 22 February 2010
Last Edited Date: 01 March 2010
251 Visits

Author: Sergio Pillon (Azienda Ospedaliera San Camillo-Forlanini - CIRM)

Type of initiative
- Project or service

Case Abstract

Even with increasing knowledge and the development of more sophisticated interventions, many clinicians will encounter wounds that are "hard to heal" despite all efforts. This often causes psychological stress and anxiety for all persons involved and creates a considerable financial burden for an already overloaded healthcare system.

The importance of regular wound assessment and wound size measurement in identifying potentially hard to heal wounds has been reviewed by Troxler. (from "Hard-to-heal wounds: a holistic approach"). "Hard to heal" wounds need a complex approach, correct patients' evaluation and advanced medications, as well as plastic surgery; all this is hard to provide to elderly and socially impaired patients.
22 January, 2010

Sergio Pillon  
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Rome  
Italy  
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Dear Mr. Sergio Pillon,

We hereby confirm the receipt of your contribution “Email for Wound Care Management Service in the Italian Public Healthcare System. Specialist, Nurse, Caregiver Connection. Two Years Checkpoint: Lessons Learned, Indicators, Budgeting, Quality Control” and its acceptance by the Selection Committee for oral presentation at the Educational and Information Program of Med-e-Tel 2010, Luxembourg, G.D. of Luxembourg, April 14-16, 2010. Please be so kind and inform your co-authors.

Your abstract will be included in the Med-e-Tel 2010 Exhibition Guide and will be loaded on Med-e-Tel 2010 website.

List of presentations and names of speakers as well as a preliminary program will be added to the website in the next few weeks. We’ll inform you about the final schedule of your presentation soon.

Acceptance of your contribution carries with it the OBLIGATION for you to actually present it at Med-e-Tel
Evolution: General Practitioners and Nurses …

Camera with Macro and Zoom feature, remotely controlled, smartphone APP.
GP's OFFICE
GP's OFFICE
The application uses the Smartphone's camera to take a snapshot (or a picture loaded from memory) and makes automatic evaluation of the necrosis, granulation and fibrin area. The caregiver/nurse add information about Exudation, Infection, Hemorrhage and Depth and a suggestion about medications is given. PDF document and Jpg image could be sent for second opinion or for storage. Wound area is measured. The application has the CE (93/42/CE) mark as medical device, Class I
MOWA: take a picture
MOWA: use touch to define the ulcer area
MOWA: add some informations...
MOWA: dressing strategy and PDF report
Patient, or Caregiver, or non trained Nurse send to the referring centre the PDF....
Resuming…

- Telemedicine in Wound Care isn’t «an option», is a must.
- Are needed:
  - Strong scientific background
  - Detailed and verified project
  - A strong support from your organization, budgeting, training, social impact….
  - Doctors and nurses trained and motivated
  - Dressing strategy tailored for telemedicine
Our Activities (results from a selected group)

- 190 subjects (405 ulcers, 19,000 dressings) started in traditional way and followed by telemedicine (eMail, whatsapp, MOWA)
- «Non professional» caregivers involved, nurses, GP or patient himself
- SF12 Health Survey to evaluate the quality of life
- All instruments (budget, clinical governance, social impact, quality control) were adapted to telemedicine
- A simple smartphone APP (MOWA, Android & iPhone OS) was tested, CE (93/42/CE), medical device, class 1.

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Results

- Healing rate 91%, (75% without telemedicine)
- No hospital stay (only for plastic surgery, when needed)
- 38% costs reduction
- 70% improving of the quality of life
- Good results from smartphone APP (but Whatsapp is growing)
Conclusions

- The purpose isn’t «Telemedicine» our purpose is a better healing
- We can follow the patients until the wound are completely closed, and you??
- We have a picture for every medication, and you?
- We can give the better (and expensive) medications at home, and you?
- Our healing is cheaper than yours..
- We follow every couple of days patients from all Italy, and you?

pillar@gmail.com
Are you sure you are doing the best you can?
Thanks,

Sergio Pillon, MD, Vincenzo Ceccarelli, MD, Lucia Boccuzzi, Nurse