



Australian Government

Department of the Environment and Energy

Australian Antarctic Division

Digital Health Technology Toolkit

ACRRM RDAA RMA 2017 Melbourne

Dr Jeff Ayton Chief Medical Officer

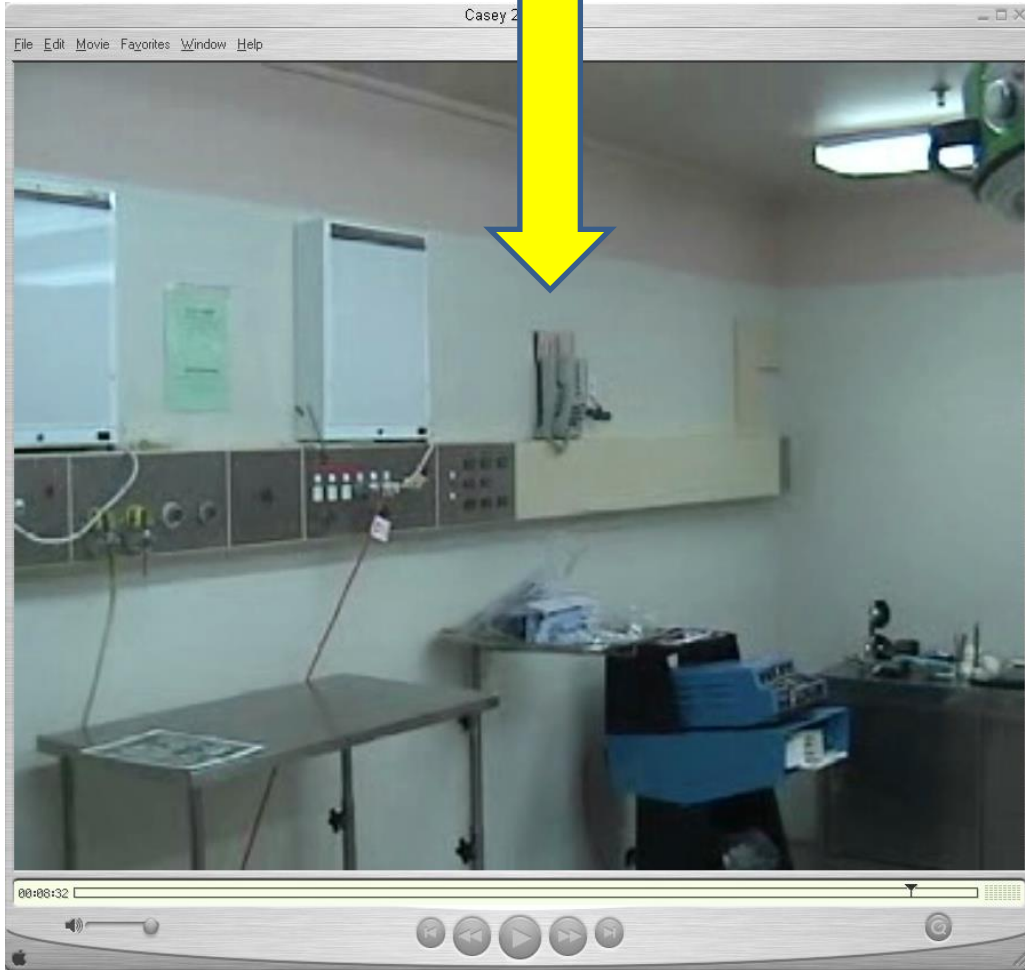
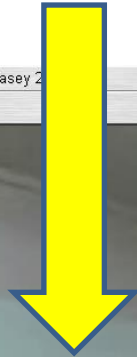
MBBS MPH&TM FACRRM FACTM AFFTM DRANZCOG DA(UK)



Year 2017 Why do we not have ?

- Single Funder
- Single Electronic Health record
- Single Telehealth Platform
- Connected Health Care

Telephone -REAL TIME SUPPORT



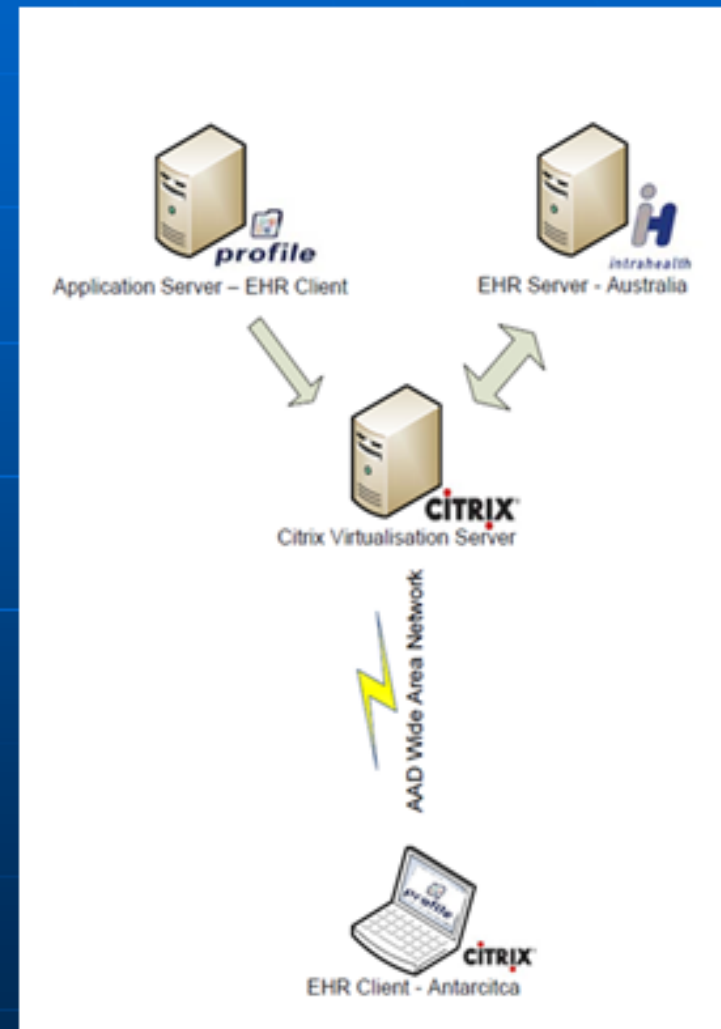
Importance of Simple Telephony- eg Hands Free

Australia's Remotest Shared Electronic Health Record

Core of
Telehealth
2009

The screenshot shows a web-based medical record system for a patient named Forest Gump. The interface includes a navigation menu on the left with options like Overview, Encounters, Documents, Results, Medications, Tasks, and Referrals. The main content area is titled 'Clinical Summary' and contains several sections: 'Shared Medications' (listing drugs like Onasemnolen 5 mg Tablets and Amoxicillin-clavulanate 250 mg Capsules), 'Problem List' (listing conditions like Periculis, Migraine - Classical migraine, and Diabetes mellitus - Diabetes with ophthalmic complications), 'Immunizations', 'Care Plans', 'Family History', 'Social History', and 'Laboratory History'. The patient's demographic information is visible at the top, including DOB (04/04/1962), gender (M), and date of capture (09/09/2009).

Australia's Antarctic program



AAD AMP Information Portal- Wiki

Access via EHR RealTime & Replicated Offline

RecentChanges FindPage HelpContents FrontPage
Immutable Page Info Attachments More Actions: ▾

Antarctic Medical Practitioner Information Portal (AMPIP) - Home



Note to AMPs

AMPIP is constantly having new material added but doesn't contain everything you need to know (yet). If you cannot find something you are looking for see the *AMP Files* folder which can be found on your desktop.

AMPIP Sections
Emergency Contacts
Polar Medicine Unit Work Instructions
Polar Medicine Unit Procedures (PMUPs)
Polar Medicine Unit clinical Guidelines (PMUGs)
PMU Manuals & Handbooks
Medical Devices
Medical Administration
IT Systems
Logistics
Training
Station Handover

Search AMPIP
AMPIP Index
AMPIP Categories

ULCO Anaesthetic Machine

Plus ULCO Bennetts Anaesthetic Ventilator



• Guidelines to performing general anaesthesia can be found on the [Anaesthesia](#) page.

Use

- general anaesthesia
- delivery of nitrous/oxygen for procedural sedation
- Previously the Bennetts Air-Oxygen mixer was used in conjunction with the ULCO anaesthetic machine to allow ICU ventilation - however this function has been taken over by the [Newport HT50 Transport Ventilator](#).

Training

- orientation to the equipment is provided during predeparture training
- ongoing training scenarios with this equipment should be undertaken regularly on station with the lay surgical and anaesthetic teams to ensure you (and your team) remain familiar with its use.

Operation Guides

- [i/Set Up Guide](#)
- [i/Set Up Pictures](#)
- [i/EV500 Ventilator Quickstart Instructions](#)

Manuels

- [i/Service Manual - ULCO Compact Anaesthetic Machine.](#)
- [i/ULCO EV500 Ventilator Manual](#)
- [i/ULCO 0.5kg CO2 Absorber Manual](#)
- [i/Blease Datum Sevoflurane Vapouriser Manual](#)

Maintenance

Job	Frequency	Instructions	Notes
Assemble & test	Monthly	As per i/Set Up Guide	This can be done as part of surgical scenario training with your lay surgical team
RTA for Service	2nd Yearly	When advised by head office	

UpToDate Fri tilgang fra helsebiblioteket.no

ankle fracture adult All Topics Contents

Overview of ankle fractures in adults

Topic Outline

SUMMARY & RECOMMENDATIONS

- INTRODUCTION
- EPIDEMIOLOGY AND RISK FACTORS
- CLINICAL ANATOMY
- MECHANISM OF INJURY
 - Overview
 - Malleolar fractures
- CLINICAL PRESENTATION AND EXAMINATION
- RADIOGRAPHIC FINDINGS

Overview of ankle fractures in adults

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Disclosures: **Scott M Koehler, MD** Nothing to disclose. **Patrice Eiff, MD** (Compression products-Dr. Fields does not receive any financial support for this article.) **Jonathan Grayzel, MD, FAAEM** Nothing to disclose.

All topics are updated as new evidence becomes available. **Literature review current through:** Jul 2015. | **This**

INTRODUCTION — Ankle fractures are increasingly common injuries. Each year, approximately 1.5 million ankle injuries occur each year in the United States alone [1].

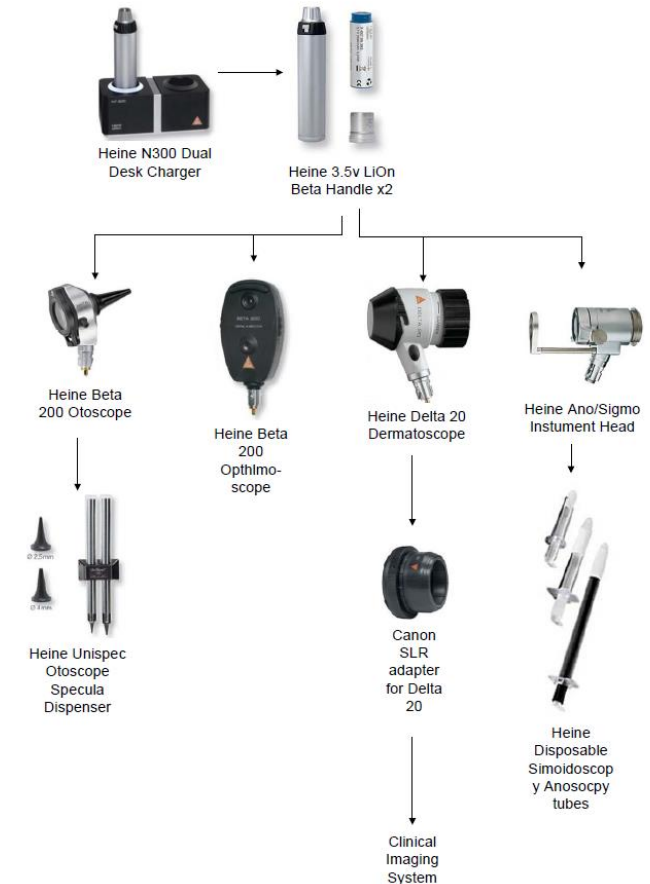
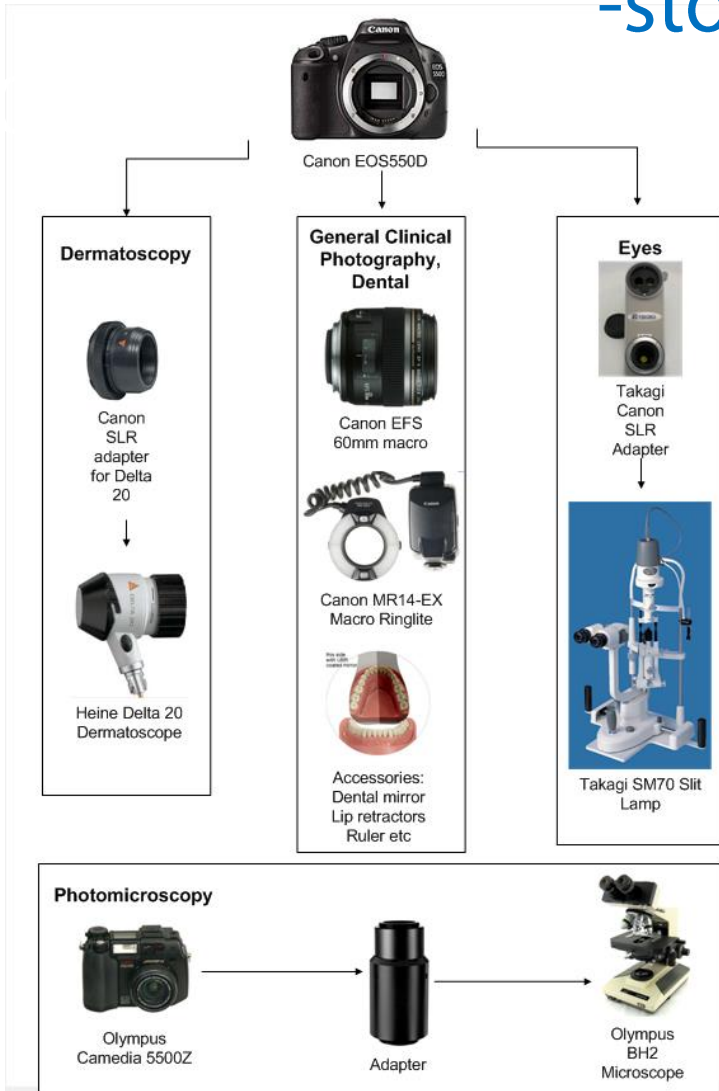
[Products-CardioView PC ECG Link]

A complete electrocardiography package that is mobile, compact and simple to use.

Various Devices- support clinical diagnosis via AAD EHR
Eg Electrocardiogram 12 lead

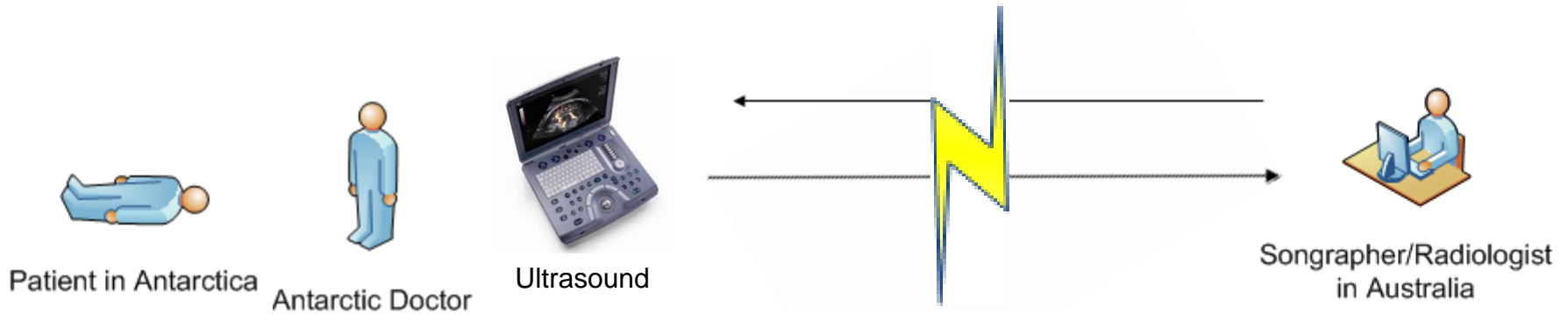


AAD Clinical Imaging incorporated into EHR -store and forward



AAD Store & Forward 3D-4D Volume Tele-Ultrasound

- Remote operator collects images separated from expert by time



Ultrasound capability for Australian Antarctic bases (AAI 2762)

BAT image four (A/B):

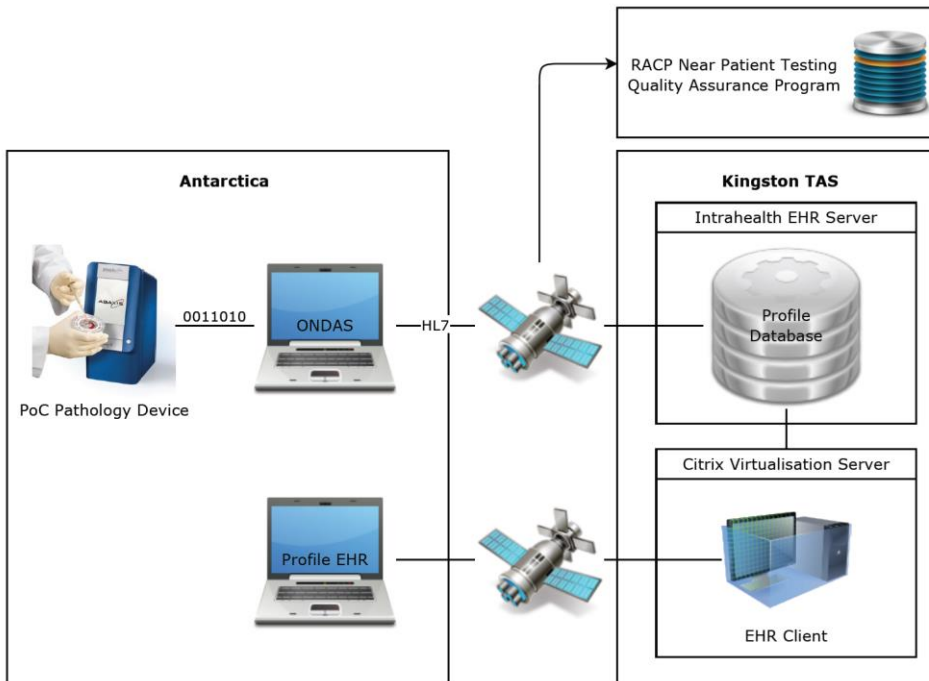
- Return the probe to horizontal with the groove towards you. Move the probe so it is about 10 cm from the belly button towards the RIGHT side. Move the probe down about 5 cm to point it in the image below.
- Now press the probe down firmly to make gas. Be careful for pressing down at least 2.4 cm. Can you see the same structures as above? You'll go to Step 3. No? try the following: A) Move the probe down about 3 cm and towards the outer side of the pelvis by another 2.4 cm. Make sure you are pressing down firmly.
- Select the **+** button and press **+** and then **+** to record IMAGE FOUR (A) one. Don't move your probe from this position.
- Keep your probe still - Select the **+** button on the ultrasound panel 4 cm. Hold the probe still until you see the volume display split into 4 parts.
- Press **+** to save IMAGE FOUR (B).



AAD Digital Radiography and PACS 2010

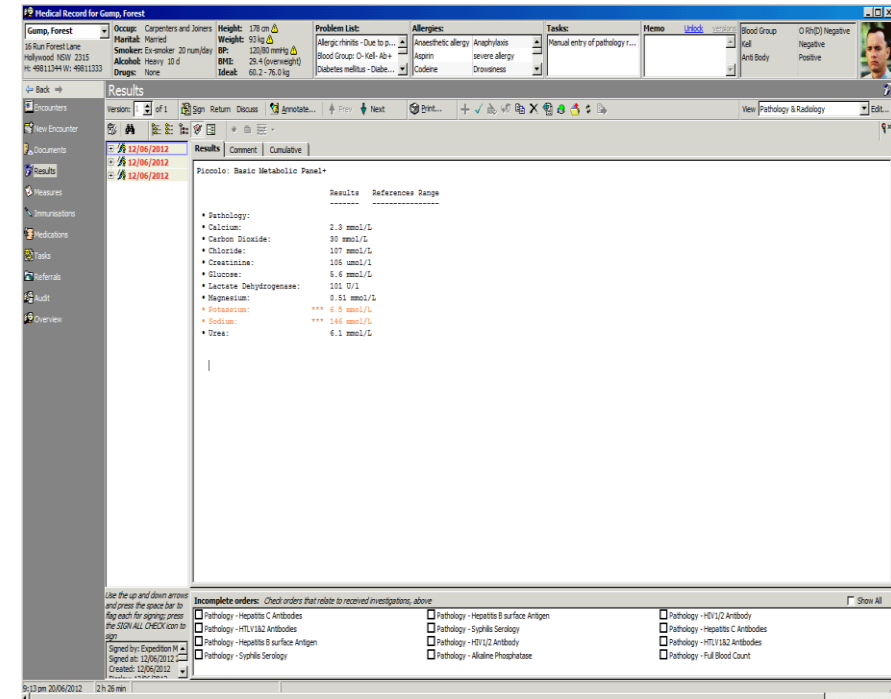


AAD Integration of POCT results into EHR



Health Language 7
Standard
Clinical follow-up and
tracking
Monthly External QAP-
RCPA

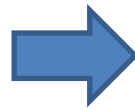
AAD Biochemistry
AAD Blood Gases
AAD Haematology
Routine Australian Pathology and Radiology
Medical Screening HL7



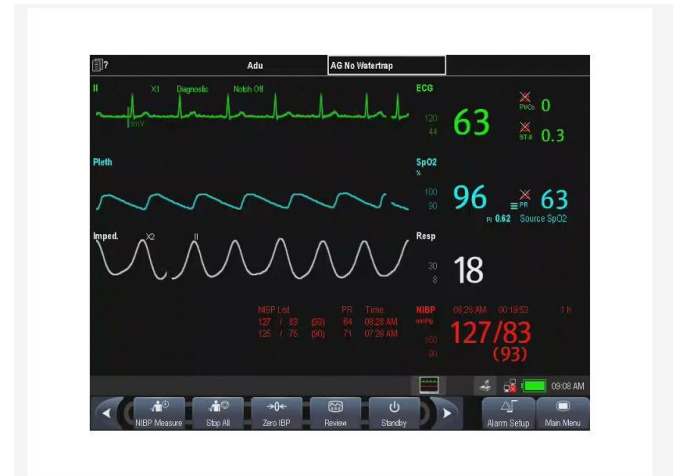
AAD Digital Teledentistry Dental Radiography via PACS 2013



AAD Remote Anaesthesia/Critical Care Monitoring RealTime 2013



VGA output



Patient in Antarctica

PMU Hobart- Web Accessible 24/7

AAD Medical Imaging Automatic routing via Satellite to PACS integrated with EHR 2014

Digital DICOM Images
International Radiology
Diagnostic Standard

Automatic email
notification of study
arrival for reporting

External Access to AAD
staff and Hobart based
specialist radiologists
24/7 via thin clients to
AAD PACS

The screenshot displays a medical record for 'Davis QAP' with the following details:

- Patient Information:** Davis QAP, ID 115, DOB: 01/01/1900, AHR Code: [blank], AP ID: [blank], Profile File No. 47507, Ph: [blank].
- Demographics:** QAP, Davis; TAS.
- Medical History:** Occup: Unknown, Marital: Unknown, Smoker: Unknown, Alcohol: Unknown, Drugs: Unknown.
- Vitals:** Height: [blank], Weight: [blank], BP: [blank], BMI: [blank], Ideal: [blank].
- Problem List:** [blank]
- Allergies:** [blank]
- Tasks:** [blank]
- Memo:** [blank]
- Blood Group:** Kell, Antibody.

The interface also shows a navigation pane on the left with categories like Encounters, Documents, Results, Medications, etc. The main window displays a DICOM image viewer for a 'Clavical' study (AP view) with the following metadata:

- Study:** Clavical, AP, 111, Compression: [checked], Compare Mode: [unchecked], Status: preloading finished.
- Patient:** QAP, Davis, O 1/01/1900, ID: 47507, Acc: 20012014, 0.
- Technical:** W4095 / C2048, Sensitivity: 2023, Plate: 0001869240300.
- Location/Time:** Australian Antarctic Division, Date: 20/01/2014, Time: 16:10:38, 4cm, CLAVICLE, 1 IMA 1, Zoom factor: 0.08.

A small thumbnail of the DICOM image is visible in the top left of the viewer area.

Telepsychology/TelePsychiatry/CBT

The screenshot shows the homepage of the 'This Way Up Clinic'. At the top left is the clinic logo, 'THIS WAY UP CLINIC', featuring two upward-pointing arrows. To the right are 'LOG IN' and 'REGISTER' buttons. Below the logo is a navigation menu with links: 'ABOUT US', 'COURSES', 'PATIENTS', 'CLINICIANS', 'EVIDENCE', and 'CONTACT US'. A search bar is also present. The main banner features a close-up illustration of a person's face with a concerned expression. A text box on the banner reads: 'Do you always feel nervous, anxious or on the edge? Anxiety is common but treatable!' with a blue arrow pointing to a 'TAKE A LOOK' button. Below the banner are three columns: 'REGISTER TO THIS WAY UP CLINIC' with text about effective treatments and buttons for 'AS CLINICIAN' and 'AS PATIENT'; 'LOG IN' with input fields for 'Email Address' and 'Password', and a 'LOG IN' button; and 'LATEST NEWS' with a heading 'Quickscripts now available!' and text about prescribing courses to patients.

THIS WAY UP CLINIC – CLINICALLY PROVEN TO LESSEN ANXIETY AND DEPRESSION

- PMU Head Office Coordinated
- Telephone
- Email
- Videoconferencing
- Clinical Psychology Hobart
- Clinical Psychiatrist Hobart
- Online asynchronous physician prescribed and monitored Cognitive behavioural therapy(CBT)
- This Way Up Clinic
- <https://thiswayup.org.au/clinic/>

TeleRemote Medical Education

ACRRM

UTAS

- 24/7 remote support via PMU Hotline Hobart**
- Shared electronic health record**
- Same Clinical Information Quality and Safety**
- Weekly Medical Group Teleconferences**
- Accredited Training Posts- Vocational Training**

AAD Telesurgery





Research / Digital Productivity / Autonomous systems / Guardian technologies

ReMoTe: wearable technology

Part of our Guardian Mentor suite of technologies, ReMoTe gives maintenance workers in remote locations access to a virtual pair of expert eyes and hands to guide them through difficult tasks.

THE CHALLENGE

Flying in an expert can be expensive and time consuming

There is a growing need to deliver expert services to remote field workers, especially in the mining industry. However flying in an expert to fix a machine in a remote location can be an expensive proposition.

OUR RESPONSE

We're bringing experts to the site (remotely)

ReMoTe (Remote Mobile Tele-assistance) is hands free, wearable, technology that connects remote experts with on site operators to provide real-time assistance when problems arise.



- Guardian technologies
- Driverless vehicles
- Wearable technology

ENQUIRIES

Have an enquiry about this page?
[Contact us](#)

Last updated: 20 March 2015

www.csiro/remote

Telehealth Futures

1. External provider access to EHR 24/7
2. Patient Access with EHR- Accession
4. Robust TeleSurgical and Tele-Anaesthetic supervision and support -remote generalist Dr
5. Virtual Support and Training wearable remotes