South West Wales Cancer Network

Telemedicine Project

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1. BACKGROUND

To ensure further progress could be made to achieve the National Cancer Standards and waiting times targets in South West Wales through service modernisation, the Welsh Assembly Government agreed to support a network-wide implementation programme for Telemedicine. The broad aims of the Telemedicine Project were to ensure improvements in Cancer Services were developed in line with the recommendations in the National Cancer Standards and Targets published by the Welsh Assembly Government in 2005. Through the telemedicine project, this was achieved by:

- Improving communication between primary and secondary care;
- Clarifying patient pathways;
- Implementing network clinical priorities and commissioning frameworks for each cancer site;
- Ensuring better integration of multidisciplinary teams;
- Improving joint commissioning and collaborative working;
- Providing seamless, consistent and well-coordinated services.

The Telemedicine Project was launched on 1 September 2005 and the modernisation process was undertaken through a project management approach. The Project Manager was seconded to the Network from the Ceredigion & Mid Wales NHS Trust for two days per week to support phases 1 and 2 of the project specification.

2. INTRODUCTION

The Welsh Assembly Government established Informing Health Care in Wales to take lead responsibility for improving the communication technologies infrastructure and to modernise service delivery by supporting new ways of working. In 2006 the Informing Health Care Implementation Strategy provided a strategic context for future development. The strategy was set in the context of Welsh Assembly Government health policy Designed for Life, Making the Connection, Wanless Report.

The strategy also set out Informing Health Care remit and the key strategic aims of the programme to deploy technology that provides information to support:

i. Continuous and integrated care for patients during their ‘journey’ throughout the health service and social care.
ii. Care closer to home for patients, keeping them informed about the progress of their care and supporting information decision making.
iii. Co-ordinated care so that contributors in the health services are work together for the benefit of the patient - supporting the care progress and the tasks that staff perform to improve the safety of services and overall efficiency.

In view of the progress made within South West Wales, Informing Health Care agreed that the range of projects underway could be used as pilot studies to support the Informing Health Care Implementation Strategy.
3. **Cancer Waiting Times Targets**

The Welsh Health Circular published on 16 June 2005 highlighted the Welsh Assembly Government requirement that the cancer standards were fully implemented and waiting times targets be achieved by the end of March 2009.

These waiting times focus on the need to ensure that patients receive treatment for their cancer quickly, regardless of referral route into the service. The standards state that patients referred by their GP as urgent with suspected cancer and diagnosis confirmed by the multidisciplinary team lead clinicians, should start their treatment within 2 months of receipt of referral at the hospital. The waiting times targets therefore focus on the whole patient pathway from referral to diagnosis and definitive treatment.

Much has been achieved to improve the patient pathway and comply with the waiting times as stated in each of the cancer site specific national standards, through improved access to the specialist teams. Integral to the standards is implementation of National Institute for Clinical Excellence and Clinical Outcomes Group Commissioning Guidance. This can only be achieved through more efficient/effective use of scarce resources to ensure the local service model reflects the recommendations in these reports to provide sustainable services for the future.
4. **PROGRESS**

**Phase 1 (September 2005-February 2006)**

As a result of implementation of phase 1 of the project plan from September 2005 to February 2006, achievements to date are summarised below:

- Project Board established with membership comprising: Trust Cancer Lead Clinicians, Network Director, Network Lead Clinician and Project Manager;
- Lead Information & Technology contact nominated to work with the Network Project Manager;
- Site visits to review videoconferencing equipment undertaken;
- Equipment tested for connectivity, quality and working condition with Health Solutions Wales;
- Equipment inventory established identifying the videoconferencing equipment in use within the network which included location, room-booking, troubleshooting and contacts;
- Summary of findings and recommendations compiled following meetings with clinicians, Multidisciplinary team co-ordinators, managers, Information Management and Technology Directors, Information & Technology staff and Cancer Centre staff and attendance at all Cancer Network meetings and workshops scheduled during this period.

As a result of the scoping exercise, the main issues to emerge from the site specific cancers multidisciplinary teams included:

- Room access;
- Equipment and availability;
- Restriction of cases discussed at MDT meetings;
- Difficulties actually using the equipment and the need for training which included basic and refresher training as well as etiquette of videoconferencing meetings;
- Lack of equipment maintenance and troubleshooting help;
- General lack of awareness of videoconferencing facilities and its full range of uses;
- The need for dedicated multidisciplinary teams videoconferencing facilities.

A number of other issues were also identified in relation to telehealth for example, Picture Archiving & Communication System (PACS). In the main these included poor image quality, availability and access to peripheral Picture Archiving & Communication System systems from tertiary centre. This was compounded by the difficulties accessing hard copies in terms of availability and display.
Phase 2 - (April 2006-March 2007)

As a result of phase 1 of the project a number of improvements were achieved, however, the scoping exercise identified a number of areas where further work was required to ensure significant impact on the waiting times for the National Cancer Standards and Targets. The work undertaken to date included:

**Training:** Training workshops for staff within the network for use of videoconferencing equipment, making calls, meeting etiquette, troubleshooting and using the Welsh Health Video Network bridging facilities for hosting multi-sites conferences were undertaken. User guides are available on South West Wales Cancer Network Website [http://howis.wales.nhs.uk/swwcn](http://howis.wales.nhs.uk/swwcn).

**Partnership with Informing Healthcare:** Meetings held with Director of Informing Healthcare to establish relationship and nomination of Informing Healthcare representation on Telemedicine Project Board to ensure collaborative working.

**Pathology Images:** Scoping exercise undertaken to establish and develop a system to network pathology images to enable images to be shared across the network to provide support for Network pathologists and facilitate sharing of images between sites for clinical and educational purposes. Recommendations presented to board and agreement to proceed with Phase 1 and 2 of recommendations and gather detailed costings for total project implementation.

**Multidisciplinary teams:** Scoping exercise to assess systems to improve the administration and function of the multidisciplinary teams to standardise patient pathways, treatment protocols and guidelines throughout the Network should be developed. This would ensure that the National Cancer Standards and Targets requirements to record meetings, audit and follow information sharing protocols.

**Teledermatology:** Project proposal being developed with Informing Healthcare and Regional Dermatology Network to establish a nurse-led Teledermatology service. If successful could be established as a regional solution to address current difficulties in providing the dermatology service and respond to the requirements of the National Institute for Clinical Excellence commissioning guidance. There is potential for establishing Teledermatology and videoconsultations at a regional level.

**Telemammography:** There is a need to establish a Telemammography system to provide a digital reporting service to remote units where there is no specialist radiology input or to provide cover for annual/sick leave. Discussion with Breast Test Wales and revision of Breast Service Telemammography business case to ensure that Breast Service is prepared and ready to submit proposal for digital systems in line with the Screening Service schedule.

**Picture Archiving & Communication System (PACS) workstations:** Raising awareness and supporting Trust’s bid to prioritise implementation of PACS at Cancer Centre. Availability of PACS workstation at multidisciplinary teams would enable specialised reporting or centralised reporting when specialist radiologists are not available in the cancer units.

**Case Study:** Collaborative partnership with Informing Healthcare, Health Solutions Wales and Telemedicine Project to write a case study on the use and impact of PVX web camera technology within a clinical environment. Nine web cameras and laptops installed at nominated hospitals throughout the South West Wales Cancer Network and their use monitored. Information gathered during case study period will provide useful
information for Cancer Network, Informing Healthcare, Health Solutions Wales and Trust IT Departments in considering the future development of use of the PVX technology. Case study to be produced by end of March 2007.

**Awareness:** Presentations at wide range of events to publicise and raise awareness of South West Wales Cancer Network’s reputation as a leader in the use of Telehealth in delivering innovative patient care services. This includes undertaking breakout session at CSCG Learning Event – 27 October 2006, oral presentation at Saving Lives in Cancer Conference, Brussels – 21 & 22 November 2006, poster presentation at 1st NHS Network Conference, Docklands, London - 30 November 2006. This has generated much interest in the community with articles published in local and national newspapers and to be published in European Cancer Journal in February 2007.

Information and user guides are available on Cancer Network Web [http://howis.wales.nhs.uk/swwcn](http://howis.wales.nhs.uk/swwcn)

**Dedicated multidisciplinary teams:** There is a need to continue working with the NHS trusts to ensure recognition of the need for dedicated multidisciplinary teams videoconferencing suites. This would ensure improved timing, scheduling and location of MDT meetings within each Trust as well as better synchronisation of MDT meetings between peripheral hospitals and the Cancer Centre.

**Supra-network multidisciplinary teams:** Further work will be required to identify and improve the clinical networking structure and improve the MDT working across Network areas for specialised services and rare or more complex cancers. This would also have significant impact on improved outcomes through clinical audit and involvement in cancer trials.

5. **IMPACT/SPIN OFFS**

Other telemedicine activities have also occurred consequently to activity within the Cancer Network team during phase 1 and phase 2.

5.1 Paediatric Cardiac Respiratory Physician using videoconferencing equipment to successfully transmit echocardiography ultrasounds to the Cardiac Department in University Hospital of Wales, Cardiff for second opinion and diagnosis. Previous practice was to courier the video tape to Cardiff or alternatively transfer the patient to Cardiff. Further work being undertaken regarding linking echocardiography ultrasound machine direct to videoconferencing equipment to enable live transmission of echocardiography.

5.2 As a result of the Ceredigion Telemedicine Project, telemedicine equipment and links with the Marie Curie Holme Towers hospice in Penarth were established in May 2006. This is to allow a nurse-led palliative care service in Mid Wales to “attend” lectures in South Wales without leaving the centre in Aberystwyth and Cardigan Hospital. This has expanded to include other cancer centres, eg Y Bwthyn Newydd Palliative Care Unit, Bridgend to also “attend” lectures and best practice seminars. This has been a great success and an article was published in Marie Curie Nursing and Therapies News Magazine (Issue 14 Dec 06).

5.3 Commencing January 2007 selected videoconferencing seminars have been recorded via the Welsh Health Video Network Codian server, copied onto CD locally and stored for reference. It is anticipated that this could be implemented for other training and e-learning sessions undertaken.
5.4 TeleRehab – An assessment clinic was undertaken between patient/carer and physiotherapy team at Bronglais Hospital, Aberystwyth and the Rehab Team, Rehab Engineering Department at Morriston Hospital. This was to assess whether videoconferencing could be used to check on the status of an intervention for a patient requiring a modification to specialised seating. This was deemed very successful both by the staff and in particular the patient. Both organizations involved are keen to investigate the potential of implementing this becoming a permanent service. Article published at http://intranet.swansea-tr.wales.nhs.uk/bulletin/showBulletin.php?bulletin_id=211 on the Swansea NHS Trust website, in Cambrian News and television broadcast in BBC Me and My Health, S4C Iechyd Ni” and BBC Radio Wales in October 2006.

5.5 Speech and Language Therapist at Singleton Hospital is exploring the feasibility of using videoconferencing for patient consultations. Particular areas to test and evaluate include:

- patient videoconsultations for those working in remote sites, (or those without local specialist services), accessing expertise of Clinical Specialist at Singleton Hospital for expert opinion
- follow up appointments for patients with highly complex communication and swallowing needs in remote or “community” sites, reducing need for time consuming, fatiguing journeys for patient, or extended travelling time and reduced patient throughput for scarce therapy personnel
- Supervision of staff at remote community sites in highly complex communication/swallowing disorders, enabling patients to be seen closer to home but by therapists who feel supported to carry out specialist procedures with remote supervision/clinical support

The Telemedicine project manager is currently working with the Speech and Language Therapist to set up two pilot sessions to evaluate the potential benefits and advantages of the procedure. Service guidelines and recommendations for future application of this innovative way of working will also be developed.

These are all good examples of the current increased interest in this area and promotion of extended applications in diverse situations which is a result of the work undertaken by the Telemedicine Project Board.
6. **In Summary**

As a result of the work undertaken to date, the site specific cancers multidisciplinary team leads identified the need to improve access to diagnostic and specialist teams and supported the need to establish a more co-ordinated approach to improving the clinical networks through videoconferencing. The project scoping also demonstrated that there were perceived benefits from other potential users of videoconferencing facilities which included non Cancer Centre clinicians. Multidisciplinary teams linking to the Cancer Centre where this does not exist currently would result in a reduction of travelling from site to site, reduction in time travelling to remote sites and the opportunity to use videoconferencing for educational and ad hoc consultation advice. Most importantly, there is overall encouragement of good working relationships both with in NHS Trusts and network wide.

Staff are now more confident in the use of technology and the Telemedicine Project has provided a platform to support healthcare professional’s enthusiasm and good ideas.

The work undertaken by the Telemedicine Project has also resulted in additional activities with other services incorporating technology imaginatively and innovation to improve services.

Telemedicine Project Board Members are very proud of their achievements and would support proposals for work to be extended to phase 3 (consolidate the work to date) and phase 4 (robust evaluation of impact of Telemedicine in the South West Wales Cancer Network).

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REFERENCES:


