National Assembly for Wales
Health and Social Care Committee

Access to medical technologies in Wales

Evidence from Cardiff and Vale UHB – MT 44

Cardiff and Vale University Health Board response to the National Assembly for Wales Health and Social Care Committee inquiry into access to medical technologies within primary care.

Introduction

1. Cardiff and Vale University Health Board (UHB) is well positioned to realise the potential of medical technology in primary care. The UHB is fortunate to have good quality primary care (across all contractors) and a real interest and engagement from practices to trial new technologies and champion successes. Consequently, there are pockets of the use of medical technology supporting good clinical practice and this paper refers to some of examples.

2. However, the potential is far greater if both the spread and the ambition extends. Cardiff and Vale are not only well placed in terms of good quality primary care with real enthusiasts to champion developments but also with the UHB's information platform. In Cardiff and Vale, PARIS is our information system of choice for community and mental health services. This is well received by primary care and can provide linkages to secondary and tertiary care. The system is widely used by staff at clinical bases and on a mobile basis. Information on care joined up at patient level and visible is essential to maximising the benefits of an integrated organisation, an opportunity that is unique to Wales.

3. This paper sets out the vision within Cardiff and Vale that would build upon the solid foundation of good quality primary care and a solid information platform for the use of medical technologies within a whole system.

Cardiff & Vale – Current Situation

4. Cardiff & Vale UHB are the only Health Board in Wales to have an information system (PARIS) that supports the full electronic patient record for mental health and community services (including Local Authority delivered elements) and which can 'talk' to the hospital systems and share information both ways. Previously these services had manual systems or, at best, poor IT infrastructure that did not 'join up' across services.

5. The design and implementation of the PARIS system has been service user led from the start which the UHB regards as critical to the successful implementation. With over 4000 users across approximately 150 clinical teams, there are 700 clinical assessments recorded each day and 7000 case notes recorded.

6. To build upon this initiative and to remove the need for staff to return to their bases to collect and update records, a mobile-working solution was sought. Following pump priming funding via Welsh Government Invest to Save, mobile working was comprehensively rolled out in April 2011.

7. This is a solid foundation for supporting integrated working across primary care, social care and hospital care.

8. The following provides some examples of the current use of technology in primary care. It should be noted that the technology support changes in pathway (shifting care in the community from hospital services) and also requires a change management to ensure they are fully embedding into everyday new ways of working.

Teledermatology
9. The teledermatology service focuses on bridging the gap between hospital based specialists and doctors in primary care. The teledermatology service links specialist dermatologists with patients and doctors in approximately 40 GP practices throughout Cardiff and the Vale of Glamorgan saving an estimated 700 out patient appointments per year. Benefits include much faster access to specialist dermatology advice, helping to develop doctors' experience and skills, and also cutting down waiting times for patients and referrals to hospitals.

ECG
10. Electrocardiograms (ECGs) are regularly used in primary care both for diagnostic and screening purposes, and to support referral to specialist services. Approximately 80% - 90% of GP practices have purchased ECG for use in Primary Care. It is difficult to estimate the number of patients who undergo ECG monitoring in primary care however the benefits are great. Early detection leads to early action and treatment moving diagnosis for some conditions such as stable AF from the acute hospital setting in to primary care allowing GP's to develop and provide a more proactive and preventable model of care.

Level 4 INR
11. Level 4 INR monitoring was introduced in Cardiff & Vale Primary Care in 2007. Initially only a small number of practices were commissioned to provide this service however over time this has increased to a total of 41 practices providing this service. INR level 4 provides point of care testing for INR monitoring within the primary care environment. This allows 'One stop' care to be provided within the GP practices: testing, analysing, dosing and prescribing in one visit which improves quality & safety for patients, improves patient experience and reduces diagnostic lab test requests within secondary care. Approximately 2450 patients are monitored using INR level 4.

Ambulatory Blood Pressure Monitoring (ABPM)
12. National Institute for Health and Clinical Excellence (NICE) are recommending ambulatory monitoring part of routine practice for the diagnosis of hypertension in primary care. Use of ABPM may rule out 25% of patients currently misdiagnosed and treated for high BP. The use of ABPM within primary care is relatively recent with only approximately 25-30% of practices across C&V approximately investing in ABPM monitoring equipment for the diagnosis of hypertension since 2011. The benefits of using ABPM in the diagnosis of hypertension are clear; the use of ABPM has been shown to improve accurate diagnosis of hypertension whilst reducing workload in practice releasing significant savings in time for the practice as well as inappropriate prescribing whilst also reducing the incidence of TIA/Stroke.

Spirometry
13. Spirometry is a type of pulmonary function test that measures the amount of air taken in (volume) and exhaled as a function of time. This is a core function of GP's in primary care for the treatment and management of patients with COPD as well as some asthma patients and is in place within all C&V practices. Approximately 7000 COPD patients undergo spirometry within primary care in Cardiff and Vale per year. The benefits of using

spriometry in primary care include the early identification, treatment and management of COPD allowing GP's to develop and provide a more proactive and preventable model of care managing and maintaining patients within primary & community care avoiding exacerbation and unscheduled care attendances.

Vision for the Future

14. Unlocking the potential of an integrated system is challenging when the history of the system is made up of different organisations with different priorities and different cultures. However, the potential is significant and therefore the challenge must be met. One of our first successes in Cardiff and Vale is within diabetes. With up to one in five medical patients having diabetes, and diabetes becoming commoner still, it is essential that clinicians across all care settings (in primary, community, secondary and tertiary care) are competent in managing diabetes.

15. A new model of diabetes care started in Cardiff and Vale in the autumn of 2012. The model arose from the observation that more care could be provided in the community setting for diabetes, further engaging local people and patients, and enabling experts to work closely with general practitioners and practice nurses. Through this approach, it helps increase professional knowledge, awareness and engagement in diabetes care among primary care practitioners, and has the potential to reduce the need for hospital-based services.

16. A shift within the model of care has been agreed so that medical consultants specialising in diabetes care now spend time working with local GPs, in their surgeries, to discuss the care and management of their patients with type 2 diabetes. The benefits of this new approach are clear. Patients seen in the outpatient department can potentially be discharged back to routine GP care more quickly, as specialist input will continue through the practice. More people with newly diagnosed diabetes can now be started on their medication in the community without needing an outpatient attendance, which is beneficial for both the patient and the NHS. GPs can use their enhanced knowledge and experience of dealing with cases of diabetes on other patients under their care and in their practice.

17. In the first six months of the model, referrals to secondary care outpatient appointments dropped by one third. It is projected that the new pathway will free up consultant time; this freed up resource could be used for increasing training to medical and allied staff, or for patient and carer education. Taking things a step further, this resource could be reallocated to preventing diabetes altogether, for example through individual or population-based interventions on known risk factors for the condition.

18. Whilst many benefits can be realised through the above model these could further enhanced with the implementation of system-wide multi-disciplinary team (MDT) tele-conferencing. Such systems bring professionals and organisations close together building a virtual team around the patient. At its most basic this would be access to secondary care opinion on patient cases at a set time but could facilitate the following:
   a) Full MDTs across primary and secondary;

   b) 'Hot access' to a secondary care opinion for patients starting to fail in the community (ie urgent assessment services in the community);

   c) Training and educational opportunities;

   d) MDTs to include wider partners such as Social Services and the Third Sector;

   e) Facilities in nursing homes to support maintaining patients in their own homes; and

f) Transition clinics eg adolescent diabetes.

19. There is still more to be done in fully implementing the diabetes model and technology is an important enabler to this. However, lessons can be learnt from the early implementation of the diabetes model of care which can provide a blueprint for the management of chronic conditions as pathways are remodelled to support patients in the community as opposed to within hospital services whenever possible. The implementation of system-wide teleconferencing facilities joins us services and partners in a virtual setting with the following benefits:
    a) Continuity of care with an impact on quality and safety and effective use of resources (eg avoidance of duplication/gaps of referrals/services, travel expenses);

    b) Impact on RTT waiting times as referrals may be avoided or care provided in an alternative setting (close to home); and

    c) Support to patients to self-care.

20. Whilst this model could be rolled out to manage chronic conditions, elements of this model could also support the management of the elderly frail population. The principles of 'team around the patient' through system-wide teleconferencing could support the step-up care provided to patients to avoid admission and support maintenance in the community and also the pull from hospital.

21. Chronic conditions management and the care of the elderly are key areas of focus for both scheduled and unscheduled care and such a model would have an integral role in supporting these patients to live as independently as possible in the community.

22. Considering further opportunities where medical technology could support new ways of working, is the use of technology to communicate with patients and obtain data on patients whilst maintaining them in the community. This could support the following:
    a) How patients book appointments, access prescriptions or even hold their own health record;

    b) Mandating e-referrals;

    c) Receive health data from direct from patients;

    d) Ensure alerts in place where health data is outside of expected parameters;

    e) Manage patients whose health data indicate a decline remotely; and

    f) Share information with all relevant parties

23. The benefits that the PARIS (mental health and community information system) has had within Cardiff and Vale UHB can be extended with the All Wales procurement of a joint health and social care system. In a modern care system this would seem as essential to maximising the benefits in Wales of integrated health systems and the join up with social care.

Making it Happen
24. The technology is rapidly improving and there are plenty of options available.

25. *Webex* is a teleconference/meeting piece of software which allows HD video, voice (via computer or traditional telephone), text chat and screen sharing through a single piece of

software. Currently, up to 8 people can be on a single call, although early applications have usually been between a single patient and either one or two clinicians. The UHB are trialling MDTs where staff may be located across the region – the host of the meeting is able to share documents from their screen, and all of the attendees are able to see each other as well as the shared documents. Where Webex is superior to the likes of skype or facetime is in its security – the connections between individuals are made securely through webex's servers and as such it is appropriate for use in our environment unlike skype and facetime.

26. Webex will probably not be the long-term tool of choice. NHS Wales Informatics Services are implementing Microsoft *Lync* infrastructure (Lync is essentially the same as Webex, but is a Microsoft-branded product) on behalf of health boards in Wales – the UHB would be keen to move to this infrastructure as an early adopter. Having staff using webex now will allow us to capitalise on this infrastructure once it is in place. The UHB has also configured a mobile working device to use webex, and it has proved to have a reliable, stable connection.

27. Such a system would support real-time communication and decision-making, avoid hand-offs and reduce travel (thereby reducing time and expenses).

28. *Florence Simple Telehealth* uses text messaging (SMS) to communicate information to patients and to receive health data from them. The received data is presented cleanly and simply to the responsible clinician. The system has a level of built-in intelligence so that if readings are too high or too low, the patient can be asked to re-submit their reading or, ultimately, contact the relevant clinician. Because the responsibility for action remains with the patient, clinicians are not expected to respond to alerts (although these can be configured). Florence is not meant to be a patient record system – received data can be exported to the patient record if it needs to be kept, and the only patient information held on the system is their name, NHS number (optional) and mobile phone number. Because of this, set-up for new patients is very quick.

Commissioning and funding position

29. The UHB has limited funding available to support capital investment in this area, however desirable as the physical infrastructure in which the UHB works in terms of estate, core IT and medical equipment is very old and subject to frequent failure. Capital is prioritised towards statutory compliance and essential backlog maintenance and there is currently a significant backlog of expenditure required to enable the environment in which we care for patients to be fit for purpose. Revenue investment opportunities are similarly tight given the challenging financial position of the UHB.

30. The UHB believes that pump priming investment in technology would deliver short-term and long-term benefits which are quantifiable both in terms of patient quality of care, access to services and financial savings in terms of administrative staff and would welcome an approach by Welsh Government which supported this.

Conclusion

31. Given the experience in Cardiff & Vale of PARIS and specific one-off developments achieved to date, the UHB believes that it is ideally placed to maximise the benefits of an integrated organisation.
   a) The UHB has a good foundation on which to build – good quality and engaged primary care and a well-developed information management platform which integrates primary care, community, mental health, acute and tertiary patient information.

b) Technology is pivotal to delivering our vision of safe and effective care as close to home as possible within an integrated organisation.
c) Benefit for population is clear plus the impact on scheduled and unscheduled care.
d) Investment is required to pump-prime medical technology and should be targeted against expected benefits.

Sue Morgan: Head of Operations and Delivery, Primary, Community and Integrated Care

Charlotte Moar: Director of Finance and Performance

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