



RADICAL STEPS is a periodic forum for open consultation on developments in informatics to support health. Informatics is not seen as an end in itself, but rather within the context of better care delivery and management systems to support health maintenance. RADICAL STEPS involves a wide range of professionals who do not lose sight of this aim. The overall aim of the RADICAL STEPS is to address the current pressures and maximise the success from available investment.

The situation in early 2004 is that much of the procurement for the National Programme in England (NPfIT) has been carried out. The first stages of implementation of infrastructure and clinical care systems are imminent and the position is being closely evaluated outwith England. RADICAL STEPS initiatives reinforce the view that NHS staff are willing to engage positively with national initiatives like NPfIT, if they fully understand them and are involved in their development and deployment. Despite welcome progress, there are still concerns about issues that have been collected under the headings of :

- **PARTNERSHIP** - notably between the National Programme as facilitators and the NHS users of the commissioned solutions, the NHS and its commercial vendors / suppliers and health professionals and the public as subjects of electronic records;
- **USE AND USABILITY** of solutions - the capacity, capability and motivation of health professionals to embrace built solutions to support their day to day practice
- **COPING STRATEGIES** - in a new environment of eclectic legacy systems, perceived confusion and a context of continuing organisational change and considerable political pressure
- **FLEXIBILITY** - in harnessing the strategic direction of health, of technology and a move to electronic governance
- **INNOVATION** - and the ability to change over time whilst retaining the best of the current

This paper reflects the collective expert comments from the participants in the forum, both on the day and subsequently, who were eager to evaluate what had, and could be done to maximise the chance of success from the emerging agenda. Whilst a broad range of participants were again involved in RADICAL STEPS, further mechanisms to capture the views of an extended community of operational practitioners should be introduced. This report will be placed on the web ([www.bcshic.org](http://www.bcshic.org)) for further comment, reflection and development.

## **DETAILED ISSUES**

There is disquiet that previous good advice, described in published literature and expert commentary, has not (yet) been responded to or indeed acted on. Detailed understanding of what contractually is available nationally and what is required locally is still confused. Although recent announcements (such as the role of Professor Halligan, as announced at the March HC2004 congress) are widely welcomed.

The total cost of local ownership of new operational solutions has yet to be worked up (including management of change, capacity increases and capability enhancements). The eventual level appears to those in the field to be escalating rapidly over and above previous perceptions.

## **PARTNERSHIP**

### ***Between professionals***

A large cohort of 'the unwilling' still need to be involved in health informatics, and this will take considerable investment in communications. The recent documents emerging from the centre are to be welcomed. Further communication should continually aim to take forward front-line staff and those in strategic positions. Professional protectionism and self-interest is endemic in the NHS, and must give way in the light of positive outcomes from implementation. It is untenable to suspend action until the next professional generation (who view informatics ubiquitously) solve the problems. Senior management who have previously seen informatics as tangential must be made to realise that it has become mainstream and crucial to positive care development.

Having the best individuals in place does not always guarantee an effective team. Like a Barbarians rugby union team, time is needed for each to get to know each other's peculiarities and strengths and to learn to work together in synergy. The target timescales for recently placed contracts do not (appear to have) the luxury of time for the NHS and supplier consortia to bond. This places an

enormous pressure on the organisations, raises the issue of corporate overstretching and increases the risk to successful application delivery and operation. Those entering into a procurement cycle now are strongly recommended to factor in resources to establish collaborative partnership working.

If provision is to deliver operational tools that are fit for purpose, partnership must cover design, development and deployment of full functionality not just the generic front-end. Developers must work in conjunction with trainers, implementers and knowledgeable end users through effective open processes to gain total engagement. Frank exchanges, flexible design and a robust structure should be transparent and collaborative in order to be effective. Perception is rife that the scope of the first phase of procurement has been downsized by a factor of ten - this must be convincingly repudiated or faced up to.

The effects of 'robust' contracts with a very limited number of suppliers tend towards a monopolistic situation. Untoward happenings are giving concern; both in terms of ongoing applications support and corporate viability.

### ***With the public***

The public are now more aware of activity, opportunities and failures in our domain, and efforts should be made to ensure a balanced picture is available and understood. The presentation of benefits from informatics to individual patients and between care giver and care recipients should be the focus, rather than promoting merely financial benefits. In particular, why patient / client records are handled in certain ways, now and in the future, must be explained to the lay audience. Partnership should encompass agreed acknowledgement of clear responsibility and accountability in a defensible not defensive manner. This trust will be hard won.

### ***In delivery***

Whilst consultation is now improving, the core specification appears immutable. The lack of detailed consultation is giving cause for considerable concern. Demonstrable, for example by :

- Superficial operational clinical involvement to date
- Indications that, although they deliver the largest proportion of bedside care, substantial nursing involvement will not be included until 2008
- Little formal engagement of health records staff has occurred

- Limited previous RADICAL STEPS observations appear to have been considered and incorporated, albeit input by the people who will have to support the solutions operationally

Full engagement of all those directly involved in collection, processing and application of health information is crucial to success and progress. It may be necessary to 'leave well alone' where existing functionality meets operational needs; then work together to produce and test extended solutions in a staged way.

From performance to date, the current concentration of power and influence is unlikely to be in concordance with patient views at all times. A more balanced democratic process and wider operational community involvement should be sought immediately. However patient power should not erode the significance of clinician decision making nor produce a risk-averse culture where the risk of litigation is disproportionately increased.

The concept of model communities as demonstrators and leaders is to be welcomed. However the risk of denuding organisations of their local champions could jeopardise their ultimate implementations downstream; conversely if demonstrators are populated with the less-able who are more easily released, the models may also be at risk.

## **USE AND USABILITY**

The NHS is under-resourced in human terms to cope with the day to day and emergency situations it works within. Overlaying a major change programme onto such situations is challenging. When that change also requires new competencies, such as informatics, to be generated for significantly large numbers of staff that challenge assumes huge proportions. System failure is known to result from a poor match between potential solutions and business processes. Time is needed to understand the local scenarios and pressures and to maximise the likelihood of success.

The focus locally is on the value of health information and the benefits of using it rather than on its availability per se. Local champions are necessary but not sufficient to the success of local engagement and application use. Steps must be taken to ensure that the operational professionals who will make (or break) the service provided are fully informed about what systems can do for them and are competent to use the solutions available to them. Care is delivered in many locations, including the home. Applications systems must reflect and support this, as well as being able to harness the emerging involvement of the public in their own health care.

Familiarisation with the potential of the Internet will help to gain confidence with available technologies. To stimulate this, limited personal research should be allowed from work bases. Clinicians are indicating their willingness to learn how to maximise the deliverables from investment in informatics, if they are regularly informed of progress. High impact applications that demonstrate significant benefit to patient care include e-prescribing, order communications and test results reporting, community intranet services and picture archiving. Early implementation of these would create a significant shift in perception and understanding of the contribution that successful technologically based solutions can provide.

The burden of generating, assimilating and responding to reports is huge; application solutions should look to automate processing and reduce the burden of mechanistic information handling wherever possible - it is not the 'sexy/heroic' side of informatics but can make a significant difference to overall performance.

## **COPING STRATEGIES**

There is a well-defined enthusiasm for utilising informatics where it has direct benefits. The lack of current clarity about what is on the menu needs to be redressed - for clinicians, managers and other health practitioners. In as far as it is possible, application solutions should be intuitive and non-invasive to clinical / operational practice. Planned programmes of work should be future-proofed and upwards compatible to cope with emergent innovations. Where there is a clear rationale (and business case) for change, full investment, commitment across the board to and involvement in the management of such change should be strongly mandated. Positive coordination of such action is made more difficult where organisational boundaries are not coterminous with natural communities and other potentially interworking agencies.

Areas where investment in strategic specification has not always been seen to come to fruition (for example in telemedicine) have a negative effect on the perception of a logical overall plan. On the other hand, there is a considerable area of potentially useful functionality for which funds have not yet been identified. Anything that brings into question value for money from funding for informatics further de-stabilises future actions. Real benefits must be communicated widely. Looking at the US roll-out of the knowledge-based Medline service to all doctor's desks indicates learning points relating to how culture change could be enabled.

Clinicians and managers will not embrace informatics unless clear benefits to patient care are demonstrated, such as early warning of potential drug-related

adverse incidents and electronic tools to manage robust prescribing, not just prescription handling.

Training should enhance professional competencies in order to get the best out of informatics solutions, and not be an exercise in the volume of qualifications only. Encouragement of feedback and continued operational reinforcement of tools, techniques and the rationale of their use must follow initial engagement in informatics. The trend is towards registration of fully competent professionals ([www.ukchip.org](http://www.ukchip.org)) to contribute to harness existing and future informatics across the domain. Well-understood coherent plans for coordinating change are imperative to achieving quick wins.

## **FLEXIBILITY**

The NHS inevitably faces continual change and concerns are raised that current contracts do not contain enough flexibility to cope. Current clusterings of organisations are not seen as homogenous. Generic contractual requirements developed at that level are not therefore felt to reflect the characteristics of present and future demand.

Clinical and management engagement must be sustained to ensure that future proposals continue to meet operational needs within the strategic context. The continuing debate surrounding benefit entitlement cards suggests that issues of access to and ownership of personal (patient) data are a significant ongoing theme. Certain recent cases (such as Soham, Climbie and Shipman) have illustrated the risks of having incomplete data and systems that are not tamper-proof. Lessons must be learnt from the sensitivities of past history.

Until health informatics is recognised as a formal profession it is unable to draw on traditional sources of staff development resources. Best efforts must be made to include appraisal of future informatics 'fitness to practice' in mainstream human resources strategies. A major step change in clinician productivity will not be achieved by simply automating existing manual processes. By thinking "outside the box" we should aim to develop radically different approaches which genuinely add value to the NHS performance and THEN aim to achieve further value and service gains through an on-going process of continuous improvement.

Medicine, for example, is recognised as both art and science. Informatics solutions must similarly allow for flexibility and choice. Demands on nursing professionals are extensive, and include *immediate* responses to patient needs. Exploration of the future deployment of human-computer interactivity / innovations such as ambient wearable technologies could meet such challenges; but funding for such strategic evaluation is not currently identified / available.

## **RECOGNISING INNOVATION**

Strategic initiatives are forever emerging, regardless of political climate. Qualitative objectives, contiguous with prevention rather than just cure [Wanless 2]<sup>1</sup> require even more complex scrutiny about health activities and outcomes. We must be vigilant in maintaining informatics to support those functions totally. Beneficial innovation may be stifled through fear of the future. Constraint on local champions must be reduced. Only communicating demonstrable successes convincingly can do this.

Closer working links between policy makers and users / implementers will ensure a more credible direction for and delivery of innovation. To guard against reluctance to move forward, we see independent researchers and academics having a valuable role to play in helping to evaluate and communicate best practice. As indicated in Wanless 2, action research grounded in the operational domain can make a significant contribution. This will require the tactical release of experienced professionals and a new perspective on migrating research into practice.

Transition from current organisational, technological and human situations will require evolutionary change not an imposed revolution. Local clashes will need to be resolved along the way. Changes to public expectations, national wealth and community priorities will also need to be factored in to longer-term developments. Use of technologies in other sectors, especially under the strategic environment of e-government, is crucial to monitor.

Repositioning the professional mix of staff in various care situations will increase the effectiveness of that care. As Integrated Care Pathways become the norm, the professional staffing mix will become wider. Workload can be devolved or dispersed as appropriate and application solutions need to be responsive enough to support such progressive or fluid deployment.

Mechanisms need to be in place to harness existing technology in innovative ways and to capitalise on new technologies, such as wearable technology, drug compliance tools, self-management support and smart homes for independent living. Facilitating personal involvement in maintaining an appropriate quality of life should be seen as paramount; and opportunities for technological support should be utilised wherever possible, such as MyHealthSpace to deliver a personal 'life log'. This will stimulate personal responsibility for owning health problems and taking actions relating to them.

Informatics can, and will, deliver support to more effective health maintenance but only if its use is enthusiastically grasped by both professionals and the public. This will only happen if all involved understand and are committed to the outcomes.

## SUMMARY ISSUES

- Conviction that informatics could enhance care outcomes is widespread
  - Enthusiasm for success exists, but will not be sustained without investment
  - Communication is improving
  - Funded action should be escalated now contracts are in place
  - Informatics should be recognised as mainstream in any health domain human resources agenda
  - Top management must become well-informed about health informatics issues and committed to addressing the problems and opportunities presented
  - Potentially useful technologies should be evaluated as they emerge
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- Previous advice has not been heeded
  - Costs appear to be escalating
  - Many professions are not yet on board and remain unconvinced
  - Partnerships are not yet seen to be working
  - Contract contents and consequences remain unclear
  - Communication needs to be even wider
  - Management arrangements, areas of responsibility and accountability are still not well-defined

*Ongoing dialogue 'in the right form, at the right time'<sup>ii</sup> [Korner] amongst the whole community of informatics in support of health is eagerly awaited. The motivation to get the best possible outcomes from informatics in support of health and care is widespread and must not be squandered.*

This position paper, the outputs of previous initiatives in the RADICAL STEPS series and announcements of future activities addressing similar issues can be found through the websites of BCSHIC ([www.bcshic.org](http://www.bcshic.org)) and ASSIST ([www.assist.org.uk](http://www.assist.org.uk)). Since this initiative, the alliance between BCSHIC and ASSIST has become stronger and both are part of the Health Informatics Forum of the BCS. Comment is welcomed from any sources in the home countries or internationally on health informatics issues.

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<sup>i</sup> Securing Good Health for the Whole Population, Wanless D (2004)

<sup>ii</sup> Steering Group on Health Services Information report series, Korner, E et al (1982-84)