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**Royal College of Nursing of the United Kingdom**

**Information in Nursing Forum  
2007-2008 Project**

**How well prepared are nursing students  
for working in an eHealth environment?**

**PHASE 2: REPORT of the WORKSHOP  
held on 29<sup>th</sup> October 2008**

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The project was funded by a Royal College of Nursing Forum Projects bid but could not have been completed without input from the students who completed the surveys and the many domain expert colleagues who willingly gave of their time, knowledge and opinions during the workshop.

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### 1. Background to the project

The work of the Information in Nursing Forum over the past several years has repeatedly demonstrated that nurses, including RCN members, are unaware of and inadequately prepared for the accelerating pace of the introduction of eHealth into health services and nursing practice. Similar problems were identified by the RCN's Nursix surveys (RCN 2004, 2005, 2006) and by the Information in Nursing (IN) Forum's earlier project *An investigation of the emergent professional issues experienced by nurses when working in a health environment*. (Baker et al 2007)

It is widely recognised that overcoming this problem must begin with pre-registration nursing education. Accordingly in 2007 a bid was submitted by the Information in Nursing Forum to explore this issue by means of a project to be undertaken in two parts: an on-line survey to identify the nature and extent of the problem, to be followed by a workshop where key stakeholders were brought together in order to discuss the results of the survey, to share current best practice, and to develop a consensus on how best to incorporate eHealth issues into pre-registration nursing education. The results of the survey and the workshop will form part of the RCN's ongoing response to the NMC proposals for pre-registration nursing education. The project is led by the Information in Nursing Forum, in association with the RCN Education Forum and the RCN Association of Nursing Students. It is managed by a small project board, which consists of representatives of the three forums supported by relevant RCN staff.

### 2. Project Objectives

The objectives of the project are:

1. To discover the level of 'readiness' amongst student nurses for working in a technology enabled healthcare service;
2. To develop a consensus among those responsible for the commissioning, planning and provision of pre-registration nursing education about how to achieve nursing competence in e-Health and to prepare nurses for the introduction of eHealth into health services, including but not limited to the NHS.
3. To contribute evidence to the NMC proposed reform of pre-registration nursing education
4. To publish the findings as widely as possible to increase awareness throughout the profession of the need for change and to offer some guidance on how it may be achieved.

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### 3. Workshop Phase

This paper reports Phase 2 of the project: the 'consensus' workshop held on 29<sup>th</sup> October 2008. The objectives of the workshop were:

- To report and discuss the findings of the student survey
- To try to reach a consensus on what action, if any, needed to be taken.

### 4. Workshop Method

#### 5.

Twenty seven invited participants attended the workshop held in London in October 2008. A further ten colleagues were unable to attend on the day but were keen to be involved in follow up input and feedback. 12 members of the participating forums plus RCN staff facilitated the day.

The day was split into 2 parts:

- **Report of the findings of the Student Survey**
- **Group work** focusing on actions required as a result of the issues identified by the findings. The group work was supported by Pre-Workshop Documents distributed to all invitees prior to the day (example Appendix 1). There were 3 groups (Members of each group are noted in Appendix 2).

### 5. Analysis, synthesis and discussion of participants views expressed at the Workshop.

The production of this report has been delayed by 3 months due to changes and re-organisation within the Information in Nursing Forum. Whilst this delay has been especially disappointing to those who were enthusiastically involved in the workshop, the benefit of distance and the opportunity to include consideration of subsequent developments has enabled a more critically reflective analysis of the discussions

The student survey revealed key issues as the students experienced them in their educational and placement environments, while the group of informed, enthusiastic, expert 'stakeholders' in the workshop phase exposed hugely complex, inter-related explanations which involved many other agencies with many differing but associated agendas.

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The complexity of these reported explanations and “causal factors” which emerged during the workshop has made the production of this report difficult - but to ignore or oversimplify this complexity would be to avoid the reality of the problem. For example, even though these groups of highly informed specialists were given pre-workshop headings and guidance, (see an example in Appendix 1), the reality in discussion proved to be not so straightforward or simplistic. Collating this group work into easily digestible recommendations was a considerable challenge, because the elements are so inter-related, complex and variable that precise compartmentalisation of cause and action is often extremely difficult.

It has become increasingly apparent that very high level strategic guidance, action and leadership is the essential **initial** element that is necessary to enable the subsequent actions which will gradually – and only then - start to address the complex need. Without this commitment from the top, many local or national efforts struggle to move from enthusiastic buy in and commitment by a relative few to usefully funded and strategically underpinned implementation at service level. For example, the 2002 report, *Learning to Manage Information* (NHSIA 2002), which was used as the basis of the student survey, was not implemented as widely as its authors hoped. An updated version is currently in preparation. Yet without incentive, funding and leadership at the strategic level, the time, knowledge and enthusiasm of colleagues at the front line is wasted, as without such leadership the implementation is yet again directly prevented by the complexities revealed by the workshop discussions.

For these reasons we recommend a prioritised approach to action, the first priority being the essential pre-requisite for the second:

### **Priority 1: KEY STRATEGIC ACTION**

### **Priority 2: Action related to IMMEDIATE ISSUES**

Throughout the workshop participants stressed the need to “stop re-inventing the wheel”, and wasting effort on “guidance without teeth”. There was concern that current efforts should not be allowed to be wasted yet again, especially as the pace of development of eHealth across all four UK countries was now accelerating. The importance of the international context was also recognised.

Participants also recognised that although the focus of this project was nursing, many of the issues identified applied to all health professions. At the strategic level in particular, the push for action should be undertaken on a multi-disciplinary basis, with all the health disciplines working in collaboration.

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**6. Recommendations**

The need for high-level strategic action/leadership was stressed by all groups. The table below therefore presents the targets for our recommendations in the form of a hierarchy, in which action at each lower level depends on action at the level above

**Table 1: Key Strategic Action hierarchy**

<b>Level</b>	<b>NHS</b>	<b>Higher education</b>	<b>Professional organisations</b>	<b>Regulatory bodies</b>	<b>Commercial suppliers</b>
<b>UK Wide</b>	“Government” departments		RCN, BCSNSG	NMC	
<b>National (Country)</b>	NHS eHealth programmes in all four UK countries	Education Commissioners (Wales, Scotland, N. Ireland)  Council of Deans	RCN, BCSNSG		
<b>Regional (England)</b>	Strategic Health Authorities (England) Local Health Boards (Wales, Scotland, N. Ireland)	Education Commissioners (England)  Universities	RCN		Links with Universities
<b>Local</b>	NHS Trusts Local student placements	Universities	RCN		On site training

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Table 1 above is an attempt to represent a complex situation in a simple table. Inevitably this approach results in generalities but the intent is to offer a visualisation from which consideration of connected action may be considered. This 'hierarchy' has been generated in order to try to convey the order in which decisions are made which then facilitate actions lower down the hierarchy.

For example, although the Council of Deans is a UK wide as opposed to a 'national' body, for the Council of Deans to ensure the inclusion of eHealth in the Pre-Registration university curricula, would require some prior commitment from educational commissioners. Similarly Educational Commissioners for England have been positioned slightly lower than Strategic Health Authorities, as insistence upon the inclusion of eHealth in educational curricula could only be assuredly implemented following higher level incentives.

In order to emphasise and to illustrate the importance of action being prioritised and being led 'from the top' recommendations are now presented in our prioritised sections:

**Priority 1: Recommendations for KEY STRATEGIC Action – all levels**

**Priority 2: Recommendations associated with KEY IMMEDIATE ISSUES**

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**PRIORITY 1: Recommendations for KEY STRATEGIC Action at all levels: UK Wide; National; Regional; Local**

**A) UK WIDE LEVEL**

	<b>Recommendation</b>
<b>'Government' Departments</b>	<ul style="list-style-type: none"><li>• The link between the delivery of effective health care and an NHS workforce which is fully educated and able to use all elements of eHealth to the full must be recognised as a key, high level, political imperative. The NHS will be a key electoral issue</li><li>• The link between a workforce that is ill prepared and the risks to achieving key political health commitments must be recognised</li><li>• The risk in relation to Information Governance errors and bad media exposure must be recognised as a direct result of poor eHealth education of staff in the NHS</li></ul>
<b>RCN/BCSNSG</b>	
<b>NMC</b>	

**B) NATIONAL (COUNTRY) LEVEL**

	<b>Recommendation</b>
<p><b>NHS eHealth Programmes</b></p> <p><b>Education Commissioners (Wales, Scotland, N Ireland)</b></p> <p><b>Council of Deans (Cyngor in Wales)</b></p>	<p>The programmes in all four countries of the UK should:</p> <ul style="list-style-type: none"> <li>• develop their powerful strategic leadership and influencing role to include all aspects of effective eHealth implementation, using a whole-systems approach (including on-going professional education and development outside of the initial systems training provided by commercial suppliers)</li> <li>• develop strategies for managing the tension between government policy and local implementation, ensuring recommendations are actually implementable in the reality of the local situation</li> <li>• recognise that by strategically leading collaboration across the UK much educational ‘wheel re-invention’ and many cross border NHS misunderstandings or shortfalls could be avoided</li> </ul> <ul style="list-style-type: none"> <li>• Mandate the inclusion of eHealth education and development within educational programmes for all staff at all levels</li> <li>• Provide strong leadership and direction to their member universities in the huge challenges posed by adding eHealth to a burgeoning pre-registration curriculum, and in relation to addressing the extensive eHealth learning needs of university lecturers themselves</li> <li>• Lobby at all levels to get the eHealth learning need – both for students and for tutors – to be recognised as a major health education/funding shortfall</li> </ul>

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**C) REGIONAL LEVEL**

	<b>Recommendation</b>
<p><b>Strategic Health Authorities</b> (England)</p> <p><b>Local Health Boards</b> (Scotland, Wales, N Ireland)</p> <p><b>Educational Commissioners (England)</b></p>	<ul style="list-style-type: none"> <li>• Provide leadership, direction and, where appropriate, funded incentives for local commissioners and organisations to work together to include eHealth in educational curricula at all levels.</li> <li>• Encourage innovative collaboration with commercial suppliers in order to develop and make available the eHealth products the NHS workforce needs to deliver effective integrated services across areas</li> <li>• Mandate and fund the inclusion of eHealth within educational and development programmes at all levels for all staff</li> </ul>

**D) LOCAL LEVEL**

	<b>Recommendation</b>
<p><b>NHS Trusts/ Local NHS student placements</b></p> <p><b>Universities</b></p> <p><b>RCN</b></p>	<ul style="list-style-type: none"> <li>• Recognise competence in eHealth for all staff as a key business enabler for the 21<sup>st</sup> Century</li> <li>• Ensure adequate education and training in eHealth for all staff</li> <li>• Recognise and manage the risks associated with current poor practice related to eHealth</li> <li>• Work with local placement areas to ensure the inclusion of eHealth in students' clinical learning.</li> <li>• Include eHealth requirements in placement audits</li> <li>• Lobby at local level to ensure that trusts provide adequate education and training in eHealth</li> <li>• Support local RCN members when local shortfalls put members at potential risk</li> </ul>

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**PRIORITY 2: Recommendations associated with KEY IMMEDIATE ISSUES**

	<b>Recommendation</b>
<b>NMC</b>	<ul style="list-style-type: none"> <li>• Include eHealth competencies in the Standards of proficiency for pre-registration nursing education</li> <li>• Make eHealth a compulsory part of PREP/Fitness to Practice/CPD</li> <li>• NMC should produce the Code of Practice for Students ASAP</li> <li>• NMC should provide guidance on the use of passwords by students ASAP</li> <li>• NMC should endorse the latest version of 'Learning to Manage Information'</li> </ul>
<b>RCN/BCSNSG</b>	<ul style="list-style-type: none"> <li>• Undertake and disseminate an eHealth Training Needs Analysis of Nurse Educators</li> <li>• Collect and disseminate examples of good eHealth educational practice</li> <li>• Consider the legal implications for members of the mis-use of passwords</li> </ul>
<b>NHS Trusts/ Local NHS student placements</b>	<ul style="list-style-type: none"> <li>• Work with local universities to resolve the issue of passwords for students in placements, by either:               <ul style="list-style-type: none"> <li>○ Passwords issued to students by HEI's</li> <li>○ Placements treat student as honorary employees and issue passwords for duration of placement</li> </ul> <p>Recognise the risks of the present situation for all involved – including clients</p> </li> <li>• Recognise the difficulty for preceptors as they try to teach and support learners (all disciplines)</li> <li>• Extend collaboration between university and placement staff (eg joint NHS/HEI Practice Educator appointments) to include eHealth specialists</li> <li>• Recognise Health Informatics as a specialty role and a career option for all professionals. Such staff could then 'floor walk' to support students and clinical staff</li> </ul>

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### 7. Conclusion

There have been many studies and reports about the importance of the utilization of eHealth as a means of delivering healthcare in the 21<sup>st</sup> century (eg Royal Society 2007, Clark J 2008). A particular feature of this project has been the recognition by virtually all of those involved of the need to move from identification of the problems to addressing the question “What can be done that will actually start to put any of it right?” All agreed that the need for effective action is now urgent.

A second very strong theme that emerged was that this need for effective action will be strongly linked to high level strategic planning and strong “leadership from the top”. The perceived lack of commitment at this level was felt by many participants to be the main reason why action that everyone knows is necessary is simply not happening, and is the source of great frustration to those struggling to cope at local level in an environment where technological progress is outstripping professional and managerial preparedness. This is the reason that the recommendations in this report focus on the strategic element over and above the multitude of current knock-on issues, dilemmas and problems which have been revealed many times before – tinkered with - but still persist or re-occur.

We recognize that the strategic approach is more complex than our relatively simple diagrams suggest – but we felt that a format that stimulates consideration from the higher level ‘leadership’ angle was very much needed. This is high level leadership – local leaders can only tinker with local short term coping strategies. The whole-systems approach which is now widely advocated needs high level facilitation, planning and incentives. If these are not available, then there is a knock-on effect as the local system struggles to cope with the reality of daily delivery of healthcare at the front line. The reported experiences of students are critical – today’s students are tomorrow’s practitioners, and the revelation that they – and many other associated staff groups in both placements and in HEI’s - are so poorly prepared for practice in an eHealth environment is a serious situation.

The RCN Information in Nursing Forum saw this as a key project. It has been a challenge in terms of scope and workload but there is no doubt it addresses key elements of educational need for health professionals everywhere. Although this project focused on nursing students, there is little doubt that these issues also exist for many other allied health professional groups. The RCN Association of Nursing Students is already working closely with the BMA’s medical students, and the Information in Nursing Forum is working closely with other groups within the RCN, with other professional organisations such as the BCS NSG, and with the NMC to try to get the message across. The publication of a new edition of ‘*Learning to Manage Health Information*’ provides a framework for education in eHealth for all the clinical professions – it just needs to be implemented. Our work in this project strongly advocates that implementation will require a new innovative approach, commitment and buy-in at strategic leadership level.

We truly hope that this piece of work will contribute to a step change in approach in relation to a high level recognition of the need for the inclusion of eHealth in all professional education in order to underpin the safe and effective development of the healthcare delivery system.

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**APPENDIX 1: EXAMPLE OF PRE-WORKSHOP GUIDANCE**

<b>Issues raised by students in Survey</b>	<b>Questions arising from Issues: Education</b>	<b>Questions arising from Issues: Placement areas</b>	<b>Issues for discussion at workshop</b>
<p>Three quarters (75.2%) of respondents rated their basic computer skills as good or very good, but only a quarter (25.9%) rated their knowledge of eHealth as good or very good.</p> <p>Most (69.9%) felt well or quite well prepared to use health related on-line sources of information</p> <p>Very few felt they understood the concept, range, and practice of telemedicine (13.8%) or telecare (14.4%).</p>	<p>How many lecturers know about or/have experience in the use of eHealth/e-records?</p> <p>How many commissioners of education understand the scope of eHealth?</p> <p>How many commissioners think e-Health is the same as e-learning?</p> <p>Lecturers are familiar with supporting usage of computers for on-line education, but know little about the use of computers in healthcare..</p>	<p>How many clinical staff and/or managers understand the potential and usage of eHealth and/or have any insight into local needs?</p>	<p>Is preparation/education of educators in HEI's and clinical staff in placement areas as important as education of students? Which comes first?</p> <p>How do the educationalists and the service providers ensure that their respective commissioners understand the complexities, scope and priorities for eHealth?</p> <p>What actions should be taken and by whom and how urgently?</p>
<p>More than half (55.9%) had used electronic patient records, including 10.8% who had used them "a lot". Only a third (33.2%) felt that they understood the secondary uses of data, and only 13.8% felt prepared to carry out an audit.</p> <p>Nearly all (89.1%) felt they had been well or quite well prepared to undertake and document a nursing assessment using a paper system, but less than a quarter (23.8%) felt similarly prepared to undertake and document a nursing assessment using an electronic system.</p> <p>Similarly, nearly all (81.7%) felt they had been well or quite well prepared to undertake and document a plan</p>	<p>How can lecturers teach about e-records and eHealth without access to the hardware or software used in provider services?</p> <p>Who keeps Higher Education Institutions up to date and in line with eHealth developments at all the various placement areas?</p> <p>How relevant is teaching about paper records to student experience in placements which use e-records?</p> <p>How relevant is teaching re</p>	<p>How many clinical staff are able to fully teach about e-records, secondary uses etc, during a student's placement experience?</p> <p>Who keeps clinical staff up to date and in line with HEI's?</p> <p>Who ensures that the current eHealth situation in the clinical areas is reflected in pre-placement teaching at HEI's?</p>	<p>Is there a need for new sustainable collaborations between eHealth education and practice development, ie a sharing of knowledge between:</p> <p>educational establishments, service provider establishments, vendor companies – all facilitated by commissioners?</p> <p>How might this be made possible? What actions are needed?</p> <p>How will problems be avoided if silo working is not addressed?</p>

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<p>of nursing care using a paper system, but less than a quarter (22.7%) felt similarly prepared to undertake and document a plan using an electronic system.</p>	<p>e-records to students in placements where only paper records are used?</p>		<p>How might this be addressed – what needs to be done and by whom and funded by what?</p>
<p>(78.1%) had used a computer in their most recent placement but less than half (45.8%) had received training on the systems they were using, and more than a third (39.1%) had received no information about information governance requirements; yet just over half (59.1%) felt well or quite well prepared to explain to patients their rights in relation to the content and access to their records</p>	<p>Is computer 'software system' 'training' a subject which should be included in the HEI curriculum?</p> <p>Is Information Governance in it's most current e-form adequately understood by lecturers in HEI's?</p> <p>Should Information Governance be integrated into all parts of the curriculum, or be taught as a special subject?</p>	<p>How many clinical staff fully understand the scope and potential usage of e-records?</p> <p>How many staff fully understand provider policies related to Information Governance</p> <p>How many service providers have adequate policies relating to Information Governance?</p> <p>How many clinical staff have adequate training on their systems in order to support student nurses?</p>	<p>Is there a need for national standards related to Information Governance, education/updating, and associated policies relating to eHealth.</p> <p>Should initial training on computer systems be followed or preceded by educationally supported development of systems in practice?</p> <p>Should there be assessment levels and methods relating to initial training and subsequent development in practice?</p> <p>Who would fund or provide this? How could it be realized?</p>
<p>Of those (78.1%) who had used a computer in their most recent placement, only 17.2% were given their own password, and almost a third (31.7%) had been asked to log-on to the system using a password that was not theirs.</p>	<p>Should awareness of misuse of passwords be taught more rigorously in HEIs?</p> <p>Would this cause professional dilemmas at placements for students?</p>	<p>How do we avoid clinical staff being forced into 'workarounds' in order to cope with these work pressures</p>	<p>Should the regulatory bodies be more involved in the resolution of this problem?</p> <p>Should there be national policy and national standards in relation to passwords for student nurses (and other healthcare students)?</p> <p>Who should do what and when to solve this issue?</p>

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**APPENDIX 2:  
GROUP WORK MEMBERS**

<b>Group 1</b> <b>Facilitator Bernice Baker</b> <b>Scribe/timekeeper: Alison Wallis</b>	<b>Group 2</b> <b>Facilitator: June Clark</b> <b>Scribe/timekeeper: Mike Dunne</b>	<b>Group 3</b> <b>Facilitator: Elizabeth Hunter</b> <b>Scribe/timekeeper: Mary</b>
Carol Hall Ed Forum Naomi Baker ANS Jackie Cheeseborough RCN Kate Marsden e-ICE Garth Long NMC Ali Wylie OU Sally Hernando Commissioner Ros Moore England CNO Rod Ward HEI Carol Bond HEI Keith Ward HEI Ian Wood HEI	David Baker ANS Betty Kershaw RCN Richard Hayward HEI/BCS David Allsup Cyngor Dr Lesley White Scotland comm Verena Wraights OU Stephanie Fade Commissioner Anne Mills Ireland CNO Tony Paget HEI Audrey Cund HEI Ali Ewing HEI	Ben Mott ANS Derek Hoy RCN Maureen Eby OU Pauline Tang HEI Paula Procter BCS/HEI Ann Grodzicka HEI Scotland Leslie Mc Nab HEI Brian McFetridge HEI N Ireland Lynn Coutts HEI Lesley McNab HEI Alex Hopkins HEI