NHS Higher Education Forum

Yorkshire and the Humber Strategic Health Authority

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Context

- NHS Yorkshire & the Humber

- Cross Organisational HE Collaborative Working

- Embedded Informatics into Clinical Education (eICE)

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- Strategic Role

- The Health Informatics Team

- Internal & External Relationships

HE Collaborative working

- SHA Approach

- CPD & Education in Health Informatics

- CfH National Advisory Group

- SHA, NPfIT Local Service Provider, Primary Care Trust & Academic Community

Embedding Informatics into Clinical Education

Dr Susan Clamp, Director
Dr Alison Lea, Clinical Lecturer, Academic Unit of Primary Care

Aims

- National activities

- To review current practice and the Leeds experience

- To look at the benefits and challenges of integrating CIS in clinical teaching

- To discuss how to allow for wider integration of CIS in clinical teaching

Background

- The goals of the UK and elsewhere in the world are to improve patients care, increase safety and do so cost effectively.

- The recognition that sophisticated information management is the key to achieving these goals lies at the heart of the current reforms in healthcare and the new tools that will shape the clinical environment in the coming years.

- Students studying for a clinical degree can expect to be working in a networked information environment radically different from that which current healthcare providers, their tutors and the public have been used to.

- Their ability to work with the information that technology provides will be critical to patient safety while their potential to take a leading role working with new technology may be a critical factor in encouraging and supporting others to adapt to new systems.

National Initiatives

- Embedding Informatics in Clinical Education (eICE) project, Department of Health Informatics Directorate

  - Promote and facilitate teaching of informatics as essential part of clinical training programmes
  - Revised "Learning to Manage Health Information: a theme for clinical education"
  - Support development of HI skills in clinical educators
  - Develop resources to support clinical educators to embed informatics in clinical teaching
  - Support clinical educators network

CIS4PC

‣ The Yorkshire Centre for Health Informatics (YCHI), with the Academic Unit of Primary Care, have an established working group entitled Clinical Information Systems for Primary Care (CIS4PC) which is dedicated to the development of relevant and up-to-date clinical education for all primary health care practitioners including doctors and nurses.

‣ The group is working with Leeds School of Medicine to develop an informatics vertical theme through all 5 years of the undergraduate medical curriculum at Leeds and with NHS organisations in Y&H to develop multidisciplinary teaching resources.

‣ A key element of this has been the use of real clinical information systems in hands-on sessions which we have found to be extremely successful and engaging for our students.

Background

- We believe that it is necessary to embed the use of Clinical Information Systems (CIS) within the undergraduate curriculum such that our graduates are prepared for the future world.

- This preparation goes well beyond mere training in IT skills and demands that they are prepared for not only the technological challenges but also for the changing sociological relationships and ethical challenges that IT supported access to clinical information will bring about.

- The General Medical Council requires graduates of medical schools to have received appropriate education to prepare them for safe and effective practice.

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19 *Use information effectively in a medical context.*

a) Keep accurate, legible and complete clinical records

b) Make effective use of computers and other information systems, including storing and retrieving information

c) Keep to the requirements of confidentiality and data protection legislation and codes of practice in all dealings with information

d) Access information sources and use the information in relation to patient care, health promotion, giving advice and information to patients, and research and education

e) Apply the principles, method and knowledge of health informatics to medical practice

Background

- There are many opportunities within the undergraduate curriculum where the use of CIS systems could be embedded in a way which would build on existing teaching, in particular in Primary Care.

- In this way we hope that the students' appreciation of CIS would be learned within the context of their general learning and hence would not be viewed as a something alien to their core skill set.

To put it simply....

In this day and age how can we teach our students about primary care and the role of the GP without teaching them about the CIS that are now used for patient care and to run the business?

Clinical information Systems in Primary Care in Leeds

We have developed a live clinical information system (TPP SystmOne) as a teaching tool to enhance and reinforce learning in a primary care environment.

SystmOne is an ideal platform to use for this purpose as it is web-based and easily accessible over the academic network. It is also widely used in Yorkshire and the Humber in practices the students attend (100% in Bradford and Airedale).

Learning Objectives

Understand how patients with chronic disease may be managed in the primary care setting, including therapeutics and the role of the Primary Care Health Team.

Know of the information sources available to doctors, patients and carers, how to access them and their benefits and limitations. These will include sources of guidelines and disease management protocols.

Understand how primary care practices organise their services, use audit, care for patients with chronic disease and promote health and disease prevention.

Understand the communication channels through which the practices communicate with other health and social care professionals, voluntary services, patients, relatives and carers.
(From Primary Care, Psychiatry and Public Health Integrated Core Unit Study Guide)

Learning objectives mapped to "Learning to Manage Health Information"

Learning Objective	Subject Area
Data, Information and Knowledge	4.2.1
Communication and Information Transfer	4.3.4 and 5
Health and Care Records	4.4.1-2-3
Language of Health	4.5.2-5-8
Clinical Systems and Applications	4.6.1-2-3-5

Programme

- 4th year medical students have an initial three hour introduction session, prior to them going out on their GP placements.

- During the formal teaching session the students:
  - o   enter a new patient's clinical details
  - o   watch a podcast of the patient's first consultation with the GP and then record this full consultation
  - o   Discuss and compare data entries with regards to data quality and communication.
  - o   Review a chronic disease consultation and input into chronic disease template

Each students is given a new patient, who has been registered at the Worsley Practice.

They then enter the clinical information from the new patient questionnaire

Example of new patient details

Podcast

‣ Students watch a podcast of the new patient's consultation with the GP

‣ Students then enter new consultation

•This enables them to explore and use clinical coding, prescribe medication, both acute and repeat items and use the clinical tools.

•Students are actively encouraged to review each others' entries and explore the implications for medical record keeping, audit and informational continuity of care.

New Consultation

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14 Aug 2008 10:21	XE2tY 1252. Y0001 Y0002 Ub171 Y0004 Ub0mj FH: CVA/stroke
XE2tY	FH: CVA/stroke (XE2tY) "Mother, 70"
1252.	FH: Diabetes mellitus (1252.) "father, 63"
Y0001	Bottles of wine (Y0001): 5.0 Units/Week
Y0002	Glasses of wine (Y0002): 0.0 Units/Week
Ub171	Alcohol units (Ub171): 50.0 Units/Week
Y0004	Pints of beer (Y0004): 3.0 Units/Week
Ub0mj	Feels should cut down drinking (Ub0mj)
Notes	10 year history of hypothyroidism, controlled by drugs without sideaffects. good compliance.
	requested smoking cessation advice. referred to clinic.
	discussed drinking habits. literature given on cutting down.
	increased exercise recommended to reduce alcohol intake and improve BP.
	consultation advised for 2 weeks.
Done By	Lucy Barker (General Medical Practitioner) - Location: Surgery
14 Aug 2008 10:37	XaLQh Wants to stop smoking
XaLQh	Wants to stop smoking (XaLQh)
Ua1Nz	Smoking cessation advice (Ua1Nz)
Done By	Lucy Barker (General Medical Practitioner) - Location: Surgery

14 Aug 2008 10:21	
Notes	New consultation with patient
	I saw Mrs Ward in clinic this afternoon. She I generally well.
	Reviewed patient details, past medical and family history.
	Reviewed medication, patient happy with current medication and shows good compliance (missed dose once or twice per month, no doubling)
	Patient interested in smoking cessation, will make appointment to see smoking cessation nurse. Has not made a serious attempt quit before.
	Reviewed alcohol consumption with Mrs Ward. Her alcohol intake is higher than previously thought. Drinks 3/4 of a bottle of wine 7 days per week, as well as 4-5 cans of lager over the course of a week. Advised of recommended weekly maximums, health risks from excessive consumption, and shows an interest in cutting down. I have given her details of an alcohol awareness website.
	Advised Mrs Ward about the benefits of exercise, particularly in relation to reducing work stress and hypertension.
	Advised to return in 2 weeks for follow up.
Done By	Matthew Ryan (General Medical Practitioner) - Location: Surgery

Chronic Disease template

Logistic issues

- Discussions with TPP Clinical Director

- TPP – created Worsley practice in their demo site

- SystmOne training – 2 days for 6 people

- YCHI / University ISS – install SystmOne client on 46 cluster PCs

- SystmOne updates every month – need to download, problems with University firewall

- Create individual patients for each student at each session and register patients

- Students able to access all SystmOne functions except ordering test and receiving test results

- Governance issues

- Sessions are now delivered by PC tutor, HI tutor and some technical support

Initial outcomes

We have now delivered the session to over 400 students

▸ The majority of students were clearly IT literate and competent with the basic technology.

▸ Most coped well with first exposure to a complex and rich clinical system though some initially found the session overwhelming and needed help entering clinical data.

▸ Many students do not have an appreciation of the overall process of care and have yet to develop an abstract model of the structure of distributed electronic as opposed to linear paper records.

▸ The session stimulated spontaneous discussion about the differences between coded data, that is auditable, and the rich, non-coded narrative data which conveyed a fuller, more holistic clinical picture. Students rapidly developed insight into the strengths and weaknesses of current methods of information capture within the consultation

Initial results

Evaluation questions	% agree or strongly agree
I now have a better understanding of how to use the CIS.	95
I now have an understanding of what CIS can do.	92
I feel more prepared for my clinical placement.	74
The sessions were relevant and useful to my current learning.	87
The session may help in the future when I am working.	89
Following this session I feel my learning on placement will be improved.	73
I will be more aware of the GPs role following this session.	71
I will understand more about how the GP practice is organised.	82
I may appreciate more about how GP practices run.	81
Overall, I found this session pitched at my level	82

Where next in Primary Care

‣ Evaluation following the student placements of their experiences

‣ Views of GP tutors of this cohort of students

‣ Revise the learning objectives according to evaluations and the clinical practice environment

‣ Embed use of CIS throughout all 5 years of Primary Care teaching in medical undergraduate curriculum

‣ Work with NHS Y&H and NHS B&A on CIS4PC project to develope strategic educational tools for all health professionals in the Yorkshire and Humber region

Summary of the Educational Themes and the Year of Study in Medical Curriculum

Primary Care Themes	Year of Study				
	1	*2*	*3*	*4*	*5*
Navigation and using the CIS	✓	✓	✓	✓	✓
Communication and Consultation	✓	✓	✓	✓	✓
Chronic Disease Care				✓	✓
Medicines Management			✓	✓	✓
Information Governance	✓	✓	✓	✓	✓
Service evaluation and audit			✓	✓	✓

CIS4PC

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‣ Reusable Learning Objects (RLOs) will be specifically developed for multi-disciplinary education both by making them more broadly applicable for clinical, nursing and allied professions and by making them suitable for teaching to multidisciplinary teams and undergraduate and postgraduate student cohorts.

‣ These RLOs will be made available to other Higher Education Institutions and for professional development in the Yorkshire and Humber region with supporting material and through a process of consultation and iterative refinement.

Technical Infrastructure
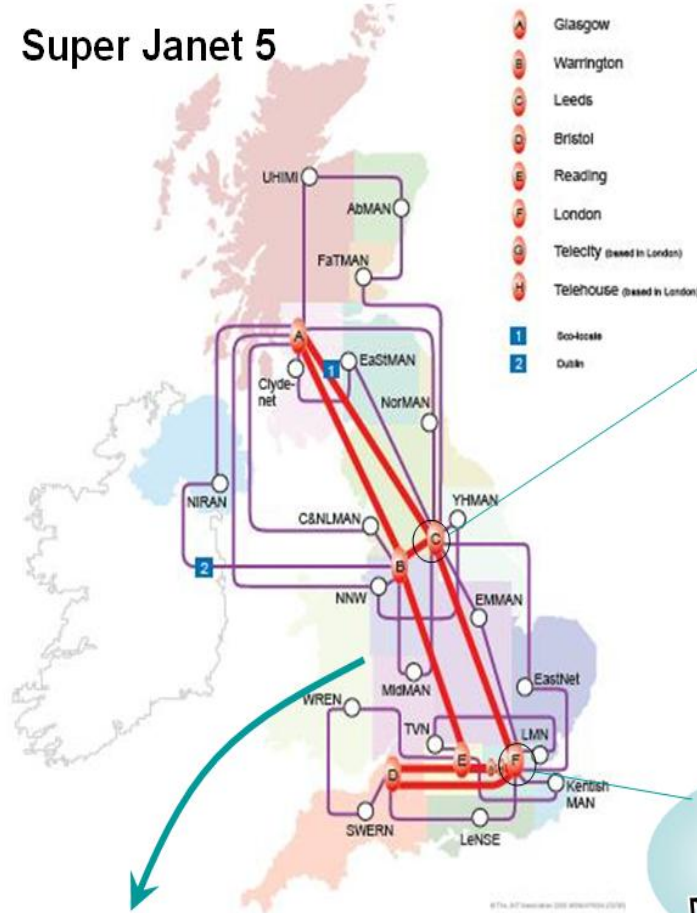
Teaching material

Relevant Topics for Module Development	Course where they could be used
Information Governance	Ethics, Primary Care
Order Communications and Results Reporting	Diagnostics / Pathology
Patient Pathways	Public Health
Electronic Prescribing	Primary Care, Pharmacy
Chronic Disease Management	Diabetes
Diagnostic support in Acute Medicine	Emergency Medicine
Social & Community Care systems	Psychiatry
Health Screening Systems	Paediatrics, Obstetrics & Gynaecology
Clinical Audit Methods	Public Health
Clinical Imaging - PACS	Anatomy, Orthopaedics, Cardiology
Team Working	Communications, Primary Care
Knowledge Management – eLibraries and decision support	Personal and Professional Development

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Questions

To The Forum

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