RESPONSE FROM THE ROYAL COLLEGE OF OCCUPATIONAL THERAPISTS

FCI Core Competencies Project - Consultation on Phase 1

Foreword – Our Clinical Informatics Journey

The UK health and care system is changing dramatically. This is a response to meeting the health challenges of an ever-increasing chronic disease epidemic (1 in 4 people in the UK, around 17 million, have more than two chronic diseases); an elderly population (18% over 65yrs); new technologies; and financial pressure (only 9.8% of GDP is spent on health in the UK).

NHS service delivery paradigms are shifting as well, with focus changing from hospital to community, patient to population (primary care networks/GP clusters), curative to preventive The ultimate goal is to keep alive the values on which the NHS was established, namely universal, high quality healthcare, that is free at the point of delivery and based on clinical needs.

Established health and care systems across the globe are investing heavily in informatics systems and routinely collect huge amounts of health information and data to improve quality and efficiency. Three things are key for effective informatics systems – People, Processes & Platforms (IT). A skilled workforce (people) is paramount to this and the health and care workforce is no different. If staff want to play a pivotal role in changing the DNA of health and care in the age of data and informatics, they must equip themselves with the relevant clinical informatics competences, for example datascope rather than stethoscope. I firmly believe in this and highlighted it in my interview with British Medical Journal (BMJ). A well-equipped workforce will lead to improved NHS quality (safety, effectiveness and patient experience) and change population and patient outcomes with the ability to develop and utilise health intelligence/data and other digital innovations in the NHS and care settings.

The UK Faculty of Clinical Informatics (FCI) has embarked on a journey with a clear mission and aims, which are: to develop professional competencies for clinical informaticians and provide accreditation for informatics-based training programmes in the UK. This is a 'must-do', but it is a challenge to create an effective clinical informatics workforce, to develop and monitor professional standards and to establish informatics as a clinical speciality in its own right in the UK. There might be learnings from the UK Faculty of Public Health, which started in 1972 and achieved similar goals for its specialist workforce in due course. The American Medical Informatics Association (AMIA) is also a very good example of how to achieve such aims successfully over the years. There are other examples of applied aspects of clinical informatics and informaticians across the globe – and hopefully one day other countries will look to the FCI and learn from us.

The first milestone on this journey is to develop a consensus on definitions for clinical informatics, informaticians and professional attributes of clinical informaticians in the UK for establishing output competences required by health and care professionals in this field.

With that in mind, the FCI initiated the Core Competencies Project (CCP) and their hard work to date has resulted in two reports:

A. To develop and define the professional attributes of a clinical informatician
B. A Validation Study and draft Output Competences for a clinical informatician

Now is the time for you to reflect on this work and give your opinion on 7 statements drawn from the reports, by completing the **online questionnaire** developed by FCI for wider consultation. It is very important to have your views, which will be of enormous value in shaping the Faculty's work and development of the clinical speciality for years to come.

This is a novel mission and I have no doubt that by sharing your knowledge and experience you are going to help on this journey to a new tomorrow – a tomorrow where clinical informatics and informaticians are going to play an effective part in providing high quality efficient health and care to 67 million people in the UK and beyond!

Mahmood

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Introduction

The Core Competencies Project (CCP) provides a methodology for the development of core knowledge and skills-based competencies for Clinical Informaticians (CIs) and the mechanism by which these competencies can be mapped to educational and professional developmental initiatives for accreditation.

Evidence that an individual has achieved these core competencies should qualify that person for membership of the FCI.

Project Aims

I. Develop core knowledge and skill-based competencies required for UK based CIs.
    a. Develop, test and define the output core competences required of a professional clinical informatician (phase 1)
    b. Define the core skills, knowledge and traits that constitute the core (input) competencies to enable an individual CI to do the job. (phase 2)
II. Develop a process for accrediting informatics educational applications through the FCI. (phase 3)

Phase 1 of the CCP was undertaken directly by the FCI project team and is presented as two linked reports:

C. Develop and define the professional attributes of a clinical informatician – final report (v1.1) [Report A – on project website]

D. Phase 1 Report Validation Study and draft Output Competences for a Clinical Informatician (v1.1) [Report B – on project website]

Method

The key task of phase 1 of the CCP was to define the output competences[1] we expect of care professionals working as clinical informaticians in the UK. Drawing on the expertise of the multi-professional membership of the FCI we used a mix of qualitative methods to derive and refine the list of output competences. Outputs from this phase of the project will then be used in phase 2 of the CCP to define the skills, knowledge and traits that are required to enable the individual clinical informatician to develop their careers and do their job – *the core input competencies*, testing and developing these with key stakeholders as we go[2]. This framework will be used to develop a systematic mapping process which the FCI can use to accredit educational CI applications (phase 3)

Findings

In our two Phase 1 reports (A & B), we present, describe and discuss a set of principles, areas and professional attributes which we test alongside definitions of clinical informatics and clinical informaticians. We suggest that together these cover the set of output competences needed to describe the landscape of clinical informatics in UK health and care, presented as a set of statements to be tested and developed further through a consultation exercise.

We are inviting key stakeholders, members of the FCI, the wider informatics community and the public to provide feedback on the CCP Phase 1 findings in this consultation exercise, which will run from 1 December 2019 – 20th January 2020.

Consultation – your responses

Q1. (i) Your Name: Suzy England (SE) and Anne Keen (AK)

(ii) Your Role/Title: Professional Advisers

(iii)Your clinical speciality: Health Informatics (SE)

Q2. Your email address: anne.keen@rcot.co.uk

Q3. Are you responding on behalf of an organisation? **Y**/N

[1] Competence may be defined in terms of what the individual brings to the job (the input), what the individual does in the job (the process), or what is actually achieved (the output).
[2] 'Core' in this context denotes the minimum knowledge base that all CIs must have to be eligible to become members of the FCI and excludes further sub-specialist avenues of education.

Q4. If “Yes” – which organisation?

The Royal College of Occupational Therapists

Statement 1
Firstly, and fundamentally, we are describing a landscape occupied by professional clinicians who are also informaticians. So, the first criterion is that a clinical informatician must be a health or care professional registered with one of the regulators overseen by the Professional Standards Authority to be eligible for full membership or fellowship of the FCI.

Q5. Please indicate in the box below, with an **"x"** the degree to which you agree or disagree with statement 1.

Q5

Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
	x			

Q5a. Please add any comments in the text box below – either reflecting your views about the statement or elaborating on the reason why you agree/disagree with the statement.

Whilst in agreement with this statement, there may be a need for this to be communicated to professional bodies, HCPC as well as employing organisations when they are recruiting into information based roles e.g. CIO or considering membership/registration of individuals in these roles. Both an agreed definition and scope of work included in clinical informatics should help to strengthen this.

Given the vast scope and range of activities covered by clinical informatics, there is a great deal of sense in keeping any **definition of clinical informatics** short, inclusive and consistent with the wider international community.

Statement 2
Clinical Informatics *involves embracing the benefits of digital technology with respect to health and wellbeing to advance treatment and the delivery of personalised, coordinated support from health and social care.*

Q6. Please indicate in the box below, with an **"x"** the degree to which you agree or disagree with statement 2.

Q6

Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
x				

Q6a. Please add any comments in the text box below - either reflecting your views about the statement or elaborating on the reason why you agree/disagree with the statement.

We strongly agree with the above statement.

The FCI's **definition of a clinical informatician** (below) has come through Phase 1 largely unchallenged and seems consistent with the new definition of clinical informatics introduced above, and with the FCI's aims and objectives. Importantly, this modified definition is also consistent with the NHS quality domains of; patient safety, clinical effectiveness and the experience of patients.

Statement 3
A clinical informatician *uses their unique knowledge and experience of informatics concepts, methods and tools to promote care that is safe, effective, efficient, timely, person centred and equitable.*

Q7. Please indicate in the box below, with an **"x"** the degree to which you agree or disagree with statement 3.

Q7.

Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
	x			

Q7a. Please add any comments in the text box below - either reflecting your views about the statement or elaborating on the reason why you agree/disagree with the statement.

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It seems clear that the title "Clinical informatician" spans a considerable spectrum of roles – it is perhaps a strand of some peoples work, but is the entire focus for others – which presents real challenges in terms of definitions. However, the principles of "less is more" adopted in the definitions of "clinical informatics" and "clinical informaticians" on pg27 of Report B seems to address this issue pretty well.

This wide spectrum of roles/responsibilities is reinforced by some of the feedback we received from our members. One member didn't know what was meant by "informatics concepts methods and tools" but saw their role working with informatics leads and improving their knowledge and skills of these tools through CPD. However another member working in an informatics role felt it related well to the knowledge and skills they use. This feedback leads us to think that informatics is a career pathway with differing knowledge and skills of the terms/concepts required at differing levels of practice.

Statement 4
It seems essential to us that clinical informatics is fully inclusive of the range of professionals and skills needed to meet the challenges of supporting health and well-being in the twenty-first century.

Q8. Please indicate in the box below, with an **"x"** the degree to which you agree or disagree with statement 4.

Q8.

Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
x				

Q8a. Please add any comments in the text box below - either reflecting your views about the statement or elaborating on the reason why you agree/disagree with the statement.

Occupational therapists work in all areas of health and social care and it is vital that all relevant health and social care professionals are both included in and supported with clinical informatics.

It is also important to recognise that clinic informaticians use their professional knowledge, skills and experience in order to meet the needs of the people using services.

Statement 5
*The set of **Principles** presented and tested in Phase 1 of the CCP study seem to be generally well supported by respondents. Clinical informaticians operate across the whole cycle of information processes, programmes, products and projects, bringing benefit to people and users at service, system and population levels.*

These ***principles*** are described below:

a) **Purpose**: of clinical informatics is the improvement in the quality and experience of health and social care, and the areas of primary concern for clinical informatics are data[3], technology and communication.
b) **Inclusivity:** clinical informatics encompasses and gives equal weight to health and social care. It was felt that clinical informatics has been predominantly focussed on hospital and GP care, and been led by GPs and physicians. There was concern that the

[3] "Data" may be too restrictive in this context, so this should be read as "data, information and knowledge".

discourse continues to be health and physician/GP biased exacerbating the assumption that informatics is about healthcare and failing to recognise the involvement of teams, multidisciplinary and multiservice, as well as the involvement of patients, carers and family.

c) **Diversity**: clinical informatics is a diverse discipline and areas of focus vary greatly, e.g. developing Apps, guidance on information governance. Each area of focus is equally important to achieving the overall aim of better person-centred health and social care. One respondent reminded us not forget the human implications of diversity either.
d) **Interdisciplinary**: clinical informatics brings together learning from multiple disciplines. Disciplines involved in clinical informatics include social sciences, biology, ICT, computer science, data science, psychology, linguistics, engineering, statistics, mathematics, medicine, and many others.
e) **Whole cycle**: clinical informatics is concerned with the whole cycle of a process, programme, product, project, that is from inception to identifying improvements from evaluation and process shut down. Those working in informatics can operate at one or more parts of the cycle.
f) **Unit of operation**: Clinical informatics operates at service, system, and population levels and within organisational, developer, practitioner and end user culture. The benefits of clinical informatics are at the individual, service, system and population level

Q9. Please indicate in the box below, with an **"x"** the degree to which you agree or disagree with statement 5.

Q9.

Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
	x			

Q9a. Please add any comments in the text box below - either reflecting your views about the statement or elaborating on the reason why you agree/disagree with the statement.

The set of principles described here indicates a specific role/job rather than an element integrated into many job roles defined as being "safe, effective and efficient health and care achieved through the best use of information and information technology.
There could be perhaps stronger wording within the principles that support the work of professionals working at a strategic level e.g. Professional bodies and those influencing policy. The current wording suits more operational roles.

Statement 6
*The set of **Areas** that describe the scope of clinical informatics are also well-supported, alongside the additional areas suggested by respondents including; inter-operability, clinical safety, leadership and clinical engagement. There was a clear recognition that 'big data", population medicine and data analytics skills are valuable clinical informatics tools, key to improving health outcomes.*

The scope of Clinical informatics includes the following ***areas*:**

a) How people interface with ICT in health and social care, including electronic health and care record (EHCR) systems and person care portals
b) Methods to collect, manage, provide security for, and analyse clinical data and "big data"
c) Application of informatics across the lifespan in the multi-layered and complex context in which health and social care services operate
d) Interventions for clinical decision support, safety alerts, and data visualisation to facilitate optimal health and social care delivery
e) Innovative communications with those receiving care to facilitate their appropriate and informed use of health and social care provision
f) Ethical and information governance frameworks and data usage policies and procedures for assurance of high-quality ethical use of individuals' data.

Q10. Please indicate in the box below, with an **"x"** the degree to which you agree or disagree with statement 6.

Q10.

Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
x				

Q10a. Please add any comments in the text box below - either reflecting your views about the statement or elaborating on the reason why you agree/disagree with the statement.
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We strongly agree with the above statement.

Statement 7
*The set of **Professional attributes** were strongly supported by respondents and seem to be key components of clinical informatics practice.*

These professional attributes need to be specific enough to be meaningful and useful for developing the core competencies and a competency framework

Professional attributes:

The clinical informatician works proactively (often in a leadership role), and collaboratively to:

a) **Define and prioritise** the needs of those receiving care and clinicians in informatics innovations (processes, systems, policies, products and programmes)
b) **Evaluate** the opportunities and limitations of informatics innovations (processes, systems, policies, products and programmes) in improving the quality of care delivery and experience
c) **Identify and take appropriate action** against ethical, legal, data protection and security risks
d) **Ensure** that informatics innovations (processes, systems, policies, products and programmes) are appropriate for the proposed purposes, that they are practical and implementable
e) Identify and address **clinical safety** issues
f) Ensure that **standards, guidance and best practice** are adhered to in clinical informatics

Q12 Please indicate in the box below, with an **"x"** the degree to which you agree or disagree with statement 7.

Q12.

Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
	x			

Q12a. Please add any comments in the text box below - either reflecting your views about the statement or elaborating on the reason why you agree/disagree with the statement.

There was some discomfort with the words "those receiving care" within Personal Attribute A. Not all health and care disciplines, notably our own, would describe themselves as offering "care" services which might serve as a barrier to engagement. Perhaps changing the language to "the needs of those accessing services" might be an alternative.

Q13. Is there anything else you would like to add?

Whilst there is acknowledgeable that clinical informatics is about health and care services, the word "clinical" can be viewed as medical orientated and therefore professionals working in social care, education and independent practice may not identify themselves as working clinically. If these concepts are are to be applicable to all health and care disciplines (and others), then those disciplines need to be able to instantly and clearly recognize that the definitions and the associated competency framework "speak to" or include them. Language such as "clinical" may be a barrier to this. Two members suggested alternative phrases "practice informatics" or "practitioner informatics".

Thank you – Dr Alan Hassey (CCP Project Director)