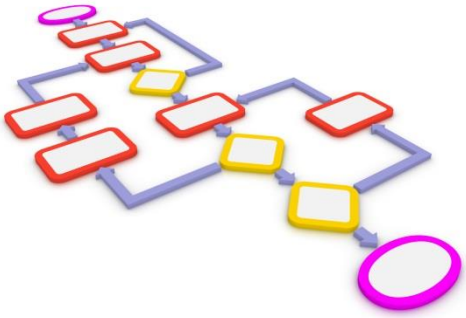

DCU ICNP® User Group

Summary Report 2016

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December 2016
ISBN: 978-1-873769-64-5

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Appendix 1 Draft Outline of Module 19

1. Introduction

An estimated two hundred plus individuals engaged with the SNHS ICNP Centre in its first year of development. In this report the SNHS DCU User Group summarises research and development activity completed in 2016. Ireland, and specifically the national eHealth programme[1], engages with citizens in health and social care to shape transitional activities by co-designing and co-creating new services. We reflect in this short report on lessons learned and consider new insights which will impact on future planned activities underpinned by two core assets. Firstly what user group participants recommend and secondly the global evidence base[2.] Additionally we take time to consider specific methods which can strategically locate the ICNP® user group centre in the co-design of new services to achieve integrated holistic and individualised care. Using the core principles and associated definitions of the World Health Organisation (WHO) Framework on Integrated People Centred Health Services, we specifically identify with Strategy 3 of this framework which relates to reorienting the models of care and defining service priorities based on life course needs [2 p7].

Ensuring that consistent and "meaningful in use practices" were optimized, a techno-anthropological methodology was used to guide activities in the User Group Work Plan. Identified as an effective approach for use in health informatics research, we strive to co-design and co-create new solutions. Recognising that there is no quick fix solutions to the issues faced in health and social care transformation, we consider the end point to be the horizon line. The over-arching methodology provides an appropriate cyclical fit with the aforementioned evidence [1, 2], and consequently the centre research and associated practice steps used include:

- Interdisciplinary team involvement to be considered as appropriate
- Problem Analysis
- Problem Formulation
- Selection of co- creators users and actors
- Selection of methods that can be used to predict the knowledge needed to solve the problem or attempt to do so [3p.10.]

Figure 1 devised in the original proposal drafted in December 2015 is now revisited. We use the aforementioned goals from the proposal to report on the first year of the centres activity to ICN and interested stakeholders and conclude with a self-assessment report on our progress to date.

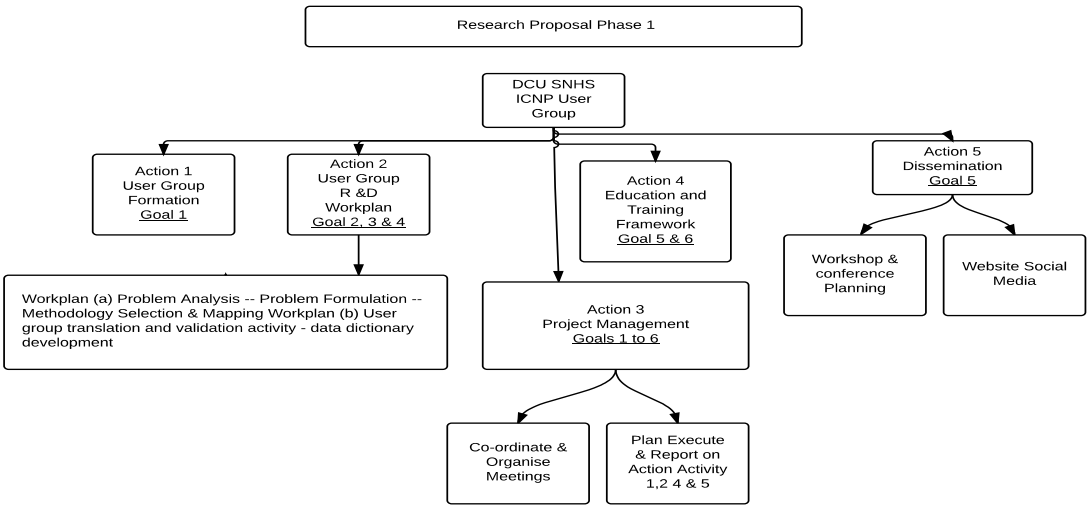

Figure 1 Initial Research Proposal Identified Goals & Activities Year One SNHS ICNP User Group

2. Action 1 User Group Formation

A significant amount of time in Quarter 1 and 2 was taken up with establishing a physical space and infrastructure for the centre to operate from. Initially the notion of creating a large user group of experts was considered. Through discussion and email informal invitations were extended and accepted, but this proved problematic when selecting dates to meet. A number of existing HSE workshops and working groups already in existence as part of eHealth Ireland were scheduled to meet in June, it was difficult over the summer recess period to identify a date in the summer of 2016 to instigate a large working group of key stakeholders and gain consensus on an agreed action plan. Consequently, the directors and co-directors decided to support the development of purposeful but smaller user groups focusing on pre-set problems, associated work plans with defined deliverables in line with the overall centre goals. A total of six working groups formed over the duration of the year, three of which delivered reports and resources in Q. 4 2016. The six established working groups formed only a portion of the collaborative activities the centre participated in over the year. The stakeholder groups and activities that we did engage with are expanded upon in Section 3 User

Group Research and Development Working Plan. Additional participatory activities currently in early development are not included in this report and will be reported on in 2017.

3. Action 2 User Group R & D Work Plan

3.1 Group Activity

The user group work plan developed organically over the duration of the year. As an approach it was found to provide a set of useful resources for individuals on specific issues requiring attention. Also it facilitated knowledge transfer from the academic community to the user group members which sustained effective use of resources which were limited in the first year of the centres development. This process will therefore be extended in year 2 of the centres overall strategic approach. For example Figure 2 provides a summary of the PESTLE analysis tool which was used for business analysis and tracking decisions used to inform the service delivery plan. Core questions used and the summarised responses were as follows.

1. What are the core political agendas in Ireland that can affect the centres development?
   The overarching political agenda for the centre is the deployment of eHealth Ireland and Healthy Ireland. The centres overarching goal is to support this process.
2. What economic factors can impact on the centres development?
   Initial funding was sought and given by DCU and INMO to establish a physical space for the centre. Future funding will be required and this will need to be sourced in 2017. Core to future funding is an established relationship with the Person and Public Involvement Agenda (PPI). Significant time has been invested to build relationships relating to PPI in 2016.
3. What are the cultural factors that need to be considered by the centre?
   Integrated care although a key driver for eHealth Ireland is we believe not widely understood by the nursing and midwifery community in Ireland. A core role of the centre is to contribute to dissemination and knowledge transfer of this topic. Educational material and workshops in addition to features in the World of Irish Nursing are critical to tackling this agenda.
4. What role has technology to play and what innovations can impact on the centres development?
   As a core feature of the centre is to support technology innovation to optimise sustainability the centre must secure access to eHealth Ireland IHTSDO user group. This was achieved in December 2016.
5. What legislation can have an impact on the centres development?

As the country is in the midst of a national transformation 2016- 2020, the key national regulations from the Health Information and Quality Authority (HIQA) guides the governance and accountability process. Other national legislation awaited is the Data Protection legislation in 2018 which is underpinned by the Data Protection Regulation published in 2016 by the European Union.

6. What are the main environmental concerns for the centres development?

   Funding was sought in Q1 and awarded in Q2 to develop a physical space in the SNHS in DCU for the centre. This is where meetings were held and stakeholders can meet for knowledge transfer and scholarship. This infrastructure will continue to expand in 2017 once funding has been secured.

Figure 2 Summary of the PESTLE

From a more local perspective we provide some examples of the daily activities completed in the centre using the techno-anthropology approach to review and shape problem formulation:

Activities - *Workshops, site visits, presentations, focus group sessions to create and make sense of meaningful in use practices*.

Resources - *Flip charts and white boards were used extensively to illustrate problem formation and problem solving. Mobile phones were used to photograph and capture ideas instigated in the centre and follow up was completed using cloud based applications for drafting reports and use cases.*

Central to the discussions were key principles drawn from the design approach; considering new ideas and possibilities for collaboration which are un-bureaucratic, but focused on the Institute of Medicines triple aim to create better health better care at a lower cost [3,4]. As the opportunities with the schedule reform within eHealth Ireland presented themselves, the centre participants actively sought solutions which would be sustainable in the long term while being ethically framed and in line with emerging policy and health informatics standards [1,2,3]. Tactical deliverables from the established working groups can be viewed from the web links in Table 1.

Group Title	Group Focus	Report link
HSE DCU User Group 1	Technical	http://www.ehealthireland.ie/Our-Team/Enterprise-Architecture/EA-Published-Documents/Data-Development-for-Health-and-Social-Care-Interim-Report-.html
CNSp User Group 2	Clinical	https://www.dcu.ie/snhs/icnpusergroup-reports-updates.shtml
DCU User Group 3	Education	Revised website and learning objects Online https://www.dcu.ie/snhs/icnpusergroup.shtml and http://www.informaticsinehealth.com/

Table 1 Deliverables from work plan in 2016.

User group one, two and three were quite distinct in the participatory approaches adopted. The focus for the three groups varied according to the background of the individual participants. Group one which was primarily a technical group engaged over the duration of the year with a view to achieving a specific set of deliverables. The activities were time bound with definitive cut off points

for deliverables which were agreed in advance with national programme objectives. Often described as a rapid development and prototyping approach, some examples of outputs from this group included defining a draft statement of requirements for future data dictionary development. The process is illustrated in Figure 2 with an associated timeline which presents an overview of the monthly meetings that were held and the actions the group engaged with over the course of the year. Participant numbers in user group one included six members in the core group, with focused consultation sessions carried out with ten experts on the working group activity to review working deliverables.

The second group had a strong clinical focus and comprised of clinical nurse specialists and academics.

The breakdown of members includes five clinical nurse specialists, thirteen academic participants and eight associated members including a student intern and two senior nurse managers. A total of seven projects stemmed from this working group and it is anticipated that individual user groups now established will develop into research projects with an informatics aspect within their action plan. Examples of deliverables from user group 2 include an educational programme for stroke rehabilitation, an exploratory review of pressure ulcer data on an inpatient population, and developing a social technical lens for client and family decision making. The photograph included on this page provides an image of an early meeting in the centre in Q2 of 2016; Figure 2 illustrates a summary from group one activity in 2016.

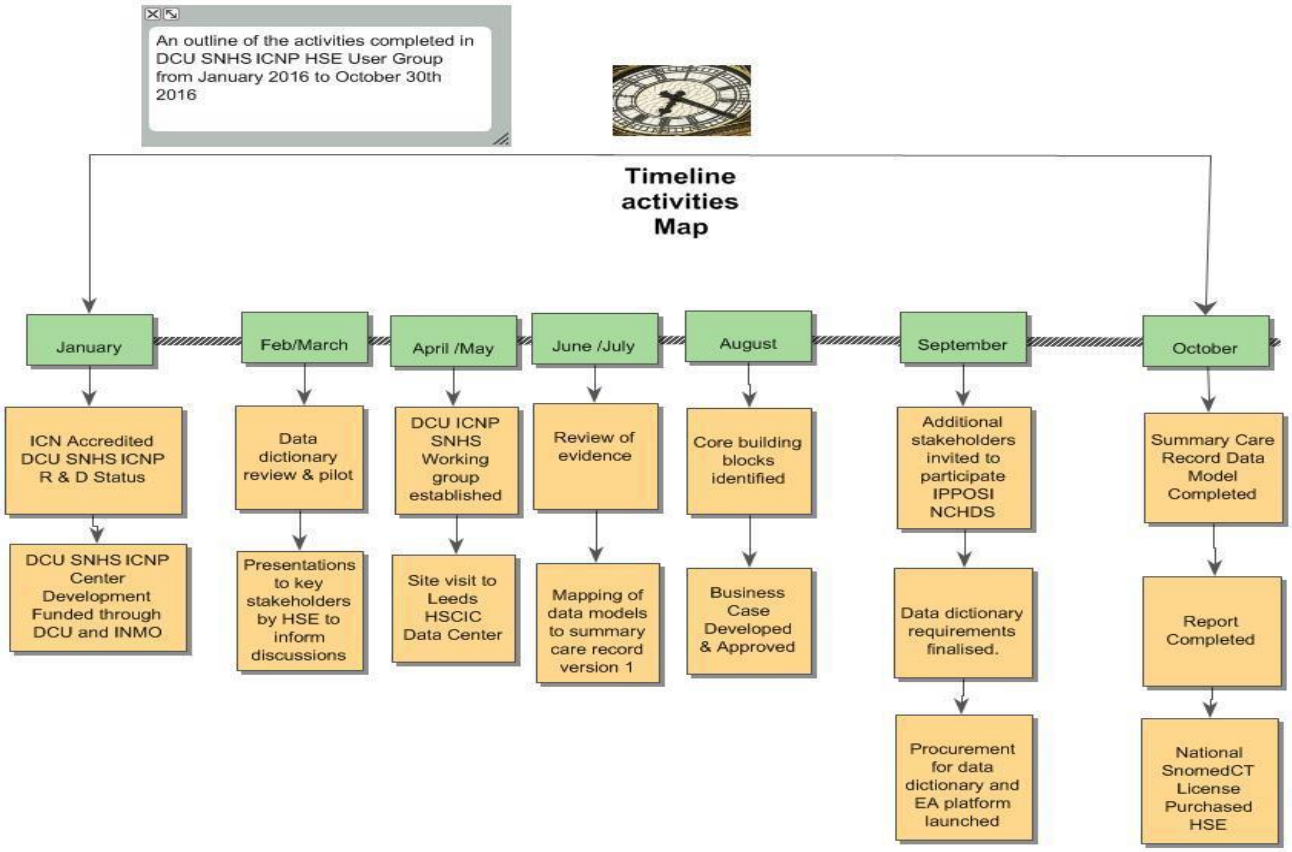

Figure 2: Example of activity completed in user group 1.

A total of six working groups were formed in 2016. Collectively the six user groups created varied in size and formation and presented to the centre with a wide ranging set queries and activities. For ease of reading Table 2 summarises the user groups that shaped the research and development activity completed over the duration of this year. As indicated earlier tactical deliverables from groups four and five will be in 2017, this is primarily due to the date of access to national IHTSDO® license.

Group Title User Group	Group Focus	Group Activity
UG 1 HSE DCU	Technical	Site visit to Leeds HSCIC, Scoping review, Defining statement of requirements for national data dictionary, Development of draft data model summary care record.
UG 2 CNSp	Clinical	Creation of 4 learning objects and 2 research proposals
UG 3 DCU	Student education	Development of undergraduate learning webpage and suite of learning objects
UG 4 Public Health	Semantic mapping	Mapping of Population Health Information Tool to ICNP phase one. *
UG 5 Intellect. Disability	Semantic mapping	Mapping of assessment tool for intellectual disability services with ICNP phase one.*
UG 6 Education	Readiness for engagement concepts & terminology phase one.	Development of resources on integrated care , eHealth using Powtoon see http://www.informaticsinehealth.com/learning-objects

* Note - Phase two will include creation of equivalence tables with SnomedCT in Q 1 2017

Table 2: An overview of six user groups' topic and activities.

3.2 ICNP Activity

As a practice development resource, ICNP® browser requires additional training and education with key stakeholders in order for them to understand the navigation process and associated underlying framework. The mapping activity completed in year one of the centre included generation of tables for public health nursing and intellectual disability assessment tools. The mapping resources created will be used as an example for further workshop training in 2017. As a relatively new concept the use of reference terminologies in nursing provide a challenge to nurse leaders. Even though there are a number of published papers in existence on standardisation of nursing language, the topic is considered a complex one. Recognition that a strong message needs to be articulated on why ICNP® should be selected is required. In discussions with nurse leaders in 2016 the following key points were highlighted relating to ICNP and on core selection criteria of a national standardised nursing language.

a) ICNP® is recognised by the World Health Organisation as a related classification and aligns well with the WHO Integrated Care Framework.

b) ICNP® is a cost effective reference terminology which can support integrated care and nursing language in accordance with ISO 18104 Health Informatics - Categorial structures for representation of nursing diagnosis and nursing actions in terminological systems[5].

c) ICNP® has been developed over a 25 year timeframe and contains over 4000 concepts and terms.

On November 21st 2016, the DCU SNHS ICNP centre having applied to eHealth Ireland for access to the IHTSDO National Contact Centre was given approval for access to SnomedCT Resources see https://mlds.ihtsdotools.org . This significant milestone recognises the SNHS ICNP centre as a potential hub and spoke unit for future development of terminology mapping in Ireland. The existing dataset tables mapped to ICNP in Q1 2017 will be mapped to SnomedCT with a view to realising Goal 3 of this centre. *To promote the use of ICNP Equivalence Tables with SnomedCT in line with national clinical programme objectives through the integrated services framework OCIO Ireland.* The centre will continue to promote ICNP in 2017 as the preferred terminology for nursing practice in Ireland.

4. Action Three Project Management

A key aspect of year one project management development of the centre related to building and accessing resources to develop a physical space for the DCU ICNP User Group. Action three project management was completed as follows: In Q1 of 2016 the team applied for and was successfully awarded funding to establish a number of key resources to establish the centre in accordance with Goal 1 of the centres stated objectives. *To establish the DCU SNHS User Group as a formal centre to advance uptake and use of ICNP in Ireland*. Funding was sourced from SNHS Research Development Fund and from the Irish Nurses and Midwifery Organisation to develop a physical office space with a suite of ICT resources in the SNHS. Creating a physical space for the centre enabled the group to achieve Goal 2: *To develop a research cluster for mapping of ICNP terms and development of catalogues in SNHS*. Figure 3 provides an example of project management resources developed as part of the project management action plan. From June to September for example some of the project management related activity included nine scheduled meetings with nursing and clinical leaders, four presentations at national committee level, two articles published with updates in the

National Nursing Association (NNA) organisation World of Irish Nursing and targeted engagement with social media. Recent figures include Twitter followers 170 and Linked in 247.

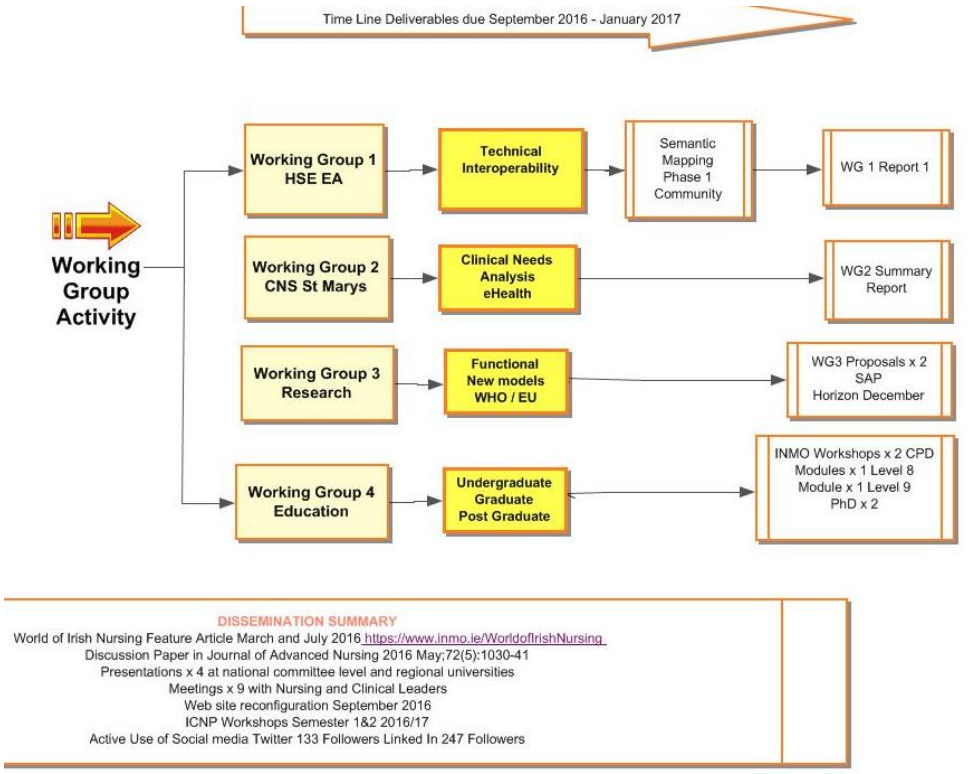

Figure 3 Example of project management resource

The previously mentioned user groups form a significant investment on the part of the centre in terms of human and financial resources; however additional activity worth noting is included here specifically relating to the centres goals.

Activity	Topic	Outcome
Standardising nursing language	Alignment with WHO framework for integrated care.	Presentations x 2 at national level Focus group discussion x 3 on approaches to standardising nursing language in accordance with eHealth Ireland.
Research Related Activity 1	Interdisciplinary	Contributed to Health Research Board Application Older person community services and self-care exercise programme progressed to phase two of the evaluation process
Post graduate research	Interdisciplinary	PhD x 2 successfully completed and approved DCU ethics committee research proposals November 2016 1. Falls prevention 2. Nursing metrics dashboard development.
ICN Global Review Group	Review of ICN activity and resources	Contributed to review of ICN activity September /October 2016
Industry	Discussions with no associated conflict of interest	Initial discussions on connected health with major industry partner and SME companies in Ireland.

Table 3: Additional activity completed in 2016

5. Action 4 Education and Training Frameworks

The educational and training frameworks devised in 2016 are considered an integral element of the overall strategic plan for the centre. Starting from the premise that deployment of technology is complex and that it requires both change (process driven) and transformation (emotionally driven) activity at an enterprise and local level. Education and training initiatives need to be embedded in all user group actions. ICNP® as a resource is poorly understood in the context of nursing and midwifery in Ireland. The specific deliverables for education and training in the SNHS ICNP User Group centre included:

1. Formal accreditation at university level of a level 9 standalone module entitled informatics in eHealth. This module will be offered in September 2016. See Appendix 1
2. Irish Nurses and Midwifery Association (INMO) have attained accreditation to provide two dedicated workshop days entitled An Introduction to Nursing Informatics and An Introduction for ICNP both of these workshops have 5.5 CEU's. These workshops have been

promoted and marketed through the National Nursing Agency INMO World of Irish Nursing https://inmoprofessional.ie/Files/PDCDirectory2016sm.pdf (see page 64 &p.65).

3. Undergraduate studentship completed and webpage for undergraduate students on *what eHealth means for me* is available to view from http://www.dcu.ie/snhs/icnpusergroup-pga-undergrad.shtml
4. A level 9 MSc student has been engaging with the centre and completing an informatics placement, this student is also mapping assessment data to ICNP in Q4 of 2016.
5. Post graduate students have dedicated websites established on the centres webpage entitled post graduate scholars http://www.dcu.ie/snhs/icnpusergroup-pga-postgrad.shtml

6. Action 5 Dissemination

The year commenced with a presentation to the Council of Clinical Information Officers and from this initial presentation a number of stakeholders contacted the centre, and additional invitations to present over the duration of the year materialized. Table 4 provides a summary of the main presentations completed over the duration of the year

Council of Clinical Information Officers	**February**
Tralee Institute of Technology	June
Health Informatics Nursing Specialist Group Meeting	March
St Marys Campus Older Person Services Dublin	January , April , August
OMNSD Standardising nursing language workshop	June
South Infirmary Hospital Cork Directors of Nursing Meeting	October
IPPOSI Patient Services and Industry	October
Health Informatics Society of Ireland 21st Annual Conference	November

Table 4: Presentations to key stakeholder groups

7. Conclusion

The centre has progressed reasonably well given the existing resources available to date. Now an established centre, the focus for years two and three will be to secure additional funding for staff to continue to engage with participatory activities and act as a springboard to integrate ICN mission into primary and secondary care services. A great deal of time was invested on development of online educational resources relating to ICNP® and presenting it as a formal terminology for contemporary nursing and midwifery practice. The Irish Nurses and Midwifery Organisation as the National Nursing Association for ICN in Ireland have been very supportive to the centre and critical to its development from the outset. The director of professional development in the INMO Ms Elizabeth Adams is a co-director of the centre and acts as an advisor in all aspects of management and planning. This report concludes with a reflective self-assessment on the goals identified in the original proposal from December 2015.

7.1 Self-Assessment of identified Goals 2016

Goal 1: Establish the SNHNS DCU ICNP user group

Self-Assessment: Goal Achieved
Profile of the centre is well established meetings have been held with a number of key stakeholders in nursing, medicine, academic ,professional bodies and industry on review of activity table twelve key stakeholder group meetings were held in 2016 .

Goal 2: Establish a research cluster with existing partner services scaling to other partner services over the 4 year timeframe

.

Self-Assessment: Partly Achieved. On track with anticipated timeline projection
Progress includes 6 working groups in development of ICNP agenda. Research and terminology mapping completed on 3 data sets relating to public health, intellectual disability and falls risk reduction. Ireland became 27th member of IHTSDO in November 2016, SNHS ICNP Centre applied for and approved as a member in December 2016.

Goal 3: Promote use of ICNP equivalence tables with SnomedCT with national clinical programme objectives through the Integrated Services Framework in OCIO Directorate Authority

Self-Assessment: Partly Achieved. On track with the anticipated time line projections.
Phase one development is in line with projected timelines. This working group has developed well over the year one and a report on progress completed is available to view see report online at http://www.ehealthireland.ie/Our-Team/Enterprise-Architecture/EA-Published-Documents/

Goal 4: Build on established relationships with existing ICNP accreditation centres (Norway, Poland) and seek funding for future initiatives through research funding streams

Self-Assessment: Marginally Achieved
Linkage with EU R&D centres has been slow to evolve in2016, it is anticipated that at Barcelona ICN Conference that collaborative and potential funding opportunities can be discussed further. Teleconference and face to face meetings have been held on connected health agendas with potential research and industry partners, but additional time investment will be required in 2017

Goal 5 Disseminate information on research activity

Self-Assessment Achieved. As outlined in this final year report.

Goal 6 Continue to advance nursing education on ICNP

Self-Assessment Achieved. As discussed in this final year report.

Goal 7 Meet ICNP Accreditation Centre Requirements

Self-Assessment Achieved.

The final three goals are assessed jointly. Ongoing dissemination on the centre activity is available to download from the website which is updated biannually https://www.dcu.ie/snhs/icnpusergroup.shtml . In addition an abstract has been submitted to International conference for Integrated Care, if accepted the abstracts will be published in International Journal of Integrated Care

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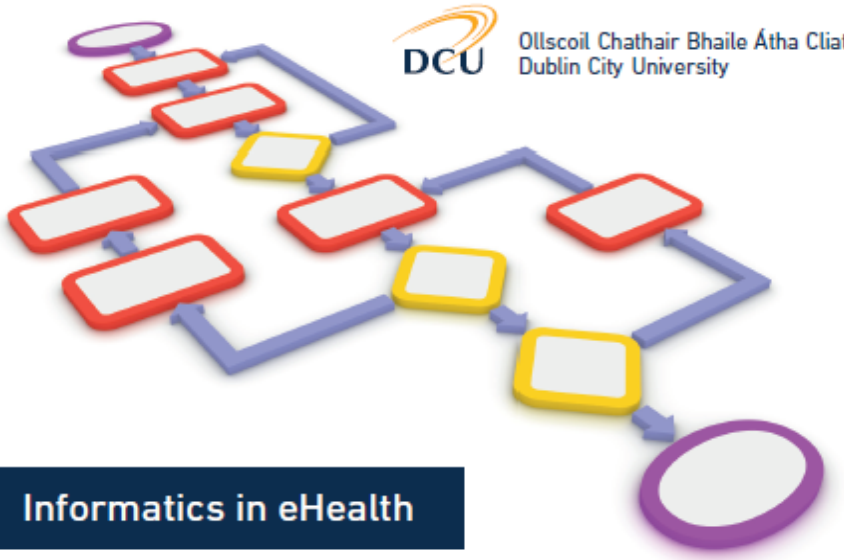
Appendix 1 Draft Outline of Module



DCU Ollscoil Chathair Bhaile Átha Cliath
Dublin City University

Informatics in eHealth

Who should apply?

This module is designed to prepare health care professionals to effectively contribute to the role of health informatics in eHealth. Adopting a solution focused approach to the National and EU eHealth transformational programme, students will gain a greater understanding of the application of core competencies required to practice in an ICT enabled health and social care environment.

Learning outcomes:

The learning outcomes for the informatics in eHealth module are as follows:

- Describe the characteristics of eHealth use, methods and its impact on health and social care service provision
- Demonstrate knowledge, skills and attitudes on how health informatics and its associated theory can support the delivery of eHealth across the continuum of care. For example: Integrated Care and the professional and regulatory standards and workplace policies
- Design and explore studies to address health issues where problem solving analysis could provide eHealth innovations as part of a solution for promoting health and wellbeing
- Evaluate and report on how eHealth resources impact upon health care delivery and patient /client outcome

Module Code: NS5058
Credit/Level: Level 9, 10 ECTS Credits
Cost of module: €865

Application forms are available from:
Faculty of Science and Health,
Dublin City University,
Dublin 9
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For further information contact: