Creating Archetypes for Patient Assessment with Nurses to Facilitate Shared Patient Centred Care with Older Persons

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Presentation will consider

- **Summary of the process of defining requirements for patient assessment to promote continuity of care with the older person using EN13940 as a high order framework of concepts**
- **Developing archetypes in accordance with EN13606 and creating a small front end application and database to pilot test patient assessment tool**
- **Completing small pilot study with 16 patients over the acute primary and continuing care sectors over a six month duration**
- **Overview of key findings from the pilot study (quantitative data) and development of web 2.0 technologies to disseminate information from clinical viewpoint (qualitative data).**
- **Discussion – using EN13606 and EN 13940 lessons learned**

Some Background

- Co-ordination of care is required across and between services to avoid poly pharmacy, conflicting care plans and ensure continuity of care and management of chronic illness (OECD, 2010)

- Sick adults in six countries indicated that a significant proportion of discharged patients are not told what symptoms to look out for and / or have no follow up arranged (Schoen et al, 2009)

Continuity of Care is Required

- Chronically ill patients may visit up to 16 physicians in a year (Pham et al, 2007)
- Health Information Standards can assist in the delivery of shared assessment records for future EHR in Ireland/Europe by offering signposts on process development
- Key standards used in this project EN13940 EN13606

Challenges and Solutions

- **The health sector places an unusual emphasis on non financial goals – hard to measure (OECD, 2010)**

- **In Ireland healthcare staff are 'battle weary' – economic downturn has resulted in a staff moratorium**

Sponsors

- **EHRland Funded by the Health Information and Quality Authority (HIQA) – Clinical Engagement EHRland available from**

  http://www.ehrland.ie/index.html

- **National Council of Nursing and Midwifery in Ireland – Education**

  http://www.partnersct.com

Project Focus

- **To develop archetypes for shared care by creating a core summary assessment tool that could be used across and between services**

- **Core tool design features include achieving syntactic and semantic interoperability**

Clinically Visualisation is a Core Requirement

'I dream of painting and then I paint my dream'

Vincent Van Gough

Aged 37years

(1853-1890)

Technically Standards Are a Core Requirement

Standards Used as Guiding Framework for this study

- ISO 11179 Metadata registry identification of concepts with terminology
- A patient centred approach EN13940 to facilitate continuity of care
- EN13606 used to create archetype framework to structure the assessment tool

Research question(s)

Clinical Perspective

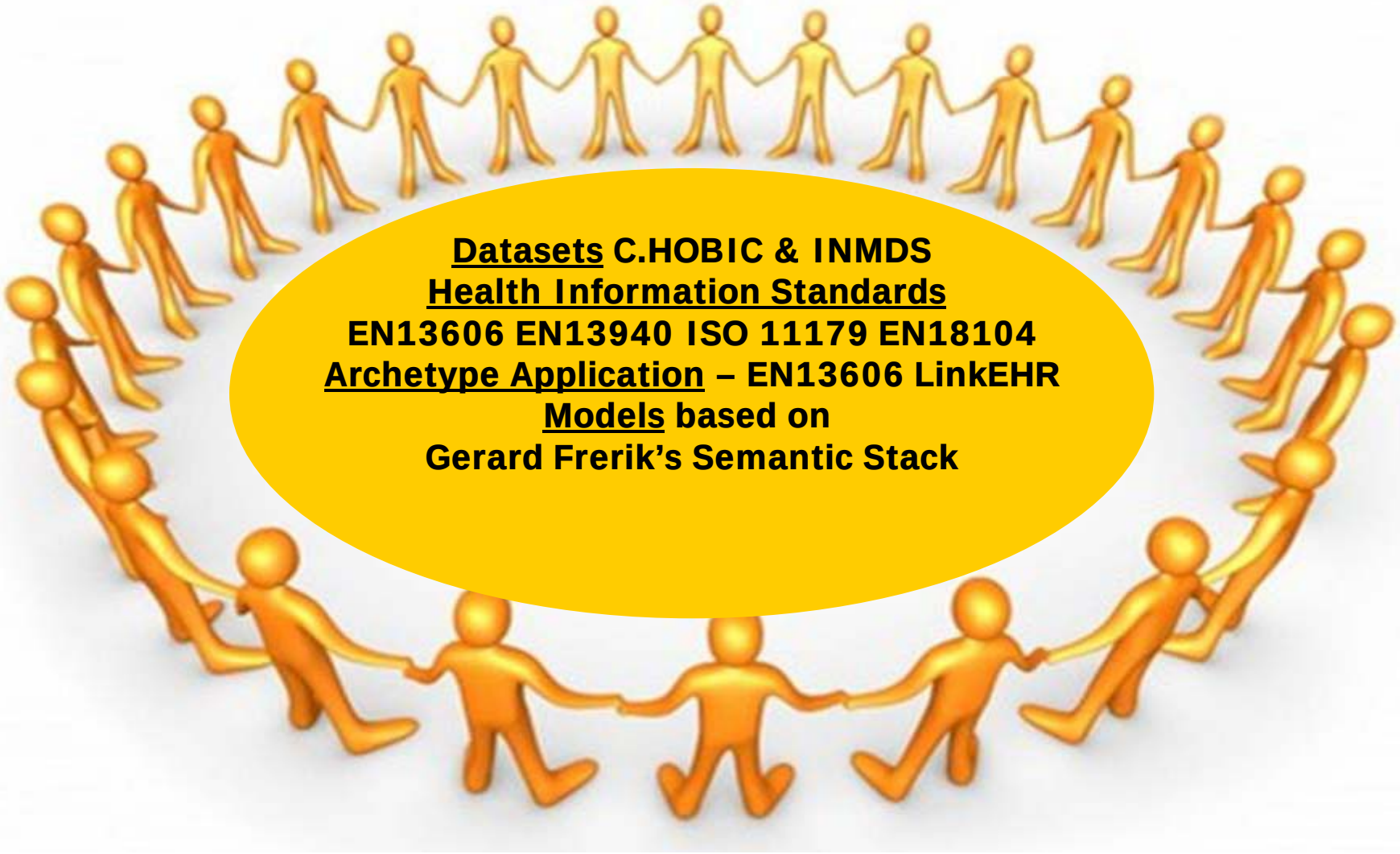
- **Can participating nurses assist in building a common understanding of patient assessment for future outcomes based research?**

Technical Perspective

- **Can archetypes be developed in accordance with EN13606 that are fit for purpose and which will facilitate shared care in older persons in the future?**

Actions steps included

Informing and Guiding Work



Research Tools

- **Participatory action research**
  - **Dymek Sense Making Model (2008)**
- **Contextual design**
  - **Ballard (2006) work on contextual requirements analysis.**
  - **Sorby et al (2005) use of drama improvisation in requirements engineering**
- **Mixed Method**
  - **Cresswell and Clarke's exploratory mixed methods dominant qualitative approach used**
- **Evaluation**
  - **Pawson and Tilley stratified realistic evaluation (2007)**
  - **Dickenson measuring patient centred outcomes (2008)**

Research Practice Interface

- **For micro theory testing realistic evaluation facilitates the potential to create a space for cumulative knowledge development within the context mechanism and outcome configurations (CMO)**

  Pawson and Tilley (1997)

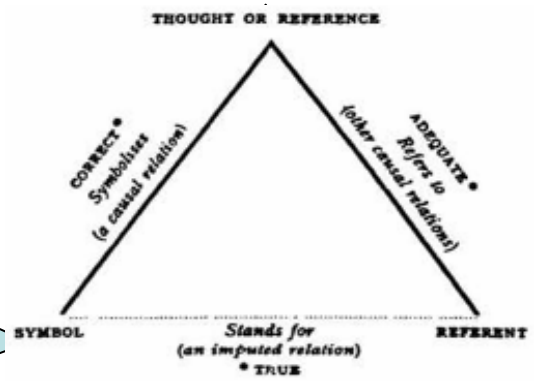
Study Outputs and Linkage

- **High order map of Models of Meaning and Knowledge**
- **Example of Model of Meaning depicting culture and context by CMO role configuration (qualitative data)**
- **Informs creation of Models of Knowledge suite of prototype archetypes (informatics data)**
- **Generates health science data – initial data collected (quantitative data)**
- **Graph of actual interagency communication**
- **Example of core archetypes created**

MODELS OF THOUGHT

HEALTH SCIENCE
LEVEL 3 DATA

COMPUTER SCIENCE
EHR
CEN TC 251
EN 13940
EN 13606



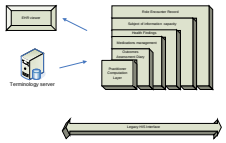
MODELS OF KNOWLEDGE

MODELS OF MEANING

INFORMATION SCIENCE

CULTURE & CONTEXT

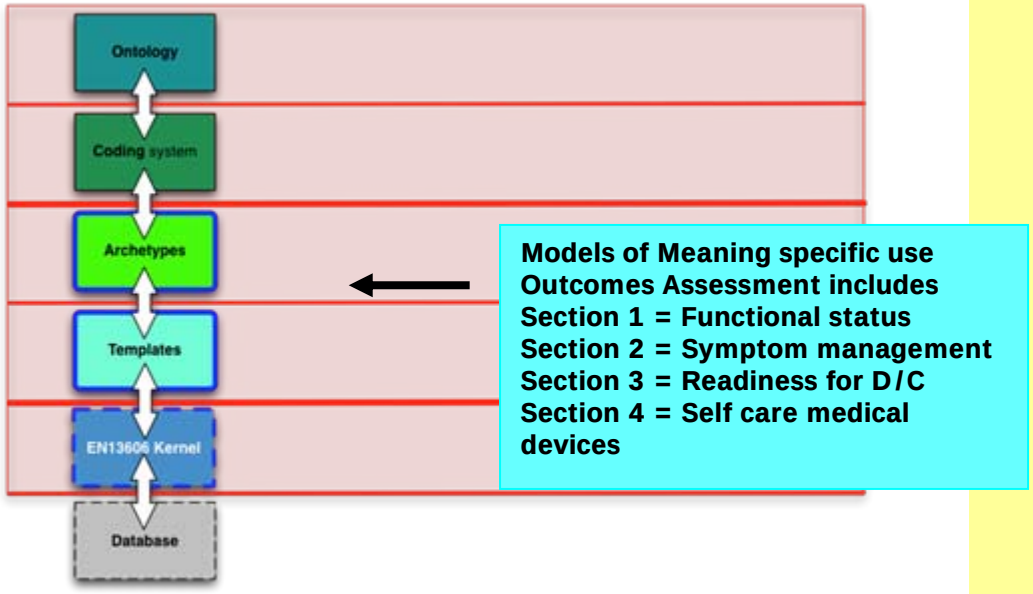
LEVEL 1 & 2 DATA



A Model of Knowledge

- **Creating a space for synthesis of identified information data (Level 1) and meaning data (culture and context - Level 2 data) to be generated and interpreted by health care providers in future patient centred EHR**

Using Models of Knowing

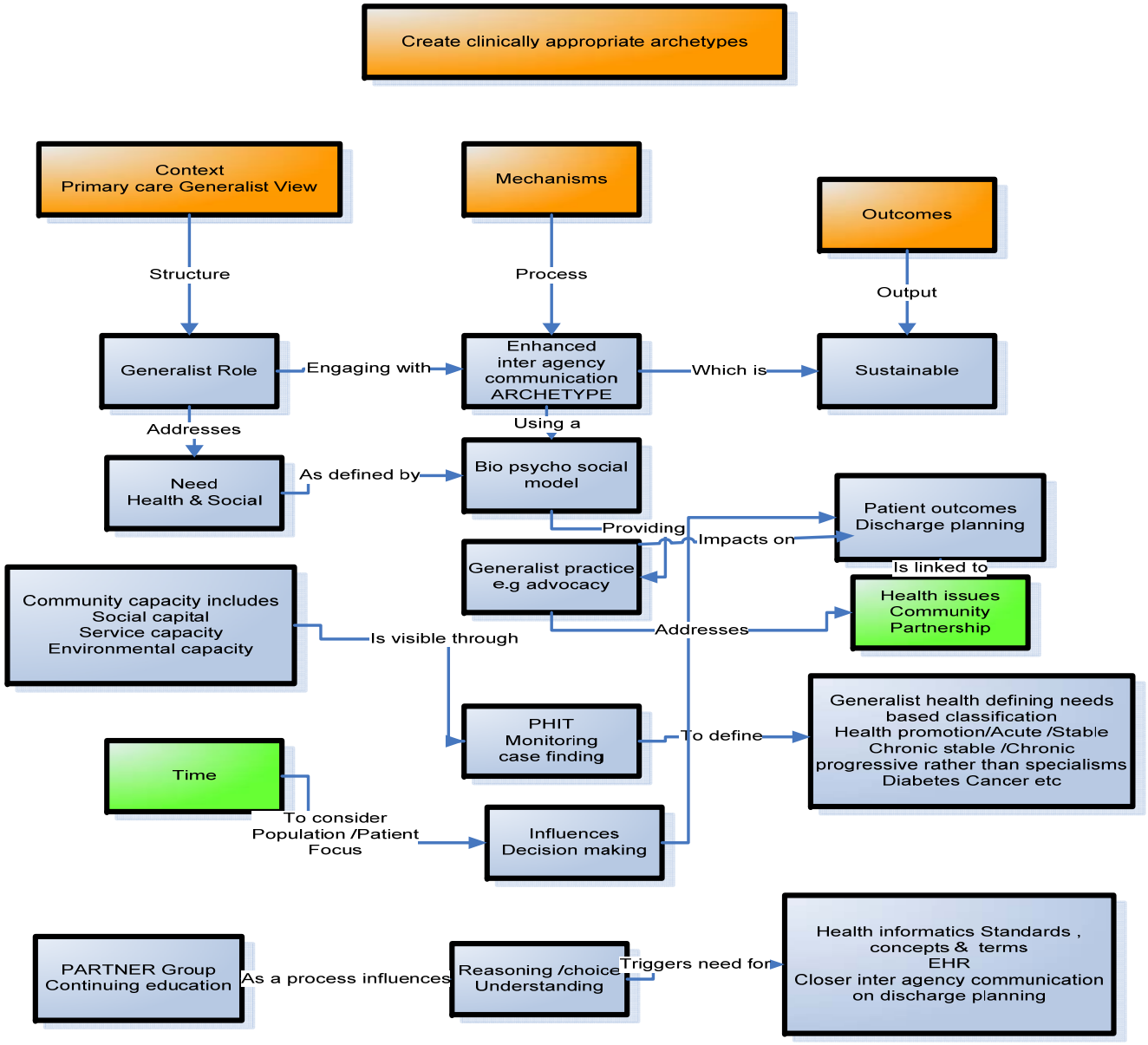


Readiness for discharge archetype can be created e.g. Therapeutic Self Care (C.HOBIC)

Freriks G. 2010

CMO configurations

- Focal point for focus group discussion
- Can blend existing models of knowing with qualitative data on culture and context to depict the ontology's as articulated by practitioners
- Bridging the gap useful training resource in future programme


Create clinically appropriate archetypes
Context
Primary care Generalist View
Mechanisms
Outcomes
Structure
Process
Output
Generalist Role
Engaging with
Enhanced
inter agency
communication
ARCHETYPE
Which is
Sustainable
Addresses
Using a
Need
Health & Social
As defined by
Bio psycho social
model
Providing
Impacts on
Patient outcomes
Discharge planning
Is linked to
Generalist practice
e.g advocacy
Community capacity includes
Social capital
Service capacity
Environmental capacity
Is visible through
Addresses
Health issues
Community
Partnership
Generalist health defining needs
based classification
Health promotion/Acute /Stable
Chronic stable /Chronic
progressive rather than specialisms
Diabetes Cancer etc
PHIT
Monitoring
case finding
To define
Time
To consider
Population /Patient
Focus
Influences
Decision making
PARTNER Group
Continuing education
As a process influences
Reasoning /choice
Understanding
Triggers need for
Health informatics Standards ,
concepts & terms
EHR
Closer inter agency communication
on discharge planning

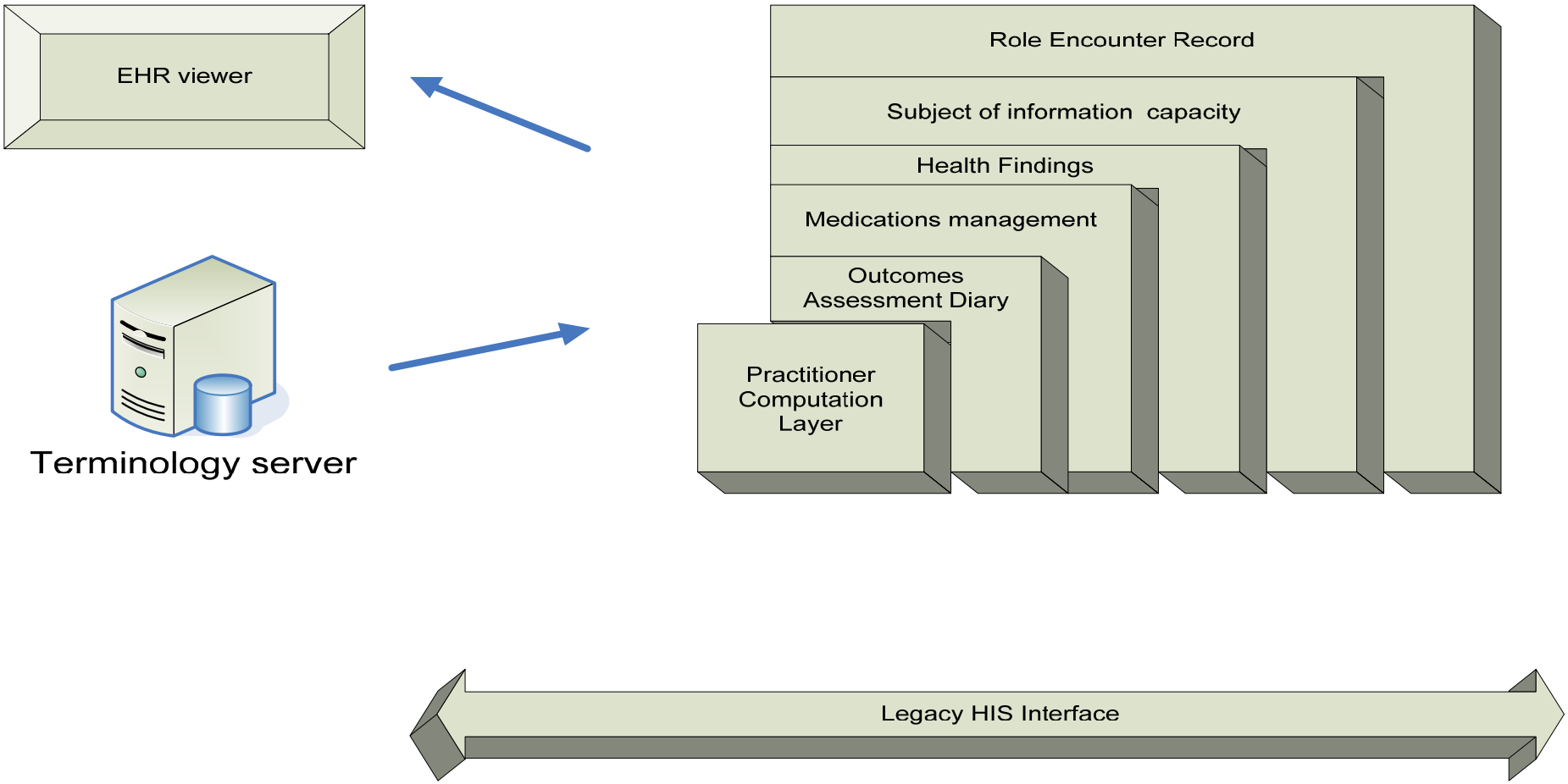
Concepts: Time & Health Issue

- Time related concepts
  - An episode of care is centred on a health issue has a time frame for one or more health care activities
  - Contact is a healthcare provider activity

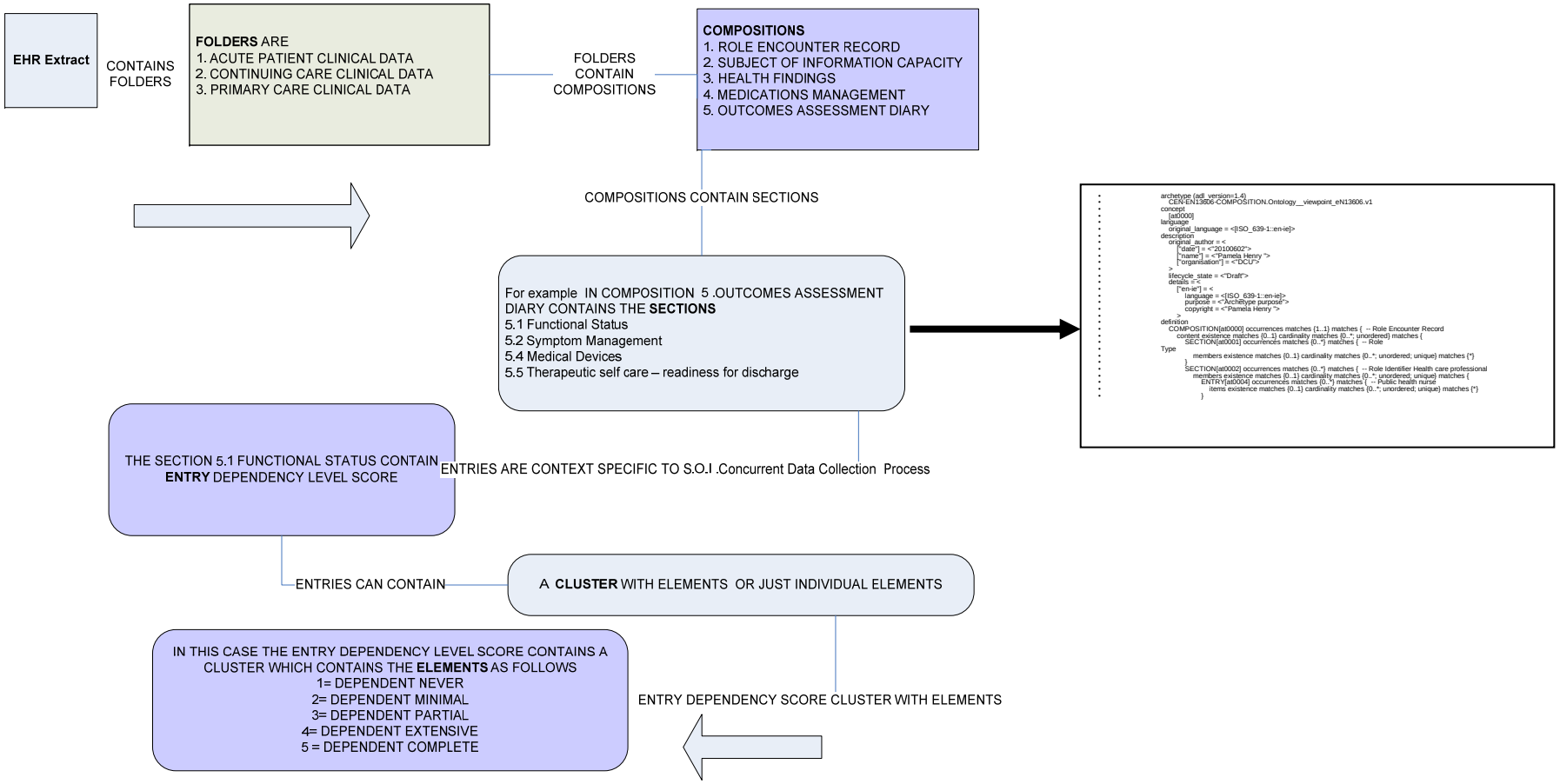
Sometimes we visit a client and whilst we anticipate that this particular contact should take a few minutes the health care activity process of the encounter must address a much more complex set of one or more health issues

(Focus group session participant comment)

Archetype Structure Content

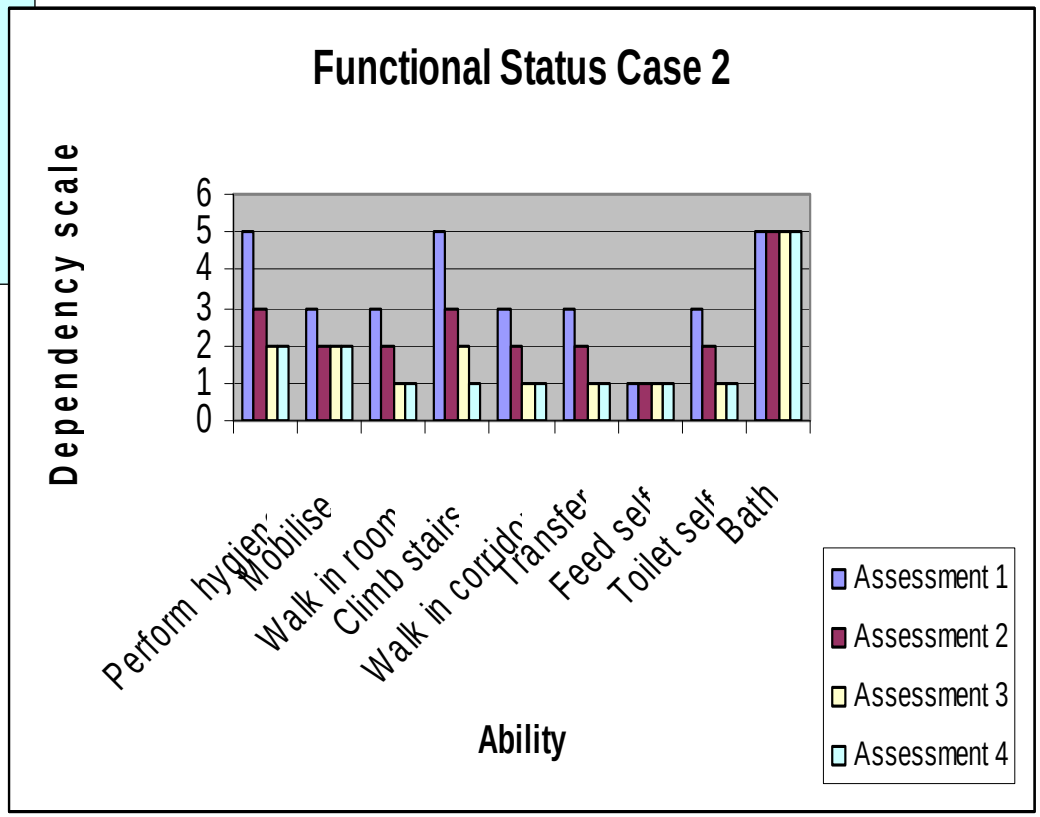


EHRland Creates Database & Collects New Data



Data Seen by Individual Case

- Discharged home with Guillain-Barre Syndrome
- Shows significant improvement in functional status dependency



Functional Status	Episode 1	Episode 2
Ability to perform hygiene	0.875	0.8125
Ability to dress	0.625	0.6875
Ability to groom oneself	0.625	0.625
Ability to bath	1.625	1.6875
Ability to mobilise	1	1.25
Ability to walk	0.875	1.125
Ability to transfer chair or bed	0.6875	0.625
Ability to walk in room	0.625	0.8125
Ability to walk in corridor	0.75	0.9375
Ability to toilet oneself	0.625	0.5
Ability to feed self	0.25	0.25
Falls Frequency	0.5	0.5
Falls Risk	1.5625	4.5625
Pressure Ulcer & Skin Integrity	3.875	3.6875
Breathing & Dyspnoea	0.6875	0.875
Weakness & Fatigue	1.3125	1.5
Nausea	0.125	0.1875
Fluid Balance	0.125	0.25
Pain Frequency	0.625	0.625
Pain Intensity	0.3125	0.5

Summary of Findings

- **The small scale quantitative pilot study which was completed on grouped data showed statistical significance with a p value of p = 0.018 for functional status improvement and a p value of p = 0.002 for functional status disimprovement**

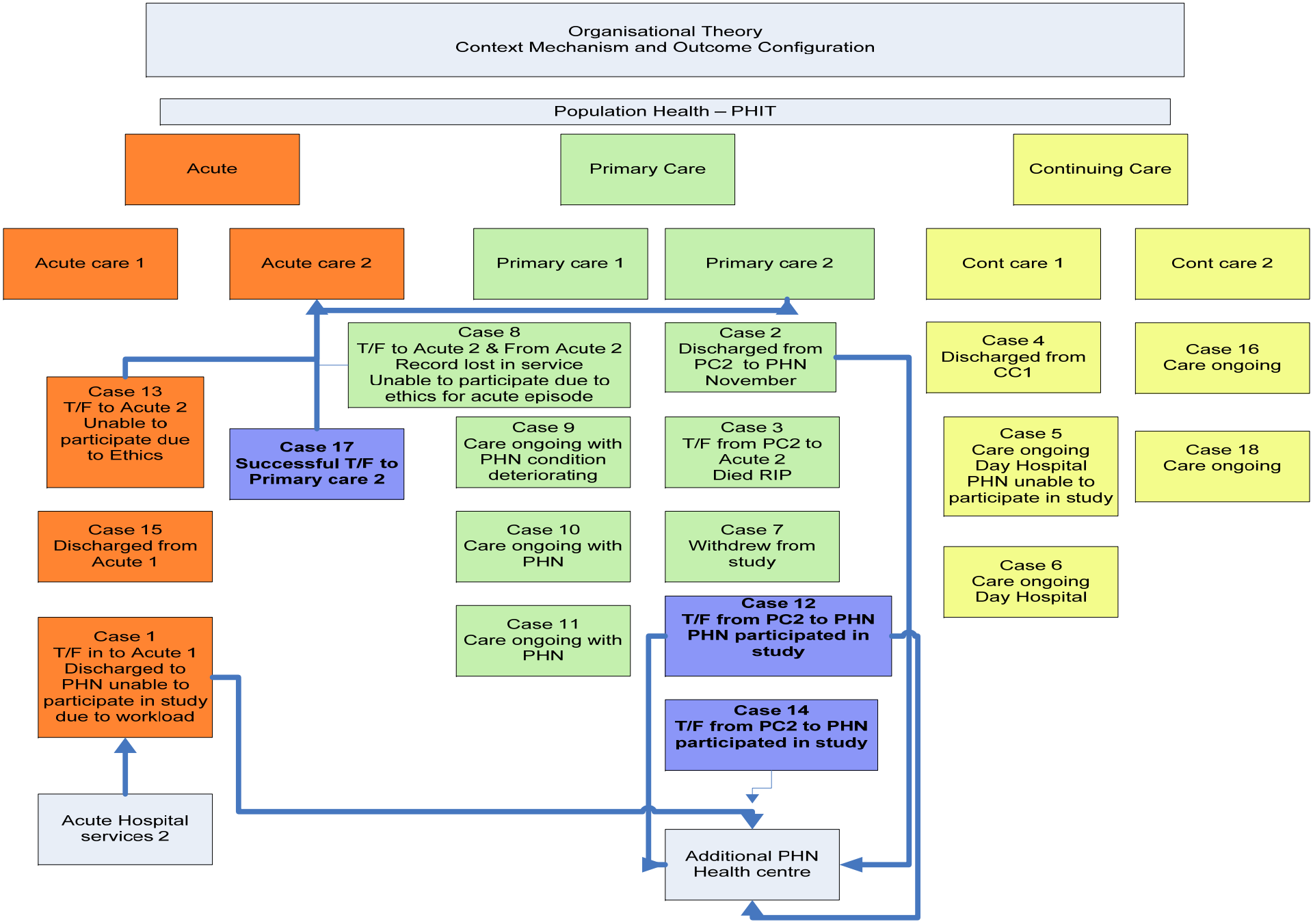
- **Combining figures for ability to perform the main tasks of everyday living with falls and risk for falling , skin integrity and symptom management such as breathing and dyspnoea, weakness and fatigue, nausea and pain and completing a t test gave a significant difference of p = 0.03**

- **<u>These findings correlated to the qualitative data collected on patients and the individual patient centred outcomes identified for individual cases</u>**

Other useful data included

Looking: ***beneath these patterns of interagency communication to account for why they did or did not occur***

Clark et al, 2008, p.71


Organisational Theory
Context Mechanism and Outcome Configuration
Population Health – PHIT
Acute
Primary Care
Continuing Care
Acute care 1
Acute care 2
Primary care 1
Primary care 2
Cont care 1
Cont care 2
Case 8
T/F to Acute 2 & From Acute 2
Record lost in service
Unable to participate due to ethics for acute episode
Case 2
Discharged from PC2 to PHN November
Case 4
Discharged from CC1
Case 16
Care ongoing
Case 13
T/F to Acute 2
Unable to participate due to Ethics
Case 17
Successful T/F to Primary care 2
Case 9
Care ongoing with PHN condition deteriorating
Case 3
T/F from PC2 to Acute 2
Died RIP
Case 5
Care ongoing
Day Hospital
PHN unable to participate in study
Case 18
Care ongoing
Case 15
Discharged from Acute 1
Case 10
Care ongoing with PHN
Case 7
Withdrew from study
Case 6
Care ongoing
Day Hospital
Case 12
T/F from PC2 to PHN
PHN participated in study
Case 11
Care ongoing with PHN
Case 1
T/F in to Acute 1
Discharged to PHN unable to participate in study due to workload
Case 14
T/F from PC2 to PHN
participated in study
Acute Hospital services 2
Additional PHN Health centre

Other Patterns – Health Issues

EN 13940 – CONTSYS Systems of Concepts for Continuity of Care

What are the key health issues (if any) relevant to nursing care?

- **Case 1 of this study has identified health issue of repeated readmissions for unstable INR and dyspnoea despite care package being in place**

- **Discussions with the team suggests that the key health issue with Case 1 = social isolation. Suggesting that medication mismanagement is a direct consequence of Case 1's loneliness and the frequent inpatient activity offers case 1 respite from living alone**

Current state of play

- **The PARTNERS project is consulting with HSE on some potential new development initiatives**
  - **Pilot study of integrated service framework**
  - **Discharge letter from acute services**

The Final Cumulative Result

It is easy to start an initiative – the trick is to keep it going

Acknowledgements

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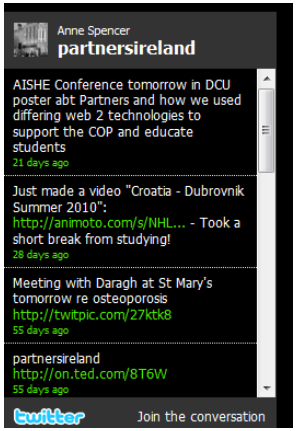

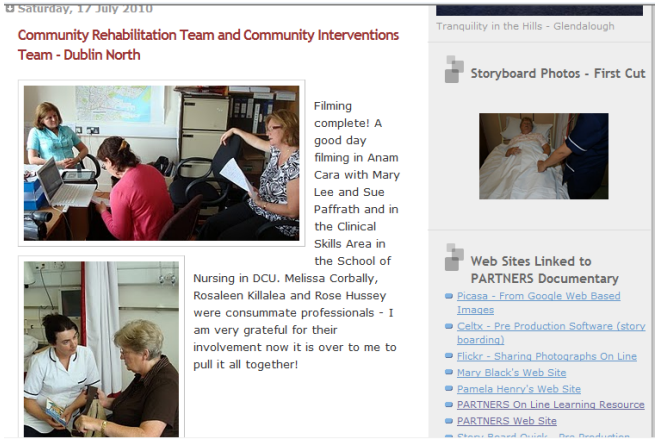

PARTNERS Web Site
www.partnersct.com

I am tomorrow, or some future day what I establish today....Joyce

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