The eHealth Programme in Northern Ireland; a five year journey

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BSO ITS

@NIECRTeam
#NIECR
NI HSC Structure

Minister/Department

Public Health Agency

Health & Social Care Board including LCGs

6 Trusts

Key Stakeholders including: Service Users, GPs, Independent & Private Sector, & Voluntary & Community

BSO

RQIA

PCC

Agencies
Northern Ireland Electronic Care Record (NIECR)

• Strategic objective from 2005
• Research commenced 2008
• Initial cohort of enthusiastic senior clinicians
• DoH support
• Pilot went live 2010
• Regional rollout 2013 (5th birthday 4 July 2018)
FIVE YEARS
TRANSFORMING
CARE
The Problem
• Multiple siloed systems
• Multiple passwords
• Fragmented Patient Records
Proof of concept

- Join 2 Hospitals in Separate Trusts
- SEHSCT Ulster hospital / BHSCT BCH
- Include GP information from 2 separate practices. (Integrate the information held on those records into a “unique clinical portal”)
- Patient centred
- Clinician led as a clinical system not a management, research or data collecting system
- Project term 2009-2013 with partners Orion Health
The ECR will reliably and correctly pull together the patient/client information needed by HSC professionals from across the HSC services and present this to them in a near-instant, easy to read patient record view.

Reduce the time wasted trying to access or confirm patient/client information, increase the effectiveness of clinical encounters by ensuring that the clinician has the information needed, reduce unnecessary delays in the patient pathway caused by lack of access to information held elsewhere in the HSC.

Reduce avoidable duplicate laboratory and radiology testing by presenting the most recent patient results in a usable, patient-centred view, thereby improving the utilization of diagnostic services and reducing avoidable discomfort, inconvenience and potential risk to patients.

Reconcile the effective sharing and communication of data with the need to ensure high standards of information governance.

The ECR solution will provide a reliable, supported and managed service with a capacity to develop and evolve to facilitate and comply with known and emergent HSC requirements, service improvement initiatives and strategic imperatives.
Project Management

• **Project Board** - senior Trust, Health Board and IT representatives. Led by Dr Carolyn Harper

• **Information Governance group** - clinicians and governance leads across all Trusts with NIECR staff. Led by Dr Jimmy Courtney GP

• **Clinical Content Group** - Clinical champions from Trusts and NIECR staff. Led by Dr Clive Russell
NIECR Usage

Wide range of users across multiple disciplines

- Nurse 28%
- Doctor 15%
- Consultant 8%
- AHP 13%
- Clinical Admin 15%
- Dentist 1%
- Midwife 2%
- Social Worker 3%
- Receptionist 1%
- Pharmacist 3%
- Other 4%
- Health Records 1%
- GP 6%
- Other 4%

Over 20,000 active users
High percentage of the intended user base actively using NIECR

<table>
<thead>
<tr>
<th>Category</th>
<th>Remaining HSC Workforce (WTE)</th>
<th>ECR Active Users</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admin &amp; Clerical</td>
<td></td>
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<tr>
<td>Nursing &amp; Midwifery</td>
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<tr>
<td>Social Services (excluding Home Helps)</td>
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<tr>
<td>Professional &amp; Technical</td>
<td></td>
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<tr>
<td>Medical &amp; Dental</td>
<td></td>
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<tr>
<td>GPs</td>
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</tbody>
</table>

- **32%**
- **42%**
- **11%**
- **45%**
- **120%** *
- **109%** *

* Denotes higher number than WTE due to locum coverage

**NIECR Usage**
NIECR Usage

Logins on a quarterly basis continue to grow with over 745,821 successful logins in March 2018
NIECR Programme Roadmap 2017-2018

Integrations
- Generic Interface
- Diabetic Retinopathy
- LCID Documents
- PARIS Documents
- BOIS
- Soscare (CP & LAC)
- ED Discharge Letters
- JAC
- GE PACS Viewer
- Mental Health & CAMHS
- Radiology Urgent Alerts
- ROI Referrals
- PARIS Enhancements

Projects
- Immediate Discharge Summary
- Medicines Reconciliation
- Problem List
- eTriage
- RM&MRS
- Diabetes Pathway
- Radiology Orders – RVH
- Community Dentist, Optometrist & Pharmacy Access

Primary Care & EDT
- ECS Extended Extract - Merlok
- Key Information Summary (KIS) – Merlok & Vision
- Electronic Document Transfer (EDT)
- Diabetes
- ECM Documents
- ED Discharge Letters
- LCID Documents
- PARIS Documents
- Patient Centre

Platform
- Clinical Data Repository Upgrade
- Orion Healthcare Platform (HCP) Upgrade
- Performance Enhancements – Results Return
- Ongoing BAU Support, Implementation & Interface Maintenance

Northern Ireland Electronic Care Record
Information for better care
eTriage – Electronic Referrals Management

- Electronic receipt and triage of Primary to Secondary Care referrals
- Developed in conjunction with Clinical staff
- Live in Northern Ireland since December 2015
- Award Winning Solution – Building better Healthcare award for Best Administration, Information or Data System.

Benefits:
- Fully Paperless process
- Registration automatically completed on Patient Administration System
- Triaging in the context of the full Patient record
- Fully auditable, no loss of paper!
Radiology Order Comms

- Enables Radiology requests to be placed from within the patient context and provides a view of orders placed against the patient record.

**Benefits:**
- Enabled a regional approach to Radiology Ordering across three Radiology Information Systems (RIS)
- Standardised approach to data collection
- Reduction in unnecessary duplicated tests
- Status updates from RIS enables greater ability to track orders.
Regional Mortality & Morbidity System

Single pathway for recording patient deaths in NI
Provides functionality for reviewing and learning from patient deaths
Live in Northern Ireland since 2016

Benefits:

- Increased and improved scrutiny of all hospital deaths in Northern Ireland.
- Standardisation of process for doctors in relation to Death Certification
- Greater assurance that deaths in hospital are appropriately scrutinised and referred to appropriate bodies e.g. Coroner.
Results Sign Off

Ability to review and sign off Laboratory & Radiology reports within NIECR, removing the need for paper reports to be issued and filed.

Benefits:
• Reduced clinical risk associated with unacknowledged results
• Reduced variation in processes for clinical staff, especially Junior Doctors
• Increased quality and safety
• Reduction in printing, paper and admin resources that are currently needed.
Diabetes pathway

Creation of a single, region wide pathway for Adult and Paediatric diabetes patients, enabling multi-disciplinary, collaborative recording of clinical encounters and treatments

Benefits:
• Single record for patient diabetes treatment, regardless of where they are being treated.
• Data can be used across other pathways and functions in NIECR
• Cost savings with the shutdown of 10 legacy systems.
• Standardised processes across the region
Other Data Integrations

- Adult & Paediatric Diabetes Historic Letters
- Mental Health Episodes, Encounters and Letters
- Community Services Encounters and Episodes such as District Nursing and Physiotherapy
- Social Care Encounters including Children at Risk Register and Looked After Children
- Maternity Information for both the mother and baby records
- Regional Oncology & Haematology Information System
Key Information Summary

Ability to share care plans for patients with long term conditions and provide key information about their treatment and wishes in the later stages of life.

Benefits:

• Improved communication between Primary and Secondary Care regarding patient treatment and choices
• Improved patient safety through the standard collection and sharing of key information in NIECR
• Improved continuity of care for patients with long term conditions
Medicines Reconciliation

Provide a single, standard interface to support medicines optimisation processes throughout HSCNI allowing curation of medicines on admission and discharge and integration with the discharge template.

**Benefits:**

- Reduced risk associated with transcription of medications
- More complete view of medications to enable more appropriate prescribing and safer transfer between secondary and primary care
- Reduced clinical and administration overhead freeing time to support clinical areas e.g. wards EDs and 7-day working.
Electronic Document Transfer (EDT)

Ability to transfer electronic documents quickly, securely and reliably from Secondary to Primary care, automatically attach them to the patient record in General Practice, improving workflow and clinical decision making and reducing errors and administrative time.

• One HSC Trust no longer printing and posting letters to primary care.
• Highly commended - Building Better Healthcare Award

“This is fantastic – documents are received within 3 hours with a number of clinic letters received on date that patient is seen.”

“It makes things so much easier.”

“It is great not having to send the letters in internal mail”
## Benefits

<table>
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<th>Hospital</th>
<th>GP Practice</th>
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<tbody>
<tr>
<td>Faster Communications</td>
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<tr>
<td>Reduction in transport costs</td>
<td>Reduction in letter handling costs</td>
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<tr>
<td>Efficient, auditable transfer of documents</td>
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<td>Reduction in printing</td>
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<td>Reassurance that documents are reaching the correct practice</td>
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NIECR

What we plan to deliver in the upcoming year
NIECR Roadmap

TURN LEFT
### Integrations
- Generic Interface
- eMed Renal
- Symphony
- Optomize
- Symphony
- ICU (ICIP)
- RISOH
- Anaesthetic Record Keeping
- Maternity – Viewpoint & Badgernet
- PAS / OP enhancements
- PACS Viewer RVH
- Blood Bank
- Blood Transfusion
- Cardiology (PRISM & MUSE)
- Community Equipment
- Anticoagulation

### Projects
- Immediate Discharge Summary
- Medicines Reconciliation
- eTriage
  - Internal referrals
  - Advice Response
  - Community Referrals
- Radiology Orders – RVH & BCH
- Independent Sector Access (WLI)
- Community Providers Access
- Pathways & Forms
  - Respiratory; Paediatric Healthcare Plan; Oxygen prescription; Fracture Liaison/Osteoporosis pathways
  - Adult Congenital Heart Disease; neuro Surgery; Spinal; Vascular form; Dermatology Forms

### Primary Care & EDT
- ECS Extended Extract – Vision & EMIS
- Key Information Summary (KIS) – EMIS
- Electronic Document Transfer (EDT)
  - CAPPs
  - eTriage
  - RISOH
  - Dermatology
  - Optometry
  - Diabetic Retinopathy

### Platform
- NIECR portal upgrade
- Rhapsody restructure
- Oracle Upgrade
- Windows server Upgrade
- Others TBC
- Ongoing maintenance and support

### NIECR Programme Roadmap 2018-2019
Immediate Discharge Letter

Provide a single, regionally standardised Immediate discharge letter that is automatically populated from NIECR, and that can be electronically sent to the GP on discharge.

Benefits:

- Significant reduction in the time taken to produce the letter, improving workflow and reducing discharge delays
- Reduced safety risk associated with transcribing information
- Time savings by reusing information already contained in NIECR such as coded problems, results, medicines, episode details and patient demographics.
- A clear, standardised, GAIN compliant letter electronically sent to Primary Care as soon as the patient is discharged
Cross Border Radiotherapy Referrals

Provide a mechanism for referring Republic of Ireland (ROI) patients for Radiotherapy treatment in Northern Ireland. Sharing of information regarding patients who attend for treatment on both sides of the border.

Benefits:
• Increased collaboration between Republic of Ireland and Northern Ireland
• Electronic transmission of referrals with full auditability
• Real-time sharing of clinical information such as laboratory results or treatment outcomes
• Framework for additional collaborative healthcare projects
Additional Data Integrations

• Generic Interface:
  • eMed Renal
  • Symphony
  • Optomize
  • Community systems

• Theatres & Endoscopy Information

• Anti-Coagulation Information

• Anaesthetic Information

• Enhanced Cardiology Information
“Best computer system for patient care. I have been working as a junior/middle tier doctor for seven years and never have I come across a system as useful and efficacious as this. (Inter)national roll out is the only logical next step !! Thanks for the tremendous advantage the ECR lends me in my day to day practice.”

Urology SpR
Feedback

• I am officially impressed, and I rarely am with anything IT related. Try and reduce the consent requirements please.

• This system is excellent. It will be absolutely invaluable, and all NI patients will benefit from its implementation. A big well done to all involved.

• The ECR is a hugely positive development. It enables us to see important consultant letters much earlier than they arrive by post, to see the results of investigations done in hospital which we would often be entirely unaware of, and it allows us to follow up inpatients. GP
What single unheralded change has made the most difference in your field in your lifetime?

“The Electronic Care Record: there's no need to worry about letters not in the chart, and most of our hospital specialities now use this, so it saves a lot of time and effort. DNA testing is second.”

Prof Patrick Morrison
Clinical geneticist BCH
Next Steps

• Transition from Programme to BAU
• Clinical Portal upgrade
• Collaborative worklists
• Pathways?
• Patient portal
The vision of the eHealth strategy is to:

‘empower people to be more active in their own care and support health and social care staff in delivering the best possible health and wellbeing for everyone’

Benefits:
• Improved Patient Engagement
• Improved Communication and Patient Satisfaction
• Improved Data Quality
• Reduction in non attendance at appointments
Patient Portal

Next Steps:
• Pathfinder Project – Dementia
• 100 patients/carers using the portal by August 2018
• Evaluation for wider implementation

Key Features:
• Patient / Clinician Communication
• Appointment Information
• Laboratory Results
• Clinical Documents
• Condition specific advice and support
• Goals and Targets
Patient Portal

Phase 1
- Appointments
- Health Library
- Shared Files
- Circle of Care

August 2018

Phase 2
- Goals
- Document Services

April 2019

Phase 3
- Medications
- Laboratory Results

August 2019
KEEP CALM
IT'S COMING HOME
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