eHealth Ireland & Northern Ireland Connected Health Ecosystem
members of the ECHAlliance International Ecosystem Network

ePharmacy & Medicines Optimization

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Smarter Medicines Better Outcomes
E-Health and Medicines Optimisation

Professor Mike Scott
Director  Medicines Optimisation Innovation Centre (MOIC)
Antrim Area Hospital
2ND Joint Ecosystem Meeting
Dublin
12 January 2018
THE CHALLENGE – SUB-OPTIMAL OUTCOMES FROM MEDICINES

- 3-6% of hospital admissions due to adverse effects, rising up to 30% in the elderly
- 1 in 15 hospital admissions are medicine related with two thirds being preventable
- 1 in 20 of GP prescriptions contain an error
- 30-50% non-adherence to prescribed medication
- 2.5 million doses are administered in the average acute hospital (215,000 errors)
- In the UK (2007) it is estimated that such errors cost £770m
Medicines Optimisation

• Defined by NICE as ‘a person centred approach to safe and effective medicines use to ensure the best possible outcomes from their medicines’
WHAT IS MEDICINES OPTIMISATION?

- Right patient
- Right dose
- Right outcome
- Right cost

- Right drug
- Right route
- Right time
Personalised medicine:
“referring to a medical model using characterisation of individuals phenotypes and genotypes (eg molecular profiling, medical imaging, lifestyle data) for tailoring the right therapeutic strategy for the right person and at the right time and/or to determine the predisposition to disease and/or to deliver timely and targeted prevention”
MEDICINES OPTIMISATION QUALITY FRAMEWORK (MOQF) (EAPM) from here to 2025-interfacing with policy
Key Measures e.g.

• Reduced ED attendances
• Reduced re admission rates
• Reduced Length of stay
• Improved medicines appropriateness
• Improved adherence
• Positive beliefs
WHO Global Challenge - Medication Without Harm

- To decrease medication related harm by 50% by 2023
- Medication safety at transitions of care
- Medication safety in high risk situations
- Medication safety in polypharmacy
- Monitoring and evaluation
E-Health Technology

• Storing, managing and transmission of data - electronic health records, Picture archiving and communication systems

• Clinical decision support -- Computer physician order entry (CPOE), e- prescribing computerised decision support systems (CDSS)

• Facilitating care from a distance - tele monitoring, tele health
Better healthcare, more efficient health systems and a healthier population depend on a more effective capture, curation and use of data—on individual patients’ health status, disease incidence, and costs of care.

- BIG DATA
Data Analytics

- Outcome based clinician driven procurement
- Health economics - societal perspective
- Risk stratification for service prioritisation
- Predictive analytics
Enabling Technology

- Safe therapeutic economic pharmaceutical selection (STEPSelect)
- Electronic pharmacist intervention clinical system (EPICS)
- Medicines reconciliation and analytics software (Writemed)
- Antimicrobial surveillance system (LAMPS)
Medicines Optimisation
Small Business Research Initiative (SBRI)

1. How can technology help people to take their medicines on time and as prescribed?
2. How can technology help improve medicines use for service users and service providers in domiciliary care?
3. How can technology help optimise the use of pharmacy staff in hospitals by matching skills to patient acuity in real time?

MEDICINES OPTIMISATION

HOME

FAST
Northern Ireland- enablers

• Northern Ireland Electronic Care Record (NIECR)

• General practice information platform (GPIP)

• ENCOMPASS    Electronic Healthcare Record
European Connected Health Alliance

The Global Connector in Healthcare
We bring people, organisations, needs and solutions together

Medicines Optimization inter-ecosystem group

www.echalliance.com /
info@echalliance.com
Medicines Optimisation Working Group

The group is a reference point to support current work and potential future ventures for the ecosystem network.

The group will act as a forum to test out thinking, share best practice and advice on developments.
Presentations to date

• Hospital Pharmacy in “Korgialenio-Benakio” Red Cross General Hospital  Athens – Dimitra Gennimata

• Supporting Medicines Optimisation through Information technology  - Keith Farrar
Presentations to date

• Medicines Optimisation Through Precision- Professor Munir Pirmohammed

• Connected Health –Value Driven Patient Engagement-Neil Williams  Medicom
Collaborations

- Pharmacist–led medicines optimisation clinics to reduce re admissions to hospital for patients at risk - TCD QUB MOIC Our Lady of Lourdes Drogheda

- Exploring medicines related harm Tallaght /MOIC

- Adverse drug reactions in middle aged adults contributing to hospitalisation-Tallaght, Naas, Aarhus, Uppsala, MOIC
• [https://vimeo.com/208352052/83ceaba05c](https://vimeo.com/208352052/83ceaba05c)

• Video
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