



National Quality Assurance & Improvement System



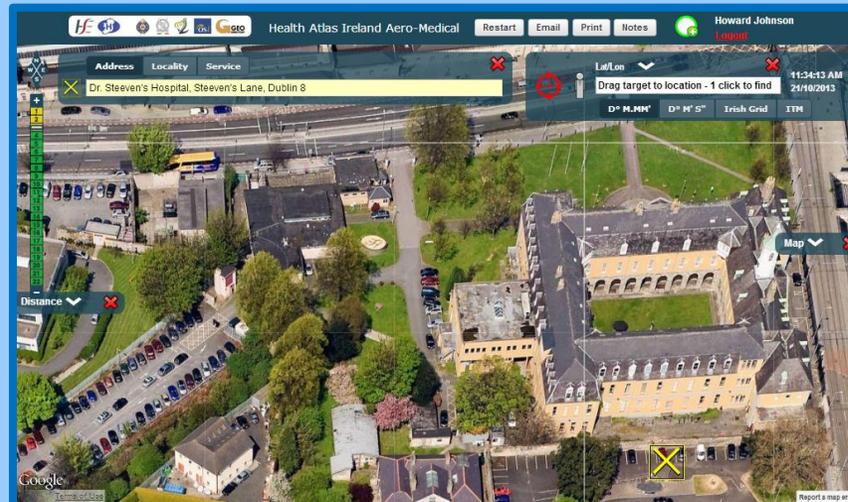
Improvement System



NQAIS Clinical



H Johnson Clinical Lead Health Intelligence, H&W, HSE





Introduction



Challenge

Average length of stay (AvLOS) is longer than ideal – although great strides have been made in recent years.

Hospitals need to **PIN POINT** areas of practice where there is potential to further shorten LOS and to carry out more same-day work.

- While ensuring safe care.

And provide care to **OTHER** patients.

- On waiting lists, awaiting admission from ED etc.



Solution

NQAIS – exploits potential of available data for QA & QI purposes.

NQAIS story began 8 years ago – Histopathology, Endoscopy, Radiology

NQAIS Clinical combines science & art to provide visibility on **VARIATIONS** in patterns of clinical practice.



Background



NQAIS Clinical – merging of NQAIS Surgery (4 y) & NQAIS Medicine (3 y).

Spans **ENTIRE** hospital and all Clinical Programmes.
– Excluding ED, OPD, waiting lists.



Partnership – Health Intelligence H&W HSE, Clinical Programmes (Medicine & Surgery), JAD and OpenApp – on behalf of Acute Hospitals Division HSE.

Exploits the potential of HIPE/HPO data (hospital, LOS, Dx, Proc, specialty) in a novel way. Display data 2 mths retro (completeness).

Web-enabled feedback on comparative AvLOS & re-admission patterns.
– National v hospital/group, clinical programme, specialty or team.

Open source security & technical infrastructure - Health Atlas Ireland.

Access – training, signed agreement, Username +Pword.

HSE “owns” the system - can be evolved as appropriate.





Behind the scenes



Hospital bed – limited and expensive resource – use for greatest no. patients.

Delays at **ANY** or **MANY** points in the journey mean more bed days used than needed.



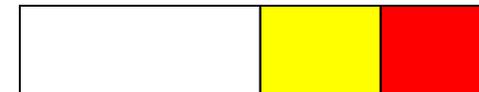
Massive impact on waiting lists and ED admissions.

NQAIS Clinical examines bed use for **SAME** diagnosis or surgical procedure by “stream”, correcting for age (like compared with like), using Irish data.

Bed use is compared to **NATIONAL TARGETS** (AvLOS top 25% of clinical teams) and **OFF TARGETS** (AvLOS >50% of clinical teams).

Trim point (prolonged stay) calculated as 75%ile LOS + 3 times inter-quartile range (proxy - medically fit for discharge or delayed discharge).

Simple indicative metric - “**Beds per day**”.



White days

within target.

Yellow days

close to target.

Red days

off target (potentially available for other patients).



What it looks like



The dashboard includes the following elements:

- Navigation Bar:** Atlas Home, Restart, Notes, Howard Johnson, NQAIS Clinical home, Log out.
- Filters:** Programme, Hospital, Period, Diagnosis, Procedure, Specialty, Age, Display, Bookmark.
- Summary Page:** Summary, Flow #, Grid, Plots, Report, Data.
- Visualizations:**
 - Line graphs for 'Number of discharges' and 'AvLOS' over time.
 - Heat grid for 'Total' and various clinical categories (Cardiovascular, Respiratory, etc.).
 - Summary table for 'Total' and 'Cancer' with columns for counts and ratios.
 - Plots for 'Length of stay', 'Age', 'Admission day', 'Discharge day', 'Discharge date', and 'Discharge time'.
 - Navigation icons for 'AMAU only', 'AMAU in-house', 'Emerg non-AMAU', 'Elective stay', and 'AMP all'.
- Record List:** A table showing patient details such as name, age, gender, and various clinical codes.

NQAIS
 Complex story
 Simply told
 Clinically focused
 Easily understood
 Signals at a glance

- Buttons – gold, silver, bronze
- Clinical Programme
- Period of interest
- Hospital/s
- Diagnosis (some or all)
- Procedure (some or all)
- Specialty, Team
- Age group
- Display – admission streams
- Bookmark
- Summary page
- Flow table
- Heat grid
- Plots - diamond, trend, explorer
- Record list
- Cross tabs
- Reports (pre-generated)
- Excel, PDF, Image



Implementation – the hard bit



Deployed under governance of Joint NQAIS (Surgery & Medicine) Steering Group on behalf of the Acute Hospitals Division HSE.

Can fulfil CPD (doctors) & CEUs (nurses) requirements.

Can enable clinical audit and research.



BUT moving AvLOS **hugely challenging** task.

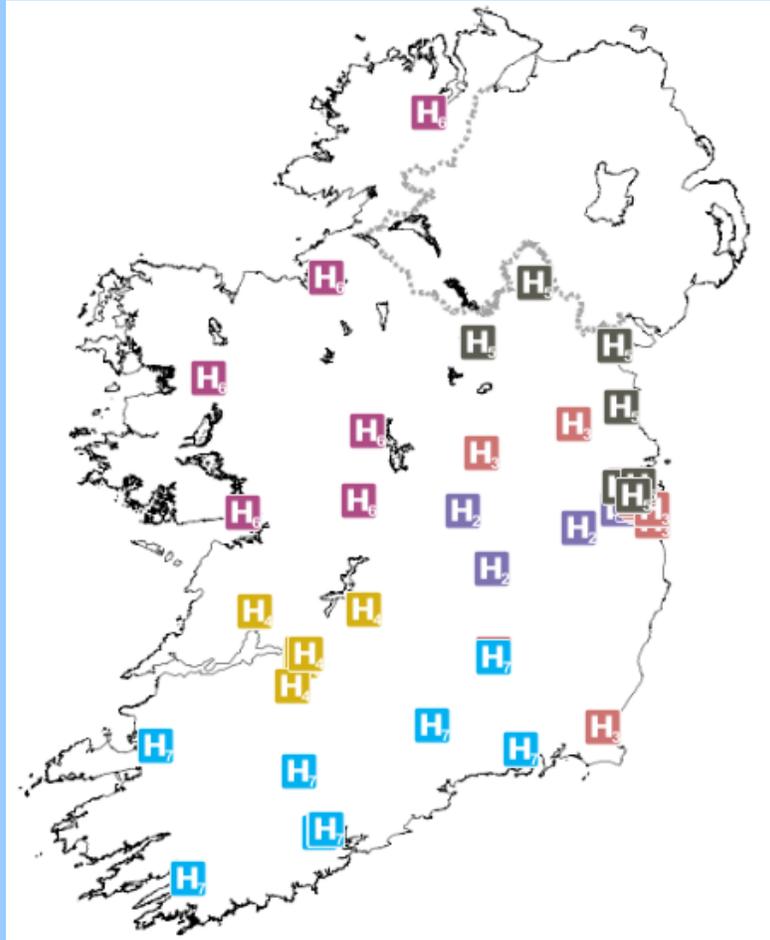
- Involves re-engineering within complex hospital systems.
- Implications for waiting lists/ED admissions are seismic.

Requires “top” leadership & camaraderie - clinical teams, management & educational bodies so the approach becomes “second nature”.

Implementation Team – share learning – what works/doesn't work and why.



NQAIS Clinical – in practice



Thank you

NQAIS Clinical is a very flexible analytical tool so its potential is infinite.
– Limited by your imagination.

The “colours” and numbers provide (Irish) peer comparison.

Enables teams to build upon local experience and expertise.

Primary focus on capacity to use beds rather than bed capacity.

Pick “patterns of interest” carefully.

Essence - make every (half) day count.



Watch the trend lines for impact.