

# Labs on Demand: Please, may I have more?

Brendan O'Reilly  
Laboratory Manager  
Cork University Hospital  
LabCon 2017

What this is not...

What this is intended to be...

The term “Demand Management”...

...Optimum Test Utilisation

*“Laboratory tests should not be ordered without a plan for using the information gained – what will be done with a result that is abnormal, high, low?”*

Dr. George Lundberg

# 10 Principles of Laboratory Modernisation

- Principle 4: Manage demand in primary and secondary care
  - Develop clinical screening programmes with approved investigation strategies (CHD, Diabetes, Thyroid, Prostate)
  - Common investigation protocols, standardised test codes and test selection menus, national lab e-handbook
- Principle 5: IT connectivity
  - Unique patient identifier
  - Electronic ordering and reporting
  - Interlab connectivity
  - Clinical-lab connectivity and GP connectivity

# Widely held truths and perceptions

- Up to 10% annual increase in testing, reduction in budgets
- As many as 25% inappropriate test requests (Carter), wide variety of reported metrics on this
- Laboratories – easy to capture inputs and outputs, so easier to target for savings

# Encouraging Quality Pathology Ordering in Australia's Public Hospitals 2012

Technology – faster TAT, multiple tests on one specimen

New tests – more from which to choose

Testing extended from diagnosis to monitoring, screening, prevention

Changes in clinical practice

Over-reliance on tests to eliminate uncertainty

Patient power

Ageing population

Teaching of Pathology to undergraduate medical students

Absence of price signals at test ordering

Medico-legal reasons

Lack of knowledge re sensitivity, specificity, PPV, NPV

Junior medical staff fear senior colleagues

Research, habit, curiosity

...reasons for increased testing



## Other reasons...

- Lab
  - Wrong blood taken
  - Poor TAT
  - Failure to review test repertoire
  - Impression testing is easy!
- Service User
  - Not following guidelines
  - Protocol-based testing
  - Peer pressure
  - Unaware of retest intervals
  - Non-medical requesting
- Systemic
  - Lack of Unique PID – unable to access previous results

Why are we surprised!!?

# Inappropriate test requests

- Wrong patient – PSA in females
- Wrong test – FVL in patients with normal activated protein C
- Wrong time – repeat HbA1c within two weeks of another in a stable patient, repeat haemochromatosis test
- Wrong process – potassium or calcium on an EDTA specimen

# Toolkit for DM

- Determining what is a clinically useful request
  - Agree criteria with user, evidence-based
  - Agree common protocols and periodically review literature for updated evidence; benchmarking between laboratories and service users
  - Strategy for reviewing workload figures
  - Audit inappropriate testing
- Demand Management Tools
  - Review repertoire frequently in context of population served
  - Review top 20 tests by cost to see if they would benefit from clinical vetting
  - Use IT to alter requests – reflex and reflective testing

# Toolkit for DM

- Duplicate tests and retest intervals
  - IT to identify inappropriate repeat requests; GAIN, ACB, Irish guidelines
- Education – preventing unnecessary venepuncture
  - Links with users – establish suitable forum for education
  - Establish local guidance based on national guidance; evidence-based
  - Training programmes for correct sample, timing, transport, etc
- Request forms and test profiles
  - Standardised profiles based on national benchmarking data
  - Symptom-specific profiles rather than organ-specific profiles
  - Review automated interpretative comments; EQA

# Toolkit for DM

- Financial and metric incentives
  - Feedback cost, volume, inappropriate requests, relative performance
  - Align DM with national financial programmes – GP contract, commissioning
- Senior/Specialty restrictions
  - Determine if specialty tests should be available only to senior requestors or specialist staff
- Guidance and Protocol
  - Systematic review of effectiveness of DM education, repeat as necessary to account for staff turnover
  - Communicate locally agreed protocols widely

# Toolkit for DM

- Sample process improvements
  - Electronic systems – advice on draw order, choice of bottle, conveyance
  - Electronic systems to indicate retest intervals
  - Electronic systems as tool for education
  - Engage users when designing algorithms for these
- Impacts
  - Review clinical cost-effectiveness of DM programmes
  - Integrate patients into design of DM strategy; educate using leaflets
  - Consider wider effects – audit and research

# Cautionary note

- Miyakis Australia 2006
  - Examined 426 sets of patient results, 25 parameters
  - 68% did not contribute to patient treatment or welfare
  - 20% reduction in testing
  - Rebounded to pre-intervention levels within 6 months
  - 80 tests with no apparent clinical indication yielded results that needed action
  - *Post Grad Med J; 82:823-9*

# Irish National Pathology Guidelines

- PSA Harmonisation
- TFTs
- B12, folate
- Thrombophilia
- Blood cultures
- TORCH...



# Optimising Pathology Services

- North Devonshire Trust; Lewis 2016
  - GPs, Pathologists and Managers working together
  - Improved quality and reduced cost
    - Clean in (right test, right time)
    - Clean through (test performed according to user requirements)
    - Clean out (results given in a way that facilitates correct action)
  - Focus on what patient wants – to be better, not to be over-treated (UTI) (leading measures)
  - Less focus on lagging measures (cost of and number of tests)
  - Leg ulcer swabs generally don't contribute to patient welfare
  - Biochemistry testing – reduced activity by educating around comparative testing activity, cost of testing, syndromic profile construction

# Future of Pathology – Nuffield Trust

- National Lab Medicine Catalogue
- RCPATH – Choosing Wisely©

# Learning?

- Multiple approaches have a better success than single interventions
- I.T. / MedLIS
- Think clinical, not financial
- This needs clinical leadership (lab and service user)
- It also needs sustained effort

***Thanks!***