

# Networks Enabled through Lab2Lab in Scotland

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# Remit

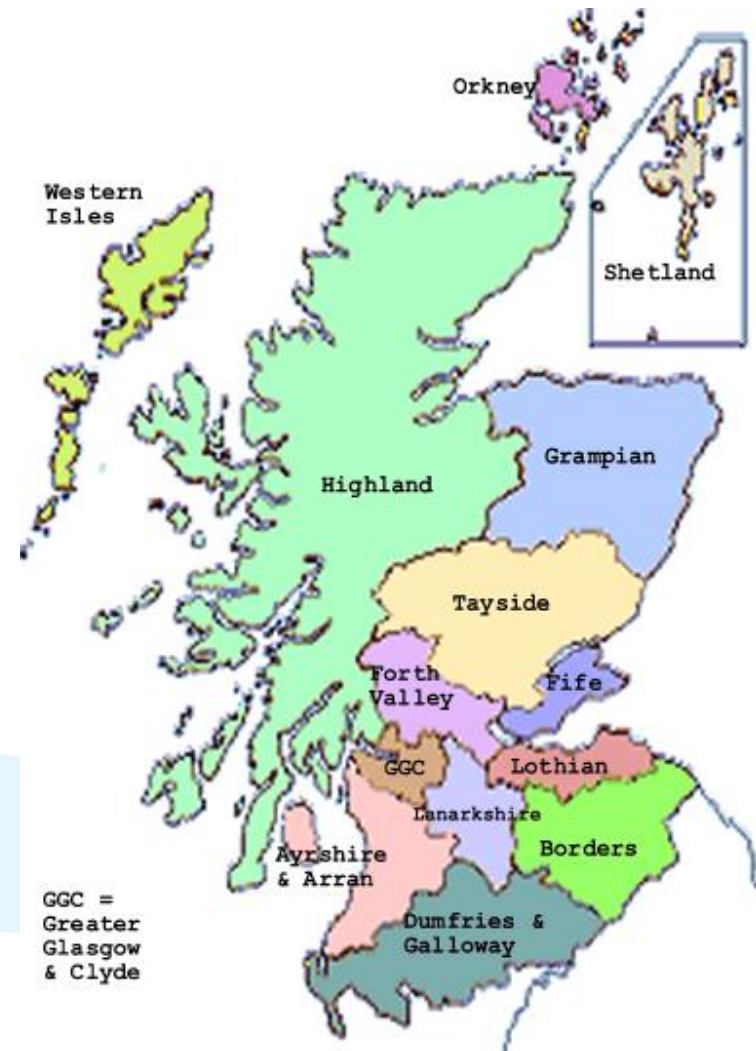
- Informatics as a key enabler to drive change
- Driving Improvement in Pathology
- Networks of Sendaways across Scotland

# Outline

- Set-up of NHS Scotland – overview
- Informatics / IT - development history
- Laboratory systems and Networks

# NHS Scotland

- **179,000 Staff**
  - **50,000 Nurses**
  - **4,800 Consultants**
  - **4,900 GPs**
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- **5.3 Million People**
  - **Budget £13 Billion**
  - **14 Health Boards**
  - **8 Other Boards**



# NHS Scotland Strategy

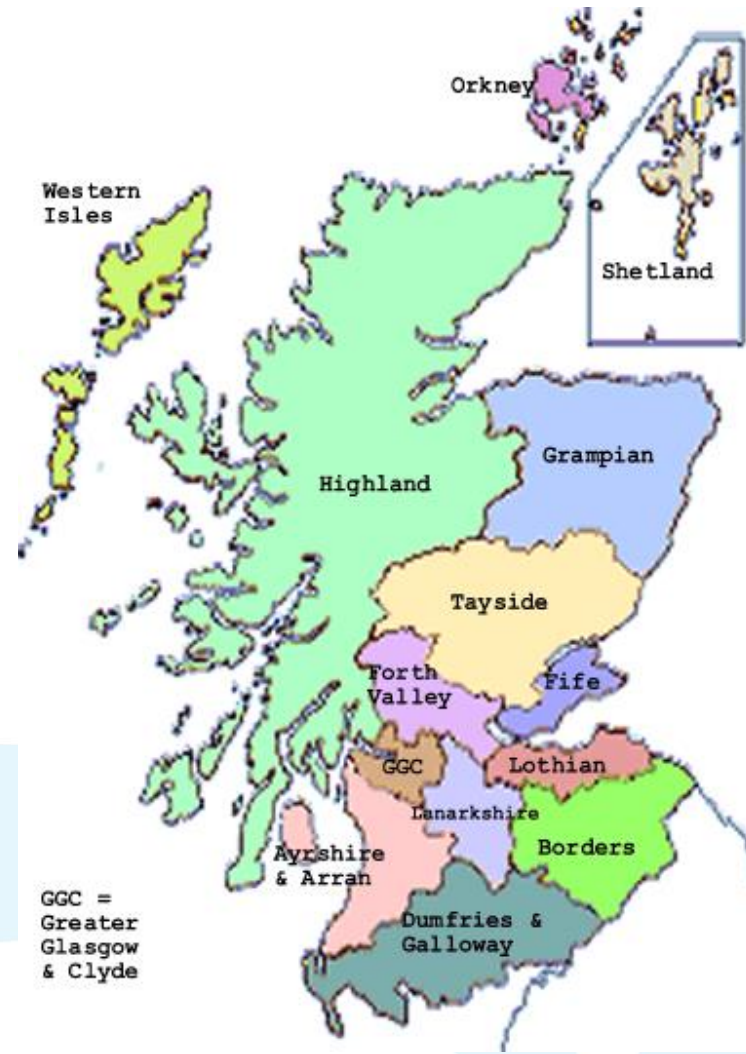
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- **Devolved Healthcare**
- **Collaborative Network not Market model**
- **Health Board Arrangement**
- **Realistic Medicine**
- **Shared Services/Networks**
- **Demand Optimisation**
  - *Appropriate Requesting*
  - *Focus on Variation*
  - *Big Data Intervention*
- **7 Day NHS – Support Emergency Care**
- **Recruitment & Retention of Staff**

# NHS Scotland – Laboratory Services

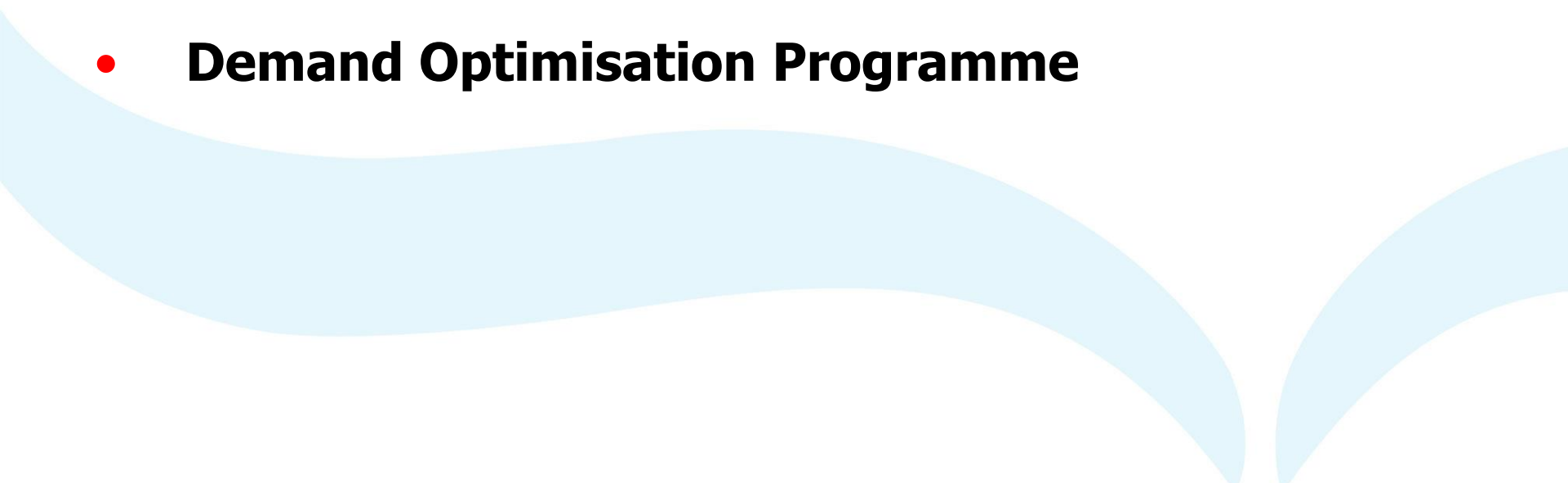
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- **14 Health Boards**
- **30 Labs**
- **2 Paediatric Labs**



# Diagnositics – Shared Services

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- **“Once for Scotland”**
  - **Not a single laboratory service**
  - **Sharing ideas, UKAS/Quality, Procurement**
  - **Specialist test consolidation**
  - **Demand Optimisation Programme**
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# History of Systems Consolidation

IT Systems were largely by individual hospital.

- Medical Records (PAS) per hospital
- Lab Systems (often by Dept)
- No Order Comms
- No link to GP systems, themselves just developing.



# Developed per Health Board

- PAS per Health Board – use NHS or CHI number. ---- unique identifier
- Single Hospital Lab System
- Potential for Order Comms
- GP systems more developed
- SCI Store – Data Repository accessible by both Primary and Secondary Care

# National Procurement

- Hospital Information System – TrakCare 2012 to be implemented across all Health Boards.
- GP systems – almost predominantly ICE
- Clinical Portal as a unified front end to view SCI Store and individual specialty systems
- Issues – Two PAS systems and Two OCS one for Primary and one for Secondary care but address different patterns of work flow and brought together in Clinical Portal.

# Lab systems still by Health Board

- |                     |             |
|---------------------|-------------|
| • Grampian Aberdeen | APEX        |
| • Lanarkshire       | TrakCare    |
| • Lothian Edinburgh | APEX (iLab) |
| • Tayside Dundee    | Masterlab   |
| • GG&C Glasgow      | Telepath    |

Range of suppliers

Overall – relatively strong Local networks but need better Network to Network connectivity and links outwith Scotland.

# Lab Results within National Network

Within Scotland joined up in terms of

- Ability to look-up patient results across the various SCI Stores
- E-mail results in batches from “Reference Lab” to requesting labs – currently getting e-mails (from GGC)

Aberdeen Royal Infirmary	- implementing NPEX
Raigmore Hospital (Inverness)	
St John’s Livingston	- ? Linked to Edinburgh NPEX
Edinburgh Royal Infirmary	- implementing NPEX
Edinburgh Sick Children	- ? Linked to Edinburgh NPEX
Ninewells Hospital (Dundee)	- pending
Forth Valley	

But requires a lot of manual transcription of results back into requesting lab

# Scope of results transfer: Referred in 1.

Within Glasgow receive requests from all Health Boards in Scotland

	Vitamin D	PTH	Immunology	Coag screen
Ayrshire & Arran HB	4622	4423	8979	413
Borders HB	1058	-		-
Dumfries & Galloway HB	10	-	7102	116
Fife HB	3111	-		-
Forth Valley HB	2523	1770	27135	187
Grampian HB	4311	-		-
Highland HB	2215	-	496	2
Lanarkshire HB	588	121	11364	163
Lothian HB	10909	-	519	-
Orkney HB	110	-		-
Shetland HB	385	-		-
Tayside HB	4009	-		-
<b>Total</b>	<b>33851</b>	<b>6314</b>	<b>55595</b>	<b>881</b>

## Scope of results transfer: Referred in 2.

### Examples of “Specialist Test Networks” in GGC HB

	TDM Tacrolimus	Trace Metals Copper	Metabolic Acyl Carnitine
Ayrshire & Arran HB	617	253	41
Borders HB	-	71	-
Dumfries & Galloway HB	594	208	11
Fife HB	-	299	24
Forth Valley HB	784	615	22
Grampian HB	-	1870	80
Highland HB	978	295	10
Lanarkshire HB	1176	588	110
Lothian HB	3	1002	166
Orkney HB	-	7	1
Shetland HB	-	21	3
Tayside HB	34	482	50
<b>Total</b>	<b>4186</b>	<b>5517</b>	<b>518</b>

# Scope of results transfer: Referred out

## Top 15 Tests referred outwith Glasgow (GGC HB) 2015/16.

Test	Number	Referred to
P111NP	2506	Manchester
6-Thioguanine	1459	Birmingham
Faecal Elastase	1183	Freeman Hospital, Newcastle
Catecholamines	1159	Crosshouse Hospital (AAHB)
5HIAA	1159	Crosshouse Hospital (AAHB)
Gut Hormone Screen	957	London, Charing Cross
Alpha 1 Antitrypsin Phenotype	487	Edinburgh – Western General
DOA -GC/MS Confirmation	467	Edinburgh / Cardiff / Birmingham
CSF ACE	270	London (Charing Cross)
Metadrenalines	213	Newcastle (Freeman Hospital)
Homocysteine	134	Edinburgh (Lothian HB)
Very Long Chain Fatty Acids	124	Bristol
Renal Calculus	72	London (University College)
Cystatin	43	London, Kings
CA15-3	37	Dundee (Tayside HB)

Totals 10,270

# Lab Discipline Networks

In terms of Lab to Lab Links in Scotland

Haematology: relatively self contained within individual labs, some Follow up tests may go to national Reference Labs especially Coagulation and Tropical Diseases

Immunology: Main labs Glasgow, Dundee and Aberdeen.

Virology: Main labs in Edinburgh and Glasgow for follow-up and confirmation work. Also links to Reference labs in UK (Colindale)

Microbiology: All TB work is centred in Edinburgh Lab but also sends Reference work to Colindale and Leeds. Often complex report formats

Pathology: Centralised in larger hospitals. Often complex report formats



# NPEX Implementation

- NPEX has been on the radar of Scottish Labs for some time but as I hope I have demonstrated, it has really taken until now for the consolidation and standardisation of the IT systems – both within hospitals and labs across Scotland to enable it to be a comprehensive joined up solution.
- The labs who are currently implementing NPEX are some of the major centres in Scotland and already have many links to Labs in the rest of the UK.  
e.g. Edinburgh and Glasgow as part of MetBio.Net – National Metabolic Biochemistry Network, (17 labs throughout the UK)
- In Glasgow the implementation schedule is  
Phase 1 : Biochemistry, Haematology, Virology and Serology.  
Phase 2 : Pathology  
Phase 3 : Microbiology, Transfusion

May well be in touch for help, advice and testing !!!

# The Future

- Each Lab discipline in Scotland has its own Managed Diagnostic Network which is attended by a representative from each Health Board Area and this structure is gaining importance. i.e. Clinical Biochemistry MDN
- This provides more direction and harmonisation in the provision of new tests, new developments, IT etc
  - so a development such as NPEx has more buy in and promise of being implemented as an overall solution rather than just individual instances per Health Board
- This ties in with the Scottish Government concept for future developments of “Once for Scotland”

# Conclusion

Hopefully I have given a brief overview of how lab services are organised in NHS Scotland and addressed and demonstrated to some degree the remit of

“Informatics helping to drive change, as demonstrated by developments in Pathology and more specifically around “Networks of Sendaways”

Thank you



# **NHS Scotland – Realistic Medicine**

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- **Ageing Population**
  - **Healthcare Demands Increasing**
  - **More Expensive Drugs/Interventions**
  - **Financial Downturn**
  - **Recruitment Issues**
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- **CMO Report – Jan 2016**
  - **The National Conversation**
  - **Priorities – Cancer Drugs/Social Care**
  - **7 Day NHS – Emergency Care Only**
  - **Taxation**

# CMO Report –Realistic Medicine

I want to engage in a conversation with clinicians on the following questions:

- How can we further reduce the burden and harm that patients experience from over-investigation and overtreatment?
- How can we reduce unwarranted variation in clinical practice to achieve optimal outcomes for patients?
- How can we ensure value for public money and prevent waste?
- How can people (as patients) and professionals combine their expertise to share clinical decisions that focus on outcomes that matter to individuals?
- How can we work to improve further the patient-doctor relationship?
- How can we better identify and manage clinical risk?
- How can all doctors release their creativity and become innovators improving outcomes for people they provide care for?