Welcome!

The Queen Elizabeth University Hospitals Teaching and Learning Centre
• NRS Conference 2016
• NRS - What have we achieved?
• Research Exemplars
NRS Conference 2016
NRS – What have we Achieved?
The Scottish Health Service

- Population 5.3M
- 14 Territorial Health Boards
- Healthcare funding £12 billion
- 38 hospitals and 1020 General Practices
- 1.5M hospital episodes; 20M Primary care visits
- Policy and funding of NHS research and ethics system lies with CSO
- Scotland manages its NHS research activity through **NHS Research Scotland**
Research Strategy

• Economic growth and NHS improvement can be driven through Research and Innovation

“Health research is one of this country’s key strengths, and it is essential that we utilise this national resource to the fullest.”

Ms Shona Robison MSP,
Cabinet Secretary for Health, Wellbeing and Sport

Delivering Innovation through Research
Scottish Government Health and Social Care Research Strategy
http://www.gov.scot/Publications/2015/10/5164
Six Guiding Principles

• Build whenever we can on the **strong academic base**
• Seek out and deliver **collaborative partnerships** with a tripartite mission of research, education and delivery of quality health care, underpinned by a significant infrastructure investment
• Exploit our ability to **link information** to support better treatment, safety and research
• De-clutter the pathway for the **regulation and governance** of health
• Deliver **collaborative arrangements** with the biotechnology, pharmaceutical, informatics and medical devices industries.
• Collaborate across the NHS family, academia and with other funders to position Scotland as a **single research site** when it makes good sense to do so
• NHS Research Scotland Support Budget - £40m
  • meets the costs to the NHS of participating in clinical research
  • Support infrastructure
  • around 190 WTE NHS posts (research nurses, data managers, radiologists etc.)
• NHS Research Scotland Fellowship Schemes
• Partnership between CSO and NHS Boards in Scotland
• Collaboration with Academic Institution Commercial companies
• Aim
  – Agree & Implement national policy
  – Deliver efficiency through pan-Scotland working

No gap between policy, funding and delivery: All round the table working to the same agenda
Regional working

- 4 Nodal hubs
  - Ethics, R&D Permissions
  - Biorepositories
  - Safe Havens

- National Support
  - SHARE
  - CMT
  - Topic Networks and SGs
  - PCC

- IT lead

North
  - NRS Permissions coordination

East
  - NRS Governance and national SOPs

South
  - NRS Contractual issues and training
THE SCOTTISH OFFERING
Our Offer

Fast, efficient & meaningful feasibility

Reduced start-up times

• Single pricing model
• Agree contracts once for Scotland - reduce contract negot

Contracting

• mCTA accepted unamended
• Single costing across Scotland
• Management
• All commercial studies are managed - no adoption process
• National oversight of recruitment across Scotland
• NRS Ethics and R&D Management services integrated

Delivery to target
Contract cycle times

NRS Partner data
Working with Industry: Key facts 2015-16

• Active research
  • 303 new project sites initiated
  • Contract value of new projects: £18,733,840
  • Actively support 1075 studies at any one time
  • Active recruiting study Portfolio value £38,036,729

• Rapid permissions – “Best in class contracting times”
  • Median: 12 days
  • Mean: 15 days

• Effective Delivery
  • Average 72% of target recruitment
  • 46% of studies achieve over 80% of target
Contract value – Total

Year end

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Number of non-commercial studies eligible/adopted studies

- Total study-sites

Year:
- 2012/2013
- 2013/2014
- 2014/2015
- 2015/2016

Studies:
- 0
- 500
- 1000
- 1500
- 2000
- 2500
- 3000
Biomedical Backbone

INFRASTRUCTURE
• Purpose built biomedical research institutes
• Integrated Clinical Research Facilities
• accredited Clinical Trials Units

Clinical Research Facilities

Biorepositories - Tissue acquisition Service

Safe Havens - Health informatics research

Project Management Quality & Facilitation

Research Imaging Platform

Delivering Research Excellence

www.nrs.org.uk  @NHSResearchScot
Biorepositories and Tissue Services

• NRS Biorepositories Network
• Streamlines access to tissue with:
  – a single point of contact
  – single application process
  – single approval process for access to tissue from across the network.
Data Safe Havens

• Trustworthy use of data for care, improvement and research
• Regional ‘Safe Havens’ provided rapid access to high quality health data for research purposes.
• All data remains under the control of the NHS
• Complies with all legislative and NHS policies
• Single sign off
UK-WIDE WORKING
Funding

- Health Departments collaborate on initiatives
- UK Research Councils

Governance

- Unified Research Ethics System
- Common Research Governance Framework
- Common costing Template
- Standard Contracts
UK-wide research

- Researchers in Scotland can be principle applicants to NETSCC programmes (*can be co-applicants to all)

<table>
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<tr>
<th>Programme</th>
<th>Commissioned stream</th>
<th>Researcher-led stream</th>
<th>Themed calls</th>
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<tbody>
<tr>
<td>EME</td>
<td>Y</td>
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<td>HS&amp;DR</td>
<td>N*</td>
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May-August 2016
25 Applications from Scotland
8 Successful
1xEME
6xHTA
1xPHR
£9.7M
400% ROI
EXEMPLARS
IMPACT OF RESEARCH
• SHARE is a Scotland-wide register of people who have agreed to the use of their electronic health records to assess study eligibility
• Includes consent for use of “spare blood”
• NRS core funded infrastructure – available now to help identify recruits for studies
• Over 128,935 people have signed up
We have 100,000 !!!

Lorraine Kelly  SHARE registrant 100,000
Safer Prescribing — A Trial of Education, Informatics, and Financial Incentives

Tobias Dreischulte, Ph.D., Peter Donnan, Ph.D., Aileen Grant, Ph.D., Adrian Hapca, Ph.D., Colin McCowan, Ph.D., and Bruce Guthrie, M.B., R Chir, Ph.D.

- 34 Practices, 33,334 patients
- Cluster-randomized, stepped-wedge trial
- Complex intervention combining professional education, informatics, and financial incentive
- Nine measures of high-risk prescribing of NSAIDs or selected antiplatelet agents
- Hospital admissions
  - Gastrointestinal 55.7 to 37.0 admissions per 10,000 person-years; rate ratio, 0.66; 95% CI, 0.51 to 0.86; P = 0.002),
  - heart failure (from 707.7 to 513.5 admissions per 10,000 person-years; rate ratio, 0.73; 95% CI, 0.56 to 0.95; P = 0.02
Glasgow Oxygen Level Dependent Techniques
GOLD Project - Celestine Santosh

- Oxygen carrier and proprietary software for use with MRI in Acute Ischaemic Stroke
- Wellcome Trust Oxycyte – further technology development Sept 2015 £1.86M
- TriCapital and SE £1.07M
- Aurum Biosciences Nov 2015

Int J Stroke 2014
Evaluation of new Technologies using Data Linkage

THE LANCET

90-95% Specific and Sensitive for Coronary Heart Disease

Male, 55 years, Calcium Agatston Score 1,400

Williams et al. Heart 2011;97:1198-1205
Scottish COmputed Tomography of the HEART (SCOT-HEART) Trial

**Trial Centres** 4,146 patients (47% all eligible)

- Royal Alexandra Hospital, Paisley
- Western Infirmary, Glasgow
- Glasgow Royal Infirmary, Glasgow
- University Hospital, Ayr
- Borders General Hospital, Melrose
- St John’s Hospital, Livingston
- Western General Hospital, Edinburgh
- Royal Infirmary, Edinburgh
- Forth Valley Hospital, Larbert
- Royal Infirmary, Ednburgh
- Victoria Hospital, Kirkcaldy
- Ninewells, Dundee
- Perth Royal Infirmary, Perth

**Complete Health Record Data Capture**

**One National Healthcare Provider**

**12 Centers Across Scotland**
CTCA and Clinical Outcome
1.7 Years of Follow-up

CHD Death and Non-Fatal MI

HR 0.62 [0.38-1.01]  
P=0.053

CHD Death, Non-Fatal MI  
and Non-fatal Stroke

HR 0.64 [0.41-1.01]  
P=0.056

Changes Diagnosis 1 in 4
Changes Management 1 in 4

Proportion of patients with an event (%)

Follow Up (years)
Using informatics to support quality improvement

C Difficile Outbreak

- Cephalosporins
- Ciprofloxacin
- Co-amoxiclav
- Clindamycin
Impact of advice

Implementation to reduce the proportion (%) of Care Home residents exposed to 4C antibiotics

Scotland 4C advice
In conclusion
Three years from now we want to be

- setting the pace for strategic activities
- at the hub of an international network;
- a safe haven for unique data assets;
- delivering deeply integrated “team science” and innovation in pursuit of bold goals;
- with recognition as a world centre for outstanding health research, innovation and transforming lives, locally and globally.
"Medical science has proven time and again that when the resources are provided, great progress in the treatment, cure, and prevention of disease can occur."