



Science and Health Improvement

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Royal Devon and Exeter NHS Foundation Trust

- RD&E Background
- What the NHS needs from science
- Examples from the RD&E of how science has helped
- Support for science
- Practical tips
- Opportunities

We provide acute and community healthcare services to around **half a million people** and specialist services to over **750,000 people** across Devon and beyond

- Standalone Teaching Hospital
- Integrated Health Provider
- Academic Centre
- We spend £500m per year
- We employ 8000 staff



Is medicine a science or an art?

The reality is all great medical advances have come from science

- Understanding the cause(s) of disease
- Improving diagnosis, improving treatment and improving approaches to organisation of care

Impact of present pressures on NHS

- Even more important that diagnosis, treatment and care organisation are improved.
- No spare money; need cost effective innovations

Evidence that patients have better outcomes through research participation

Also improvements for Trust : finance, reputation, staff recruitment, morale

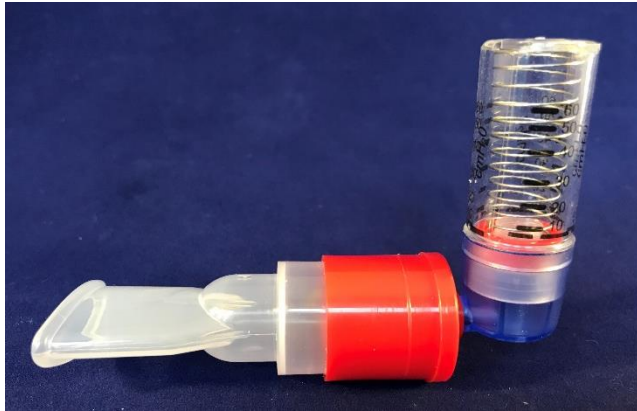
Improving treatment for patients needing hip replacement – the Exeter hip

collaboration between
Orthopaedic Surgeon Robin Ling
and University of Exeter engineer
Clive Lee - first implanted at the
RD&E Princess Elizabeth
Orthopaedic Hospital in Exeter in
1970.

Most widely and commonly
used cemented hip
replacement in the world -
over 2 million by 2017



How has science helped the RD&E?



The Valsalva Assist Device simple, single-patient device to generate the 40mmHg intrathoracic pressure for a Valsalva Manoeuvre

The RD&E led REVERT study increasing SVT cardioversion rates from 5% to 40% with a postural modification



How has science helped the RD&E?



Prevention of skin tears in at-risk population (over 65 and especially if on long-term steroids and/or warfarin or if diabetic)



How has science helped the RD&E?

Increased understanding of the causes: Genetic subtypes of diabetes



Improving diagnostic tests to help assess immune treatment in bowel disease.



Support for science

Royal Devon and Exeter **NHS**
NHS Foundation Trust



South West
Academic Health
Science Network

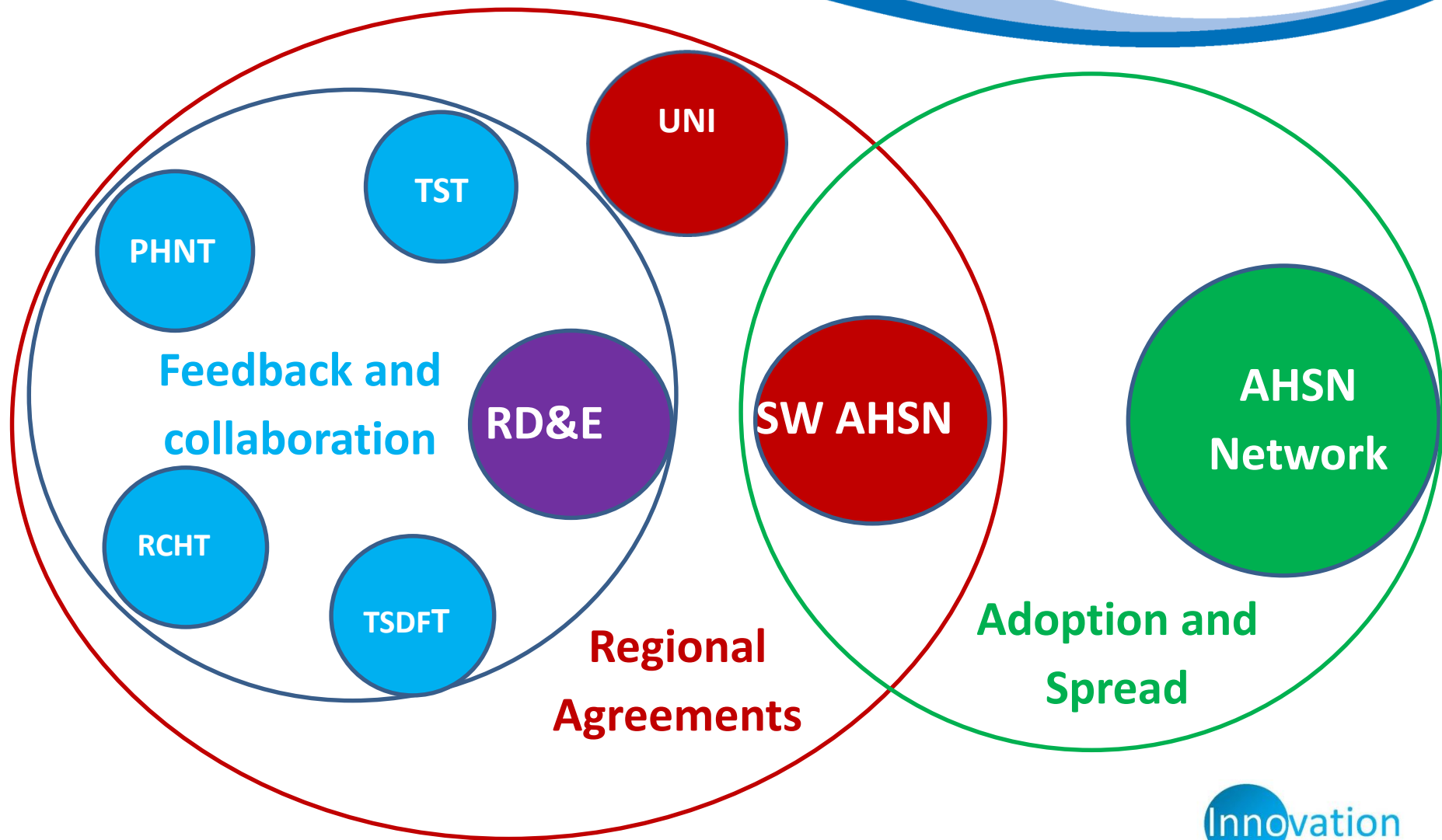


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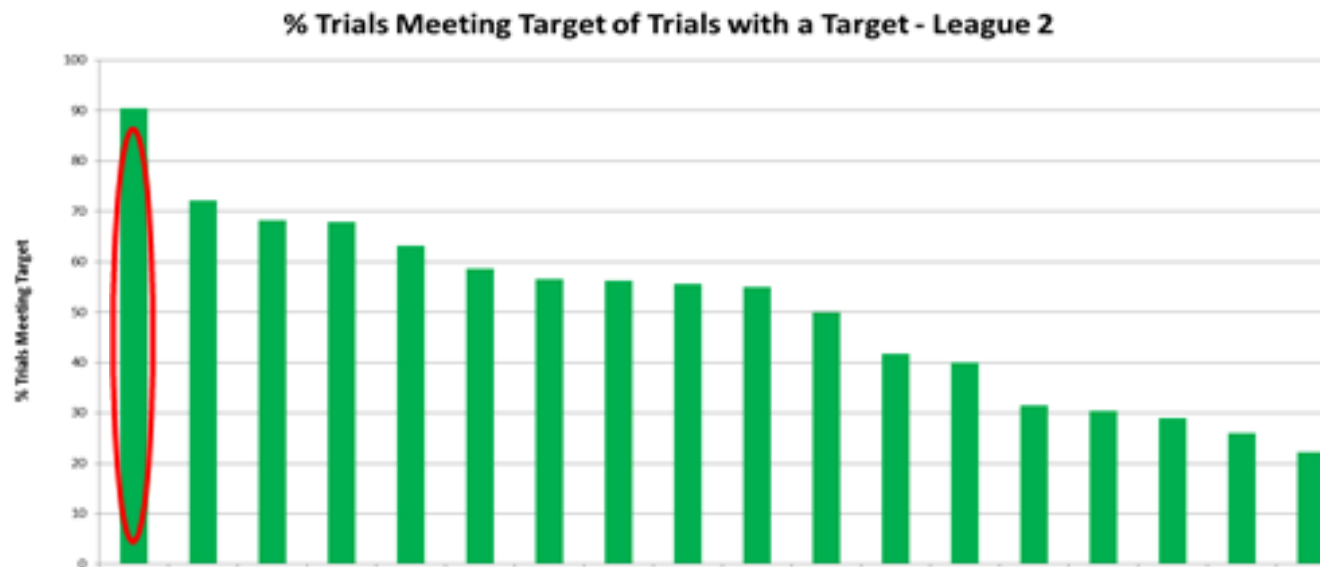
Exeter Clinical Research Facility

NHS
*National Institute for
Health Research*

Clinical Research Network
South West Peninsula



- **Top ranking for delivery of commercial trials**
- **92.6% of clinical trials reported met the 70 day benchmark, League 2)**
- **Top ranking for patient recruitment by Acute hospitals**
- **Awards from Quintiles and NIHR .**



Issues to be aware of

- Engage early
- NHS priority or need?
- Robust feasibility
- Realistic estimate of cost and time
- patient choice and safety

When does it work best?

Key strategic direction of RD&E trust to work in partnership with both the University and industry

Research and innovation are a priority for the RD&E and its future

Bio bank in place to support research...



Specialist facility in place to support research...

Exeter Clinical Research Facility





Academic Departments



- **Blood Sciences** – Tim McDonald, Honorary Associate Professor
- **Diabetes and Endocrinology** – Professor Andrew Hattersley and Bijay Vaidya, Honorary Professor
- **Emergency Department** – Andrew Appelboam, Honorary Clinical Associate Professor
- **Gastroenterology** – Tariq Ahmad, Honorary Clinical Associate Professor
- **Gastrointestinal Surgery** – Neil Smart, Honorary Clinical Associate Professor
- **Healthcare for Older People** – David Strain and Martin James, Honorary Associate Professor
- **Molecular Genetics** – Professor Sian Ellard
- **Renal** – Richard Oram and Coralie Bingham, Honorary Associate Professor
- **Trauma and Orthopaedics** – Andrew Toms, Honorary Professor

Joint Office Development (RD&E and UEMS)

Facilitate and streamline the necessary processes required to attract and progress new Clinical Research opportunities

Website: <https://rderesearch.co.uk>

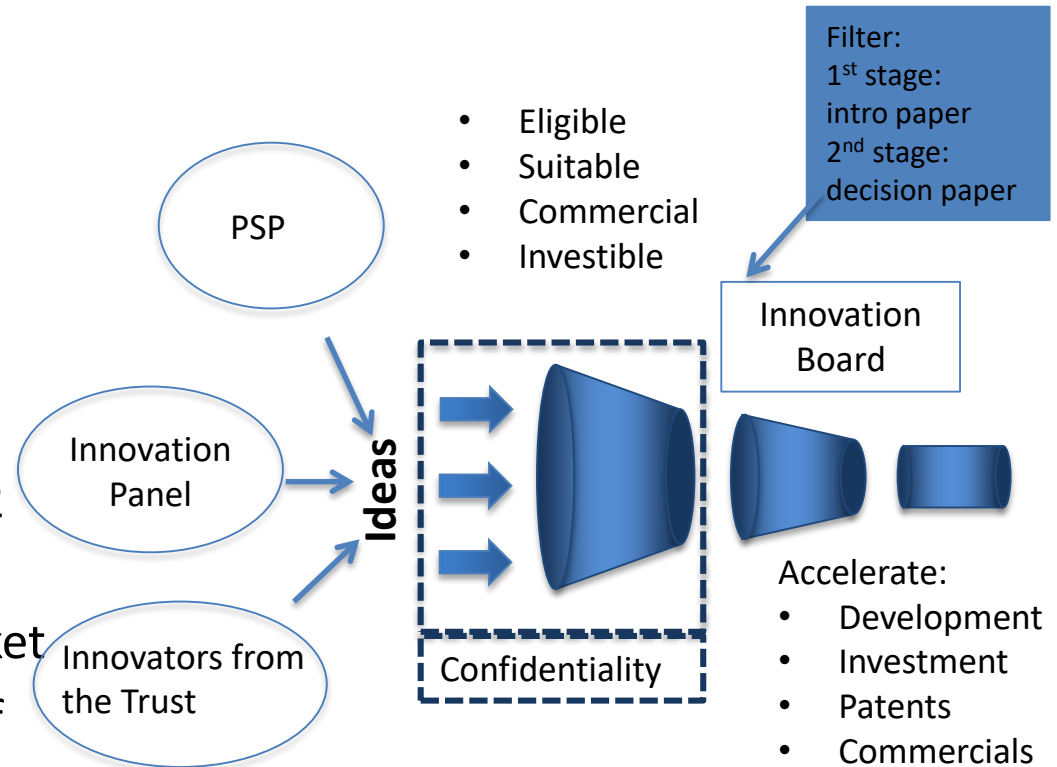
Contact: Dr Rohan Chauhan, Research Advisor

Tel: 01392 406144 or 406933

- Could and Should do more
 - Current innovation model is too narrow
 - Limitations in existing offering
- Considering development of Innovation HUB within the RDE&
 - Key contacts
 - Dave Tarbet – Business Development Director
 - Pete Ford – Innovation Lead and Consultant Anaesthetist

The HUB 'pipeline' Process

- Record the ideas under tight confidentiality agreements
- Assess opportunity:
 - Suitable
 - Commercial
 - Investible
- Present to Innovation Board (2 stage) - decision to proceed
- Invest in development to market
- Establish IP through patents (if applicable)
- Organise commercial agreements



In summary....



Questions?