Establishing Research in the Health Professions

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Challenges to developing research

- No Money
- No time
- Too busy
- Not sure How to do Research
- No Research Ideas
- Not My Job
- I'm too OLD
- No Relevance
How I started research

• Bored - asked around
• “Do something in cervical cancer”
• Started MSc, fell into PhD
• Cervical cancer led to HPV led to breast cancer led to agriculture and marine research
We all are conducting research in our professions

- Keeping up-to-date with new developments
- Introducing new systems, methods, therapies
- Reviewing and auditing patterns, epidemiology, trends

- This is part of your job [CORU]
- BUT we fail to PUBLISH most of our research
Too Busy, No Time

• Ideas can happen at lunchtime, anytime
• Read a paper at home, online
• Older staff have more experience and knowledge – might have better ideas
• Time - Take on undergraduate students to do the practical work and literature search for their theses
• Management have to buy in to research too
  – Good PR for the department/service
  – Might give you time to do the research if benefits the practice
YOU are not alone

Patients

Mentors/Colleagues

Clinicians and other Health Professionals

IT Staff/Bioinformatics Statistics

Colleagues in other centres National and International

Academics in Third Level
A team is better than a solo researcher

- Better for planning a study
- More likely to gain grants to support it
- Best – multiple partners in multiple sites
- Networking is very important
  - Help with sourcing support
  - Information on ethics
  - Finding other researchers
  - Access to other data, facilities, equipment
- Co-operative research is :WIN-WIN
Finding Ideas - New Developments

• Attend international and national meetings
• Read studies/reviews of other populations, see if you can establish the same data for your patient cohort/population
• Write a summary of new developments for your profession or give a talk on it
• Do a review on how to introduce a new method/therapy etc – challenges, costs and potential benefits
Money

• Not all research costs money
• Workplace may support the work
• Professional bodies (bursaries, grants)
• Universities and ITs
• Charities
• Commercial and pharmaceutical suppliers
• Larger grants from Health Research Board, Wellcome trust, Science Foundation Ireland, EU Framework Programme
  – 100s to millions
Types of research

• Epidemiology, trends, patterns of disease
• Introducing new methods, reagent, equipment, therapy
• Patient/Stakeholder experience, surveys
• Education in the profession
• Health and Safety, QMS
• New work practices and guidelines
1. Reviewing and auditing patterns, epidemiology, trends

- You can write and publish a review on education, diseases etc – this could cost nothing but be very publishable
- Audit of trends, numbers, workload, staffing etc.
- These are very important reports which are just collection and analysis of results and data
- BUT access to and publishing the data must be checked with your line managers and maybe clinicians
Audit and Review

• How many cases of each condition
• Trend over some years
• Demographics – ages, gender, locations
• Tests and treatments required
• Cost, implications for resource planning
• Management of tinnitus in English NHS audiology departments: an evaluation of current practice.

Maternal Factors Influencing Transfusion of Blood in Obstetrics: An Audit of Practice

• Accuracy of referrals from an orthoptic vision screening programme for preschool children

• Hu VH, Starling A, Baynham SN, Wager H, Shun-Shin GA.
• J AAPOS. 2012
• Vision therapy and computer orthoptics: evidence-based approach to use in your practice

• Lambert J. Am Orthopt J. 2013
• Bite wounds and antibiotic prescription among patients presenting to an Emergency department.

• Birdsey M, Edwards G, Abetz J, Jennings N, Mitra B.

• Int Emerg Nurs. 2015
• Nutritional habits among high-performance endurance athletes.

• Baranauskas M, et al

• Medicina 2015;
2. New Method, Reagent, Equipment, Therapy

- Cost and benefit analysis
- Comparison of new with old – write it up
- Follow-up review – one, or more years
- Review of impact on your practice of the
  new method/therapy/drug/equipment etc.
Electro-acoustic performance of the new bone vibrator Radioear B81: a comparison with the conventional Radioear B71.

2015 Int J Audiology, Jansson KJ,
• Comparison of three commercial fecal calprotectin ELISA kits for IBD.

• Mirsepasi-Lauridsen HC.
• Scand J Gastroenterol. 2016
• A comparison of conventional and in-situ audiometry on participants with varying levels of sensorineural hearing loss.

• Kiessling J. 2015 J Am Acad Audiology
• A laboratory comparison between two liquid skin barrier creams

• Woo KY, Chakravarthy D.
• Int Wound J. 2014
• Velocity measurement in Carotid Artery: Quantitative Comparison of 3D Phase-contrast MRI and Image-based Computational Fluid Dynamics

• Sarrami-Foroushani A, Nasr Esfahany M,
• Iran J Radiol. 2015
3. Surveys – Patients, Users, Stakeholders

- Patient experience of the service
- What do they present with or need?
- Turn around times, demand and staffing
- Survey – Issues, Problems and Challenges
- Report – How service altered to improve issues
Healthcare workers perceptions of Lean: a study in three Swedish hospitals

Holden RJ, Eriksson A, Andreasson J, Williamsson A, Dellve L.

Appl Ergon. 2015
4. Education and training

- Challenges and issues in professional practice
- Education and CPD audit and requirements
- Skills shortages and future requirements
- Staffing levels and workforce planning
Education Trends

• Review – last 20-50 years
• Placement – developments and changes
• CPD – requirements and new developments
• Skills mix, shortages and upskilling requirements
Current Developments in Biomedical Science Education

H Lambkin Converse [ACSLM] 2012

Career Pathways in Clinical Science and Laboratory Medicine – the Graduate Perspective.
• Professional regulation of nutritionists: where are we now?

• *Physiotherapy*. 2009. Gunn H

- Continuing Professional Development of physiotherapists based in community primary care trusts: a qualitative study investigating perceptions, experiences and outcomes.
Continuous professional competence (CPC) for emergency medical technicians in Ireland: educational needs assessment.

2013 BMC Emergency Medicine,

Knox S et al.
Compulsory continuing professional development: a questionnaire-based survey of the UK dietetic profession.

2009 J Human Nutrition Dietetics

Sturrock JB, Lennie SC.
Guidelines – National and International

- Audit current protocols
- Network with other providers for their protocols
- Draw up agreed guidelines for the profession
• Clinical practice guideline: tinnitus.

• 2014 Otolaryngology Head neck Surgery
• Tunkel DE
Health Service Executive Code of Practice for Decontamination of Reusable Invasive Medical Devices

Medical Engineers
5. Health and Safety and Quality Management systems

- Many reviews of safety
- Biohazards
- Illness, occupational health issues
- Health promotion
• Needlestick and sharps injuries among medical undergraduate students.

• Lauer AC et al 2014. Am J Infect Control
• Evaluation of bacterial contamination in a clinical environment.

• Umar D et al. 2015 International Oral Health
• Infection prevention and control measures currently applied in South African audiology.

• 2014 South African Journal Communicable Disorders.
  • Ehlert K, Naude AM.
• Adherence to surgical hand rubbing directives in a hospital district of Finland

• Laurikainen E, Rintala E, Kaarto AM, Routamaa M. Infect Dis (Lond). 2016
LEAN and Six Sigma

• Applying LEAN to your processes and procedures
• Write it up as a poster or paper
• Before and After LEAN
• Improved ED specimen TAT using Lean Six Sigma

• Sanders JH, Karr T.
• Int J Health Care Qual Assur. 2015
• The assessment and management of strabismus and amblyopia: a national audit.

• Eye 2002 Wickham L et al.
Research Dissemination

- Oral presentation at a seminar/conference
- Lecture to students
- Poster – in your workplace, at a meeting
- Thesis
- Journal article
- Book, Magazine, gazette, newsletter
- Online – profession websites, Youtube presentations
Journal Publications

• If your research is not published in a journal your research has a small audience

• High impact factor– harder to gain publication

• Journal of your profession, Irish, British journals – good targets
  – Very exact writing guidelines
  – Small paper/report easier than long paper to have published
Development Aid

- Link with other countries to support their education or service development
- Eastern Europe [EU member states]
- Developing countries
DIET INTAKE TRENDS AMONG PREGNANT WOMEN IN RURAL AREA OF RAWALPINDI, PAKISTAN

2015. J Avub Med Coll Abottabad

Qureshi Z, Khan R.
Ethical research

- **Respect**
  - Participants human rights

- **Beneficence**
  - Do no harm
  - Maximise benefits of the research

- **Justice**
  - Fair and equitable care of participants
Ethical research

• Advances science/health care
• Improves tests, methods, sensitivity, specificity etc.
• Reviews results, for patterns and epidemiology population studies
• No unnecessary testing of patients
• The research does not hamper diagnosis or therapy of patient
• Participants give informed consent if a new or additional test
• Approved by management and ethics committee
Do you need Ethical Approval?

• Should have all research studies and projects approved by ethics committee
• All journals insist on a letter regarding ethical requirements/approval
  • Is it a new test/extra test/investigation on the patient?
  • Is it a comparison of old and new tests?
  • Did the patient consent for their involvement in research, education, Quality Control?
• Is this a part of an ongoing study which already has ethical approval?
Validation, Audit and Quality research publications

- These may not require ethical approval from an ethics committee
- The department clinical management team can advise you on this
- A letter from the management team still should be sought declaring that this does not require an ethics committee approval because it falls under these categories
Start with the basics - studies

• Research takes time to build in your area
• Do find out who else is doing research
• Read a journal from your profession – what research is going on in other countries?
• Try to plan short surveys, audits, reviews that are easy to design and implement
Try to be research ACTIVE

• Attend research meetings – new ideas
• Facilitate research by others - Encourage ideas and research by all colleagues
• Supervise research projects in your department (BSc MSc)
• Do brainstorming with a group of staff – how can we improve the service, generate money for research, produce audits or reviews
• Promote education and engagement
Research is Rewarding

- Interesting – and fun
- New people, new interests
- Attending meetings and conferences
- Improving patient care
- Better Career Opportunities for you
- CPD outputs
Some Irish agencies for your research

- Health research board
- Wellcome – wellcome trust
- Science Foundation Ireland
- Enterprise Ireland
- Irish Research Council
- IrishAid – overseas aid
- Third Level Colleges – universities and ITs
Questions?

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