

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

I'm too OLD

Not My Job

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.**
- J Eval Clin Pract. 2012 Hoare DJ et al.

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

Culliton M, et al 2016 [NMH Dublin].

- 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.**

H Lambkin, Converse [ACSLM] 2015.

- **Professional regulation of nutritionists: where are we now?**
- Proc Nutr Soc. 2007 Landman JP et al.

- 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



OPTOMETRYGIVINGSIGHT

Transforming lives through the gift of vision

- **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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