

Chapter XX.

Research, theory and practice

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Reference Documents:

Specialist Training Programme In Family Medicine – Malta (3rd Edition). (2017). Zammit E, Sammut MR, Abela G. Malta College of Family Doctors, Malta.

Research Agenda for General Practice / Family Medicine and Primary Health Care in Europe. (2009). Hummers-Pradier E, Beyer M, Chevallier P, Eilat-Tsanani S, Lionis C, Peremans L, Petek D, Rurik I, Soler JK, Stoffers HEJH, Topsever P, Ungan M, van Royen P. European General Practice Research Network, Maastricht, the Netherlands.

The International Web-based Course on Research in Primary Health Care. (<https://www.egprn.org/page/web-based-course> accessed November 2019). Le Reste JY, Petrazzuoli F, Ungan M, Vinker S. European General Practice Research Network, Maastricht, the Netherlands.

Introduction

Rationale

‘Evidence of the health-promoting influence of primary care has been accumulating ever since researchers have been able to distinguish primary care from other aspects of the health services delivery system. This evidence shows that primary care helps prevent illness and death, regardless of whether the care is characterized by supply of primary care physicians, a relationship with a source of primary care, or the receipt of important features of primary care. The evidence also shows that primary care (in contrast to specialty care) is associated with a more equitable distribution of health in populations, a finding that holds in both cross-national and within-national studies. The means by which primary care improves health have been identified, thus suggesting ways to improve overall health and reduce differences in health across major population subgroups.’ (Starfield, Shi and Macinko, 2005)

A specialty is defined by its specific knowledge base. The specialty of Family Medicine is defined and validated by its knowledge base, which emerges from clinical and research activity in the domain. The documentation and analysis of such knowledge is a fundamental function for a clinical and academic specialty such as Family Practice.

Research produces the knowledge which sustains clinical practice, education and audit. The involvement of family doctors in research activity includes leading or participating in research projects, performing practice audits, reflective practice, searching for and analysing available evidence, and using research evidence to improve practice or support learning and education, amongst others.

It is essential that all family doctors should understand the principles of research, to allow effective incorporation of research and evidence in practice and academic activity.

Maltese context

Malta has a good track record of participation in international research organisations such as the European General Practice Research Network and the World Organisation of Family Medicine (Wonca). The Malta College of Family Doctors has traditionally been affiliated with such organisations since its inception, has delivered local research courses for its members, and hosted various international research meetings in Malta. Research evidence is an important element of the College’s continued professional development programme, for which member attendance is obligatory. Research training is incorporated into the Specialist Training Programme for Family Medicine through the Half-Day Release Course modules, and this has now been upgraded with the inclusion of a requirement for a research project to be performed by all specialist trainees in the 3rd version of the Specialist Training Programme for Family Medicine (Zammit, Sammut and Abela, 2017).

Learning aims and objectives

The educational **aims** of the Specialist Training Programme for Family Medicine in Malta, with reference to research theory and practice are:

1. To train and support Family Medicine trainees and trainers in the area of research in Family Medicine
2. To empower trainees with the skills, knowledge and attitudes to perform research projects during Family Medicine speciality training
3. To empower trainers with the skills, knowledge and attitudes to support trainees in performing research during Family Medicine speciality training
4. To empower trainees and trainers with skills which allow them to search for and critically appraise research evidence and apply this to their daily practice

The learning **objectives** of the Specialist Training Programme for Family Medicine in Malta, with reference to research theory and practice are:

1. To have acquired the skills, knowledge and attitudes to perform basic research in their practice
2. To have effectively performed and written up at least one research project or written one research protocol
3. To be confident in searching for and appraising research evidence relevant for their practice

Specific **contexts** for competencies in the research domain are listed below with respect to the core competencies defined in the European definition of Family Medicine (EURACT, 2011):

1. Primary care management:

- Knowledge of the epidemiology of family medicine
- Knowledge of a broad range of common conditions
- Understanding the roles of primary and secondary care
- Understanding the interface between community and hospital care
- Knowledge of care co-ordination and advocacy

2. Person-centred care:

- Understanding the concept of longitudinal continuity
- Knowledge of the episode of care concept
- Knowledge of the importance of the patient's perspective
- Understanding the reason for encounter
- Understanding the interpretation of common symptoms
- Understanding the importance of the patient's agenda
- Understanding the elements of the doctor-patient relationship

3. Specific problem-solving skills

- Knowledge of the presentation of disease in an undifferentiated form
- Differentiating between functional symptomatology and early presentations of disease

- Awareness of the role of the symptom diagnosis when a disease label is inappropriate for a health problem
- Knowledge of common diagnostic associations in primary care
- Understanding how a population prevalence and incidence data can be applied to individual patient care depending on how a test result or the presence of a symptom or sign can change the probability of disease
- Knowledge of appropriate evidence resources appropriate for primary care
- Knowledge of how to formulate an appropriate clinical question
- Knowledge of how to define the elements of a query on the outcome of an intervention in a defined population
- Knowledge on how to search for evidence to answer such a query
- Knowledge of how to critically appraise such evidence
- Understanding of how to apply evidence in practice with individual patients

4. A comprehensive approach

- Understanding the epidemiology of family medicine
- Knowledge of a broad range of common conditions
- Understanding common acute and chronic conditions
- Understanding comorbidity and multimorbidity
- Understanding appropriate primary care health interventions
- Knowledge of health promotion and disease prevention
- Awareness of the evidence of benefit and harm, and cost and effectiveness, of preventive interventions

5. Community orientation

- Knowledge of local community context, including special characteristics, beliefs, resources and problems
- Understanding the role of community participation in health care
- Knowledge of public health programmes and resources
- Understanding the evidence of benefit and harm, and cost and effectiveness, of preventive interventions

6. Holistic modelling

- Understanding the psycho-social dimensions of health
- Knowledge of the role of the biological, psychological and social axes of disease
- Knowledge of cultural and spiritual issues and their effect on health and health care
- Maintaining an ethical approach to research and practice

Specific learning outcomes

Knowledge of the following research methods and research skills constitute specific learning outcomes:

1. Research methods

- Quantitative research
- Randomised controlled trials
- Observational studies
- Qualitative research
- Interviews, focus groups and questionnaires
- Systematic reviews
- Meta-analysis
- Case reports
- Epidemiology
- Electronic patient records

2. Research skills

- Problem framing
- Accessing evidence
- Critical appraisal
- Applying evidence to clinical care
- Basic statistics
- Audit
- Implementing change in clinical practice
- Writing a research protocol and abstract
- Dissemination

Teaching and learning resources

Work- based learning – *in primary care*

- Tutorials on research methodologies and evidence-based medicine
- Observation of family doctors applying evidence in clinical practice
- Leading of or participation in research projects, individually or in teams
- Using the Educational Portfolio to record learning points and reflection

Work- based learning – *in secondary care*

- Tutorials on research methodologies and evidence-based medicine
- Observation of different disciplines engaging in evidence-based medicine
- Observation of different disciplines engaging in research projects
- Participation in research projects individually or in teams
- Using the Educational Portfolio to record learning points and reflection

Research course

1. A series of lectures delivered over two half-day release course sessions for trainers and trainees:

- a. An introduction to research
- b. The research question
- c. Writing a research protocol
- d. Finding and appraising research evidence
- e. Research methods
 - i. Quantitative
 - ii. Qualitative
- f. Basic statistics
- g. Collecting and analysing data
- h. Writing and dissemination
- i. Introduction to the EGPRN online course

2. Trainees and trainers shall be given access to, and expected to successfully complete, the European General Practice online Research Methods Course. This course comprises research lectures in the form of online slide presentations with pre-recorded voice-overs by research experts, followed by a simple assessment and required reading

3. A full day seminar shall allow trainees and trainers to work on their research idea, either in pairs or larger groups, and formulate a research question and design a research protocol for the research project designed to answer that question. The seminar shall comprise a few short formal lectures, but shall focus on group work supervised by local research experts who shall be available to help the trainees and trainers successfully complete their task

4. The trainees are expected to then move on to perform and complete a research project, and write it up to a level appropriate for academic dissemination

5. A final full-day session shall allow the completed research projects to be presented to the whole group of trainees and trainers, in the form of a fifteen minute Power-Point presentation, which may or may not be complemented by a written report for dissemination. Each presentation shall be discussed and critically appraised by participants, in a safe and friendly environment. At the end of the session, trainees' projects shall be marked by the programme lead

Other learning opportunities

- Evidence-based guidelines
- Research journals and internet resources
- Volunteering to participate in research projects
- Informal discussions with trainers, peers, and professionals engaging in research activity
- Attending clinical and academic conferences

Formative Assessment

- Participating actively in the research course, preparing and presenting the research protocol for the planned research project
- Performing the research project as part of the research course included in the programme, for assessment by the course lead

References:

Dobbs F, Soler JK, Sandholzer H, Yaman H, Petrazzuoli F, Peremans L, Van Royen P. 2009. The Development of Research Capacity in Europe through research workshops – The EGPRN perspective. Family Practice, **26(4)**: 331-334

Hummers-Pradier E, Beyer M, Chevallier P, Eilat-Tsanani S, Lionis C, Peremans L, Petek D, Rurik I, Soler JK, Stoffers HEJH, Topsever P, Ungan M, van Royen P. 2009. Research Agenda for General Practice / Family Medicine and Primary Health Care in Europe. European General Practice Research Network, Maastricht, the Netherlands.

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Starfield B, Shi L, Macinko J. 2005. Contribution of Primary Care to Health Systems and Health. Milbank Q, **83(3)**: 457–502.

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Further reading:

- Hummers-Pradier E, Beyer M, Chevallier P, Eilat-Tsanani S, Lionis C, Peremans L, Petek D, Rurik I, Soler JK, Stoffers HEJH, Topsever P, Urgan M, van Royen P. (2009). Research Agenda for General Practice / Family Medicine and Primary Health Care in Europe. European General Practice Research Network, Maastricht, the Netherlands.
- North American Primary Care Research Group – Getting started in Research: <https://www.napcrg.org/resources/getting-started-in-primary-care-research/>

Internet resources:

- European General Practice Research Network: <http://egprn.org>
- The Society for Academic Primary care: <http://www.sapc.ac.uk>
- The Cochrane Collaboration: <http://www.cochrane.org>
- National Guideline Clearinghouse: <http://www.guideline.gov>
- North American Primary Care Research Group: <https://www.napcrg.org/>

Peer reviewers

The following experts critically reviewed this document:

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