

Position description

Senior Research Fellow

Department/Unit	Epidemiological Modelling Unit Epidemiology and Preventive Medicine
Faculty/Division	Faculty of Medicine, Nursing and Health Sciences
Classification	Level C
Work location	Clayton campus
Date document created or updated	31 February 2017

Organisational context

Monash is a university of transformation, progress and optimism. Our people are our most valued asset, with our academics among the best in the world and our professional staff revolutionising the way we operate as an organisation. For more information about our University and our exciting future, please visit www.monash.edu

The **Faculty of Medicine, Nursing & Health Sciences** is the University's largest research faculty. World-class researchers work across disciplines including laboratory-based medical science, applied clinical research, and social and public health research. The faculty is home to a number of leading medical and biomedical research institutes and groups, and has contributed to advances in many crucial areas. Our expertise in life sciences and biomedicine is recognised both nationally and internationally.

From a teaching perspective, our education curriculum covers a range of disciplines, including medicine, nursing, radiography and medical imaging, nutrition and dietetics, paramedic studies, biomedical sciences, physiotherapy, occupational therapy, behavioural neurosciences and social work. We take pride in delivering outstanding education in all courses, in opening students to the possibilities offered by newly discovered knowledge and in providing a nurturing and caring environment. To learn more about the faculty, please visit www.monash.edu/medicine

Monash School of Public Health & Preventive Medicine is a teaching and research unit of the Faculty of Medicine, Nursing and Health Sciences and is based at the Alfred Hospital Campus. It plays a prominent role in public health medicine and works closely with the major Monash affiliated hospitals, research institutes and public health units within Victoria. It plays a prominent role in public health medicine in Australia and has a strong record for training individuals with the capacity and skills to assume leadership roles in Australia in this field. We work closely with the major Monash affiliated hospitals, research institutes and public health units within Victoria. Our skills provide a key resource underpinning translational research within our faculty.

The Epidemiological Modelling Unit (EMU) is housed within SPHPM's Division of Research Methodology. The unit undertakes a broad range of epidemiological, statistical and actuarial modelling to determine the likely effectiveness and cost-effectiveness of clinical and public health interventions. EMU also works closely with the Centre of Cardiovascular Research and Therapeutics, clinical trial lists and registries.

EMU's current and future projects include, modelling of:

- the contribution of health risk factors to regional variation in mortality
- the impact of low-dose aspirin on bowel cancer morbidity and mortality
- aiding in the design and analysis of clinical trials for statin intervention to prevent multiple disease outcomes associated with ageing
- the current and future impact of cigarette smoking on all-cause mortality

- undertaking theoretical research to improve the underpinnings of mathematical models of infectious disease transmission
- predicting the effectiveness and cost-effectiveness of interventions for tuberculosis control
- simulating interventions for the control of HIV, human papillomavirus and other sexually transmitted infections
- developing novel techniques to understand the spread of emerging infections (including Ebola virus disease)

Position purpose

A Level C research-only academic is expected to make independent or original contributions to the research effort within her/his field of expertise and to the organisational unit or inter-disciplinary area of which he/she is a part. An academic at this level is expected to play a major role in research including the exercise of some leadership in research.

This position is a key role of the School's research capacity in the area of chronic disease and epidemiological modelling and EMU. The broad impact of the position is to work with the EMU team to provide an evidence base for improved decision making in the area of chronic disease prevention and management, including the impact of future demographic trends on these outcomes.

The incumbent is a member of EMU and of the academic staff of the Monash University SPHPM and will harness partnerships nationally and internationally provides leadership in research capacity in the area of epidemiological modelling. The incumbent works closely with clinical trial and registry coordinators within the school to use the information collected by such programs to produce data-driven chronic disease models. A key activity for EMU and for this position includes using the results of the ASPREE trial (the largest primary prevention trial ever undertaken in the elderly) to determine the population groups for which aspirin is likely to be beneficial.

This work involves the development of epidemiological models that can assist policy-makers to make more informed choices of which preventive or reactive programs to fund, improve the ability of clinicians to provide accurate preventive advice to patients and to increase the ability of consumers to make decisions about preventive activities (that may relate to themselves or their communities). This will also extend more broadly to consider the impact of underlying social trends, such as overall changes in mortality, education and health behaviours on future projections of disease burden and life expectancy.

This work allows extensive scope for innovation and involves calculation of burden of disease indicators, evaluating costs and effects of health policies, cost-effectiveness studies of interventions and 'what-if' projections. Although the application will be primarily for settings in Australia, the models developed through this work are expected to have international relevance. The Research Fellow has an integral role in EMU and its related research activities and is expected to publish and present research outputs. The Research Fellow works closely with the Head of EMU, the other Research Fellows and students who are due to be recruited to the Modelling Unit during 2017, and the broader community of SPHPM.

Reporting Line: The position reports to the Head of the Epidemiological Modelling Unit, to the Director of the Division of Research Methodology and to the Head of School.

Supervisory responsibilities: EMU research team and Higher Degree students where applicable

Financial delegation and/or budget responsibilities: Not applicable

Key responsibilities

Specific duties required of a Level C research-only academic may include:

1. The conduct of research and the production of conference and seminar papers and publications from that research

2. Supervision of research-support and administrative staff involved in the staff member's research
3. Supervision, where appropriate, of the research of less senior research-only Academic staff
4. Involvement, where appropriate, in the promotion of research links with outside bodies
5. Preparation of research proposal submissions to external funding bodies
6. Significant role in research projects including, where appropriate, leadership of research teams or management of projects
7. Responsibility for the oversight of financial management of grants received for her/his research projects
8. Involvement in professional activities including, subject to availability of funds, attendance at conferences and seminars in the field of expertise
9. Occasional contributions to the teaching program within the field of the staff member's research
10. Supervision of major honours or postgraduate research projects within the field of the staff member's area of research
11. Various research-related administrative functions; and
12. Attendance at meetings associated with research or the work of the organisational unit to which the research is connected and/or at departmental, school and/or faculty meetings and a major role in planning and committee work

Key selection criteria

Education/Qualifications

1. The incumbent should possess:
 - a PhD in a related discipline from a recognised university and subsequent qualifications and research experience in the area
 - an equivalent combination of relevant experience and/or education/training

Knowledge and Skills

2. Advanced quantitative skills. Ideally, these would include one or more of: mathematical modelling of chronic diseases, comparative effectiveness research, Markovian processes, Bayesian inference and health economics
3. Demonstrated strong record of publications, conference papers, reports and/or professional and/or technical contributions in the relevant discipline area
4. Provide student supervision including supervision of honours students and the co-supervision of PhD students
5. Ability to work independently in a research environment
6. Ability to work as part of a team
7. Advanced computer skills with experience using statistical computing packages (such as R and Stata), scientific computing packages (such as Matlab and Python), spreadsheets (such as Excel), reference management software and other relevant packages
8. Ability to prepare and communicate the aims and outputs of research projects in a range of formats
9. High level organisational skills, with demonstrated capacity to establish and achieve goals
10. Excellent written and oral communication skills

Other job related information

- Travel (e.g. to other campuses of the University) may be required
- There may be peak periods of work during which the taking of leave may be restricted

Legal compliance

Ensure you are aware of and adhere to legislation and University policy relevant to the duties undertaken, including: Equal Employment Opportunity, supporting equity and fairness; Occupational Health and Safety, supporting a safe workplace; Conflict of Interest (including Conflict of Interest in Research); Paid Outside Work; Privacy; Research Conduct; and Staff/Student Relationships