

Research Australia Philanthropy – Case Studies



Project Title: Development and validation of the de Morton Mobility Index (DEMMI)

Project Summary: Physical inactivity is a major public health issue facing our ageing society. Poorer physical ability has been found to be associated with increased risk of many poor health outcomes including increased risk of falls, fractures, loss of independence, mortality, carer burden and healthcare costs. Just as we require accurate tests of other important health indicators such as a blood pressure cuff for measuring blood pressure or a thermometer for measuring temperature, an accurate mobility test that can be applied across clinical settings to all older people is required. Until the recent development of the DEMMI, such an instrument did not exist. This research resulted in the development of the DEMMI, the first instrument to accurately measure the mobility of all older adults across clinical settings.

Who benefited from the research: The development of the DEMMI has benefitted a range of key stakeholders; older adults and their families/carers, hospital management, universities, clinicians, researchers and the Australian healthcare system. The broader Australian community has benefitted from this research, as maximising the physical health of older adults is known to improve health outcomes. Subsequently applying the DEMMI may reduce dependence on limited healthcare resources (e.g. requirements for hospital admissions, GP appointments) and thus increase availability of healthcare resources for those in greater or more urgent need (e.g. increase hospital bed availability). This research has assisted Dr Natalie de Morton to obtain a 4 year NHMRC Research Fellowship.

How did they benefit from the research: Older Australians and their families/carers have benefitted from this research as healthcare professionals now have available to them an accurate method for measuring the mobility/physical health of all older people. The DEMMI can be applied to identify early signs of declining mobility and prompt early intervention (e.g. in the primary care, community or residential aged care setting), to facilitate goal setting for therapeutic intervention or assist with discharge planning in the hospital setting (e.g. to assist with identifying if a referral for further rehabilitation is required after hospital discharge). Informal feedback from clinicians has identified that the DEMMI provides important information regarding patient mobility, is quick and easy to use and facilitates continuity of patient care across clinical settings.

What was the pathway to delivering the benefit: After completing the development of the DEMMI during my doctoral studies, presentations in 2007 at hospitals and universities, the World Congress of Physical Therapy (WCPT) in Vancouver (Canada) and the National Australian Physiotherapy Association (APA) Conference in Cairns (Australia) resulted in the prompt implementation of the DEMMI into a range of healthcare settings in Australia and overseas. Continued presentations at local, national and international forums/conferences, additional DEMMI studies conducted by Dr de Morton and students under Dr de Morton's supervision and publication of the DEMMI manuscript in 2008 has continued the broad dissemination and uptake of the DEMMI into clinical practice. The DEMMI is now being taught into undergraduate Physiotherapy curricula in a number of Australian universities and will commence being taught into the Monash medical curricula in 2010.

Please outline other benefits arising from the support provided: The support provided by the HCF Health and Medical Research Foundation has greatly assisted in the growth and development in the early research career of Dr Natalie de Morton. The funding from the HCF Foundation provided her with the opportunity to employ a research assistant during her doctoral studies and to conduct additional experiments to maximise the rigorous scientific development of the DEMMI. Developing skills in supervising research assistant staff and managing a project budget at such an early stage in her research career was invaluable experience and provided skills that are core requirements as a researcher. The funding obtained from the HCF Foundation has subsequently assisted her in attracting research funding from other granting bodies.

Chief Investigator:
Dr Natalie de Morton

Co-investigators:
Prof Jenny Keating
A/Prof Megan Davidson
Dr David Berlowitz

Research organisation:
Northern Health
Monash University
La Trobe University

Granting organisation:
HCF Health and Medical
Research Foundation

Amount of grant:
\$99,223

Project commenced:
2005

Project completed:
2007

Project duration (years)
3 years

Other project support:
- Northern Clinical Research Centre, Northern Health
- NHMRC Dora Lush PhD scholarship (3 years)

Key Publications:
- de Morton N, Davidson M, Keating J (2008). The de Morton Mobility Index (DEMMI): an essential health index for an ageing world. BMC HQLO, 6:63.
- de Morton N, Berlowitz D, Keating J. A systematic review of mobility instruments and their measurement properties for older acute medical patients. BMC HQLO 2008;6.

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Other comments:

The relationship developed between Dr de Morton and the HCF Foundation (in particular, Dr Shaun Larkin) since 2005 has been one of ongoing collaboration. The HCF Foundation funded the rigorous research development of the DEMMI during Dr de Morton's doctoral research (2005-07) and now more recently the development of DEMMI technology (a DEMMI website and database) to further facilitate the implementation of the DEMMI into a broad range of healthcare settings (acute and subacute hospital settings, primary care and residential aged care facilities) and the potential for this body of research to influence healthcare policy. This technology will be available for clinical use in 2011. Dr de Morton is enormously grateful for the support provided to her during her doctoral studies and early research career by the HCF Health and Medical Foundation.

Philanthropic groups that have philosophies and goals that align with the research questions of young researchers can provide a wonderful opportunity to conduct research, as an early career researcher, by providing them with the freedom and financial independence to conduct research without being limited by resources. While initially hesitant about the project management and reporting requirements of the HCF Foundation, during the course of the project it became readily apparent that this approach was a valuable aid to delivering the desired outcomes.

Dr Natalie de Morton is also currently working on a range of language translation and validation studies for the DEMMI with international collaborators, including languages such as Dutch, German, Malaysian, Mandarin, Cantonese, Thai and Danish. This work has resulted in Natalie presenting her research as an invited speaker at a range of international forums; conferences, universities and hospitals.

Currently Dr de Morton is expanding the DEMMI research in community (primary care and residential aged care) and hospital (acute and rehabilitation) settings and in the field of falls prevention.

Research Australia may wish to invite speakers and written contributions to support our community awareness programs with the aim of increasing support for health and medical research. Please provide the contact details and preferred methods for communication.

Dr Natalie de Morton

Mobile phone: 0414 968 943

Email: natalie.demorton@nh.org.au or n.demorton@latrobe.edu.au

Postal:

Bundoora Extended Care, Northern Health
Level 1, 1231 Plenty Rd
Bundoora, Victoria, Australia, 3083

Authorised by:

Name: Ms Jenni Smith

Organisation: Northern Health, Victoria, Australia

Position: Executive Director Ambulatory Care & Consulting Services/Chief Allied Health Officer

Signed:

A handwritten signature in black ink, appearing to read "Jenni Smith", is written over a white rectangular background.

Date: 26th March 2010

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I am authorised to provide this information and give permission for Research Australia to include it for the purpose of promoting the benefits of giving to health and medical research.