

# MEDICAL DEVICE TECHNOLOGIES FOR MANAGING DISEASE AND WELLNESS

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## **Abstract**

*As a response to the increasing burden of chronic disease and the ageing population on health care expenditure, considerable focus has been placed on appropriate technologies for promoting self-care and for supporting ageing-in-place.*

*A number of medical device technologies aimed at relieving the burden of disease and improving quality of life will be explored. These devices, developed at the Graduate School of Biomedical Engineering, University of New South Wales over the past two decades include telehealth monitoring and decision support systems for chronic disease management; and wearable ambulatory technologies based around triaxial accelerometry for estimating risks of falling and for automatically detecting falls. Brief mention will also be made of work towards the design and testing of a retinal neuroprosthesis to provide some form of vision restoration for lost sensory function.*

*Trialing and deployment of these technological approaches will be discussed in conjunction with some perspectives on health service delivery models and anticipated health and economic outcomes from the adoption of telehealth systems.*

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