

Managed Care Education

Availability, suitability and potential of courses and qualifications in regards to coordinated care workforce skills.

A Review for Health Workforce New Zealand

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Process

The information and recommendations contained in this review is the result of:

- literature review and scan of managed care/case management/integrated care/guided care education and practices primarily in New Zealand, Australia, Britain, Canada and the United States of America
- research, communications, interviews and feedback from the New Zealand University programme personnel involved with delivery of health and health related programmes with particular relevance to case coordination and rehabilitation
- research, communication and feedback from Polytechnic personnel
- Research, communication and feedback with third party providers engaged in managed care and/or case management delivery
- research, communication and feedback from private insurance organisations
- research, and interviews with personnel from Primary Health Care organisations and/or those involved with delivery of primary healthcare medical practitioners and nursing personnel
- research, communication and feedback from DHB personnel
- research interviews with ACC personnel
- research, communication and feedback with Ministry of Social Development personnel
- research, communication and feedback with non-government organisation personnel
- research communication and feedback from Department of Corrections personnel.

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Introduction

In today's healthcare environment more recognition is being given to the need to increase skill in the workforce in order to deliver a more integrated approach to managing healthcare. It is well recognised that fragmented delivery of health and associated care is not helpful to health consumers and funders.

Research both locally and internationally provides evidence that implementing a managed, integrated, and thereby coordinated, approach to healthcare – particularly amongst the frequent users of health services – enhances quality and cost effectiveness. In this regard, historically and increasingly many countries are examining and implementing models and systems to address the challenges of the shift in health delivery requirements associated with managing chronic conditions.

Recognising the need for different delivery models produces inevitable questions around the skill sets required. This review addresses these questions by examining education opportunities available in New Zealand currently for those involved, and/or potentially involved, in managing and co-ordinating care within existing organisations; a review of what programmes are available currently and/or could be instituted; and the estimate of need for education programmes in managed care delivery throughout all applicable public and private organisations involved in the delivery of healthcare.

Why have a workforce skilled in managing and coordinating care?

Within the New Zealand healthcare environment, as with many other healthcare environments worldwide, there exists a mismatch between health care demand, supply and affordability.¹

Added to this mismatch is the increasingly complex environment that a healthcare consumer faces. This complexity by its very nature increases the risk to all parties in delivery of quality cost effective healthcare.

Traditionally the delivery of healthcare has focused on models that suit an episodic and reactive approach, however changes in consumer profiles and requirements requires a shift to care that is longer-term, continuous and managed². This will require the workforce to have skills appropriate to models of integrated care.

USA data advises 78 per cent

of USA health care spending is in the area of chronic disease – a situation comparative to most developed countries. In this regard, multiple factors have been

¹ Gorman DF, Thompson M. Encouraging and rewarding the good behavior of health care providers. *Internal Medical Journal* Editorial August 2011 DOI:10.1111/j.1445-5994.2011.02548.x

² Alleviating the Burden of Chronic Conditions: Literature Review 2011 http://dhbrc.hrc.govt.nz-media-documents_abcc/ABCC_Study_NZ_Literature_Review_2011.pdf

identified as barriers to providing effective treatment to the chronically ill, among them a fragmented delivery system and a lack of continuity of care.³

Examples of this fragmentation exist in consumer feedback in New Zealand where inadequate communication and lack of information sharing is commonly cited in complaint processes. This view is supported by the Health and Disability Commissioner Anthony Hill who advises that he has been “struck by the number of complaints which relate to a failure to get the basics right”.⁴ This poses potential harm to the consumer, challenges to the health professionals involved and adds financial cost to the funder.

If getting the basics right is being lost in an increasingly complicated systems environment through which healthcare is delivered, there is potential to affect quality and cost outcomes by aligning people and systems in a more coordinated and integrated way to avoid duplicated procedures, gaps in treatment and inappropriate care.

The complexities faced in today’s environment are well documented challenges in the delivery of healthcare; increasing population, longer life expectancy, new and innovative medical and technological advances. These challenges require the need for systems and processes that provide the most suitable and sustainable management of healthcare.

Underlying these ‘macro issues’ however, are the ‘micro issues’ associated with populations containing individuals that are diverse in their physical, emotional, psychosocial, socioeconomic and cultural needs. It is important therefore to have a workforce skilled in coordinating and managing the myriad of complexities to individuals and populations.

Effective management of health conditions extends therefore beyond better services or treatment – care must be integrated into the wider social, cultural and economic context to achieve sustainable health outcomes for individuals and society.

In this regard recent reports and recommendations such as those advised by the Welfare Working Group highlights the need for better work outcomes for those at risk of long term dependency, by identifying and tailoring support to peoples’ needs and

³ Baker LC, Johnson SJ, Macaulay D et al. Integrated Telehealth and Care Management Program for Medicare Beneficiaries with Chronic Disease Linked to Savings. *Health Affairs* 30 No 9 (2011): 1689-1697 DOI: 10.10.1377/hlthaff.2011.0216

⁴ Hill A. Pondering those recurring themes. *NZ Doctor* 22 (March 2011)

building strong partnerships with medical, health systems and employers.⁵ This is not a new concept; case management/case coordination became part of government entitled programmes in the USA in 1971 with the intention of integrating three major departments; health, education and welfare.⁶

There are many models and terms used to describe the functions (and titles) of those coordinating care; integrated care, care coordination, guided care, managed care, case management, collaborative care, seamless care – to name a few. To add to the confusion there is also on-going debate around the suitability of models and systems. Irrespective however of the model or system, the mandate and skill to guide and coordinate care is becoming an increasingly recognised skill, particularly in the area of managing chronic illnesses in order to affect quality, prevent duplication and most importantly to prevent the escalation of care to secondary services.

Support for education in this area is evidenced in this review and has relevance to the recent Health Workforce New Zealand Rehabilitation Service and Workforce Forecast, which identified that a fragmented approach to rehabilitation compromises care and advises the need for a skilled coordinator; a person with skill that would involve them working with clinicians, client and family to develop and oversee a plan of care. This report acknowledges that there is no specific training available in New Zealand.⁷ Findings of this review support this assertion.

The recent Rehabilitation Service and Workforce review also advises Māori have on average the poorest health status of any ethnic group currently in New Zealand. In this regard the work undertaken by Whānau ora appears to have synergy with the underpinning values and philosophies of an integrated approach to the provision of health and related services. This requires further exploration; however as a founding principle in recognition of Māori health needs, any managed care programme should by way of design be equipped to deliver education appropriate to those involved in the delivery of Whānau ora concepts and practices.

It is worthy of note that the establishment of a Māori case management clinic occurred some ten years ago in the primary healthcare setting with the aim of delivering high quality, accessible, culturally acceptable care to Māori living in high needs areas.⁸

⁵ Welfare Working Group Reducing Long Term Benefit Dependency. <http://ips.ac.nz-WelfareWorkingGroup/Downloads/final%20Report/WWG-Final-Recomendations-Report-22-February-2011.pdf>

⁶ Siefker JM, Garrett MB, and Von Genderen, et al. *Fundamentals of Case Management: Guidelines for practicing case managers*. 1998 St Louis: Mosby

⁷ Rehabilitation Service and Workforce Final Report: <http://www.healthworkforce.govt.nz/sites/all/files/Final%20Rehabilitation%20Workforce%20Service%20Forecast.pdf>

⁸ Maniapoto T Gribben B. Establishing a Maori Case Management Clinic. *New Zealand Medical Journal* 21 Feb 2003, Vol 116, No 1169 1of 8 [URL:http://www.nzmq.org.nz/journal/116-1169/328](http://www.nzmq.org.nz/journal/116-1169/328)

Irrespective of the models, systems and terms used, there is evidence to support that well-designed and implemented care coordination can help persons with disabilities live independently longer with added years of quality life, and that care coordination/care management may be even more vital for certain populations, such as individuals with multiple chronic conditions and those with higher levels of disability.⁹ This is significant for health consumers, health professionals and funders.

⁹ Walsh K, Zander K. *Emergency Department Case Management- Strategies for Creating and Sustaining a Successful Programme* 2007 USA HCPro Inc

Recommendations

1. A skilled workforce in the management of health consumers with multiple and complex medical and associated issues should be prioritised as an urgent requirement. This is supported by the vast amount of data from increasing literature and feedback, which supports a more coordinated multidisciplinary approach to affect quality and cost outcomes in healthcare delivery.
2. Encouragement of existing workforce such as registered nurses (and/or allied health workforce such as occupational therapy, physiotherapists, psychologists) to be further up-skilled and trained in care co-ordination is a sensible course of action; nurses already have existing skills and knowledge in healthcare and health systems. They also have 'credibility' when working with health consumers and other health and health related professions. Additionally the nursing workforce will have potential for continuation of their careers.
3. Programme development and design should reflect the goals of an integrative and evidence based approach to healthcare. This will, in this reviewer's opinion, require collaboration between medical and nursing personnel in the design and implementation of any education process – such as is seen in the Guided Care approach developed at John Hopkins University.
4. Learnings from other programmes (nationally and internationally) should be incorporated in the programme development with the guiding premise that any programme must primarily reflect the needs and requirements unique to health consumers in New Zealand, with particular regard to the needs of Māori health consumers.
5. Programme development and design should provide flexibility to enable those without health professional qualifications who are practising case/care management (such as ACC private insurance, corrections case managers) to engage in a programme applicable to them; this may require a two tiered approach with overlay in some courses/programmes.
6. Programme design should reflect learning styles which are applicable to the participants.
7. Implementation of any education programme should be facilitated through applicable existing programme(s) in New Zealand.
8. Any education process should have available work environments for graduates to access.

9. A research programme is implemented in conjunction with any programme to test the effects of a coordinated care approach on all significant parties.
- 10 Completion of qualifications in case/care coordination should be a requirement for any role that requires coordination of complex medical and associated issues for a health consumer.

There are a number of terms and definitions associated with managing care and numerous examples of differing models used in the management and coordination of health services at both an individual and systems level. It is useful to identify these terms and apply meaning in order to relate these to an educative process.

Managed Care

Managed care is a generic label used to describe a system aimed at managing cost and quality in healthcare. The term is usually associated with healthcare in the United States and/or healthcare systems and is described as a system of cost containment programmes.

However, there are in the New Zealand environment, examples where a system or systems have similar aims.

Techniques used in managed care may involve:

- a set of designated doctors and healthcare facilities, known as a provider network, which furnish an array of healthcare services to enrolees
- explicit standards for selecting providers
- formal utilisation review and quality improvement programmes
- an emphasis on preventive care
- financial incentives to encourage enrolees to use care efficiently
- disease management
- case management
- wellness incentives
- patient education
- utilisation management and utilisation review.

The processes of most interest and applicability to this educative review are the case management /disease management /case coordination /guided care approaches used internationally which are applied to enable management and coordination of healthcare with the specific aims of providing high quality cost effective care.

Case Management (otherwise called case coordination or care coordination)

Definitions in case management vary depending on the area or focus of work, as case management is a function or way of working that can be applied across many

disciplines and settings apart from healthcare; such as IT, law, and accountancy to name a few.

Similarly there is no standardised method or definition as it applies to healthcare. Generally it refers to a process where there are a number of different phases; assessment, planning, coordination, monitoring and evaluation. These phases are for the most part linear and any definition includes principles of access, connecting need with service and monitoring of some kind.

The primary goal of a case management approach is to facilitate the delivery of quality and appropriate care in a cost effective manner whilst seeking to promote positive healthcare outcomes.

Whilst roles in healthcare may carry varying levels of intensity, skills required to perform in this role include:

- up to date medical knowledge and associated health knowledge and or access to this
- up to date knowledge of healthcare systems
- strong assessment capability
- effective planning skills
- umbrella oversight
- time management skills
- sound documentation skills
- knowledge and understanding in risk assessment (a very different concept to cost cutting or cost containment)
- high level of ingenuity and problem solving ability
- finesse in working with individuals and organisations
- cultural competency
- mediation and conflict resolution skills
- ability to coordinate and facilitate a multidisciplinary team
- flexibility in decision making
- strong advocacy skills
- commitment to continuous improvement
- ability to educate a wide range of people
- understanding of actuarial and risk principles.

In relation to healthcare definitions these have historically originated from the United States environment, where mainly nursing-based education and affiliated societies promote the practice of healthcare case management. The definition in this environment is:

1. 'Case management is a collaborative process of assessment, planning, facilitation and advocacy for options and services to meet an individual's health needs through communication and available resources to promote quality cost effective outcomes'.
2. 'Case management in hospital/healthcare systems is a collaborative practice model including patients, nurses, social workers, physicians, other practitioners, caregivers and the community. The case management process encompasses communication and facilitates care along a continuum through effective resource coordination. The goals of case management include the achievement of optimal health, access to care, and appropriate utilisation of resources, balanced with the patient's right to self-determination'.¹⁰

Literature quotes public health nursing and social work in the United States as an originator of case management in healthcare; these two areas exemplify the need for co-ordination of health and related services to achieve outcomes for individuals with often multiple and complex needs.

Increasingly used to facilitate care for returned servicemen from two world wars, which necessitated a coordinated approach of health, social and vocational disciplines followed by the introduction of managed care environments, case management has grown exponentially in the USA.

It is therefore reasonable to conclude that the history of the type of health case management practised outside of New Zealand today resulted from creative healthcare efforts from different disciplines including nursing, medicine, mental health, public health and social work.

The transition to insurance industry involvement in the United States is reported as having two separate origins: the workers compensation system and the accident and health insurance system. The reason for its introduction to these areas was to control costs through more active management and coordination of required care.

The involvement in the workers compensation area is recorded as early as 1943. This concept further expanded into incorporating vocational rehabilitation in about 1966. These programmes provided many of the basic elements used in case management practice in the USA today.

¹⁰ American Case Management Association 2004 <http://www.acmaweb.org/>

As described, movement into the overall healthcare environment came about following the introduction of managed care, and in more recent years with advances in medical technology resulting in disabled people living longer and requiring an array of health and related services. Examples of these include spinal cord and head injuries, and development of new drug treatments extending life span with an on-going requirement for care¹¹

This expansion saw the increase in nurses being employed as facilitators and coordinators of care, given their knowledge and expertise in assessment of health needs and healthcare systems.

While those with health related qualifications can practice case management in the United States, the majority of case managers are nurses with post graduate credentialing/certification in case management. This career has become an increasingly attractive option for nurses as it facilitates use of nursing skills while accommodating nurses with choices relating to lifestyle and age.

There were challenges however, that became evident for health professionals such as nurses becoming case managers; generally health professionals are trained to think in processes and case management requires a shift to tackling problems that require strategic analysis, financial forecasting and long term planning decisions.¹²

In contrast to many nursing roles, a case management role often involved or involves input over an 'entire episode of illness/ disability or need for services' long term alliances are therefore common. This is becoming more common due to the increasing numbers of health consumers with long term condition(s). It requires a skill set not often acquired through traditional health education environments, evidenced by the development of post graduate education in the United States to skill (mainly nurses) in the practice and application of case management.

Mullahy (2010),¹³ a well-known United States case manager and author of case management philosophy and practice, describes the process of case management as highly individualised and one that aims to:

- identify those most at risk, vulnerable, or care and cost intensive patients
- assess treatment options and opportunities to coordinate care
- design treatment programmes to improve quality and efficacy of care
- control costs and manage patient care to ensure optimum outcome.

¹¹ Siefker JM, Garrett MB, Von Genderen, et al. *Fundamentals of Case Management: Guidelines for practicing case managers* 1998 St Louis: Mosby

¹² Daniels S, Ramey M: *Leaders Guide to Hospital Case Management* 2005 UK: Jones and Bartlett

¹³⁴ Mullahy CM *The Case Managers Handbook* 2010 UK: Jones and Bartlett

A challenge identified throughout this review has been the somewhat pejorative view by many in regards to the practice of case management articulating it as a system or practice to deny care. This appears to have come from two sources; firstly the belief that it is a 'USA managed care invention' and therefore is about cost saving at the expense of care and secondly it is viewed as a practice within the New Zealand setting (mainly in the ACC and Social Welfare areas) where staff are untrained health professionals with a claims management and entitlement focus; often perceived by health professionals as not conducive to health consumers wellbeing.

Case Management Models and Application

Case management models are as wide and diverse as the health system. Various models of case management are described in literature; many models are adapted to suit particular settings for reasons as diverse as tradition, culture, and perceived risk to individuals/groups to issues involving personalities.

Therefore the ability to define models and then obtain research which identifies with accuracy the benefits of a case management approach remains challenging. There is evidence to support case management particularly as it relates to an integrated care approach. Additionally, anecdotal evidence and those interviewed throughout this review who are implementing case management, are doing so in the belief that its application produces positive outcomes in the areas of quality and cost.

Models that are generally used within healthcare settings are based on the following approaches:

- Brokerage model: this is a very brief approach to case management in which case workers attempt to help consumers identify their needs and broker ancillary or supportive services. This is the most common model practised in the New Zealand environment.
- Generalist or standard models: this model implements the commonly accepted functions of case management. The case manager in this model is generally more involved with the healthcare consumer and required services. This model is probably the most aligned with nurse case managers in the United States environment.
- Clinical or rehabilitation approaches; these combine resources acquisition and clinical or rehabilitation activities, which might include psychotherapy for clients and their families, for example in the area of mental health area, or teaching of specific skills in the chronic disease case management – for example, diabetes disease management area. Aspects of this model are practised within the healthcare system in New Zealand in areas such as mental health, elderly care, diabetes education, and community health.
- Strengths-based case management: this focuses on consumers strengths, self-direction, and the use of informal help networks (as opposed to agency resources) this model is often applied in the mental health area.

- Intensive case management: case managers with small caseloads work with consumers with highly complex and often long term health problems to affect best health and cost effective outcomes. These consumers usually require coordination across a range of health specialties and other services and without a case managed approach may become frequent users of secondary services.¹⁴

Expected benefits of a case management approach:

- supports clinical effectiveness, risk management and clinical audit
- improves multidisciplinary communication, teamwork and care planning
- can support continuity and co-ordination of care across different clinical disciplines and sectors
- optimises the management of resources
- can help ensure quality of care
- helps empower patients
- helps manage clinical risk
- helps improve communications between different care sectors
- provides a baseline for future initiatives
- expected to help reduce risk by supporting health consumers with a planned and coordinated approach
- expected to help reduce costs and or most appropriate use of health spend
- advocacy for compromised health consumers
- supports independence
- reduces unnecessary hospital admissions; quality and cost attainments
- one point of contact promotes optimal use of available resources
- focuses on full range of health and related issues, able to work across boundaries
- reduce work and sick absences, thereby increasing productivity
- reduces burdens associated with long term illnesses
- reduces healthcare costs.

¹⁴ Wouter V, Wolf J Rapp R et al Effectiveness of Different Models of Case Management for Substance Abusing Populations Journal Psychoactive Drugs. 2007 March; 39 (1): 81-95 <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1986794/>

New Zealand and International Case Management Models

As described, the evolution of case management in the New Zealand setting has not generally seen it introduced as it has been elsewhere in the world with the exception of its introduction into the Accident Compensation Corporation (ACC) and workers compensation settings and/or used to define roles in the community and secondary sectors, where, the function of case management usually forms part of an existing clinical role with usually no responsibilities for resource allocation as is seen in nursing case management roles in the United States.

In this regard the implementation of case management in New Zealand in a formal way, which has the most recognition, has been through the ACC model. This model of combined brokerage/generalist of services is common throughout countries such as Australia, United States, Canada, United Kingdom, however research reveals that qualification requirements of the workforce outside of New Zealand generally requires a skilled and qualified health/health related professional as the preferred candidate for employment. Another identified (and often criticised distinction) in this model, as opposed to traditional case management models elsewhere, is the requirement for the case manager to make decisions on entitlement of an injured person whilst developing a relationship in order to affect a rehabilitative process. This dichotomy many believe often leads to disharmony for all parties and is not conducive to the wellbeing and recovery of the injured person.

Of relevance to this review process was the often communicated belief that case management is about claims and entitlement management as ACC and Work and Income New Zealand, two very high profile organisations, are the only 'face' of case management in the New Zealand setting.

Take the following case example of case management in practice at ACC:

A 35-year-old checkout operator and mother of two who is injured in a car accident, suffers multiple injuries that leave her unable to work and care for her two young children aged six and eight.

This necessitates her to receive weekly compensation entitlement and rehabilitation assistance in accordance with ACC legislation.

The case manager is tasked with providing the injured person through a prescribed process that supports their legislated entitlement throughout the life of their claim, including financial, medical and vocational requirements. This will necessitate working closely with the injured woman, her family, appropriate medical, financial, rehabilitative and vocational personnel. The case manager will not be required to provide any clinical input to this process but rather coordinate the required clinical resource(s).

Case managers operating in New Zealand healthcare environments in the primary and secondary sectors generally hold a primarily clinical focus to their work (i.e. mental health, aged care) and are therefore required to have a health qualification most commonly as a registered nurse and or social worker. Their role is to assess need and either implement or arrange implementation of care.

The scope of the role may extend to assisting with acquiring other services identified in the care plan such as housing, employment, social and community needs. This role does not in New Zealand generally include any direct responsibility for assessment and brokering of services such as is seen in United States models.

Growing evidence of nurses in New Zealand, particularly specialist nurses (such as is seen in aged care), are working in roles that involve care coordination. A recent example in New Zealand of merit is the recently reported trial to determine the effect of primary based care management for frail older adults (cited in Table I) which has shown that a physician aligned community care management approach reduces frail older adults risk of mortality and permanent residential care placement.

A recent change in the delivery of rehabilitative services in the corrections area has seen the introduction of a case management approach to facilitate prisoner's rehabilitation and reintegration. This approach has seen the introduction of some 227 case manager roles within the Department of Corrections.

United Kingdom

As with many other countries, Britain has long instituted a case engagement/ care coordinated approach in the workers compensation area. However, unlike New Zealand, generally there appears to be acceptance that health qualification or health background is required.

Britain has extended its use of case management from workers compensation into the area of managing complex vulnerable people with fluctuating needs, the workforce required to perform these roles are generally highly skilled nurses and/or social workers.

In this regard The National Health Service and Social Care Long term Conditions Model, of which case management is an integral part, builds on expertise and experience from within the National Health Service and from models implemented successfully in the United States – namely the Kaiser, Evercare and Pfizer approaches.¹⁵

These three models have differing approaches with the major distinguishing features being that the Kaiser model focuses on integrating services by removing distinctions between the primary and secondary care for people at all stages whereas the

EverCare and Pfizer approaches focus on targeting those at highest risk of hospitalisation.¹⁶

The workforce required to meet the needs of those with long term chronic conditions were required to be in the first instance highly qualified nurse clinicians, termed 'community matrons', who would work with patients (mainly those with a serious long term condition or complex range of conditions) in a community setting to directly provide, plan and organise their care.

Of interest to this review is the newly realised report (February 2012) commissioned by the Case Management Society in the United Kingdom, which investigated the need for a standardised, accredited or certified Professional Pathway for Case Managers in the United Kingdom. This report describes case management as a burgeoning industry lacking in regulation. The aims of the review /report were to:

1. Explore the most feasible type/model of professional pathway for case managers.
2. Identify the constituent parts of such a pathway.
3. Explore options for implementation of such a pathway.
4. Clarify the type/level/content of an educational framework and what it could contribute to a professional pathway.
5. Provided evidence of the impact of implementing a professional pathway on individual case managers and case management in the United Kingdom.

The method used was a questionnaire provided to a range of stakeholders – either providers or commissioners of case management. Some 95% of those who provided feedback held a professional qualification, the majority were nurses followed by occupational therapists.

Overall this investigation provided strong evidence in support of the need for a professional pathway that includes an educational framework. While there was less certainty about the need for a specific case management qualification there was very strong support for professional recognition, registration and professional qualifications. Most viewed this qualification as post graduate.¹⁷

¹⁵ Supporting People with Long term Conditions: UK Department of Health 2005: [http—www.dh.gov.uk-en-Publicationsandstatistics-Publications-PublicationsPoliciesAndGuidance-DH_4100252](http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPoliciesAndGuidance/DH_4100252)

¹⁶ Singh D, Ham C. Improving Care for People with Long Term Conditions: Review of UK and International Frameworks: <http://Birmingham.ac.uk/Documents/college-social-sciences/social-policy/HSMC/research/long-term-conditions.pdf>

¹⁷ CMSUK Project Report 2012: An Investigation to identify the need for a Standardised, Accredited or Certified Professional Pathway for Case Managers in the UK. <http://www.cmsuk.org/userfiles-0000%20HT%20Report%202012.pdf>

Australia

Australia employs case management in a variety of settings similar to those described in New Zealand literature; workers compensation, clinical care and long term community care, with increased emphasis on long term condition case management.

Additionally case management has been implemented as a model/strategy to assist in managing those in custodial care back into the community, which as identified has also been recently introduced into the New Zealand environment.

As with New Zealand models, case managers in the injury and private insurance environment may not have a health or health related background, however generally unlike New Zealand, it is often cited as a desirable role requirement. Educative opportunities discussed in this review are available to Australian case managers through a number of sectors.

Integrated care models in Australia commonly use case managers to assist in coordinating required services, particularly in areas of high intensity need such as long term conditions or those conditions/individuals/populations that are at risk to frequent hospitalisations.

Of particular interest to this review is the development in 1996 in Australia of the Case Management Society of Australia in response to the growing demand for support and information in regards to quality case management. New Zealand case managers are able to access this society membership; and the programme formally implemented at Auckland University in managed care (currently suspended) is cited as an advised programme on the society's website.

Australia also provides tertiary education for case managers, originally with emphasis on the injury management environment.

United States

Case management has a strong focus in the United States, particularly as a model/tool to manage those health consumers who are frequent users of the health system and/or who are likely to be long term users.

The majority of case managers are qualified nurses or those with allied health professional qualifications who work in a variety of settings (managed care, integrated care, workers compensation), either within a health facility (primary and/or secondary) through a case management company, or as a contractor.

Whilst they are required to have a high level of skill and knowledge in healthcare they are also often required to have knowledge and skill in arranging services and the funding implications surrounding these services.

In the United States, there is a recognised educative path for case managers and a society which advises on standards, ethics and educative opportunities. This society also carries out research around case management practices and organises conferences for case managers on a frequent basis.

Take the following example of a case manager's role and engagement in practice:

- a referral is received for case management services of a 55 year old diabetic with multisystem involvement and a range of psychosocial issues requiring the need for intervention across a wide range of specialties in order to manage and coordinate appropriate care
- generally in this model a third party such as an insurer will contract a case manager to work with the patient, family, health professionals and any other required services to work towards health outcomes which provide quality for him/her and a cost effective approach for the funder
- this engagement may be for an undetermined timeframe due to the chronic nature of the patient's health conditions
- the case manager will be a qualified health professional, often a registered nurse who holds postgraduate certification in case management, with in-depth knowledge of the clients health issues and also in-depth knowledge of health systems and funding arrangements as he/she will be involved with brokering health and related services
- generally the case manager works closely with the primary physician in order to affect the best evidence-based approach to care.

The United States has increasingly used case management models and case managers to affect more integration and coordination of care within the secondary care environment, recognising that in a more complex hospital environment quality and cost issues – if not controlled – created potential for poorer care and increasing cost.

An example where this has produced positive results in regards to quality and cost effectiveness, has been in one emergency department where a case manager employed to manage and report on the increasing use of the department by mental health consumers, resulted in appropriate changes and assistance to this group thereby preventing unnecessary use of the emergency area and affecting more appropriate care for the health consumers. Further changes also resulted from this outcome in regards to better evaluating tools for admission and discharge and more appropriate IT system support financed by the savings made that prevented unnecessary use of the department.¹⁸

¹⁸ Daniels S, Ramey M: *Leaders Guide to Hospital Case Management* 2005 UK: Jones and Bartlett

Canada

Canada operates similar models and systems in case management to the United States' models. It is an integral and growing part of healthcare delivery in this country with recent development in regards to professional standards for case managers and or those acting in a co-ordinator role which is further discussed in this review. As with the United States, generally case managers are highly skilled nurses.

Of relevance to this review is the recent announcement (March 2012) of government funding to develop practice standards and further development of case management practice in recognition of the part case management/case coordination plays in healthcare delivery particularly in long term care and chronic conditions.

Integrated Care

The World Health Organisation definition advises that integrated care is about 'bringing together inputs, delivery, management and organisation of services related to diagnosis, treatment, care, rehabilitation and health promotion'.

As with case management there are many differing versions, interpretations and terms associated with its definition. Also known as coordinated care, comprehensive care, seamless care, transmural care and collaborative care, this system(s) of care aims to facilitate and support the health consumers' ability to self-manage in order to achieve best health outcomes.

Proponents believe it differs from a case management approach in that it is directed towards empowering the health consumer to be able to self-manage by applying systems often termed as 'critical or clinical care pathways', supported by appropriate health and allied professionals.

However the two models are not mutually exclusive; research provides evidence that case management practices and/or case manager roles are often an integral part of the delivery of an integrated approach, similarly integrated care is a specific aim of case management in order to facilitate best outcomes for consumer and funder.

Clinical/critical/care pathways described as a fundamental to integrated care are structured, multidisciplinary plans of care designed to support the implementation of clinical guidelines and protocols, and non-clinical resource management, clinical audit and also financial management.

They provide detailed guidance for each stage in the management of a health consumers requirements (treatments, interventions etc) with a specific condition over a given time period, and include progress and outcomes details. In this regard they differ from practice guidelines, protocols and algorithms as they are utilised by a multidisciplinary team and have a focus on the quality and co-ordination of care.¹⁹

Other definitions advise integration of care as a coherent set of methods and models on the funding, administrative, organisational, service delivery and clinical levels designed to create connectivity, alignment and collaboration within and between the cure and care sectors. The goal of these methods and models is to enhance quality of care and quality of life, consumer satisfaction and system efficiency for patients with complex, long term problems cutting across multiple services, providers and settings.²⁰

Five main drivers behind the integrated care agenda are:

- Integrated care addresses the changing demand for care.
- Integrated care recognises that health and social care outcomes are interdependent.
- Integrated care is a vehicle towards social integration of society's more vulnerable groups.
- Integrated care may lead to better system efficiency.
- Integrated care may improve the quality and continuity of care

Benefits of an integrated care approach:

- supports the introduction of evidence-based medicine and use of clinical guidelines
- supports clinical effectiveness, risk management and clinical audit
- improves multidisciplinary communication, teamwork and care planning
- can support continuity and co-ordination of care across different clinical disciplines and sectors
- provide explicit and well-defined standards for care
- help reduce variations in patient care (by promoting standardisation)
- help improve clinical outcomes
- help improve and even reduce patient documentation
- supports training
- optimises the management of resources
- can help ensure quality of care and provide a means of continuous quality improvement

¹⁹ Clinical Pathways Module One: The Medical City <http://www.tmcinqio.com/wp-content/uploads/2011/03/MPlayLModule1handout.pdf>

²⁰ Kodner D, Spreeuwenberg C Integrated Care Meaning, logic, applications, and implications-a discussion paper. *Int J Integrated Care* . 2002 Oct-Dec; 2: e12 PMID: PMC1480401 <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC14800401/>

- supports the implementation of continuous clinical audit in clinical practice
- supports the use of guidelines in clinical practice
- helps empower patients
- helps manage clinical risk
- helps improve communications between different care sectors
- disseminates accepted standards of care
- provides a baseline for future initiatives
- expected to help reduce risk
- expected to help reduce costs by shortening hospital stays

Integrated care models

Models of integration are many and varied, some common models are:

- **Shared information among professionals from different sectors:**
This model uses greater sharing of patient information among health and social care professionals to facilitate the treatment of patients in a coordinated fashion, minimise data storage costs, and reduce problems that result from separate information systems.
- **Standardised communication protocols and formats:**
Defined communication protocols and formats are used to improve communication between health and social care professionals, and facilitate a more seamless and integrated care process.
- **Single assessment processes incorporating multi-disciplinary assessment:** This involves a single, multi-disciplinary assessment of users' needs for health and social care. Single assessment processes reduce the number of assessments that a patient undergoes, and provide a central point of information from which to coordinate care.
- **Defined pathways of care:** clearly defined multi-disciplinary pathways of care incorporating both health and social care.
- **Single access points to care:** Reduces the number of 'access-points' at which users receive care, ideally to a single access point, so as to reduce the number of professionals and organisations that patients have to deal with ²¹

²¹ Lloyd J Wait S Integrated Care-A Guide for Policy Makers http://www.wilcuk.org.uk/files/pdf_pdf_7_pdf

Examples of integrated care approach

Chronic Care Management Programme, Counties Manukau DHB: Improving quality of care while reducing cost: The Middlemore Hospital Very High Intensity User Programme – the role of community pharmacy in integrated care to intensively manage the complex patient.

This programme has been developed to address the very high intensity users of secondary services (Middlemore Hospital) in an attempt to contain costs by helping patients and families change health behaviours.

This integrated care model is designed to improve care of frequent presenters at the Emergency Department and establish/re-establish effective care in the community and general practice. In this regard the community pharmacist is seen as an integral part of this approach as inappropriate use or non-adherence to advised medicine regimes is identified as an important factor in frequent high intensity users presenting at the Emergency Department.

The basic model of care is comprised of five fundamental elements:

1. Identification of the Very High Intensity User patient.
2. Pre-assess the patient for possible unaddressed risk factors, such as demographics, social issues and mental health etc.
3. A multi-disciplinary team visits the patient to glean a full understanding of the problem.
4. Refer appropriately for management (very often the community pharmacy).
5. Develop a care plan in discussion with the GP and practice nurse.

Whilst focusing on prevention (to optimise ongoing care in the hope of reducing frequent admissions) the model involves medical and social review using a multidisciplinary approach with a designated 'navigator', committed follow up, self and family management including involvement of community bases, organisations if deemed appropriate.

An evaluation of this programme is currently underway, including a randomised controlled trial to assess the effect of the programme on acute hospital demand; a process evaluation into programme delivery; measures of patient outcomes; and measures of costs.

Initial findings however, support this approach of primary/secondary care integration along with social support for long term care management.²²

²² Improving quality of care while reducing costs: The Middlemore Hospital Very High Intensity User programme – the role of community pharmacy in integrated care to intensively manage the complex patient. Health Improvement & Innovation Resource Centre March 2012: Pharmacy Guild of New Zealand <http://www.pgnz.org.nz/assets/Uploads/VHIU-Report.pdf>

Flinders Programme

Previously described as Flinders Model supported by research into coordinated care in the 1990s which identified self-management as a key identifier of a person's health need), is described as a robust programme of chronic condition management developed and implemented in Australia (for some years now also implemented in the New Zealand setting), as a tool for health professionals in partnership with health consumers to develop a personalised self-management care plan.

Based on its inception in the South Australia HealthPlus coordinated care trial (1997-1999), and subsequent research and development, the Flinders care planning process has five functions:

1. **Generic and holistic chronic condition management :**
It provides a generic clinical process for assessment and planning for disease specific management. It uses a semi-structured framework which could be applied to any chronic disease or condition and co-morbid conditions in the same person, that is patient centred and holistic i.e., incorporates the bio (disease) psychosocial aspects of a person into a plan, and is motivational.
2. **Case management :**
A screening tool is used to determine who requires full care planning and case management. The care plan itself then becomes the case management model by defining the roles of the health professionals and the client, the need for case management or coordination could be determined. (Not all people with chronic conditions need support or education or case management).
3. **Self-management support:**
The care planning process enables assessment of the person's self-management knowledge, behaviours and barriers so as to be able to target self-management education and support to the person.
4. **Systemic and organisational change:**
The programme provides a longitudinal structure, which if followed naturally leads to the development of an integrated care plan for each patient which addresses: self-management issues; evidence based medical care; motivation and maintenance of effort; a care plan for each medical condition which is measurable and monitored and meshes with public or private practice business processes.
5. **Clinician change:**
Use of the Flinders Programme can change a clinician's understanding of their practice in delivering patient centred care. The Flinders Programme provides a semi-structured method of ensuring that patients are fully engaged in the delivery of their own care. The quality of the therapeutic alliance is optimised.²³

²³ Flinders University Site: The Flinders Program™ <http://www.flinders.edu.au/medicine/sites/fhbhru/self-management.cfm>

Community Care North Carolina (CCNC) North Carolina, United States

This programme is funded through the state Medicaid programme and is designed to improve quality, cost accessibility and utilisation of services for low income uninsured recipients.

CCNC uses multiple methods to promote integration through coordinated and standardised clinical practice. These include locally adapted clinical guidelines, case management services, data review and analysis, and feedback on clinical practice. This integrated programme covered more than 3000 physicians who provide care for more than 880,000 Medicaid enrollees across the state.

The central CCNC programme office provides medical leadership, operational support (for example, information technology (IT) and data analytics) and developmental support to 14 regional networks.

The network offices receive a set amount from Medicaid-enrolled patient per month in order to support physicians in the CCNC programme. Each network is led by a medical director and network manager, and employs a case management team that may include nurses, pharmacists, social workers and selected other staff, depending on local need. The network offices work with participating doctors to disseminate guidance, support and monitor changes in clinical practice, and enable more integrated care to be delivered to patients.

CCNC's programmes result in more integrated care by linking patients to a named primary care doctor, and supporting a consistent standard of care for common conditions across different physician practices through adherence to evidence-based guidelines and disease management programmes for high-prevalence conditions. Selected patients also receive case management and care coordination services, and CCNC builds links between doctors, hospitals, social services and other community providers.²⁴

Community Assessment and Rehabilitation Teams (CART) – UK

This model of integrated care involves a multi-disciplinary team based in a single location (available to all health consumers in the UK) undertaking integrated assessments of health consumers both before admission to hospital and after discharge, following referrals from both hospitals and community-care organisations.

CARTs aim is to intervene before a crisis point is reached in a health consumer's condition that requires hospital admission, thereby positively affecting outcomes on quality and cost of care. The team members consist of nurses, occupational therapists and physiotherapists, who are charged with working closely with all other health professionals and providers such as GP and specialists.

²⁴ Steiner BD, Denham AC, Askin E. et al Community Care of North Carolina: Improving Care Through Community Health networks *Annals of Family Medicine* July 1, 2008 Vol 6 No 4 361-367 DOI:10.1370/afm.866 <http://www.annfammed.org/content/6/4/361.full>

A literature review undertaken for a report on 'The Effectiveness of Health Care Teams' in the National Health Service provided evidence that teams working together in a similar manner as the CART approach lowered hospitalisation rates and reduced physician visits while maintaining function for elderly patients with chronic illness and functional deficits.

Significant cost savings were also shown from reduced hospitalisation, which more than accounted for the costs of setting up the team and making regular home visits.

Families who received primary health team care had fewer hospitalisations, fewer operations, fewer physician visits for illness and more physician visits for health supervision than control families. A similar pattern emerged for terminally ill patients, where their increased utilisation of home care services more than offset savings in hospital costs, such that there were average savings of 18% in hospital costs.²⁵

Guided Care

Guided care has become an increasingly popular model of working in the United States. Like case management, it seeks to apply a multidisciplinary approach to coordinating care through the skill of specifically trained registered nurses. In the United States, these nurses are assigned to a primary health facility where they work closely with the physicians and health consumers.

The health consumers are generally those who have multiple conditions where in the United States it is recognised that a quarter of Americans have multiple conditions and these individuals account for two-thirds of the health spend.

The development of a guided care programme in the United States originated in 2001 through a team of researchers at John Hopkins University. Professor Boulton, a key academic at John Hopkins Bloomberg School of Public Health who was and is instrumental in the implementation and design of guided care as a way of working has recently been a Community Trust of Otago Visiting Professor at the Otago Medical School.

Guided care is a practical, interdisciplinary model of health care designed to improve the quality of life and efficiency of resource use for persons with medically complex health conditions.

A guided care nurse works in partnership with primary care physicians to provide coordinated, patient centred, cost-effective care to chronically ill patients.

Whilst registered nurses operate case management functions, in the guided care model key differences are it:

²⁵ Borrelli CS, Carletta J, Carter AJ et al The Effectiveness of Health Care Teams in the National Health Service Report <http://homepages.inf.ed.ac.uk/jeanc/DOH-final-report.pdf>

- is based in the primary care physician's office
- works with the patient long-term, usually for life
- provides intensive transitional care
- uses motivational interviewing to help patients manage their conditions
- provides continuing education, resources, and support for family caregivers.

A Johns Hopkins study showed that guided care improves the quality of care and, in well-managed health care systems, even reduces visits to the emergency room and admissions to hospitals and skilled nursing facilities.²⁶

A multidisciplinary team of investigators at Johns Hopkins University and experts from across the United States have conducted a one-year pilot study of guided care that suggested guided care improves the quality and efficiency of care, and is feasible and acceptable to physician, patients, and family /caregivers.

A completed 32-month cluster-randomised controlled trial of guided care at eight urban and suburban community primary care practices in the Baltimore-Washington, DC area assessed the effects of guided care on a consumers quality of life, insurers' costs, family caregivers' strain, primary care office function, and physicians' and nurses' job satisfaction. Six month data from the trials show that Guided Care improves the quality of care, reduces healthcare costs, reduces family caregiver strain, and produces high job satisfaction among physicians and nurses. Analyses of the 32-month data are currently underway. Based on early RCT results, two of the managed care organisations that participated in the trial continue to provide guided care to their consumers.

Early results in relation to the trial is the positive feedback from all parties – consumers feel more supported and involved in their care; physicians identify improved health outcomes for their patients along with developing a closer relationship (through the communication and feedback from the guided care nurse) with the patient; and believe their practice has become more efficient as a result of this model. Of particular significance is the feedback from the nurses themselves who identify that they are finally practising in the way they envisaged, 'holistically'.²⁷

The educative programme is a six week online course and examination available to registered nurses. These nurses will ideally have had three years' experience in homecare, case management, community/gerontological nursing experience.

The programme teaches best practices in chronic disease management, case management, self-management, lifestyle modification, caregiver education and support, transitional care, and geriatric evaluation and management.²⁸

It is worthy of note that the Guided Care Programme at John Hopkins Healthcare received the Case Management Society of America 2011 Case Management Research Award.

²⁶ Boulton C, Reider L, Leff B et al The Effect of guided Care Teams on the Use of Health Services: Results from a Cluster-Randomised Controlled Trial. *Arch Intern Med* 2011; 171 (5): 460-466

²⁷ Johns Hopkins BLOOMBERG School of Public Health: <http://www.guidedcare.org/nurse.asp>

²⁸ The Institute for Johns Hopkins Nursing: Continuing Education: http://www.ijhn.jhmi.edu/contEd_3rdLevel_Class.asp?

Benefits of case management /guided care/integrated care approaches

How does a managed care/case management approach benefit social, economic and health outcomes?

Examples of case management models described are all used to affect quality and where possible cost effective outcomes with varying degrees of success. As advised there are considerable challenges with describing and evaluating models of case management however a generally agreed and expected outcome of case management is that it will deliver a coordinated approach to enable positive outcomes for both consumer and funder.

Research in case management produces interesting results; as acknowledged case management has a wide variety of service models, definitions and varying applications which is often dependent on the skill of the case managers and their available resources, leaving it challenging to study and evaluate on. Additionally case management programmes may develop and change as they are implemented and may thus stray from the combination of factors which contribute to successful outcomes.

Managers and commissioners need therefore to view the importance of programme fidelity where the content of the intervention needs to be related to the precise goals it is designed to achieve.²⁹

Integrated care research like case management research also faces similar challenges when researching, however it has become widely accepted as a system which affects quality and cost outcomes in healthcare.

²⁹ Challis, D. (2003) Achieving co-ordinated and integrated care among long term care services: the role of care management, in Brodsky, J., Habib, J. and Hirschfeld, M. (eds) *Key Policy Issues in Long Term Care*, World Health Organisation, Geneva.

Examples of research programmes, systemic review/surveys

Table One: This provides examples of research programmes, systemic review/surveys that cover a number of areas in healthcare in regards to case management and integrated care models.

STUDY	AIM	METHOD	RESULTS	CONCLUSION
Telephone case management reduces both Distress and Psychiatric Hospitalization <i>Aust NZJ Psychiatry September 2009 vol. 43 no. 9 809-811</i>	The aim of the present study was to improve the health care of people repeatedly admitted to private hospitals.	Open trial frequent users were offered telephone case management over a 12 month period. Structured proactive support programme for those with relapsing mental health disorders.	An average of 24 phone calls were made to the 99 who remained in the programme for the 12 months. Psychological distress declined significantly over the 12 months, and the number of days in hospital was reduced compared to the previous year. The cost benefit ratio was 1:8.4. 50% of enrolees completed the programme.	The changes in well-being and hospitalization over the 12 months were substantial and are unlikely to be due to regression to the mean. A prospective randomized controlled trial comparing telephone case management with treatment as usual is indicated as those not enrolled were not surveyed.
Cost Effectiveness of Diabetes Case Management for Low-Income Populations <i>Todd P. Gilmer, Stephane Roze, William j Valentine, Katrina Emy-Albrecht, Joshua A Ray, David Cohen, Lars Nicklasson, Athena Philis-Tsimikas, Andrew J Palmer: Health Research and Educational Trust (www.blackwell-synergy.com/doi/abs/10.1111/j.1475-6773.2007.00701.x)</i>	To evaluate the cost effectiveness of Project Dulce, a culturally specific diabetes case management and self-management training programme, in four cohorts defined by insurance status-(3,893 persons) large focus on pharmacotherapy and self-management.	Comparison of effectiveness with this model as opposed to cohort of historical controls.	Dulce programme effective in areas of improved clinical and cost effective results	Project Dulcie diabetes case management programme was associated with cost effective improvements in quality adjusted life expectancy and decreased incidence of diabetes –related complications over patients lifetimes; intervention provided early in life has a high potential for long term health gains and may also impact positively on employment productivity

				in individuals and the family unit.
<p>The Effectiveness of Disease and Case Management for People with Diabetes A Systematic Review</p> <p><i>Susan L. Norris, MD, MPH, Phyllis J. Nichols, MPH, Carl J. Caspersen, PhD, MPH, Russell E. Glasgow, PhD, Michael M. Engelgau, MD, MSc, Leonard Jack Jr, PhD, MSc, George Isham, MD, Susan R. Snyder, PhD, Vilma G. Carande-Kulis, PhD, Sanford Garfield, PhD, Peter Briss, MD, David McCulloch, MD, and the Task Force on Community Preventative Services</i> <i>(Am J Prev Med 2002;22(4S):15–38) © 2002 American Journal of Preventive Medicine)</i></p>	Effectiveness and economic efficiency in disease and case management	Developing an approach to identifying, organising, grouping, and selecting interventions for review; developing an analytic framework depicting interrelationships between interventions, populations, and outcomes; systematically searching for and retrieving evidence; assessing and summarizing the quality and strength of the body of evidence of effectiveness; translating evidence of effectiveness into recommendations; summarizing data about applicability, economic and other effects, and barriers to implementation; and identifying and summarising research gaps.	Case management is effective in improving both glycaemic control and provider monitoring of glycaemic control and is effective when both delivered in conjunction with disease management and when delivered with one or more additional educational or reminder support interventions. Evidence supports the effectiveness of disease management on glycaemic control; on screening for diabetic retinopathy, foot lesions and peripheral neuropathy, and proteinuria; and on the monitoring of lipid concentrations.	Case and disease management both impact positively on consumer quality and funder cost effectiveness
<p>Dementia Case Management Effectiveness On Health Care Costs And Resources Utilisation: a systematic review of randomised control trials.</p>	Review evidence of case management efficacy on care costs, hospitalisation and institutionalisation in consumers with dementia.	Review of randomised control trials for community dwelling consumers, where studies provide done or more outcomes i cost analysis, hospitalisation, institutionalisation.	Majority of trials displayed no economic advantages.	Drawing conclusion on case management effectiveness hampered by the limited number and varying quality of studies. Of interest two studies that provided best evidence supporting case management intervention in reducing

				institutionalisation were longer studies and appeared to affect a more 'hands on' approach; other conclusion case management effectiveness is strongly dependent on health care systems, thus integration into any health system is primordial.
Coordinated and Tailored Work Rehabilitation: A Randomised Control Trial with Economic Evaluation Undertaken on Sick Leave Due to Musculoskeletal Disorders. <i>Ute Bultmann, David Sherson, Jens Olsen, Carl Lysbeck Hansen, Thomas Lund, Jorgen Kilsgaard, J Occup Rehabilitation (2009) 19:81-93 DOI 10.1007/s10926-009-9162-7</i>	Denmark study to evaluate the effectiveness a CTWR (interdisciplinary team) approach has on the reduction of sick leave.	Randomised control trial involving CTWR approach compared with CCM (conventional case management with focus on collaboration)	CTWR Beneficial effect on reduced sickness hours, reduced productivity loss due to less sick absence as opposed to conventional case management.	Main difference in style multidisciplinary assessment, conference, development of a coordinated, tailored and action orientated return to work plan.
Improved outcome quality following total knee and hip arthroplasty in an integrated care setting: results of a controlled study <i>Bethge M, Bartel S, Streibelt M, Lassahn C, Thren K. http://www.ncbi.nlm.nih.gov/pubmed/21503861</i>	In Germany, the introduction of the Law on integrated care (IC) (§ 140 a-d SGB V) opened up the possibility of cross-sectional health care settings and new forms of remuneration, and improved the conditions for a closer cooperation between health care providers. Patients awaiting a hip or knee arthroplasty expect	The controlled multicentre trial included pensioners who received an arthroplasty following gonarthrosis or coxarthrosis. Implantation of the arthroplasty was accomplished in 11 hospitals. Participants of the intervention group (IG; 3 hospitals) were treated within an IC model, participants of the	481 patients attended the study (IG: n = 249; KG: n = 232). Response at end of treatment was 85.9% (n = 413), response after 4 months was 89.4% (n = 430) and after 1 year 85.9% (n = 413). Multivariate analyses confirmed a reduction of treatment time by 4 days (b = -3.964; 95% CI: -5.833 to -2.094; p < 0.001) and	The IC setting improved coordination and communication at the interface between hospital and rehabilitation centre (internal patient orientation). Higher patient satisfaction and better outcome quality (external patient orientation) are not only achievable by improved medical devices but also

	<p>a higher benefit from such an intensified cooperation of operating hospital and rehabilitation centre. However, to date there is no study that investigated the anticipated effects on functional outcomes. Therefore, the aim of our study was the efficacy evaluation of an arthroplastic IC model in comparison with usual care.</p>	<p>control group (CG; 8 hospitals) were treated within conventional care. Primary outcome were the functional complaints measured by the Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC).</p>	<p>improved functional outcomes on the WOMAC (4 months: $b = -7.219$; 95% CI: -11.184 to -3.254; $p < 0.001$; 12 months: $b = -8.070$; 95% CI: -12.101 to -4.039; $p < 0.001$). Patients of the IG rated the process better (e. g. cooperation between hospital and rehabilitation centre: $b = 0.672$; 95% CI: 0.401 to 0.943; $p < 0.001$); reported a better self-rated health after 1 year ($b = 4.418$; 95% CI: 0.050 to 8.786; $p = 0.047$), and were physically more active ($b = 1.603$; 95% CI: 0.655 to 2.551; $p = 0.001$).</p>	<p>by innovative communicative and organisational structures bringing along an improved process quality.</p>
<p>Benefits of a primary care clinic co-located and integrated in a mental health setting for veterans with serious mental illness.</p> <p><i>Pirraglia PA, Rowland E, Wu WC, Friedmann PD, O'Toole TP, Cohen LB, Taveira TH. http://www.ncbi.nlm.nih.gov/pubmed/22300871 Prev Chronic Dis2012 Feb;9:E51. Epub 2012 Feb 2.</i></p>	<p>To test whether implementation of a primary health/integrated in a mental health setting program affected health service use and cardiovascular risk factor control among veterans with serious mental illness who had previously demonstrated limited primary care engagement.</p>	<p>Cohort study of veterans enrolled in a co-located, integrated primary care clinic in the mental health outpatient unit through targeted chart review. Two successive 6-month periods in the year before and in the year following enrolment in the co-located primary care clinic were examined for primary care and emergency department use and for</p>	<p>Compared with the period before enrolment, the 97 veterans enrolled in the clinic had significantly more primary care visits during 6 months and significantly improved goal attainment for blood pressure, low-density lipoprotein cholesterol, triglycerides, and BMI. Changes with regard to goal attainment for high-</p>	<p>Enrolment in a co-located, integrated clinic was associated with increased primary care use and improved attainment of some cardiovascular risk goals among veterans with serious mental illness. Such a clinic can be implemented effectively in the mental health setting.</p>

		goal attainment of blood pressure, fasting blood lipids, body mass index (BMI), and, among patients with diabetes, haemoglobin A1c (HbA1c). Repeated-measures logistic regression to analyse goal attainment and repeated measures Poisson regression to analyse service use.	density lipoprotein cholesterol and HbA1c were not significant.	
<p>Randomised trial of impact of model of integrated care and case management for older people living in the community.</p> <p><i>BMJ1998;316doi: 10.1136/bmj.316.7141.1348(Published 2 May 1998) Cite this as:BMJ1998;316:1348</i></p>	<p>To evaluate the impact of a programme of integrated social and medical care among frail elderly people living in the community. Randomised study with 1 year follow up. Setting: Town in northern Italy (Rovereto)</p> <p>Subjects: 200 older people already receiving conventional community care services.</p> <p>Intervention: Random allocation to an intervention group receiving integrated social and medical care and case management or to a control group</p>	<p>Main outcome measures: Admission to an institution, use and costs of health services, variations in functional status.</p>	<p>Survival analysis showed that admission to hospital or nursing home in the intervention group occurred later and was less common than in controls (hazard ratio 0.69; 95% confidence interval 0.53 to 0.91). Health services were used to the same extent, but control subjects received more frequent home visits by general practitioners. In the intervention group the estimated financial savings were in the order of £1125 (r1800) per year of follow up. The intervention group had improved physical function (activities of daily living score improved by 5.1% v13.0% loss in controls;</p>	<p>Integrated social and medical care with case management programmes may provide a cost effective approach to reduce admission to institutions and functional decline in older people living in the Community.</p>

	receiving conventional care.		P < 0.001). Decline of cognitive status (measured by the short portable mental status questionnaire) was also reduced (3.8% v 9.4%; P < 0.05).	
Implementation of case management in long term conditions in England: survey and case studies.	Describe the current provision of case management arrangements in primary care for people with long term conditions in England and identify the extent and nature of self-care support services within it.	Cross sections survey of primary care trusts in England and four case studies using semi structured interviews and focus groups.	Services predominately nurse led typically by 'community matrons' assessment, care coordination and direct support were principal tasks, care plans limited to primary care services and did not include service costings.	Case management for long term conditions at early stage of development, effective links to range of local services required if care plans are to be comprehensive.
Cost, Effectiveness, and Cost effectiveness of a Collaborative Mental Health Care Program for People receiving Short-Term Disability Benefits for Psychiatric disorders. <i>(Carolyn S Dewa, MPH, PhD; Jeffrey S Hoch, PhD; Glenn Carmen, MSc, DPH; Richard Guscott, MA, MD, FRCPC; Chris Anderson, MM Canadian Journal of Psychiatry, Vol 54, No 6, June 2009)</i>	Examine the cost, effectiveness, and cost effectiveness of a collaborative mental healthcare (CMHC) pilot programme for people on short term disability leave for psychiatric disorders which involved greater facilitation / collaboration between specialists in mental healthcare, primary care physicians.	Quasi-experimental design, 2 groups of students who received short term disability benefits. One group in CMHC programme during their disability episode. Difference in cost and days absent were tested and compared as was rerun to work and transition to long term disability using chi-square tests. Cost effective analysis used the net benefit regression framework.	Results suggest that with CMHC for every 100 people on short term disability leave for psychiatric disorders, there could be a \$50k in saving related to disability benefits along with more people returning to work (n=23), less people transitioning to long term disability leave (n=24) and 1600 more workdays.	CMHC models of disability management based on this study may be a worthwhile investment in helping people who are receiving short term disability benefits for psychiatric disorders.
Case management of arthritis patients in primary care: a cluster randomised controlled trial.	To assess whether providing information on arthritis self-management through	Pragmatic, cluster-randomised, controlled, 3-arm trial that included 1,021 patients from 75	Of 1,125 administered questionnaires, 1,021 were analysed. Compared with the	Improving the quality of life in patients with arthritis using arthritis self-management seems

<p><i>Rosemann T, Joos S, Laux G, Gensichen J, Szecsenyi J.</i> <i>Arthritis Rheum 2007 Dec 15;57(8):1390/7.</i></p>	<p>general practitioners (GPs) increases the quality of life in patients with osteoarthritis and whether additional case management provided by practice nurses shows better results.</p>	<p>primary care practices in Germany. GPs were randomised to intervention group I, group II, or a control group. GPs of both intervention groups participated in 2 peer group meetings. In intervention group II, additional case management was conducted via telephone by a practice nurse. The primary outcome was change in quality of life, assessed by the German version of the Arthritis Impact Measurement Scales Short Form (AIMS2-SF). Secondary outcomes were health service utilization, prescriptions, and physical activity. Data were controlled for depression using the Patient Health Questionnaire 9 as a potential confounder.</p>	<p>control group, no significant changes occurred in intervention group I with respect to the primary outcome. Performed radiographs decreased significantly ($P = 0.050$), whereas prescriptions of acetaminophen increased significantly ($P < 0.001$). In intervention group II, significant changes in the AIMS2-SF dimensions social ($P < 0.001$), symptom ($P = 0.048$), and lower body ($P = 0.049$) were identified. Radiographs ($P = 0.031$) and orthopaedic referrals ($P = 0.044$) decreased whereas prescriptions of pain relievers increased significantly</p>	<p>challenging. Simply providing this information through GPs is not sufficient but combining it with case management seems to be a promising approach.</p>
<p>Six and 12-month outcomes among homeless youth accessing therapy and case management services through an urban drop-in centre.</p> <p><i>Slesnick N, Kang MJ, Bonomi AE, Prestopnik JL.</i></p>	<p>To evaluate the impact of case management and individual therapy offered through a drop-in centre for homeless youth on substance use, mental health, housing, education, employment, and medical care</p>	<p>All youth ($n=172$) between the ages of 14-24 who accessed treatment services through an urban, south-western drop-in centre were included. Semi structured and self-report questionnaires were</p>	<p>Statistically significant improvements were found in substance abuse, mental health, and percent days housed up to 12 months post baseline. Decreased alcohol and drug use was</p>	<p>While treatment offered through drop-in centres for homeless youth can positively impact homeless youth, policy, funding, and service provision need greater focus, collaboration, and support if youth</p>

<i>Health Serv Res. 2008 Feb;43 (1 Pt 1):211-29.</i>	utilisation.	administered to youth between October 2002 and April 2005. A repeated measures design was utilized. Youth were assessed at baseline, 6 months, and 12 months post baseline. Hierarchical linear modelling was used to test the hypotheses.	associated with an increase in housing. However, most youth did not acquire permanent housing, and education, employment, and medical service utilization did not significantly change over time.	homelessness is to be successfully addressed.
Should Care managers for Older Adults Be Located in Primary Care? A Randomised Controlled Trial. <i>Matthew Parsons, PhD, Hugh Senior, PhD, Ngaire Kerse, PhD, Mei-hua Chen, MSc, Stephen Jacobs, PhD, Stephen Vanderhoorn, MSc, and Craig Anderson, PhD</i> <i>JAGS 60:86-92, 2012.</i>	To determine the effect of a primary care based care management initiative on a residential care placement and death in a population of frail older adults referred for needs assessment in New Zealand. Care management programme consisted of a nominated health professional care manager (skilled nurse) geographically aligned to family physicians housed with the family physician or located nearby.	Randomised control trial with follow up at 3, 6, 12, 18 and 24 months for residential care placement and mortality.	Risk of permanent residential care placement or death was 0.36 for usual care (control group) and 0.26 for the care management initiative, a 10.2% absolute risk seen in residential care placement (control group 0.25, intervention group 0.16)	A family physician-aligned community care management approach reduces frail older adults risk of mortality and permanent residential care placement.

(Literature search: Case management, integrated care, care coordination, collaborative care, seamless care, transmural care, guided care, care navigation, critical care pathways, clinical care pathways).

Workforce qualifications

Table 2: International workforce application and qualifications in case management/case coordination.

COUNTRY	TITLE/WORKFORCE COMPOSTION	EDUCATION AND QUALIFICATION REQUIREMENTS	WORKFORCE APPLICATION	PROFESSIONAL BODIES
United States	Case Manager (may use other titles such as case coordinator, care navigator) Predominately nurses, social workers and or health related qualification.	Generally a minimum of an undergraduate degree in health science or social work with Case management nurse certification acquired through the American Nurses Credentialling Centre - ANCC (largest board certification body for nurses in United States) Accredited case manager (Accredited case manager certification) Registered nurse or license in practical nursing who has completed certified qualification –certified managed care nurse	Health insurer setting Health provider setting Workers compensation/employer setting Veterans Healthcare insurance setting	Case Management Society of America Non-profit organisation –support and develop profession through educative opportunities, networking legislative advocacy, establishing standards of practice. Code of ethics.
	Managed Care Nurse	Registered nurses who complete an online certificate – note not a certification but a recognition of professional development	Hospital setting	American Case Management Association - non-profit professional membership supports practice of hospital case management.

	Guided care nurse		<p>Primary and secondary settings (emphasis on consumer education- develop wellness and prevention programmes disease management programmes administration and application of benefits to enrolled consumer)</p> <p>Nurses work in a practice that adopts the Guided Care model usually part of an accountable care organization that provides comprehensive, coordinated, continuous care to their patients, including those with multiple chronic conditions who require complex services. Nurses work closely with physicians and consumers</p>	<p>American Board of Managed Care Nursing – non-profit organisation formed 1998 national examination and testing to deliver a defined set of behaviours http://www.abmcn.org/</p>
Canada	Case manager/ intensive case manager/ disability	Generally case managers must have undergraduate degree in nursing or health related field dependent on area of work	<p>Health insurer setting</p> <p>Health provider setting</p>	<p>The National Case Management Network is a non-profit professional association representing case</p>

	case manager	where case management is required. Certification available and encouraged through university programmes in Canada in case management.	Workers compensation/employer setting Veterans healthcare insurance setting	management services in health and social services across Canada. This organisation supports the growth and development of case management as a strategy essential to an effective health care system. Their goal is to continue to advance the development of case management standards of practice, facilitate continuing education for professionals to develop their case management competencies and support members to excel in the practice of case management. Recent announcement by government (March 2012) to support the development of core competencies and standards of practice in recognition of the better health outcomes achieved through case management/case coordination.
United Kingdom	Case managers (community matrons, care navigators)	Generally a registered nurse and or health related qualification (social, psychology, rehabilitation counsellor) for all areas of practice case management not a recognised professional title or pathway in the UK.	Healthcare – public and private. Increasingly in consumers with chronic long term conditions Workers compensation Private insurance setting	Case Management Society UK (2001). Committed to delivery of quality case management through standards of best practice. Research project underway over past year for development of educational pathway findings now available, which supports holding firstly a relevant professional qualification with a professional pathway that

				<p>includes an educational framework in case management practice.</p> <p>http://www.cmsuk.org/userfiles/0000%20HT%20Report%202012.pdf</p>
Australia	Case managers – differing titles dependent on area of work; rehabilitation coordinators, integrated care coordinators, personal injury case managers, return to work coordinator, rehabilitation counsellors	Role determines qualification requirement, generally health or allied health undergraduate background and or experience, case management qualifications available are through government training schemes and/or university training in case management and personal injury management. New Zealand qualification in managed care cited (now in suspension).	<p>Workers compensation /injury management areas</p> <p>Community health settings/integrated care</p> <p>Insurance</p>	<p>Case Management Society of Australia.</p> <p>Founded in 1996, (affiliate of the Case Management Society International) support came from health industry stakeholders. Non-profit organisation dedicated to support and development of the practice of quality case management, has produced national standards of practice, holds annual conferences, educational forums and networking opportunities.</p>
New Zealand	Case Managers (differing titles dependent on area of work; care coordinators, clinical case managers)	No health or health related qualification required in majority of case management positions unless role combines clinical input and support with case coordination	<p>Injury and private insurance settings</p> <p>Primary and secondary services</p> <p>Roles in areas such as aged care, mental health drug and alcohol</p> <p>Māori Health Settings</p>	<p>No professional body in New Zealand.</p> <p>Not a recognised career pathway, case managers do access membership to Australian Case Management Society.</p>

Workforce application

Generally, as outlined in the table, the workforce involved in coordination and integration of care internationally is required for the most part to have an undergraduate degree in nursing, social work and or health science in order to carry out case management/case coordination roles.

Many organisations also require a candidate to have already acquired skills and experience in case management as well as an applicable certification/ post graduate qualification. However if these are not available, candidates with nursing and/or health related qualifications are preferred. This applies mainly to the United States and Canadian models where case management/ integrated care/ disease management models of care are integral to these countries health care systems.

Australia began developing case management education in response to a need in the mid-1990s and in the last 10 years, the United Kingdom has developed more interest and application in case management approaches in response to long term care initiatives and requirements.

New Zealand

In the New Zealand environment, functions of case management are practised albeit informally by GPs, public and district nurses, and social workers in local hospitals and communities.

Due to the differences in health care delivery systems combined with differing professional pathways, case management has not seen the growth and specialisation as observed in the United States.

Case management does exist within New Zealand, in public health care settings, however its utility is generally in either clinical based roles and/or generalist roles around a particular service to clients.

The move towards a more formal use of case management in New Zealand was the introduction through ACC with an essentially untrained and unskilled workforce in healthcare.

New Zealand's accident compensation scheme, an insurance-based scheme, came into operation on 1 April 1974. This scheme was based on an insurance model that provided cover for all, regardless of fault or cause of injury. The model was recommended by a Royal Commission in its report, known as the Woodhouse Report, named after the chairman the Right Honourable Sir Owen Woodhouse.

The significance of this report and subsequent legislation was the instigation of an insurance scheme which covered all New Zealanders and those residing in New Zealand at the time of the injury.

The implications of the decision to provide this state-funded scheme was that not only did it negate the need for expensive and often unsuccessful legal remedy, it provided immediate monetary and rehabilitative assistance. It also became evident that there were no effective processes in place at an individual level to assist in vocational rehabilitation (as was intended) nor to control and monitor cost.

These factors, combined with the spiralling cost evidenced by the increasing 'tail' of long term claims, saw the instigation of a case management approach in 1993. Information provided to the public at that time advised the rationale for case management was to enable a strategic approach to processing, communicating and decision making on each claim with the express goal of minimising the impact of an injury on the claimant, community and premium payer.

The model differed in two distinct areas from that seen in most other health care environments, instituting case management as a process in managing care.

1. Case managers were not required to have health backgrounds; the rationale behind this related to the purpose and intent of the scheme as a compensation and entitlement scheme not a provider of care.
2. Cost was not viewed as a case management responsibility; the rationale was that case managers worked with claimants not at the level of overall compensation cost and trends.³⁰

The instigation of a case management approach provided a challenge to the incumbent staff, many of whom did not have the knowledge, skills and/or experience in providing case management. The significant outcomes of this change in regards to the public's perception of case management were and arguably are today:

- lack of confidence in case management as a process to assist in managing individuals health outcomes
- perception that case management is a process to deny entitlement
- Case managers not viewed as skilled professionals.

³⁰ Report of the Controller and Auditor General - Accident Compensation Corporation: Case Management of Rehabilitation and Compensation 2004.

New Zealand Qualifications

Education and training in managed care

Recognition of the need for specific training for those working in managed care environments led to the creation and introduction of a managed care programme at Auckland University in the late 1990s.

This was in response generally to the ACC workforce requirements but also in response to the need for health professionals working in vocational rehabilitation to have appropriate learning and knowledge.

This programme comprised of courses and programmes in evidence-based medical knowledge and processes in regards to injury; legal and health systems knowledge; disability and rehabilitation; injury prevention; health and safety; occupational medicine and health, including safe and appropriate return to work strategies. It had a formal examination process as well as a requirement to provide case studies centred on effective rehabilitation.

Generally those participating in this course found it met their needs – those without health or health related qualifications became more confident in interfacing with medical and associated healthcare professionals and more able to understand their clients' needs in regards to injury and rehabilitation.

Case managers with nursing and other allied health professional backgrounds such as occupational health, completed this programme with generally excellent feedback around content and applicability.

A somewhat unexpected outcome of this educative process was the challenge some case managers found on returning to their workplace. Now equipped with knowledge to effectively coordinate an individual's unmet health needs in order to facilitate a viable return to work, some case managers believed the environment they returned to at that time was not able to accommodate this 'bio psychosocial approach'.

Case or care management skill, knowledge, and qualifications

In the United States, the minimum qualification or educational requirement is the completion of a tertiary degree in a field that promotes the physical, psychosocial or vocational well-being of the persons served. This reflects the level of intensity and complexity of the case manager's role.

In the New Zealand environment, the requirement for a qualification in managed care/case management is rarely seen – perhaps due to the fact that a case manager/coordination role may vary quite considerably from being as simple as

assisting with coordinating visits to the primary health care provider, to managing high risk health insurance claims, involving multiple medical specialties and allied healthcare professionals.

Review of programmes/courses in managed care

The University of Auckland is, to the knowledge of this reviewer, the only tertiary provider with a specific managed care programme. This programme is currently in suspension.

Traditionally in New Zealand academic programmes that have components or aspects of managed care are generally focused on providing academic learning for clinical providers, or those involved in therapeutic relationships. Non clinical courses are usually focused on health management, epidemiology, and population based health studies.

No formal qualification process is currently available in New Zealand in regards to managed care/care coordination/ case management/guided care. There are however many courses and programmes currently (identified in the appendices of this report) where aspects of care coordination/case management are taught within these programmes, providing a sound basis for those wishing to develop a career in case management /care coordination (these are identified, discussed and tabled in this report).

The National Institute of Disability Management and Research (NIDMAR) (Canada) programme has been franchised by ACC into the Otago Polytechnic. It provides a learning base for skills to assist an injured person back into the workplace, but does not, in this reviewer's opinion, provide the in-depth knowledge required for case management/case coordination roles within the wider health care setting.

The Auckland University programme, currently in suspension, did provide courses and programmes applicable to a managed – and in particular a guided care – approach as it incorporated a clinical/evidence- based medical approach along with learnings in case management.

The design of this programme however, if re-enacted, would in this reviewers opinion need to be extended to incorporate more in-depth knowledge in the areas applicable to management of those health consumers with complex long term needs.

Polytechnic Education

Written requests were made to all polytechnics along with collection of data discussions and interviews with relevant personnel.

As advised there are many programmes/courses which enable students to become more skilled in areas applicable to managed care such as health, social and community based qualifications.

Currently there is only one specific programme identified which bares relevance to education in managed care/case management.

Otago Polytechnic ³¹

National Institute of Disability Management and Research (Canada) (NIDMAR) programme

Disability management in the workplace

This online course is a programme of study designed by NIDMAR to assist those providing return to work coordination in the workers compensation setting; learnings from this programme are applicable to other areas providing return to work processes such as private insurers.

The programme was purchased under a franchise agreement by ACC and is delivered through Otago Polytechnic.

NIDMAR advises it is:

‘Committed to reducing the human, social and economic cost of disability to workers, employers and society by providing education, research, policy development and implementation resources to promote workplace-based reintegration programs.’

NIDMAR, founded in 1994, is an internationally recognised organisation committed to reducing the human, social and economic costs of disability.

As an education, training and research organisation, NIDMAR's primary focus is the implementation of workplace-based reintegration programmes, which international research has proven is the most effective way of restoring and maintaining workers' abilities, while reducing the costs of disability for workers, employers, government and insurance carriers.

³¹ Otago Polytechnic : <http://www.otagopolytechnic.ac.nz>

The institute's success is the result of collaborative initiatives undertaken by leaders in labour, business, government, education, insurance and rehabilitation. NIDMAR is supported by a broad-based Board of Directors and International Council, with senior representatives from Canada, Australia, Germany, Ireland, The Netherlands, and the United States.

As a long-term labour-management and multi-party commitment to disability management in the workplace, NIDMAR is supported by an endowment fund created through contributions from the federal and provincial governments, major private corporations and public organisations.³²

ACC purchased the franchise to this programme from the National Institute of Disability Management and Research in Canada in, due to the perceived lack of available programme suitable in the New Zealand environment.

ACC-assigned personnel are directly involved with Otago Polytechnic personnel and the implementation of this course.

The programme is a fully online programme with available modules adapted to the New Zealand environment. The NIDMAR programme delivered through Otago Polytechnic is not yet accredited by the New Zealand Qualifications Authority.

ACC fund and support case managers and others in the organisation to undertake this programme of study. Primarily, students are case managers from ACC – it is open to all individuals involved in disability management, case managers, physiotherapists, occupational therapists, occupational nurses etc. There are a small number of other organisations and case managers accessing this education.

Feedback from those implementing the programme is that case managers are generally positive about the learnings and engagement in this online programme. Many of the case managers are new to case management and or have not experienced any other case management education. In contrast some private organisations delivering injury and illness case management believe this programme is too narrow in its focus.

Of importance to this review is that adaptation of this programme has been required as the content and nature of some of the modules were found to be not applicable to the New Zealand environment. It has been difficult to illicit information as to which parts of the programme were not applicable; adaptation and or re writing of this programme contents, this reviewer understands, has been carried out by a physiotherapist.

³² NIDMAR Background http://www.nidmar.ca/about/about_institute/institute_info.asp

Of relevance to this review is that this programme, although currently owned and managed by ACC (and as such is the programme currently in place to deliver education to ACC case managers), has now been sold to the Personal Injury Education Foundation (based in Australia) that also have a licence to use the NIDMAR programme in Australia.

The Personal Injury Education Foundation have advised they have agreed to purchase the New Zealand programme from ACC and intend to operate this programme from 2012. The foundation was established in 2006 by a consortium of Australia and New Zealand accident and insurance compensation organisations with the goal of creating and providing leading educational programmes. ACC have a board appointed representative on the foundation's board, which meets regularly in Australia.

Foundation personnel interviewed believes the NIDMAR programme has merit and value as a basic programme for educating return to work coordinators. This is especially relevant in the Australian setting as return to work coordinators are mandated.

Foundation personnel agree with feedback and comments in regards to the 'narrow focus' of this course. Its relevance is for those providing basic return to work assistance is too narrow for those involved with more complex health care coordination and management.

Of further interest to this review is that the foundation has appointed the Deakin University in Melbourne Australia to deliver the post graduate programmes they have designed in personal injury.

The foundation advise that ACC supports the concept of furthering education through Deakin University, which provides a number of post graduate courses in case and claims management in relation to injury. However the cost of funding overseas education has prohibited ACC case managers in large numbers from attending as some parts of the course require attendance in Melbourne Australia.

This reviewer has to date been unable to obtain exact numbers of attendance. Foundation personnel advise they believe possibly three NZ ACC case managers have enrolled in Deakin University programmes in the past few years.

Content summary of course modules is outlined below. Completion of all required modules enables eligibility for certification through an exam process.

- Certified Disability Management Professional (CDMP)
- Certified Return to Work Coordinator (CRTWC)

In order to sit these examinations candidates must supply evidence of work experience in disability management and educational qualifications. Essential skill and core competencies to achieve these qualifications in summary are:

- demonstrated knowledge of disability management theory and practice
- application of legislation and benefit programmes
- labour and management relations
- utilise communication and problem solving skills
- disability case management
- return to work coordination
- health, psychosocial, prevention and functional aspects of disability
- development of programme management and evaluation activities
- demonstrate ethical and professional conduct.

Module 1 – Job analysis and assessment

The purpose of this module is to provide the return to work coordinator with the skills to undertake and interpret job analysis and implement job modifications that may be required. The Return to Work Coordinator will also need to decide when and who completes the assessments and how to evaluate and use the information effectively – this is key to quality return to work outcomes.

Module 2 – Building effective return to work relationships

The purpose of this module is to provide students with the skills to build and maintain effective relationships with clients, managers, and key stakeholders. Through this module the student will develop skills in coordinating disability management interventions and services at the worksite in order to achieve positive outcomes for the worker. This module also covers group dynamics, and assists return to work coordinators to establish their role in supporting a worker, and the need to engage professional counselling or other therapeutic supports.

Module 3 – Employment related legislation and entitlements

This module will ensure that students have a working understanding of legislation, guidelines, entitlements and services. Knowledge in these areas is essential for the successful return to work for those with illness, injury and/or disability.

Module 4 – Managing the return to work process

Students considering this module should have significant work experience in this area or have completed a number of other modules in this programme. This module outlines the return to work process: early contact, assessment, the coordination of services and resources, planning, implementation, monitoring and problem solving. It develops skills in facilitating and implementing a return to work plan with the worker and key stakeholders.

Module 5 – Ethics and professional conduct

The purpose of this module is to provide students with the knowledge and skills to manage situations in which the ethical choice or direction is not entirely clear. Other aspects covered in this module include the code of ethics and the ethical issues related to record keeping.

Module 6 – Physical and mental health: implications on work

This module will develop a student's understanding and knowledge of the impact that physical and/or mental health impairments may have on the individual. This information will enable students to make informed decisions about the match of the individual to the job tasks in a modified job. Students will become aware of the effects of workers health conditions to enable return to work coordinators to have effective interactions with medical practitioners and other health professionals. This module facilitates an understanding of the bio-psychosocial model of disability.

Module 7 – Effective disability management programmes

Establishing and implementing an effective disability management programme and return to work process requires an understanding of how organisations operate. It explores how organisations plan, how decisions are made and the financial implications of these actions. Aspects of managing change are also included in this module.

Module 8 – Introduction to return to work coordination

This module is essential for students to gain an understanding and working knowledge of the return to work process and the key stakeholders. This module explores the clients' perspective on the return to work process. The purpose of this module is for students to gain an understanding of the return to work process. It provides an overview of the role of the return to work coordinator and key stakeholders. It explores the possible barriers and the types of accommodations that may be required to enable a successful return to work process.

Module 9 – New Zealand disability and diversity framework

This module focuses and explores the relationship between diversity and discrimination. It discusses how organisations manage diversity and what return to work coordinators must do to develop cultural competence.

Module 10 – Disability management from a human resources perspective

Students completing this module will come to recognise that people are a workplace's most valuable resource. They will understand the importance of recruitment and retention and the development of policies, processes and strategies for an organisation to achieve their desired outcomes. Students will be able to apply the various acts of parliament and statutory regulations that addresses likely barriers to an individual's return to work plan.

Module 11 – Injury prevention and health promotion in the workplace

This module looks at the interaction between health and wellness, health and safety, and disability management programmes.

Module 12 – Promoting disability management programmes

This module will focus on development of strategies to ensure that people in the organisations they work with understand the disability management programmes – purposes, policies and procedures and their role in the return to work process. Students will have the opportunity to further explore the development of and promotion of an inclusive workplace culture and how it impacts on the return to work process.

Polytechnic Education

Polytechnic	Certificates	Diplomas	Degrees	Graduate
Aoraki ³³ (Central South Island)	National Certificate in Mental Health (Level 4) (alcohol and drug)	Diploma in Social Services (Level 5)		
	Certificate in Life Skills. Certificate in Sports and Fitness	Diploma in Sports and Fitness		
	Certificate in Health Studies/national Certificate in Science (Level 4)			
Bay of Plenty ³⁴ Te Kuratini o Poike	National Certificate in Mental Health (Level 4)	Diploma Sport and Recreation	Bachelor of Science (biological sciences)	
	Certificate in Healthcare Assistance			
			Bachelor Of Nursing	
	Certificate in Social Services (Level 4)		Bachelor Sport and Recreation	
			Bachelor of Social Work	
Christchurch ³⁵ Te Wananga o Otautahi	National Certificate in Mental Health (Level 4)			
	Certificate in Pre-health Science	Diploma in Enrolled Nursing		
		National Diploma in Mental Health (support work)		
			Bachelor of Nursing	
			Bachelor of Social Work	
	Certificate in Human Services		Bachelor of Midwifery	
				Graduate Cert in Nursing Practice

³³ Aoraki Polytechnic: <http://www.aoraki.ac.nz>

³⁴ Bay of Plenty Polytechnic : <http://www.boppoly.ac.nz>

³⁵ Christchurch Polytechnic: <http://www.cpit.ac.nz>

Eastern Institute of Technology – Hawkes Bay ³⁶			Bachelor of Nursing	Master of Nursing
	Certificate in Health Science		Bachelor of Applied Social Sciences (social Work)	Post Graduate Certificate in Health Science
	Certificate in Contemporary NZ Nursing Practice			Postgraduate Diploma in Health Science
	Certificate in Social Sciences			
	Certificate in Health Promotion	Diploma in Health Promotion		
	National Certificate in Hauora	National Diploma in Mental Health		
	National Certificate in Community Support			
	National Certificate in Mental Health and Addiction Support			
	Certificate in Work and Life Skills			
	Certificate in Introduction to Social Services			
Manakau Institute of Technology ³⁷	Pre-degree Nursing	Diploma in Enrolled Nursing	Bachelor of Nursing	
	Certificate for Health Support Assistants	Diploma in Health Promotion	Bachelor of Nursing-Pacific	
	Certificate in Community health Work	National Diploma on Mental Health	Bachelor of Applied Social Work	
	Certificate in Pacific Community Health work		Bachelor of Applied Social science (Counselling)	
	Certificate of Achievement in Registered Nurse Competency to Practice			
	Certificate in Social Services			
	National Certificate in Mental Health Addiction and Support			
	Preparation for Social Work			

³⁶ Eastern Institute of Technology: <http://www.eit.ac.nz>

³⁷ Manakau Institute of Technology: <http://www.manakau.ac.nz>

Nelson/Marlborough Te Whare Wananga o te Tau Ihu o Te Waka a Maui ³⁸	Certificate in Community Support Services	Diploma in Career Guidance	Bachelor of Nursing	
	Certificate in Contemporary NZ Nursing Practice		Bachelor of Applied Social Science (Counselling)	
	Certificate in Foundation Nursing		Bachelor of Applied Social Science (Social Work)	
	Certificate in Counselling and social Work			
Northtec ³⁹ Tai Tokerau Wananga	Transition from nurse assistant to enrolled nurse		Bachelor of Nursing	
	Certificate in Registered nurse competence		Bachelor of Applied Social Science	
	Certificate in Mental Health and Addictions			
	Certificate in Cognitive Behavioural Therapy			
	National Certificate in Occupational Health and Safety (Level 3)			
	National Certificate in Occupational Health and Safety (Coordination) (Level 4)			
Open Polytechnic Kuratini Tuwhera ⁴⁰	National Certificate in Mental Health (Level 4)	Diploma in Health and Human Behaviour	Bachelor of Applied Science (Psychology)	
		Diploma in Applied Mental Health	Bachelor of Social Work	

³⁸ Nelson/Marlborough Institute of Technology: <http://www.nmit.ac.nz>

³⁹ Northtec <http://www.northland.ac.nz>

⁴⁰ Open Polytechnic: <http://openpolytechnic.ac.nz>

Otago Polytechnic Te Kura Matatini ki Otago ⁴¹	Disability Management in the Workplace Certified Disability management professional Or certified return to work coordinator		Bachelor of Nursing	
	Certificate in Health		Bachelor of Midwifery	Master Midwifery
	Competency Assessment programme for Registered Nurses return to workforce			Post grad certificate and diploma in midwifery and short courses in midwifery practices
			Bachelor of Occupational Therapy (Honours)	Masters of Occupational Therapy
				Post Grad certificate and diploma in occupational therapy
	Certificate in Human services		Bachelor of Social Services	
	National Certificate in Mental Health (Level 4)			
Southern Institute of Technology Te Whare Wananga o Murihiku ⁴²	Certificates in Health Science (Level 3&4)	Diploma Occupational Health and Safety practice		Post Graduate Diploma/Certificate Health Science
	Certificate in pre Entry to Bachelor of Nursing	Diploma of Enrolled Nursing	Bachelor of Nursing	
	National Certificate in Social Science (Level 4)	National Diploma in Mental Health		
	National Certificate in mental health (mental health support) (Level 4)			
Tairāwhiti ⁴³	Certificate in Health Science		Bachelor of Applied Social Sciences (social Work)	Post Graduate Certificate in Health Science (Cognitive Behavioural Therapy)

⁴¹ Otago Polytechnic: <http://otagopolytechnic.ac.nz>

⁴² Southern Institute of Technology: <http://www.sit.ac.nz>

⁴³ Tairāwhiti: <http://www.eit.ac.nz/tairāwhiti/>

	Certificate in Contemporary NZ Nursing practice		Bachelor of Nursing	Master of Nursing
	Certificate in Social Sciences			Post Graduate Certificate and Diploma in Health Science
	Certificate in Health Promotion	Diploma in Health Promotion		
	National Certificate in Hauora	National Diploma in Mental Health		
	National Certificate in Community Support			
Universal College of Learning – Te Pae Matauranga Ki Te Ao ⁴⁴	National Certificate in Mental Health (Level 4)	National Diploma in Mental Health (Level 6)	Bachelor of Nursing	
	Certificate in Science and Health	Diploma in Enrolled Nursing	Bachelor of Exercise and Sports Science	
	Certificate in Introduction to Health Science/Human Science			
	Short Course Competency Certificate for Registered Nurses			
Unitec NZ Te Whare Wananga o Wairaka ⁴⁵	National Certificate in Mental Health	Diploma in Enrolled Nursing	Bachelor of Nursing	Master of Health Science (Nursing)
	Certificate in Community Skills	Diploma in Sports and Fitness	Bachelor of Applied Science (Osteopathy)	Post Graduate Diploma Health Science
	Certificate in Foundation Studies-Nursing/Science/Social Practice/General		Bachelor of Social Practice (Community Development)	Master of Osteopathy
			Bachelor of Sport	Master of Social Practice
			Bachelor Health Science -Medical Imaging	Post Graduate Certificate and Diploma in Social Practice
				Post Graduate Diploma in Counselling

⁴⁴ Universal College of Learning: <http://www.ucol.ac.nz/Pages?index.aspx>

⁴⁵ Unitec : <http://www.unitec.ac.nz>

				Masters and post graduate studies in clinical areas relative to medical imaging
Wintec Te Kuratini o Waikato ⁴⁶	National Certificate in Mental Health (Level 4)	National Diploma in Mental Health (Level 6)	Bachelor Sports and Exercise	Master of Science (Sports and Exercise) Post Graduate Diploma in Sports and exercise
	Certificate in Social Services	Diploma in Enrolled Nursing (Level 5)	Bachelor Occupational Therapy	
	Certificate in Nursing Competence	Graduate Diploma Sports and Exercise	Bachelor of Nursing	Master of Nursing Post Graduate Diploma in Nursing
			Bachelor of Midwifery	
			Bachelor of Applied Social Science- Social Work/Counselling / Te Whiuwhiu o te Hau- Māori Counselling	Post Graduate Certificate and Diploma in Health and Social Practice
Wellington Institute of Technology – Te Whare Wanaga o te Awakaairangi ⁴⁷	Certificate in Health Leadership	Diploma in Counselling	Bachelor of Counselling	
	National Certificate in Health, Disability and Aged support			
	Certificate in Health, Disability and Aged Support	Diploma in Alcohol and Drug studies	Bachelor of Addiction Studies	Graduate Diploma in Addiction Studies
	National Certificate in Community Support			Graduate Diploma in theory of Addictions
	Certificate in Exercise Science	Diploma in Exercise science		
	Certificate in Recreation and Sport			
	Certificate of Achievement in Science bridging	Diploma in Health Psychology – Hauora Hinengaro		
	Certificate in Alcohol and Drug Studies			

⁴⁶ Wintec: <http://www.wintec.ac.nz>

⁴⁷ Wellington Institute of Technology: <http://www.weltec.ac.nz>

	Certificate in Alcohol and Drug youth work			
	Certificate in Trauma Studies		Diploma in Trauma Management	
	Certificate in Supervision (Human Services)			
Waiariki Institute of Technology –Whare takiura ⁴⁸		Diploma in Enrolled Nursing	Bachelor of Nursing	
			Bachelor of Māori Development	
			Bachelor of Applied Social Science (Social Work)	
Whitireia ⁴⁹		Diploma in Enrolled Nursing	Bachelor of Nursing	Post Grad Cert in Nursing Mental Health/ Primary Health
			Bachelor of Nursing (Māori)	
			Bachelor of Nursing (Pacific)	
			Bachelor of Health Science (Paramedic)	Post Graduate Certificate in Speciality Care
			Bachelor of Social Work	
	National Certificate in Mental Health	National Diploma in Mental Health		
	National certificate in Tamariki ora – Well Child Services			
Western Institute of Technology at Taranaki – te kura matatini o taranaki ⁵⁰			Bachelor of Nursing	
	Certificate in Mental Health		Bachelor of Applied Social Science (Social Work)	
Te Wananga o Aotearoa University of New Zealand ⁵¹	Certificate in Social Services		Bachelor of Social Work (Biculturalism in practice)	

⁴⁸ Waiariki Institute of Technology: <http://wairaki.ac.nz/>

⁴⁹ Whitireia: <http://www.whitireia.ac.nz/Pages/home.aspx>

⁵⁰ Western Institute of Technology: <http://www.witt.ac.nz>

⁵¹ Te Wananga o Aotearoa University of New Zealand: <http://www.twoa.ac.nz>

	Kaupapa Toimau Hauora- Certificate in Health and Fitness			
	Kaupapa Toimau Takaro Certificate in Sports Leadership			
	Kaupapa Hihiri Ngakau – Certificate in Sports Fitness and Health			
	Certificate in Tu Tuia			
Te Whare Wananga o Awanuiarangi ⁵²	Ako kit e Wananga - bridging to teaching and nursing		Bachelor Health Science Māori Nursing - Te Ohanga Matoara Paetahi	
Anamata (private institution) ⁵³	Te Whaitau o te Whanau- social work			
	National Certificate in Social Work Suicide Intervention and Prevention	National Diploma of Counselling (Level 6)		
	National Certificate in Intervention and Prevention Abuse Neglect and Violence	Diploma Māori Health Co existing Disorders		
Bethlehem Tertiary Institute te whare taura o peterehema ⁵⁴			Bachelor of Social Work	
			Bachelor of Counselling	

⁵² Te Whare Wananga o Awanuiarangi: <http://www.wananga.ac.nz/pages/Te%20Whare%20W%C4%81nanga%20o%20Awanui%C4%81rangi.aspx>

⁵³ Anamata: <http://anamata.ac.nz>

⁵⁴ Bethlehem Tertiary Institute: <http://www.bti.ac.nz/>

Auckland University

Te Whare Wananga o Tamaki Makaurau

Managed Care Studies – Faculty of Medical and Health Sciences (currently suspended)

As with other universities in New Zealand, Auckland University provides a comprehensive suite of courses and programmes at the undergraduate level with both clinical and non-clinical pathways for those who desire to work in healthcare settings. Many of these programmes provide basic academic learning to assist in forwarding a career in managed care/case management.

From late 1990s until 2008, Auckland University provided a programme of study (managed through the Faculty of Medical and Health Sciences within the Occupational Medicine Unit) designed to advance the knowledge of case managers, health professionals (nurses, physiotherapists, occupational therapists) or graduates who worked in or desired to work in settings where managed care systems/strategies were in place. Areas of work included public, private and community healthcare, injury prevention and rehabilitation, private insurance industry, sport and exercise science.

Students who accessed this programme at inception were generally case managers working in the Accident Compensation environment; however this expanded to those working or having a desire to work in private insurance settings, occupational health, mental health, and acute care settings. Whilst many students came from health backgrounds students did not require previous healthcare experience although generally those entering into this course of study were involved with or employed in managed care settings.

The programme of study was available online, block course and in distance learning format and was designed to develop and enhance theoretical understanding of important processes used in the managed care environment such as case management, rehabilitation planning, advocacy, communication, appropriate referral writing, medico/legal aspects of care, and assessment and management of disability.

Qualifications offered in regards to this programme of study were:

- Postgraduate Certificate in Health Sciences
- Postgraduate Diploma in Health Sciences
- Master of Health Sciences
- PhD

Programme content for Managed Care studies:

- Legislation and Managed Care
- Principles and Practice of Case Management

- Assessment and Management of Disability
- Rehabilitation Practice
- Health Systems in New Zealand
- Rehabilitation Case Studies ⁵⁵

This programme of study is the only programme to date with a dedicated course of study in the practices of managed care.

In regards to the suitability of this programme, it provided a good educational base to suit the needs of those in the managed care environment at that time. If managed care/case management is expanded into the wider healthcare setting expansion of this programme would be required. Areas of expansion for consideration would be in the assessment, rehabilitation and medical areas, Māori health, the business including insurance and actuarial models of learning, human factors, risk management, conflict resolution and mediation and other areas pertinent to case management work in the wider healthcare setting.

Auckland University personnel advise reinstatement of this programme is possible for the 2013 academic year. Discussion around the requirement to expand the programme to better equip students to work in the wider healthcare setting was also agreed as an important component of any re-enactment of this programme. Creating alliances with other areas such as the business school was seen as a positive enhancement to this programme.

⁵⁵ Auckland University: <http://www.auckland.ac.nz/uoa/>

Relevant programmes / courses offered

(Online distance and block learning available)

Auckland University Te Whare Wananga o Tamaki Makaurau ⁵⁵	Undergraduate	Post Grad Cert	Post Grad Diploma	Masters	PhD
Medical and Health Sciences and School of Population Health	Bachelor of Health Science	Health Science: Advanced Nursing Alcohol and Drug Studies Child and Adolescent Health Mental Health Nursing Community Emergency care Forensic Psychiatry Health Informatics Social Work Sports Medicine Youth Health Pharmaceutical Science Public Health (Māori and Pacific) Palliative care Research Methods Managed Care (Currently suspended)	Health Science: Advanced Nursing Alcohol and Drug Studies Child and Adolescent Health Mental Health Nursing Community Emergency care Forensic Psychiatry Health Informatics Health Management (conjunct business school) Social Work Sports Medicine Youth Health Pharmaceutical Science Public Health (Māori and Pacific) Public Health	Master of Health Science Master of Audiology Master of Health Management Master of Public Health	Doctor of Philosophy (PhD) all disciplines

			Palliative care Research Methods Managed Care (Currently suspended)		
	Bachelor of Nursing	Refer health sciences	Refer health sciences	Master of Nursing	
	Bachelor of Pharmacy	Pharmaceutical Science	Pharmaceutical Science	Master of Health Science	
	Bachelor of Medicine and Bachelor of Surgery	Clinical Education General Practice Primary Health Care Palliative Care	Clinical Education General Practice Primary Health Care Palliative Care	Master of Medical Science	
	Bachelor of Science Biomedical				
Other courses and programmes of relevance	Certificate in Health Science (Māori and Pacific bridging programme) Bachelor of Arts (e.g. specialisation psychology) Bachelor of Social Work Bachelor of Science Bachelor of Sports and Exercise Science Bachelor of Business and Information Management Bachelor of Human Services				

⁵⁵ Auckland University: <http://www.auckland.ac.nz/uoa>

AUT University Auckland

AUT offers, as with other universities in NZ, undergraduate degrees clinical and non-clinical that prepare students for work in the healthcare sector. There is no undergraduate degree in rehabilitation and/or managed care, however this university provides undergraduate degrees in occupational therapy and physiotherapy – both disciplines have strong links to rehabilitation and managed care.

Faculty of Health and Environmental Studies – School of Rehabilitation and Occupation Studies

Within the School of Rehabilitation and Occupation Studies are courses in occupation and rehabilitation studies designed to enhance knowledge for those working in health and health related disciplines. In this regard the main focus at AUT is providing health professionals who are working in a therapeutic or clinically-based relationship with knowledge and skills in order to enhance the care of people with health and disability challenges.

Health professionals enrolled in courses come from the nursing, physiotherapy and occupational therapy disciplines generally, however there are a small number that are from other areas such as case managers from ACC and the private insurance environment.

Courses and programmes offered are available in online, block course and distance learning.

Rehabilitation Studies

AUT has a Professor of Rehabilitation (Professor Kath McPherson), a Person Centred Research Centre, and a Health and Rehabilitation Research Institute. Whilst there are no programmes/courses in managed care and case management aspects of managed care and case management are incorporated in learnings around provision of rehabilitation.

Case managers and other non-clinical students have accessed these programmes, however this reviewer understands these numbers are low, this is not unusual and is common to all other tertiary institutions for reasons discussed in this review.

AUT offers a wide and extensive range of learning opportunities which relate to those working in healthcare. Although the primary goal of these courses and programmes is to provide knowledge to those professionals in therapeutic relationships, areas explored in courses and programmes such as concepts of rehabilitation, research papers, enabling participation, participation in health, innovative strategies-engaging in rehabilitation and measuring health and wellbeing, provide opportunities of learning relevant to managed care.⁵⁶

⁵⁶ Auckland Institute of Technology: <http://www.aut.ac.nz/>

As advised there is no formal programme of study for education in managed care/case management. However, with strong basis in health and rehabilitation academic teaching and research, expansion into managed care qualifications is a distinct possibility for this university.

AUT has strong links with the community and organisations involved in disability and rehabilitation issues and as such are well placed to provide programmes in managed care; additionally case management is cited as a special interest of the Professor of Rehabilitation and there is the intention to forward this area of study within this university.

Relevant programmes / courses offered

(Online distance and block learning available)

Auckland University of Technology Te Wananga Aronui o Tamaki Makau Rau ⁵⁶	Undergraduate	Post Grad Cert	Post Grad Diploma	Masters	PhD
Health Sciences	Bachelor of Health Science	Rehabilitation	Rehabilitation	Rehabilitation	Doctor of Health Science
	Applied Mental Health	Occupational Practice	Occupational Practice	Musculoskeletal Physiotherapy	Doctor of Philosophy
	Health Promotion	Advanced Nursing Practice	Musculoskeletal Physiotherapy	Occupational Therapy	
	Paramedicine	Practice	Advanced Nursing Practice	Advanced Nursing Practice	
	Podiatry	Health care Ethics	Health care Ethics	Child Health	
	Psychology	Health Professional Education Leadership and Management	Health Professional Education Leadership and Management	Māori Health	
	Midwifery			Mental Health	
	Nursing			Midwifery	
	Occupational Therapy	Māori Health	Māori Health	Physical Activity and Nutrition	
	Physiotherapy	Mental Health	Mental health		
	Bachelor of Science	Midwifery	Midwifery		
	Bachelor of Science and Business Conjoint	Older Adult Health and Wellness	Older Adult Health and Wellness		
	Bachelor of Sport and	Physical Activity and	Physical Activity and Nutrition		

	Recreation BA: Conflict Resolution Criminology Psychology Social Services Bachelor Māori Development	Nutrition Public Health	Public Health Counselling Psychology		
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⁵⁶ Auckland Institute of Technology: <http://www.aut.ac.nz/>

Massey University

Te Kunenga ki Purehuroa

Massey University provides courses and programmes in rehabilitation through the School of Health and Social Services. Professor Steven La Grow, Professor of Rehabilitation, heads this school. His special interest is in rehabilitation for those who are blind or have low vision.

Professor La Grow has worked overseas within managed care systems and is therefore familiar with working in systems that operate manage care processes and practices such as case management and case coordination.

The programmes offered at Massey have a primary focus around the social/vocational arena of rehabilitation; that is the adjustment to the onset of disability and how one moves to restoring the ability to perform. Much of the programme content and design is applicable for healthcare professionals working in the mental health and addiction areas.

Programmes and courses designed at Massey in rehabilitation are accessed by case managers in small numbers. Most case managers have come from the ACC area. Generally students come from those working in a clinical role such as nurses, occupational therapist, physiotherapists, mental health nurses/practitioners. This university has a number of campuses around NZ with the main sites being Palmerston North and Albany, North Shore Auckland.

Of importance to this review is that Massey University offers in 2012 an undergraduate degree in Bachelor of Arts with a minor in rehabilitation and an undergraduate degree in Bachelor of Health Sciences with a major in rehabilitation. These programmes are available via distance learning. There are currently no other universities to this reviewer's knowledge providing undergraduate degree programmes in rehabilitation studies.

The availability of a rehabilitation qualification at the undergraduate level provides for a distinct career pathway for those wishing to pursue rehabilitation as a career choice. This programme of study would certainly assist those with no health background in preparing students for work in managed care/coordination roles particularly in the mental health setting.

Currently there is no intention to provide courses in managed care/case management.

Undergraduate degrees

Bachelor of Arts (minor in rehabilitation)

The aim of this minor is to provide a broad general knowledge of the purpose practice and philosophy of rehabilitation. Completion of five papers related to rehabilitation which students must pass are offered: Students choose from:

- Community based rehabilitation
- Alcohol and drug use
- Issues in rehabilitation
- Psychiatric rehabilitation
- Measurement in rehabilitation
- Rehabilitation
- Psychiatric disability

Bachelor of Health Science (major in rehabilitation)

The aim of this degree is to provide students with knowledge in relevant sciences and practices associated with rehabilitation to enable them to optimise mental and physical functioning for individuals within their environments and communities.

Compulsory papers:

- Rehabilitation studies
- Psychiatric disability
- Issues in rehabilitation
- Psychiatric rehabilitation
- Measurement in rehabilitation
- Community based rehabilitation

One paper from:

- Hauora Tangata Māori health foundations
- Brain and behaviour
- Memory and cognition
- Gender and health

Three papers from:

- Ergonomics work performance health and design
- Alcohol and drug use
- Planning for Māori health
- Community psychology
- Sociology of disability
- Health and ageing

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⁵⁷ Massey University: <http://www.massey.ac.nz/massey/home.cfm>

Postgraduate programmes

Provides advanced learnings around the specific areas of rehabilitation offered through the undergraduate programme.

Relevant programmes / courses offered

(Online distance and block learning available)

Massey Te Kunenga Ki Purehuroa ⁵⁷	Undergraduate	Post Grad Cert	Post Grad Diploma	Masters	PhD
	Bachelor of Nursing	Post Grad Cert in Health Science (Dual Diagnosis)	Diploma Rehabilitation Studies	Master of Arts (Nursing)	PhD Nursing
	Bachelor of Arts – Rehabilitation Studies		PostGrad Diploma Arts	Master of Nursing (MN)	PhD General
	Psychology				
	Bachelor of Health Science - Rehabilitation	Post grad cert in Whanau Development	Disability Studies	Master of Arts-Disability Health or Rehabilitation	
	Bachelor of Science Exercise and Sport	Post Grad Cert in arts (Social work)	Post Grad Diploma in Health Studies	Master of Applied Social Work (MAppISW)	
	Psychology		Post Diploma in Whanau Development	Master of Social Work (MSW)	
	Bachelor of Social Work (BSW)				
	Bachelor of Midwifery		Post Grad Diploma in Arts (Social Work)		

⁵⁷ Massey University: <http://www.massey.ac.nz/massey/home.cfm>

Otago University

Whare Wananga o Otago Ki Te Whanga-Nui-a-Tara

As with all other universities in New Zealand, Otago provides undergraduate degrees with courses and programmes of relevance to those wishing to undertake careers in health but has no specific undergraduate degree programmes/courses in rehabilitation and or managed care/case management.

Of relevance to this review is that Otago has a rehabilitation, teaching and research unit (RTRU) situated in the Department of Medicine Wellington. This unit cites its philosophy as interdisciplinary and supports this with staff members from a number of medical areas/disciplines such as rheumatology, geriatrics and occupational medicine, along with other allied health professionals, physiotherapists, occupational therapists and a clinical psychologist.

Rehabilitation practice: This unit advises that the majority of teaching is by distance learning and admission is generally only available to health professionals; however case managers without health professional qualifications have and do study through this universities programme as each person's situation is examined on its own merit and this is advised in the communication around eligibility. Additional information on courses and programmes available cite applicability to case managers and in particular ACC case managers.

The courses and programme of study available are advised as enabling students to understand concepts around:

- Goal planning
- Understanding compensation systems
- Ethical issues
- Team dynamics
- Cultural perspectives
- Person centred rehabilitation

Case managers from managed care environments have and do access this university's programmes and general feedback from case managers who have studied through this programme is very positive.

Whilst it is primarily a clinical teaching unit the devised programmes place emphasis on understanding issues that affect both clinical and non-clinical staff; along with its multidisciplinary focus this makes it an attractive programme for those working in managed care environments.

This unit currently provides courses and programmes that are applicable to managed care/case management education and most importantly has a focus which is

inclusive of managed healthcare challenges. In this regard it is well placed to advance and extend its programmes to educate students in managed care/case management to enable them to work in settings other than injury case management

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Relevant programmes / courses offered

(Online distance and block learning offered)

Otago Te Whare Wananga o Otago 58	Undergraduate	Post Grad Cert	Post Grad Diploma	Masters	PhD
	Bachelor of Health Science: Biomedical Sciences Medical Laboratory Science Radiation Therapy Bachelor of applied Science - Sports and Exercise Nutrition Bachelor of Social and Community Work	Post Grad Cert Health Sciences Medical Technology Nursing Social Work	Post grad Dip Bio Ethics and Health Law Nursing Health Management Health Sciences Medical Lab Science Nutrition Dietetics Social Work Medical Technology Sports and Exercise Medicine	Masters Bio Ethics and Health Law Health Science Medical Lab Science Nursing Social Work	PhD

⁵⁸ Otago University: <http://www.otago.ac.nz/>

	Bachelor of Medicine and Bachelor of Surgery	General Practice Occupational Medicine Primary Health Public health Rehabilitation	General Practice Industrial Health Health informatics Occupational Medicine Primary Healthcare Public Health Rehabilitation	Masters General Practice Medical Science Primary Healthcare Public Health	MD PhD
	Bachelor of Physiotherapy	Post Grad Cert Physiotherapy	Post grad Dip Physiotherapy	Master Physiotherapy	PhD
	Bachelor of Physical Education		Physical Education	Physical Education	PhD
	Bachelor of Pharmacy	Prescribing Pharmacy	Clinical Pharmacy	Clinical Pharmacy Pharmacy	PhD

Victoria University

Te Whare Wananga o te Upoko o te Ika a Maui

Victoria University provides courses and programmes with applicability for managed care at the postgraduate level. These programmes are situated within the Graduate School of Nursing Midwifery and Health.

Programmes available are for those working in clinical and non-clinical areas. Students explore their own area of work as well as investigation and learning in the structures and complexities of the health environment. Core courses include research, health systems and practice.

Situated within the Victoria University is the Health Services Research Centre. This centre provides and facilitates research in the area of health and disability. This work encompasses research in the disability needs of communities; the organisation, planning, provision, use and effectiveness of personal and population-based health and disability services.⁵⁹

Relevant programmes / courses offered

(Online distance and block learning available)

Victoria Te Whare Wananga o te Upoko o te Ika a Maui On campus and distance ⁵⁹	Undergraduate	Post Grad Cert	Post Grad Diploma	Masters	PhD
	Bachelor of Bio Medical Science Bachelor of Science and Technology	Post Grad Cert in Health Care Post Grad Cert Nursing Science Post Grad Cert Midwifery Post Grad Cert in Science	Post Grad Dip in Health Care Post Grad Dip Nursing Science Post Grad Dip Midwifery Post Grad Dip Science	Masters in Health Care Masters of Nursing Master of Midwifery Master of Science	PhD in Health Care Doctor of Phil Nursing Doctor of Phil

⁵⁹ Victoria University: <http://www.victoria.ac.nz/home/default.aspx>

Canterbury University Te Whare Wananga o Waitaho

Canterbury University has, as with other universities, courses and programmes in the undergraduate area that provide introduction to basic concepts in managed care/case management such as social work. It does not provide any definite postgraduate programmes and courses applicable to managed care/case management.

Of interest to this review is feedback from representatives of mental health services in Christchurch including representatives from non-government organisations was the need identified post-earthquake for more understanding and learning around processes such as case management, case coordination, and integrated care due to the changes in delivery models required around healthcare provision.⁶⁰

Relevant programmes / courses offered

(Online distance and block learning available)

Canterbury Te Whare Wananga o Waitaho ⁶⁰	Undergraduate	Post Grad Cert	Post Grad Diploma	Masters	PhD
	Bachelor of Social Work	Post Grad Cert Health Science	Post Grad Dip Health Science	Master Health Science	Doctor of Phil in Health Sciences
	Bachelor of Science	Post Grad Cert Health Science Palliative care	Post Grad Dip Health Science- Palliative care	Master Health Science- Palliative care	
		Post Grad cert Clinical Teaching	Post Grad Diploma in Industrial and Organisational Psychology	Master of Social Work	
			Post Grad Dip in Clinical Psychology	Master of social Work (Applied)	
			Post Grad Dip in Social Work		
			Post Grad Dip in Science		
			Post Grad Dip in Child and Family Psychology		

⁶⁰ Canterbury University: <http://www.canterbury.ac.nz>

Waikato University

Te Whare Wananga o Waikato

Waikato University has undergraduate courses and programmes available that provide introduction to basic concepts in managed care/case management such as Social Work, Social Science-Health Development and Policy, Māori and Pacific Development and sports and leisure.

There are no courses involving managed care/case management and or any related courses in rehabilitation cited. The postgraduate programme availability is in Health Development and Policy area which although of interest and applicability to managed care/case management students are generally focused on careers in the policy area.

Relevant programmes / courses offered

(Online distance and block learning available)

Waikato Te Whare Wananga o Waikato ⁶¹	Undergraduate	Post Grad Cert	Post Grad Diploma	Masters	PhD
	Bachelor of Science Bachelor of Social Sciences major in Health Development and Policy Bachelor of Social Work Bachelor of Māori and Pacific Development Bachelor of Sport and Leisure Studies	Post Grad Cert in Health Development and Policy	Post Grad Dip in Health Development and Policy	Master of Health Development and Policy Master of Social Sciences Master of Philosophy	Doctor of Philosophy

⁶¹ Waikato University: <http://www.waikato.ac.nz/>

Interviews, discussion and feedback

An important part of this review process was to advise on the gross estimate of need in regards to ACC, the Ministry of Social Development, the public health system and the insurance industry.

Method

Email, mail and phone contact to perceived interested parties with a letter of introduction inviting and offering preferred contact with availability to dialogue by email, post, teleconference and face to face meetings.

Process

Letter of introduction and request for feedback was provided to the following organisations and or their representatives. In some areas this was presented twice to applicable organisations to ensure they had received the letter of introduction and request for information. All those communicated with were offered the opportunity for face to face meetings.

Organisations contacted

- All District Health Boards through Director of Nursing
- All PHOs CEO/Managers
- Ministry of Social Development
- ACC
- Third party providers
- Private insurance organisations
- Department of Corrections

Other interested parties: Whanau Ora – yet to be interviewed.

District Health Boards

NB: This review process has not elicited a gross estimate of need from DHBs.

Feedback from this area was mixed. In general, feedback elicited information on current courses each DHB representative believed to be applicable. This usually consisted of a list of in-house programmes and or programmes with a clinical focus that DHB personnel could access. The majority of programmes /courses cited were not directly relevant to managed care education.

This reviewer is aware there are case coordination/case manager roles within the DHB setting, however these are generally aligned to clinical practice e.g. as a nurse specialist and are not therefore viewed as relevant to managed care/case management education processes as these personnel would receive education through clinically based programmes.

Feedback from Directors of Nursing was generally around programmes already available for staff and interest in managed care education was minimal.

Views on a managed care role was mixed – some believed they needed to know more about HWNZ's intentions whilst others believed funding was better placed in courses and programmes already available and more applicable to their existing workforce.

Adoption of a model of managed care in DHBs would greatly increase the requirement for access to programmes and courses.

Primary Health Organisations

As with DHBs, this review process has not elicited a gross estimate of need although opportunity for more dialogue around how an intended programme and model would assist their health workforce was welcomed by the majority communicated with.

Many at the management level also welcomed a managed care role but as with the majority of feedback this would necessitate a change in the delivery model.

There are personnel within primary health care organisations carrying out a variety of roles associated with managed care /case coordination but again as with DHB roles, these are often situated within a clinical role and managed care/ case coordination is not viewed as a key function.

The opportunity for dialogue and feedback from PHO personnel elicited responses from areas of management and healthcare workers ranging from clinical and non-clinical. In general PHO clinical staff in all areas had mixed views in relation to the need for managed care/case management education.

Many clinical staff advised appropriate processes in order to best manage care were already in place throughout New Zealand, and quoted the Flinders Programme (Australian Model of Integrated Care) as an example of a managed care model in place currently.

Others believed roles in the community setting for specifically trained personnel in coordinating high risk and frequent users of the health and other systems would bring potential gains in cost and quality. Education was viewed as essential for this role.

There was general agreement that a trained and qualified coordinator would be most valuable if their role enabled them to be based in the community but have strong and effective (mandated) links in to the tertiary care area. Of note this feedback has synergy with the recommendations in the rehabilitation review around the care coordination role.

Ministry Of Social Development

In relation to gross estimate of need, as with public health settings, this is dependent on change in perception of training requirements but most importantly a change in the current delivery model.

Of relevance to this review in this regard are the recommendations of the Welfare Working Group. This group have recommended changes, which if implemented, will change the case management delivery model to a more active managed care approach. In this regard skill levels of current workforce would need to be addressed.

A review of cases allocated for active managed care would determine workforce requirements in numbers skill and educative needs.

Within MSD, there are staff employed as case managers. They oversee the entitlement and associated requirements of beneficiaries. The case manager's role currently is not, this reviewer understands, a role where they are directly responsible for a portfolio of cases. The interaction with their clients is in a more 'ad hoc' way. This reviewer is informed that case managers see people on the day and at that time gather information and organise a package of assistance.

In regards to the sickness and invalid portfolio, whilst they may gather information and assess requirements they are unable to action and coordinate unmet health needs (as an ACC case manager can), as MSD does not have allocated funding for this.

Case managers do have access to a principal health advisor (medical professional) and a principal disability advisor and I understand nurses are mainly used as advisors to the case managers. There are 13 advisors throughout the 11 regions. Nurse advisors provide advice on health issues, and how these issues will impact the person's ability to work and advise on services available to assist in the persons return to work.

The principal disability advisor believes it is important not to 'over medicalise' in the case management process, just to look at the condition and how that impacts on the person and to focus on work, not the condition. She believes case managers require basic anatomy and physiology information, knowledge on how best to understand and utilise resources, skills in how to build rapport and use empowerment models.

The NIDMAR programme (for which she was involved with bringing into the ACC environment), she advises is a good training base for case managers and case management as is the Deakin University of Melbourne programmes.

In regards to education, human resource personnel are responsible for the education of all staff members; there is no formal case management education programme

however staff are provided with training identified applicable to their role. Whilst numbers are not available in regards to case managers from MSD accessing polytechnic and or university programmes this reviewer believes the numbers would currently be minimal.

Accident Compensation Corporation

As advised, ACC implemented case management processes in the mid-1993. In terms of 'numbers' they are the single biggest employer of case managers involved in coordinating rehabilitation and healthcare in New Zealand today.

Case managers employed at ACC have access to an online policy and procedure manual Informe, along with other tools such as a medical disability advisor computer programme, technical and medical support, to assist in their day to day work as claims and case managers.

In regards to education, historically, as advised ACC supported case managers through a number of university programmes, including the currently suspended Auckland University Managed Care Programme. This support continues based on approval for those that apply.

There was, as advised, a move away from postgraduate education around 2002 and subsequently the NIDMAR programme (instituted through Otago Polytechnic) was bought by ACC in order to educate case managers in return to work strategies.

Prior to Otago polytechnic instituting the programme, ACC attempted to run this programme in-house. Due to 'logistical difficulties' the decision was made to contract it to an outside provider; a tender process was used and Otago Polytechnic were successful in obtaining the contract.

Whilst this programme is contracted to Otago Polytechnic, ACC remain very involved. They provide an appointed employee who is responsible for oversight and coordination of the NIDMAR programme. Since instigation of this programme, this reviewer understands that approximately 160 ACC employees – mainly case managers – have completed modules.

As advised, this programme is focused on return to work strategies and as such has a narrower focus than programmes and courses available through other tertiary institutions.

Additionally, this reviewer is informed that the success of the ACC Better at Work programme – a programme designed to assist injured claimants with support in the workplace to remain at work and or return to work more rapidly (by providing a contracted advisor with appropriate qualifications to assist with the return to work) – may impact on case management functions and roles.

Of further relevance (which cannot be estimated at this time) is the potential impact privatisation of parts of ACC will have on case management function and roles.

In relation to this review, the estimate of gross need at this time for ACC staff to require managed care/ case management education programmes is minimal, for two and possibly three reasons:

1. Whilst ACC have 'sold' the NIDMAR franchise to an overseas institution (Personal Injury Education Foundation) this institution has strong links with ACC. Discussions with PIEF advise they intend to actively manage and refine this programme to suit the NZ environment. Whilst this reviewer is not in possession of the facts surrounding the sale to PIEF, the presumption is ACC case managers will still be supported to access this programme.
2. Discussions informally with ACC advise the Better at Work programme success may see the change in case manager and case management functions in the ACC organisation. This is currently a sensitive issue due to the potential impact on staff.
3. The impact of privatisation – whilst this may lessen – ACC case manager numbers, case managers seeking work in the privatised environment may be required by their new employers to access managed care education.

Third party providers/administrators

These organisations administer work injury claims on behalf of employers who are enrolled in the ACC partnership programme.

The ACC Partnership Programme gives employers significant discounts on their ACC levies, in exchange for taking responsibility for their employees' work injury claims. However, responsibilities include the delivery of all statutory entitlements, such as weekly compensation for lost earnings and provision of vocational rehabilitation.

Currently in New Zealand there are five main third party administrators providing claims and case management services through contracts with employers in the ACC partnership programme.

- CRM Catalyst Risk Management – formally a subsidiary of ACC now understood to be purchased by an Australian company.
- Care Advantage
- WorkAON
- WellINZ
- Gallagher Bassett

All five organisations were interviewed for this review.

General feedback:

All third party providers, without exception, view managed care/management education as essential to their business from both a quality and cost perspective. They believe that the quality of case management is reflective of their outcomes.

Case managers employed by third party provider's work in an environment that is subject to scrutiny, not only by their client and the employer, but also ACC and the injured claimant. In this regard, managers of third parties advise the requirement and training of suitably trained case managers is essential.

Currently, one of their main concerns is the scarcity of appropriately trained case managers if the intended privatisation of ACC is implemented. Traditionally these organisations recruited case managers from ACC however, most expressed concern that they believed the level of skill of case managers in ACC had diminished.

To address this issue, one third party provider has developed their own in-house competency programme; another (which is owned by an Australian company) has advised they are supporting staff through the Masters programme at Deakin University in Melbourne. The cost for this study is \$10,000 a year.

Confidence was expressed in the case managers they had employed who completed qualifications through the managed care programme at Auckland University. Differences noted in these graduates compared to other case managers were the ability for them to:

- understand medical reports and process this information in an appropriate way to assist the injured claimant
- write appropriate referrals to and dialogue with medical and associated healthcare professionals
- plan a course of care in conjunction with all relevant parties
- manage difficult situations and people due to appropriate knowledge base
- better understand the business environment
- manage serious injury more appropriately.

The majority of these organisations would welcome either the re-enactment of the Auckland University managed care programme and/or development of a dedicated programme in managed care with added courses and programmes in:

- communication styles/attitude management
- conflict management and resolution
- business risk, actuarial and insurance knowledge.

The third party provider that has developed their own programme has advised that even with their own in-house programme they would support this higher level of education.

One third party provider advised that time away from the business was a significant factor in considering support to education. In this regard the majority did accept this as a 'cost' to the business (in not just financial but also resource terms) however consensus was the outcomes this education provided outweighed any cost, challenge or inconvenience.

Whilst online and distance learning was regarded as the most appropriate way to address the issues raised around time away from the business, it is interesting to note that some also expressed support of classroom teaching as they believed exposure and interaction with lecturers and other students was an important part of managed care/case management education.

The majority did not believe the NIDMAR programme was applicable for their case managers' educational requirements, citing the focus as being too narrow.

In regards to gross estimate of need, currently these organisations employ approximately 40 case managers; they are accessing little in the way of tertiary education, however they advise confidence (with expansion) of the type and nature of the managed care programme at Auckland University and would support attendance if re-enacted.

Of importance to this estimate is the potential need if the privatisation of ACC proceeds. The majority advised a programme available for the 2013 year is imperative if privatisation goes ahead.

Skill of case managers is advised as imperative to the success of any expansion, gross estimate of need I am advised could extend to potentially another 50- 100 case managers.

Currently in regards to gross estimate of need with approximately 40 case managers, an uptake of anywhere between 5-10 a year in an approved programme (by both the provider and individual) could be expected.

Employers

Generally, as advised, third party providers manage large employers engaged in the ACC Partnership programme injury management processes, however there are a number of employers particularly the larger employers who provide their own injury/health and sickness management systems.

Some of these employers provide in-house claims and case management. Employers engaged in managing their own injury processes range across a wide spectrum from District Health Boards to construction companies.

Whilst none were specifically interviewed, historically, they have supported at varying degrees education processes for their in-house staff. Additionally, strict audit requirements provide impetus for appropriately trained personnel; this will play a part in ongoing decisions around furthering education for staff in an expected enlarged private insurance environment

Dependent on the numbers and complexity of organisations/employers uptake of self-insurance and the use of third party providers the expectation would be in a privatised environment of increased need.

Private health insurers

Private Health Insurers provide a range of insurance products including:

- Life insurance
- Medical and health insurance
- Mortgage insurance
- Income protection insurance

Currently in New Zealand there are approximately 10 private health insurers who employ claims staff in case management roles.

- Sovereign
- AXA/AMP
- Tower
- Fidelity Life
- ING
- AIA
- Asteron
- State
- Medical Assurance

A 'guestimate' of those performing managed care/case management functions is somewhere between 50-60.

Private insurers generally employ case managers to manage processes around claims involving income protection insurance. This insurance cover provides for entitlement for an advised medical inability to work.

The management of private insurance clients is not, as with ACC, restricted to injury management, however case managers in the insurance environment are often 'co-managing' claims and clients with injury alongside ACC case managers.

The process of entitlement is similar in that it is based on a medical condition precluding an ability to work, however unlike ACC, each insured person:

- has chosen their own particular product/policy

- has entitlement based on meeting the requirement of that policy
- has an ascribed 'stand down or waiting period'; a period chosen by the insured which reflects premium difference, (number of weeks before entitlement is due, usually four, eight, or 13 weeks is chosen)
- must meet medical and financial requirements to receive entitlement
- must have an ascribed illness and or injury precluding them from working in their own occupation or business they were engaged in at date of total disablement.
- is required to have a registered medical practitioner (approved by the insurer) provide opinion on occupational disablement
- can continue to receive entitlement until the end of the benefit period (usually until 65 some to 70+) as long as they are advised medically as unable to return to their own occupation; they are not required under their policy wordings to engage in any other occupation even if approved medically
- may have entitlement under the policy which provides vocational and rehabilitation assistance such as modifications to houses, assistance aids for daily living activities etc. but no entitlement to medical and associated healthcare.

Historically, health insurers provided claims processes – that is they assessed entitlement usually on requested and received information. In this regard personnel were not usually required to have any health-related training, they were for the most part gatherers and processes of medical and related data.

Subsequently, as with ACC, experience the need to manage claims became evident as claim durations increased leading to the growth of long term claims which for the most part had been 'unmanaged'.

Tensions often also arose between the insured and claims staff due to a lack of understanding by claims staff around medical and associated issues leading to presumptions, which often affected decision making; consequences occurred that were often not well received by the insured.

Risk of claim duration and issues of costumer experience combined with a perceived lack of expertise in the provision and coordination of rehabilitation lead private insurers to engage in processes that facilitated management of a clients' individual health needs that were providing barriers in relation to vocational recovery.

Due to the relatively small numbers of private insurers, case management numbers are relatively small. Recruitment and training of case managers is an individual process in all companies dependent on each company's values and philosophy.

Generally all representatives interviewed from the private insurance environment were supportive of managed care/case management training. As with third party companies, many had acquired education and training through the now suspended Auckland programme and/or other universities such as Otago.

Of interest, most insurers, as with third party providers, believed (albeit they had no researched data to prove this) that positive outcomes both fiscally in regards to decreased claim duration and more positive customer experience were a result of providing a managed care process.

In terms of feedback on support for education programmes:

- General support for an identified programme and career pathway.
- Support for staff to attend would be on an individual basis and would depend on perceived adequacy of any managed care programme.
- All expressed concern around the impact on the business with staff timeout for education and this would be taken into consideration in regards to approval. Online, distance and or after hours was preferred options although many agreed that face to face interaction given the nature of managed care work was an important factor in programme design and implementation.
- Some access claims and case management training programmes provided through their reinsurer.
- One insurer, Sovereign, has provided its own in-house training programme due to the lack of specific educative processes in managed care. All staff was able and encouraged to attend this programme.
- Some insurers specifically recruit skilled personnel such as registered nurses with rehabilitation backgrounds to work alongside unskilled case managers.
- Solutions suggested around staffing issues were online and or after hours education opportunities
- One manager (of case managers) believed an already educationally qualified person who had received qualifications in managed care but not necessarily worked in a managed care environment (a new graduate) was a more 'attractive' option due to issues around release of staff for educational opportunities.
- The Auckland University Managed Care programme if re-enacted should be expanded to reflect environments other than ACC and this would make it more marketable to the private insurance environment.
- Any programme design should incorporate not only managed healthcare knowledge but all aspects or areas encountered in an insurance environment such as insurance and actuarial knowledge, risk management and business models. Other areas of request for inclusion in any programme was mediation and conflict resolution knowledge.

In regards to gross estimate of need in this area, unlike other areas where a change of model of delivery is required insurers supporting and/or individuals seeking this education are the driving factors for attendance. Given the current estimate of numbers of case managers in this area a conservative prediction of 5-10 a year is possible.

Department of Corrections

The Department of Corrections in April 2011 implemented a case management approach in response to the identified need for a more coordinated approach when working with those in custodial care in order to complete activities required for their rehabilitation and reintegration requirements.

These activities are all designed to reduce the risk of reoffending and the case manager works with the offender from beginning to end of their sentence.

Case managers are not involved with the medical/health aspects of offenders – this is currently the role of the nurses employed at Corrections of which there are approximately 200. This is worthy of note, as these nurses are also required to coordinate care within this environment and are often seeking educative needs in regards to their area of practice.

Currently the department employs approximately 220 case managers, their skill and educational qualifications vary, however approximately 20% have postgraduate qualifications in varying areas.

Those involved with the oversight of case management and case managers advise they are keen to see that case managers have access to appropriate education and educative opportunities which will not only up skill them but also further motive and encourage them in enhancing their area of practice.

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