

Imagine

Your weekend plans: bike, golf, DIY, travel, time with family, dinner with friends

Playing sport: touch with your mates, coaching your child's team

Your professional plans: continued learning, teaching, retirement

The freedom: of sleeping in or getting up early to go for a run; of reaching for your partner

Imagine, now

...All those normal parts of *your* life – of *your* life plan – changing in an instant.

...Waiting for someone to turn *you*, clean you, dress you, feed you, toilet you.

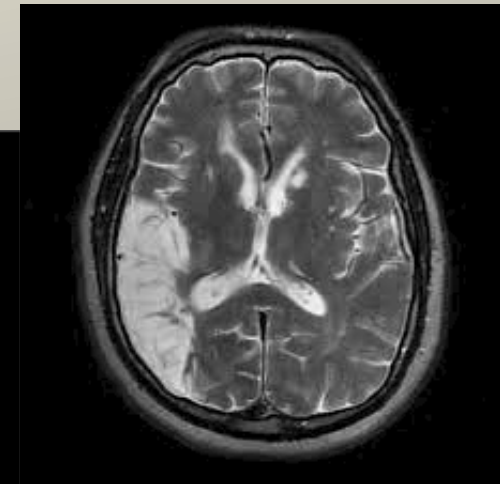
...The changes in how *you* relate to your family, your friends, your co-workers and peers.

Imagine how, in a moment...

Injury



Diagnosis

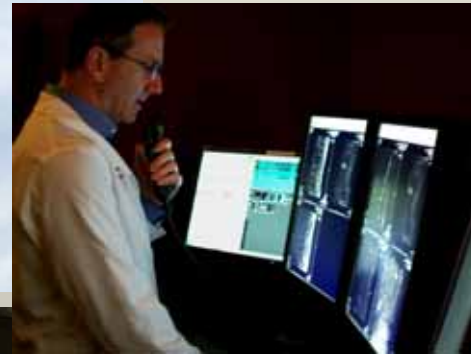


Everything changes

You



witness



everyday.....

Rehabilitation allows those whose lives have been saved by skilled emergency care and acute medical and surgical care – to regain a life worth living.



Physical Medicine and Rehabilitation Medicine

- Frank H Krusen: pioneer of **physical medicine**, which emphasized the use of physical agents, such as hydrotherapy and hyperbaric oxygen, coined the term 'physiatry' in 1938.
- Rehabilitation medicine gained prominence during **both** World Wars in the treatment of injured soldiers and laborers. Howard A Rusk became a pioneer of **rehabilitation** medicine after being appointed to rehabilitate air force pilots during World War II.
- 1943, the Baruch Committee defined the specialty as a combination of the two fields. The committee also distributed funds to establish training and **research** programs across the United States.

UN & WHO

UN declared 1983-1992 the Decade of Disabled Persons

1993 - WHO General Assembly adopted the UN Standard Rules on the ***Equalization of Opportunities for Persons with Disabilities***₁.

2007 **NZ** with 80 countries ratified the United Nations Convention on the Rights of Persons with Disabilities

Article 26: Identifies rehabilitation as a **Human Right**

WHO International Classification of Function

IMPAIRMENT

Alteration in Body Function / Body Structure

- *physiological* functions of body systems (including psychological function).
- *anatomical* parts of the body (organs, limbs)

ACTIVITY

Activity is the execution of a task or action by an individual.

- **Activity Limitations** (previously described as '*disability*') are difficulties an individual may have in executing basic human activities due to an impairment.
- **Basic ADL**

PARTICIPATION

Participation is involvement in a life situation /experience.

- **Participation Restrictions** (previously described as '*handicap*') are difficulties an individual may experience in being involved in life situations due to the environment.
- **Environmental Factors** - **consist of** the physical, social and **attitudinal** environment in which people live and conduct their lives.
- **Industrial ADL**

“Disability” & “Handicap” are not within the person but are within the environment and the environment’s restrictions upon the person.

Whole of Systems Pathway

Traumatic/Non-traumatic

Community/Home

RE-INTEGRATION PATHWAY



IMPAIRMENT



ACTIVITY



PARTICIPATION



World Health Organisation
International Classification of
Functioning, Disability and Health

Repair/Heal

Teach, Practice & Support

Re-integration into life roles

Prevention & Education

Prevention & Education

Prevention & Education

Procedures, Protocols, Guidelines, Processes

Tasks/Interventions/Activity

**IDT - Inter-
Disciplinary Team
Person Centred
Goals**

Specialist Rehabilitation is:

- a comprehensive, interdisciplinary and biopsychosocial process
 - directed by Rehabilitation Medicine physician
- aimed at enabling people with short-term or long-term conditions that impact on health and function
- to reach and maintain their optimal physical, sensory, intellectual, psychological and social abilities
 - in order to live a meaningful life
- while recognising fiscal & societal responsibilities.

Rehabilitation is an evidence-based,
person-centred,
goal-oriented service
developed with service user co-design.

Rehabilitation Diagnoses:

Stroke & Acquired Brain Injury

Traumatic & Non-Traumatic Spinal Cord Injury

Multiple Trauma/ Multiple Fractures

Pelvic & Femur fracture; Limb Amputation

acute inflammatory or active degenerative polyarthritic conditions and connective tissue disorders

neuro-degenerative disorders and degenerative neuromuscular disorders (i.e., MS, MND, ALS, polio/post-polio)

*post-TJR (if bilateral or if complications)

congenital disability

other acquired neurological disorders (i.e., GBS, Critical Illness Polyneuropathy)

severe debilitation due to prolonged complicated hospital course.

Rehabilitation in New Zealand

Evidence-based Rehabilitation Medicine practices and treatments that are cost effective and result in the best outcomes for people with acute, short term and long term disability due to illness or injury.

Unfortunately.... delivery of rehabilitation services in New Zealand has not kept pace.

Rehabilitation Medicine as a medical specialty is still widely unrecognised in NZ

- AH & Medical Schools
- 4/20 DHBs have AFRM Rehabilitation Medicine Specialist
- Public

The state of New Zealand's rehabilitation services has been described as “woeful” by Health Workforce New Zealand; with the specialty categorised as “vulnerable” → “critical”

- US – 8000 AAPMR [**~1/40,000**]
- AU – 354 AFRM [**~1/63,500**]
- NZ – 11.5 [**~1/450,000**]

Many New Zealanders are not achieving the health – and life - outcomes that are possible and realistic....and their right.

Disability in NZ

New Zealand Census 2006

New Zealand Census 2013

**~ 660,300 New Zealanders
disabled**

17% of the total population

**~ 1,062,000 New Zealanders
disabled**

**24% of the total
population**



2013

3rd leading cause of adult impairment due
to “**natural ageing**”

Disparity in Maori & Pasifika

- Māori experience higher rates of disability (21%) vs non-Māori (16.7%).
- **~43,000 Pacific adults** identified as experiencing disability (~24,300); 42% due to injury
- **>50%** of disabled Pacific people aged **< 45 years**.

Limited Access to Rehabilitation - Inequity due to Location

4 / 20 DHBs Rehab Medicine Specialists [AFRM(RACP)] & Rehab Units

DHBs AT&R “ >65 ” Wards with Geriatrician, AH, nursing, SW teams

DHBs Developing Community Rehab Services

Post-Specialised Rehabilitation (non-traumatic dx) → home DHB

- poor equipment provision
- limited home modification
- limited skill therapists (AT&R)

Access to Rehabilitation – Inequity due to funding

- Disabled adults in New Zealand supported ~ by three funding systems (ACC, MOH, DHB) – dependent upon aetiology (accident vs illness) and age.
- “This funding model for rehabilitation services has been criticised as an **obstacle** to a comprehensive rehabilitation system.”

Access to Rehabilitation – Inequity Due to Aetiology

Ministry – Illness/Condition

- Limited personal/household supports
- No family support
- No psychological support
- Limited (very basic) equipment (lottery grant)
- Limited personal supplies
- No home modifications (ramp)
- Income testing for PH
- Self-funded driving assessment, vehicle purchase & modifications
- No Vocational Rehabilitation
- Limited DHB therapy

ACC - Accident/Injury

- 24h+ care in home
- Personal, household & family support
- Psychological support
- Equipment & home modifications
- Interim accommodation or PH
- Vehicle, driving assessment, vehicle modifications
- Vocational Rehabilitation RTW
- On-going private therapy

Access to Rehabilitation – further Inequity due to age < 65 >

< 65 MOH

DHB

- Generally no rehab unless in Geriatric AT&R ward
- Limited personal/household supports; multiple needs assessors w/o delegated authority & within limited budget
- Short –term disability supports: Physical, sensory & ID dx before 18
- Long-term supports:
 - DSS (physical disability & cognitive incl dementia - Alzheimer's, EtOH)
 - LTS CHC (health related – no “disability”)
- Accommodation ~ no housing mods; no age-appropriate residential care facilities
- No Voc Rehab
- Family / social disruption
- Living longer with disability

MOH 65+

MOH

- AT&R rehab units in DHBs
- One NASC
- Equipment & home modifications from NASC delegated authority to identify care package, equipment & mods – no max

Stroke < 65 NZ



Not ALL Doom & Gloom....



Rehabilitation in NZ

1974 Accident Compensation Corporation (ACC)

Case-managed, timely rehabilitation of persons injured in NZ – IP, OP & Community

- + key promotor of best-practice models of Rehabilitation after injury.
- + cost effective with outcomes better than Australia¹². (specialist rehab)
- legislation - ACC only covers rehabilitation, equipment/modifications & support after **injury**.
- resulted in an unforeseen consequence of significant disparity in service provision.

National Burn Centre

Burn rehabilitation
(acute)

Middlemore Hospital
Auckland

Established without
Rehabilitation Medicine

→ Regional provider once
stable

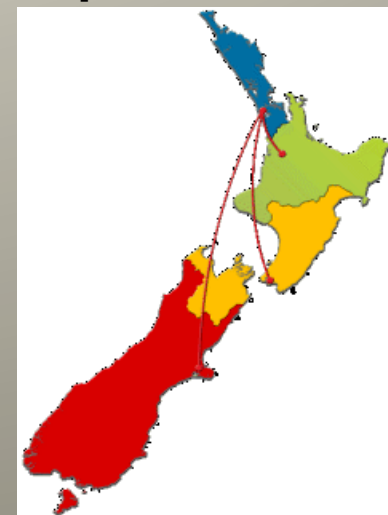
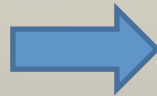
ACC funded community rehab

**Middlemore Hospital ,
Auckland** (co-located with
the National Burn Centre)

Waikato Hospital, Hamilton

Hutt Hospital, Lower Hutt,
Wellington

Christchurch Hospital,
Christchurch



Spinal Cord Injury/Impairment

XS Complications – Delays to surgery & rehab, poor surgery, poor post-op support

Services and treatments inconsistent

Poor coordination of services

Questionable knowledge of SCI → poor outcomes

Traumatic & Non-Traumatic SCI : Fragmented & Inequitable

NZ OPPORTUNITY!

...optimise and coordinate resources to improve the outcomes for people with SCI and their families

...through Specialist SCI Surgical, Critical Care & Rehabilitation Medicine care; SCI specific interventions & rehabilitation; and lifelong support for people with spinal cord impairment (SCI).

Traumatic SCI in NZ

New Zealand Spinal Cord Impairment Action Plan 2014-2019



Destination Policy & NZSCIR International Registry

◆ Northern Supra Regional Spinal Cord Service ◆
Acute Management of People with Traumatic and Non-Traumatic Spinal Cord Injury with Neurological Impairment, Middlemore Hospital

Referral Criteria:

- Patients with traumatic spinal cord injury with complete neurological deficit
- Patients with traumatic spinal cord injury with incomplete neurological deficit
- Patients 15 years or older with traumatic spinal cord injury
- Patients with traumatic cauda equina injury
- All patients that fulfil these criteria are required to be discussed with Spinal Consultant on call

Referral Pathway:

- Referring Consultant/Registrar calls MMH operator 09 276 0000 for Spinal Consultant / Clinical Nurse Specialist spines-on call
- Mandatory discussion with On Call Spinal Consultant or Clinical Nurse Specialist before transfer
- Transfer should occur as soon as cleared fit for transfer preferably within 24 hours
- Regional DHB sends Radiology images
- Accepted for transfer, Referring service completes online Spinal Transfer form then fax to 09 276 0288 then send notification by email to spines@middlemore.co.nz
- Clinical Nurse Specialist Spines will contact referring DHB to discuss time and mode of transfer
- All patients with neurological deficit who are not transferred still require referral to the Auckland Spinal Rehabilitation Unit (ASRU) for spinal rehabilitation and follow up

Contact Information:

Spinal On Call Consultant	09 276 0000
Clinical Nurse Specialist Spines	09 276 0000 or 011 221 9819
Middlemore Clinics	09 276 0288
Email	spines@middlemore.co.nz

NZ Traumatic Brain Injury Strategy and Action Plan 2017–2021

- Prevention
- Consumer information
- Clinical pathways & Services
- Consumer supports

TBI Rehab Pathway

Following confirmation that TBI has occurred:

- Criteria
- ACC notification
- Referral Process
- ABI Rehab Assessment Team –
 - ABI Auckland & Hamilton
 - Laura Fergusson Trust
 - Isis (1 Site 1 Service) Rehabilitation (SDHB)

Regional Amputee Rehabilitation Pathway - across DHBs, Auckland Artificial Limb Centre and Community

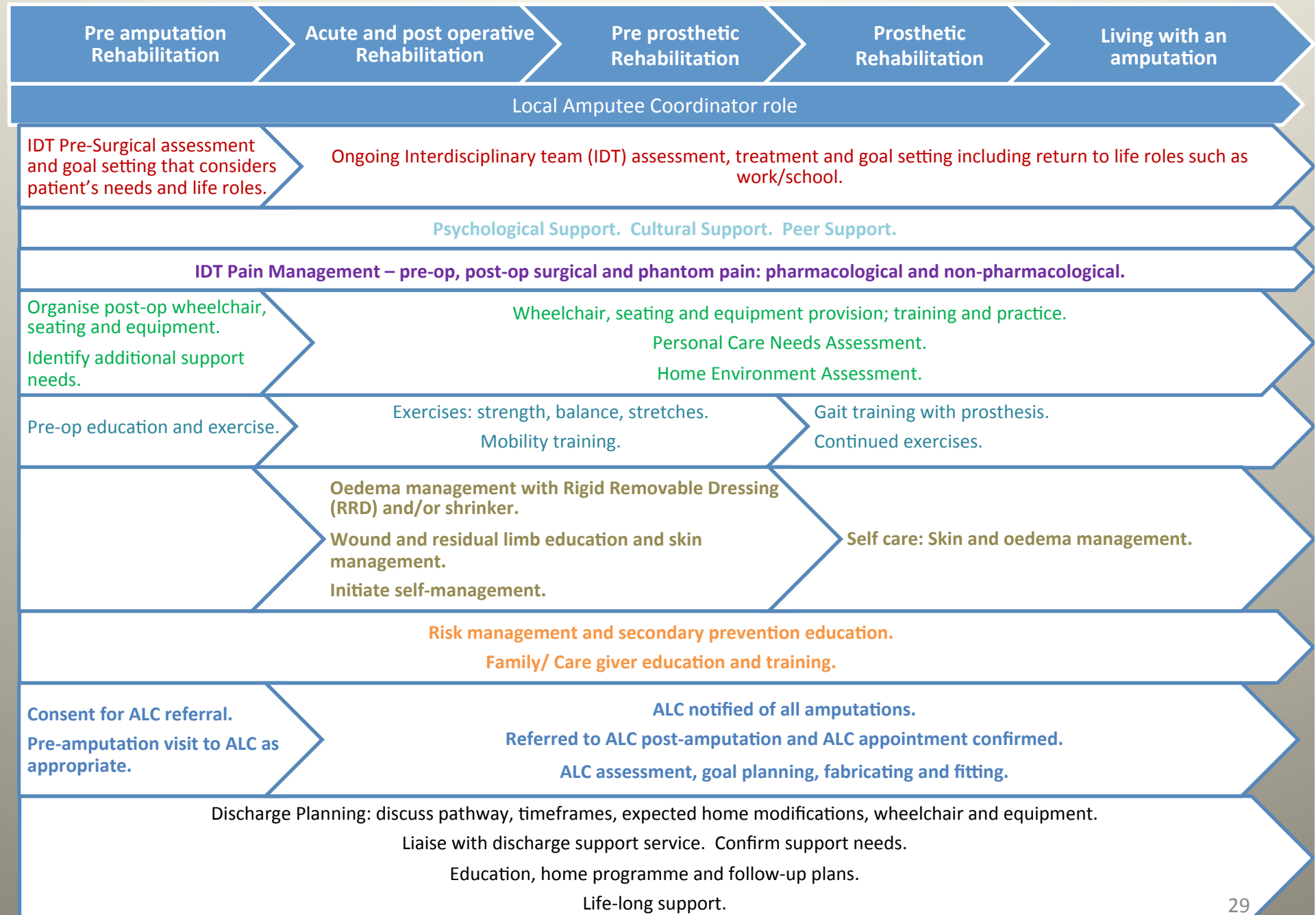
Final Draft 23rd June 2016

Regional Amputee Rehabilitation Pathway

Locally delivered across the DHBs, Community and Auckland Limb Centre to:

- Ensure that all people with amputations have access to **comprehensive, skilled IDT rehabilitation services**.
- Support a regionally consistent and timely working relationship with **Auckland Artificial Limb Centre (ALC)**.
- Encourage a robust consumer **peer support network** throughout New Zealand.
- Support **regional and local quality improvement, audit and bench marking**.
- The local **Amputee Coordinator** roles will be instrumental in this function.

Regional Amputee Rehabilitation Pathway



ACC

Major Trauma National Clinical
Network

MOH

DHBs

Early Responders

Critical Care & Acute Services

Rehabilitation

Major Multiple Trauma



Multitrauma
Limb Salvage
Amputee

Cancer Rehabilitation

INTEGRATED IDT Inpatient & Outpatient Rehabilitation Service for people with cancer related and treatment related deficits

-

EDUCATION beyond the diagnosis and cancer treatment

-

SUPPORT in understanding physical, emotional, mental and social changes

-

PREVENTION of secondary complications

-

**SUPPORTIVE Rehabilitation guided Return to Work &
Return to Life**

-

MAXIMISING & Maintaining QUALITY of LIFE

**Focus away *from* mere SURVIVAL toward PRESERVATION of function,
functional improvement & optimised Quality of Life**

Rehabilitation for People with Cancer

- Metastases to Bone
 - Pathologic Fractures, Amputation & assess the risk
- CNS Involvement (primary or metastases)
 - Brain, Spinal Cord
- Lymphedema & complications 2° treatment
 - Pulmonary, swallow, PN, MSK, burn/contracture
- Medical Complications
- Debilitation

- Discharge Planning & Coordination of Community Services
- Prevention of 2° complications

Category of Cancer Treatment

- Stage I – Preventive. Prevent deconditioning, contractures, pressure areas, fxs, etc.
- Stage II – Restorative. Expected return to premorbid state w/o substantial disability. May benefit from orthotic/prosthesis.
- Stage III – Supportive. Disease controlled but w/ residual disease/disability. Expect return home & remain active, function below premorbid level. May RTW for a time.
- Stage IV – Palliative. Active rehab program not appropriate; +/- Hospice LOC.

And now for this
important
announcement...



A redistribution of funding is needed to support:

Equity of rehabilitation services, equipment, modifications & personal and social supports for the > 50% of New Zealanders living with disability due to *illness*;

The development of rehabilitation medicine & “all age” rehabilitation services in all NZ DHBs;

A national focus on social investment & inter-sectorial funding for rehabilitation and associated services;

A clear rehabilitation framework through a NZ Rehabilitation Strategy that brings together health, disability /ABILITY and fiscal responsibility.

Call for a New Zealand Rehabilitation Strategy

*Guide **government policy and practice of healthcare** WITH & FOR those with disability through Co-design

***Improve the health, wellbeing, functional abilities and thus participation** of New Zealanders who experience disability from illness or injury.

***Enhance functional ability / independence**
reduce the individual, Whānau/family and societal burden of disability.

Improve access to & participation in the community and workplace to allow opportunity to contribute to family, the community and the economy by return to life roles and work force participation.

*2014 Update

*WHO Rehabilitation 2030
A Call for Action

<http://ww.who.int/disabilities/care/rehab-2030/en/>

Rehabilitation Medicine

Universal

Holistic

