Northern Regional Alliance
He Hononga o te Raki

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

23rd June 2016

The purpose of a Regional Amputee Rehabilitation Pathway

The purpose of the regional Interdisciplinary Team (IDT) amputee rehabilitation pathway, locally delivered across the DHBs, Community and Auckland Limb Centre is to:

- Ensure that all people with amputations have access to IDT rehabilitation services however it is deemed locally appropriate to provide.
- Support a regionally consistent and timely working relationship with Auckland Artificial Limb Centre (ALC) which serves all people with amputations in the Northern Region.
- 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.

The Pathway addresses upper and lower limb amputations however digit amputations is not in its scope.

Regional Amputee Rehabilitation Pathway

Pre amputation Rehabilitation	Acute and post operative Rehabilitation	Pre prosthetic Rehabilitation	Prosthetic Rehabilitation	Living with an amputation

Local Amputee Coordinator role

IDT Pre-Surgical assessment and goal setting that considers patient's needs and life roles.

Ongoing Interdisciplinary team (IDT) assessment, treatment and goal setting including return to life roles such as work/school.

Psychological Support. Cultural Support. Peer Support.

IDT Pain Management – pre-op, post-op surgical and phantom pain: pharmacological and non-pharmacological.

Organise post-op wheelchair, seating and equipment.

Identify additional support needs.

Wheelchair, seating and equipment provision; training and practice.

Personal Care Needs Assessment.

Home Environment Assessment.

Pre-op education and exercise.

Exercises: strength, balance, stretches.

Mobility training.

Gait training with prosthesis.

Continued exercises.

Oedema management with Rigid Removable Dressing (RRD) and/or shrinker.

Wound and residual limb education and skin management.

Initiate self-management.

Self care: Skin and oedema management.

Risk management and secondary prevention education.

Family/ Care giver education and training.

Consent for ALC referral.

Pre-amputation visit to ALC as appropriate.

ALC notified of all amputations.

Referred to ALC post-amputation and ALC appointment confirmed.

ALC assessment, goal planning, fabricating and fitting.

Discharge Planning: discuss pathway, timeframes, expected home modifications, wheelchair and equipment.

Liaise with discharge support service. Confirm support needs.

Education, home programme and follow-up plans.

Life-long support.

Regional Amputee Rehabilitation Pathway

Will the patient receive a prosthesis; discussions with patient, family, IDT, Rehabilitation Medicine Consultant and ALC

Pre amputation Rehabilitation → **Acute and post operative Rehabilitation** → **Pre prosthetic Rehabilitation** → **Prosthetic Rehabilitation** → **Living with an amputation**

Local Amputee Coordinator role

No, patient will not receive a prosthesis – patient declined, deceased or not recommended by IDT Rehabilitation Service, Rehabilitation Medicine Consultant or ALC.

Decision regarding limb can be reviewed again at any time.

ALC Preliminary Assessment; prosthesis may or may not be recommended. Decision may be reviewed again later.

Yes, prosthesis is recommended; patient visits ALC for:
- ALC Consultant and team consultation.
- Cast of residual limb.
- Prosthesis fitted and adjusted (multiple visits).

A combination of amputee rehabilitation services supports the Pathway.

Pre amputation Rehabilitation → **Acute and post operative Rehabilitation** → **Pre prosthetic Rehabilitation** → **Prosthetic Rehabilitation** → **Living with an amputation**

Local Amputee Coordinator role

Specialist Amputee Rehabilitation Services

Continue with Specialist Amputee Rehabilitation Services
or
Discharge from Specialist Amputee Rehabilitation Services:
- Inform ALC of Specialist Amputee Rehabilitation discharge.
- Patient referred to Community Rehabilitation as appropriate.
- Patient follow-up by Medicine/Surgical/Geriatrician.
- On-going ALC and GP monitoring.
- Referred back to Specialist Amputee Rehabilitation Services as required or at a minimum within 1 year for review.
- Ongoing follow-up by Specialist Amputee Rehabilitation Services 1-2 years post 1st review and then ongoing review every 1-5 years as clinically indicated

Discharge from Specialist Amputee Rehabilitation Services can only occur when post operative rehabilitation is complete.

The interdisciplinary team is key to optimising patient outcomes.

Interdisciplinary Team (IDT) Specialist Amputee Rehabilitation Service – is made up of the Rehabilitation Medicine Consultant, Nurse, Psycho-social support and allied health services such as Physiotherapy, Occupational Therapy, Social Work and Dietician that work together as a team with specific skills and expertise regarding amputations to support and promote the patient's rehabilitation. For Health of Older People (HoP) patients this may include a Geriatrician and for children a Paediatrician. For all patients it also includes their General Practitioner.

On-going IDT Specialist Amputee Rehabilitation Service input is key to planning and delivering optimal patient focused outcomes.

The Interdisciplinary Team (IDT) Pre-Surgical Assessment

The pre-surgical assessment is an essential consultation between the patient, surgeon, IDT specialist amputee rehabilitation service (e.g. Rehabilitation Medicine Consultant, Physiotherapist), and Auckland Artificial Limb Centre (ALC) that takes into account the patient's health needs, their level of amputation and rehab goals. Working collaboratively with the surgical team ensures optimal functional outcomes for the patient.

Interdisciplinary Team (IDT) Pain Management

Early intervention and collaboration between the Pain Specialist, Rehabilitation Medicine Consultant and IDT specialist amputee rehabilitation service and patient promotes a holistic management of neuropathic and surgical pain.

A combination of rehabilitation services will provide life long support

The Pathway identifies 5 Phases

The pathway identifies the need for amputee rehabilitation services through a i)pre-surgical, ii)acute and post-operative, iii)pre-prosthetic, iv)prosthetic training and a v)phase of services received in the community for life long support and prosthesis maintenance. Post- operative rehabilitation must be provided by a Secondary Care specialist amputee rehabilitation service (e.g. DHB specialist service). Pre prosthetic and prosthetic rehabilitation may be provided by a combination of Secondary Care specialist amputee rehabilitation and rehabilitation services in the community, in the home, residential care or school. The v)phase also includes regular review and assessment at 1 year post discharge followed by review in another 1 to 2 years and then every 1 to 5 years by a Rehabilitation Medicine Consultant and/or IDT specialist amputee rehabilitation service as clinically indicated.

Overall a combination of amputee rehabilitation services support the patient such as:

- DHB Secondary Care Specialist Amputee Rehabilitation Services
  - Acute post operative inpatient services (in-reach specialist amputee rehabilitation for medical/ surgical beds)
  - Inpatient Rehabilitation Service (dedicated specialist rehabilitation beds, AT&R service)
  - Outpatient and Community Rehabilitation Services
- Private Specialist Amputee Rehabilitation Services (overseen by a Rehabilitation Medicine Consultant)
  - Residential Rehabilitation Service
  - Outpatient Rehabilitation service
- Community rehabilitation services
  - Community rehabilitation clinics
  - Rehabilitation provided in the home or residential care facility
- School-based (MoE) rehabilitation services for school children

Patient focused care must be managed across all aspects of the Pathway for the patient.

Quality patient care

Quality patient care requires engaging evidence based best practice, patient and family/Whanau involvement, psychosocial supports and when appropriate cultural support.

Continuous patient education

Patient education for fall prevention, care of the remaining limb, and prevention of non-traumatic amputation by decreasing risks and improving management of chronic medical conditions, is essential and is provided at each stage of the pathway.

The local Amputee Coordinator is a formally recognised role as part of the local Specialist Amputee Rehabilitation Service. The role can be provided by, or be a combination of; i)DHBs, ii)ACC, iii)ALC and iv)Primary Care. The role encompasses:

- Facilitating communication and coordinating services across DHB/s, Auckland Artificial Limb Centre and the Community;
- Developing, implementing and monitoring pathways across DHB/s, Auckland Artificial Limb Centre and the Community;
- Making contributions to regional and district quality improvement, auditing and benchmarking.

The regional amputee rehabilitation pathway is delivered locally by the DHBs & ALC

Locally delivered and equitable Pathway

The regional amputee rehabilitation pathway is delivered locally by the DHBs through operational guidelines that define their health professional roles in the pathway. DHBs will also work collaboratively to ensure a seamless Pathway for those clients that cross and utilise multiple DHBs and other resources such as ALC and ACC.

The rehabilitation and discharge planning process for traumatic and non-traumatic amputees should be equitable and provide the same quality of care regardless of the funding source, e.g.: DHB, ACC, MOH, MOE, Private Insurance.

Engagement between DHBs and Auckland Artificial Limb Centre (ALC)

Communication between DHBs and ALC consists of:

- The DHB notifying ALC of all limb amputations for inclusion in a Northern Region amputation database.
- The DHB referring the patient to ALC for pre-amputation consultation as appropriate.
- The DHB supporting ALC to provide peer support for any patient pre or post amputation.
- The DHB providing the required patient information (inpatient medical notes or discharge summary and any IDT Service comments) for ALC patient appointments.
- ALC providing a life long service commitment with the patient and their prosthesis.
- ALC referring to Secondary Care Specialist Amputee Rehabilitation Services at anytime for further assessment, treatment or support.

Supportive reintegration into life roles

Discharge planning from Secondary Care Specialist Amputee Rehabilitation services is the process of reintegrating the patient into their life roles and consists of:

- Early discussion of Pathway, timeframes and goals.
- Early identification of needs and barriers (psychosocial, environmental/home modification, wheel chair and equipment).
- Liaising with discharge support services.
- Education (prevention, residual limb management, fitness and home programme).
- Self-management and actualisation
- Provision of equipment, services and supports.
- Return to life roles (parent, student, employment).
- Establishing life-long support links.

In order to optimise independence and improve a person's quality of life, intermittent episodes of active rehabilitation from Secondary Care Specialist Amputee Rehabilitation Services or other community rehabilitation may be required.
Whatever the rehabilitation support that is needed, the patient moves along the Pathway and is referred back and forth between Secondary Care Specialist Amputee Services and/or other rehabilitation services as indicated.

Glossary

What is rehabilitation? Rehabilitation is an interdisciplinary process aimed at optimising an individual's functional capacity and role participation after a major health insult. Key characteristics include:

- Defined entry criteria, length of stay and exit criteria.
- Individualised goals set collaboratively by patient/ family/ team.
- Interdisciplinary team managed by a Rehabilitation Medicine Consultant with a wide range of professional skills (physiotherapy, occupational therapy, speech and language therapy, social work, medical, psychology and others).
- Identified clinical outcomes with functional gains and achievement of goals measured and reported.

In-reach rehabilitation – Rehabilitation model of care which provides rehabilitation services as soon as the patient is ready and able to participate. In-reach provides IDT Specialist Rehabilitation services to patients while in the acute inpatient bed. The IDT Services support the patient and staff where ever the patient is in the hospital.

Glossary

DHB Secondary Care Rehabilitation Services – refers to hospital based (Provider Arm) Specialist Rehabilitation Services that specialise in supporting the hospital's acute services as well as providing specialist rehabilitation services for patients through dedicated inpatient beds and outpatient clinics and programmes.

Secondary Care Rehabilitation Services (i.e. Specialist Rehabilitation Services) can also be provided by private providers that is overseen by a Rehabilitation Medicine Consultant, for example ACC contracted providers.

New Zealand Artificial Limb Service (NZALS) – is a Crown entity and National Provider of prosthetic limb services to New Zealand residents with amputations. NZALS supports four Regional Centres that includes the Auckland Artificial Limb Centre.

Auckland Artificial Limb Centre (ALC) – the regional NZALS provider to the four Northern DHBs: Northland, Waitemata, Auckland and Counties Manukau.