AusTOMs-PT
for use in Podiatry
2ND EDITION

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AusTOMs PT - for use in Podiatry

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Professor Pam Enderby assisted the research team at La Trobe University in the application to the Commonwealth to support this project. Both Professor Enderby and Dr Alexandra John from Sheffield University, United Kingdom, were associate researchers to this project, providing the Research Team with advice, discussion and support in this development of the AusTOMs.
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Introduction and Background to the AusTOMs

Measuring outcomes using the AusTOMs
We have developed the AusTOMs to measure therapy outcomes for physiotherapists, occupational therapists and speech pathologists. Subsequently, many of the AusTOMs for Physiotherapy scales have been found to be suitable for use by podiatrists. Outcome measures are an important part of quality assurance and service improvement. Outcome data can show areas that need improvement, as well as areas of particular strength within a service. This manual provides you with training and information so that you can use the AusTOMs-PT for use in Podiatry scales.

The AusTOMs are not an assessment tool, but are designed to provide a snapshot rating that broadly reflects a client’s status across four domains of health and functioning (discussed in the next chapter). Unlike some outcome measures, the AusTOMs are rated by you, the clinician, not clients. You make a rating based on your clinical judgment, using your knowledge of the client and how they are functioning. Of course, this includes your discussion with the client and carer about their concerns and areas of difficulty.

Background to the AusTOMs Project
Although developed in Australia, the AusTOMs have been designed for international use. The AusTOMs are based on the Therapy Outcome Measures (TOM), published in the UK by Professor Pam Enderby and Dr Alex John (Enderby & John, 1997; Enderby, John, & Petherham, 1998) and concepts of health as outlined by the World Health Organisation (WHO) in the International Classification of Functioning, Disability, and Health (ICF) (WHO, 2001). The ICF is a taxonomy of the consequences of disease and provides a useful organising framework for therapists to identify where to focus their outcomes research.

The ICF organizes information in two sections, the first part deals with Functioning and Disability (further divided into the components of Body Functions and Structures, and Activities and Participation), while the second covers contextual factors (further divided into environmental and personal factors). In this system, clinicians can think about their client’s problems and the kinds of therapy needed in relation to body function and structure (impairment), ability to do activities (activity limitation), and participation (participation restriction) (WHO, 2001). Drawing on this structure, the
domains measured on the AusTOMs scales are Impairment, Activity Limitation and Participation Restriction. The concept of Distress/Wellbeing is embedded in the ICF. However, Enderby and John (1997), drew out this concept as a distinct domain since therapy often aims to alleviate distress and promote wellbeing in both clients and their carers. AusTOMs also includes rating the client's Distress/Wellbeing as part of the measures.

The World Health Organisation also developed the International Statistical Classification of Diseases and Health Related Problems (10th Edition). The ICD-10 (WHO, 2004) provides a classification of diseases, disorders and other health conditions and complements the ICF. AusTOMs data can be collected along with a client's ICD-10 code/s to provide contextual information about the client's diseases and other health problems.

Process to develop the scales
The AusTOMs scales were developed and refined over two years. Documentation concerning development can be found in Perry et al (2004). The following process was used:

- The team at La Trobe University reviewed the TOM scales and in discussion with clinicians decided to develop AusTOMs scales
  - for the three professions and
  - that could be used both in Australia and internationally,

- We developed an AusTOMs core scale on which to base the occupational therapy, physiotherapy, and speech pathology scales (see pages. 7 & 8),

- We held focus groups with occupational therapists, physiotherapists and speech pathologists in Victoria to develop occupation or disorder-specific scales for each profession,

- We sent these draft scales to clinicians across Australia for review and feedback,

- We revised the scales for each profession on the basis of clinicians’ comments and then re-sent them to clinicians for further feedback, and

- We tested the final scales in a six month data collection phase to determine their reliability and validity (see Chapter 7).

- We published several articles on the AusTOMs scales (refer to the Reference List) and three AusTOMs kits (including scales and manual), one for occupational therapy, physiotherapy, and speech pathology. The AusTOMs comprise 12 occupational therapy scales, 9 for physiotherapy scales, and 6 for speech pathology scales.
Subsequently, focus groups were held with podiatrists to determine the scales that were suitable for use in the podiatry profession.

The 12 AusTOMs for Occupational Therapy scales are:

| Scale 1. | Learning and Applying Knowledge |
| Scale 2. | Functional Walking and Mobility |
| Scale 3. | Upper Limb Use |
| Scale 4. | Carrying Out Daily Life Tasks and Routines |
| Scale 5. | Transfers |
| Scale 6. | Using Transport |
| Scale 7. | Self Care |
| Scale 8. | Domestic Life—Home |
| Scale 9. | Domestic Life—Managing Resources |
| Scale 10. | Interpersonal Interactions and Relationships |
| Scale 11. | Work, Employment and Education |
| Scale 12. | Community Life, Recreation, Leisure and Play |

The 6 AusTOMs for Speech Pathology scales are:

- Speech
- Language
- Voice
- Fluency
- Swallowing
- Cognitive-communication

The 9 AusTOMs for Physiotherapy scales, and 6 scales applicable to Podiatry are:

| Scale 1. | Balance and Postural Control (Podiatry) |
| Scale 2. | Cardiovascular System Related Functions |
| Scale 3. | Musculoskeletal Movement Related Functions (Podiatry) |
| Scale 4. | Neurological Movement Related Functions (Podiatry) |
| Scale 5. | Pain (Podiatry) |
| Scale 6. | Respiratory System Functions |
| Scale 7. | Sensory Functions (Podiatry) |
| Scale 8. | Skin Functions (Podiatry) |
| Scale 9. | Urinary and Bowel Continence |

We derived these areas from the International Classification of Functioning, Disability and Health (WHO, 2001), and consultation with occupational therapists, speech pathologists and physiotherapists.
Changes in the second edition of AusTOMS for Physiotherapy

The first edition of the AusTOMS for Physiotherapy kit was published in 2004 and is being used across Australia and around the world in the UK, Sweden, the USA, Canada, and New Zealand. The second edition has been updated by Professor Carolyn Unsworth, developer of the AusTOMS for Occupational Therapy in 2014. Then in 2019, Associate Professor Cylie Williams (Monash University and Peninsula Health) led a project to determine if these scales could be used in Podiatry, and subsequently 6 of the AusTOMS for Physiotherapy scales were identified as suitable for use. They have been called AusTOMs-PT for use in Podiatry.

In this AusTOMs PT for use in Podiatry manual, case studies suitable for use in Podiatry have been added in Chapter 5, together with Answers and Discussion Points in Chapter 6.

The ICD-10 codes (WHO, 2004) also replace the original aetiology and disorder codes (Enderby, John, & Petherham, 1998), and there is an updated reference list.

Feedback

The AusTOMs PT- for use in Podiatry is an evolving tool. If you would like to comment on a scale, find out more about current research or are currently gathering outcome data using the AusTOMs-PT for use in Podiatry, we would love to hear from you. Please email C.Unsworth@latrobe.edu.au to provide feedback.
CHAPTER TWO

AusTOMs Domains

We have based the AusTOMs scales on a common core scale, shown as Appendix A (p. 35). All of the disorder-specific scales in each profession were developed from this core scale, meaning that scales across disorders and across professions are comparable. There are four domains in the core scale, which become the four domains to be assessed in each of the profession-specific scales: Impairment, Activity Limitation, Participation Restriction, and Distress/Wellbeing. We based the first three of these domains on the International Classification of Functioning, Disability and Health (ICF) (WHO, 2001). Distress/Wellbeing was developed as clinicians felt that this domain—part of the UK Therapy Outcome Measures—was also relevant to Australian clinical practice.

Impairment and Activity Limitation

The Impairment and Activity Limitation domains of the AusTOMs are disorder-specific. We have developed descriptions of a range of behaviours or factors that illustrate the levels of difficulty that clients experience related to their disorder.

The Impairment domain describes structural (anatomical) or functional (physiological or psychological) difficulties that a client may have. For example, an impairment of body structure could include a fracture to a bone, while an impairment of body function could include difficulty walking. When rating the Impairment domain, you need to consider all the impairments the client currently experiences and the severity of these compared to all other clients.

The Activity Limitation domain measures a client's level of ability and difficulty in performing activities. When a client experiences difficulties in the performance or execution of a task, he or she is experiencing an activity limitation. For example, a client with impaired muscle coordination after a stroke may have difficulty with the activity of walking; a client with muscle paralysis due to spina bifida may have difficulty sitting independently.

Participation Restriction and Distress/Wellbeing

The Participation Restriction and Distress/Wellbeing domains are identical across all scales. These domains are not related to each scale (for example the clients level of distress/wellbeing is not just related to 'Pain as rated on Scale 5), but are global constructs related to all areas of the client's life. Therefore, when making a rating for a
client using the AusTOMs, you will only need to rate the Participation Restriction and Distress/Wellbeing domains once, even if you are using several AusTOMs scales for that client. Assess these domains each time you set goals and evaluate goal outcomes. For example, a therapist conducts the usual admission initial interview and assessments with the client. The therapist then sets two goals to work on with the client and rates the client on the relevant AusTOMs scales. On the score sheet for admission, the therapist will provide a unique score for the domains of Impairment and Activity Limitation for both of the scales. However, only one rating will be made for each of the Participation Restriction and Distress/Wellbeing domains and this will be filled in for both scales. As mentioned above, this is because an individual’s Participation Restriction and Distress/Wellbeing don’t just relate to his/her pain and balance and postural control. Rather, Participation Restriction and Distress/Wellbeing are global constructs.

When you choose more than one scale to rate your client, you need to rate the Impairment and Activity Limitation domains for each scale, however, you rate the Participation Restriction and Distress/Wellbeing domains only once.

The Participation Restriction domain examines, overall, the limitation that a client may experience in real-life, daily situations. Such limitations include roles within vocational, educational, and social contexts. For example, a builder who has plantar heel pain can struggle to go up and down a ladder on the worksite. This is a restriction of his vocational role. An individual’s participation in an activity is facilitated or restricted by a range of individual, environmental and societal issues. The Participation Restriction domain considers an individual’s overall ability to participate, given the facilitators and barriers in place (see below). These facilitators and barriers also affect a client’s impairment and activity limitation (e.g., medication for Parkinson’s Disease impacts on a person’s performance at both impairment and activity levels).

A facilitator is any person or item that assists the client to participate. For example, medication, a teacher’s aide for a child with a physical disability, a carer who assists the client to dress, an alternative communication device such as a Lightwriter, or a community service such as Meals on Wheels (WHO, 2001).

A barrier is anything that may impede a client’s participation. For example, an older person who cannot leave home without assistance, a child who cannot participate in some class activities without one-to-one assistance, a client who chooses not to participate in an activity, or a client who has poor self-esteem or self worth (WHO 2001).

The Distress/Wellbeing domain describes a client’s level of concern. Concern may be evidenced by anger, frustration, apathy or depression. The AusTOMs scales also allow you to rate the distress/wellbeing of a carer (for example, a parent). You can rate a carer’s level of distress/wellbeing if you anticipate that this will be an area that you will target in the client’s episode of care. For example, when the client is a young child (and therapy may be directed toward the parent), or when you spend time on counselling and advising carers, a rating of the carer’s level of distress/wellbeing may be appropriate.

Always rate a domain appropriate to the age of the client. For example, in the Participation Restriction domain, a lack of autonomy is not an indication of restriction for a still dependent child.
**AusTOMs core scales**

The following core scales provide the basis for scoring the four AusTOMs domains. Descriptions have been added to the Impairment and Activity Limitation core scales for each of the 6 AusTOMs - PT for use in Podiatry scales. Use the spiral bound book of AusTOMs - PT for use in Podiatry scales when rating people who attend for podiatry care.

**Impairment of either Structure or Function (as appropriate to age):**

*Impairments are problems in body structure (anatomical) or function (physiological) as a deviation or loss.*

0  -  The most severe presentation of impairment
1  -  Severe presentation of this impairment
2  -  Moderate/severe presentation
3  -  Moderate presentation
4  -  Mild presentation
5  -  No impairment of structure or function

**Activity Limitation (as appropriate to age):**

*Activity limitation results from the difficulty in the performance of an activity. Activity is the execution of a task by the individual.*

0  -  Complete limitation
1  -  Severe limitation
2  -  Moderate/severe limitation
3  -  Moderate limitation
4  -  Mild limitation
5  -  No limitation

**Participation Restriction (as appropriate to age):**

*Participation restrictions are difficulties the individual may have in the manner or extent of involvement in their life situation. Clinicians should ask themselves: “given their problem, is this individual experiencing disadvantage?”*

0  -  Unable to fulfill social, work, educational or family roles. No social integration. No involvement in decision-making. No control over environment. Unable to reach potential in any situation.
1  -  Severe restriction in fulfilling social, work, educational or family roles. Very limited social integration. Very limited involvement in decision-making. Very little control over environment. Can only rarely reach potential with maximum assistance.
2  -  Moderately severe restriction in fulfilling social, work, educational or family roles. Limited social integration. Limited involvement in decision-

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**AusTOMs Domains**
making. Control over environment in one setting only. Usually reaches potential with maximum assistance.

3 - Moderate restriction in fulfilling social, work, educational or family roles. Relies on moderate assistance for social integration. Limited involvement in decision-making. Control over environment in more than one setting. Always reaches potential with maximum assistance and sometimes reaches potential without assistance.

4 - Mild restriction in fulfilling social, work, educational or family roles. Needs little assistance for social integration and decision-making. Control over environment in more than one setting. Reaches potential with little assistance.

5 - No restriction in fulfilling social, work, educational or family roles. No assistance required for social integration or decision-making. Control over environment in all settings. Reaches potential with no assistance.

Distress/Wellbeing (as appropriate to age):
The level of concern experienced by the individual. Concern may be evidenced by anger, frustration, apathy, depression etc.

0 - High and consistent levels of distress or concern.
1 - Severe concern, becomes distressed or concerned easily. Requires constant reassurance. Loses emotional control easily.
2 - Moderately severe concern. Frequent emotional encouragement and reassurance required.
3 - Moderate concern. May be able to manage emotions at times, although may require some encouragement.
4 - Mild concern. Able to manage emotions in most situations. Occasional emotional support or encouragement needed.
5 - Able to cope with most situations. Accepts and understands own limitations.
Selecting clients to score using the AusTOMs

You can collect AusTOMs data on clients who are receiving services over a period of time. You cannot collect outcome data on clients who attend therapy only once, for example, to receive advice alone, unless there is a follow-up appointment or audit survey to see whether the advice has influenced any of the domains.

You can rate clients of any age and with any diagnosis using the AusTOMs scales.

Selecting scales

We have not designed the AusTOMs scales to provide diagnostic assessment or to help guide management strategies for a particular client. Rather, we have designed them to evaluate the overall effects of care across an episode of care. The scales do not reflect aetiologies, but therapeutic goals. For example, there is no “ingrown toe nail” scale. If a person has an ingrown toe nail and you are providing therapy with the aim of reducing pain and infection, then you will use the Skin scale. Similarly, if you are working with a child who has a foot pain, you may use the Musculoskeletal Movement Related Function scale. If you are working with an older adult who has Charcot’s Neuroarthropathy, use the Sensory or Neurological Movement Related Functions scale.

You can rate a client on more than one AusTOMs scale. For example, when your therapeutic goal is only to improve a client’s neurological movement related problems then you would just choose the scale that relates to this area. However, if you have several goals, such as to improve balance and decrease neurological movement related problems you would need to rate the client on two scales to reflect the outcome of your intervention (i.e., the Balance and Postural Control, and Neurological Movement Related Functions scales). Similarly, if you have a client with pain and sensory impairments, and it is possible that you may work on one or both of these areas during a period of therapy, you will need to make an initial rating on both scales relating to these areas, even if you do not plan to target both areas immediately.

When to make a rating

Make an initial rating after you have assessed a client at the beginning of an episode of care and set your goals. In the case of clients who are seen before elective surgery, the episode of care will commence at the first session following the surgical procedure.
You may make an interim rating if you wish. This may be appropriate for clients in long-term therapy, where you regularly re-assess the client and set new goals. We recommend that services specify and standardise the time at which an interim rating is made, for example every six months.

You make a final rating at the end of an episode of care. An episode of care is the total period of your intervention. The end of an episode of care could be when the client is to be discharged, put on review, transferred from inpatient to outpatient service, or when you change the goals of therapy.

How to make a rating
The domains of the AusTOMs are independent; each domain is rated separately, according to the client’s abilities and difficulties relating to that domain. If you chose one scale only, you need to make a rating of your client’s abilities and difficulties for all four domains. However, when you choose more than one scale for a client, you need to rate the Impairment and Activity Limitation domains for each scale, and rate the client’s Participation Restriction and Distress/Wellbeing only once. The AusTOMs include the option to rate the Distress/Wellbeing domain for carers, in addition to clients. We recommend that you make use of this option if you are targeting the distress/wellbeing of a carer, for example through informational counselling.

How to choose scale points
Each domain of the AusTOMs scales has six levels (0-5), where 0 represents “complete difficulty” in each domain, and 5 represents “no difficulty”. The descriptions at each point are designed to reflect that level; they are unlikely to fit any particular client perfectly. They merely provide descriptions of a range of behaviours or factors you can consider in order to judge the severity of the impact of the disorder on a client’s performance. All descriptors for each domain need not be present for you to give a client that rating. Match the client to the description that is the best fit, despite the client not having all the factors listed or having other factors that are not listed.

You are able to use half points. For example, if the impact of a disorder on a client is more severe than a rating of 2, but not quite as severe as a rating of 1, you can score 1.5. Rate severity in the Impairment domain by taking a global snapshot based on your clinical judgement. Some of the things that might influence your global snapshot are:

- the degree of the impairment (e.g., a person with a stroke who has a completely paretic leg);
- the number of different impairments the person has (e.g., a person with a pressure wound at their heel, decreased range of hip and knee motion and pain over the wound site when attempting to move);
- the number of body parts or the percentage of the body affected (e.g., a child with hemiplegia affecting one side of their body);

Make a rating according to the "best fit" with the scale descriptions, according to your knowledge about the client at that time.
- the amount of time the impairment is present (e.g., a child with calcaneal apophysitis who only has pain when participating in sporting activities over the past 3 months).

Similarly, rate severity within the Activity Limitation domain by taking a global snapshot based on your clinical judgement. Some of the things that might influence this rating are:

- the degree of limitation (e.g., a child with cerebral palsy (spastic quadriplegia) who is unable to walk at all with or without assistive devices);

- the number of different limitations a client has (e.g., a person with back pain may have difficulty putting on shoes, be unable to sit for more than 10 minutes and walk in a slow and guarded manner);

- the amount of time the limitation is present (e.g., a person with plantar heel pain may be able to work, however struggles to do work in the house or attend the gym);

- the number of different environments in which the limitation is evident (e.g., a client can walk independently and safely in the podiatry department, yet cannot walk around at home or at the supermarket due to increase calf pain).

The following figure shows the scores that can be awarded for AusTOMs-PT for use in podiatry.

![Figure 1: The continuum of scores for the AusTOMs scales.](image-url)
The flowchart below provides a visual guide of when to make ratings for the AusTOMs - PT for use in Podiatry.

**Summary of the procedure for using the AusTOMs PT - For use in Podiatry**

- **Initial (admission) ratings**
  - On the basis of your assessment, select AusTOMs - PT for use in Podiatry scales that reflect the client's main areas of difficulty.

- **Interim ratings**
  - At discharge from your intervention, use the same scales selected for your admission rating(s).

- **Final (discharge) ratings**
  - At re-assessment and/or change of goals, use the same scales you selected for your admission rating. You can make as many interim ratings as necessary.

**Impairment and Activity Limitation**—rate each scale chosen

**Participation and Distress/Wellbeing**—rate once per client at each time point

**Carer Distress/Wellbeing (optional)**—rate once per client at each time point

- An initial and a final rating, using the same scales, are necessary to measure a client's outcome
**Scoring Tips and Frequently asked Questions**

### A. Scoring tips

**Ammending a score**

If during the course of an episode of therapy new information becomes available that suggests that the wrong scale point was chosen at the beginning, you may amend the rating retrospectively.

### B. Frequently asked Questions

1. **Is it appropriate to use the AusTOMs when clients have deteriorating conditions?**

Sometimes clients’ conditions may be expected to deteriorate over time. This means that their initial score on the AusTOMs may be better than their interim or final scores. You may feel that this shows a negative effect in terms of your therapy input. Make sure that outcome scores are reported in terms of the condition/aetiology, so that negative changes over time can be seen in context. As data are collected, you may be able to see which therapy is more effective in slowing progression of disorders in people with progressive conditions, to document the expected deterioration for particular disorders over time, and to see whether therapy has any positive effect (e.g., in terms of the client or carer’s Distress/Wellbeing scores).

If you are working with a client with a deteriorating condition, consider your goals for the client. For example, you might be trying to introduce strategies to facilitate independent mobility; in this case the client’s Impairment score may decrease (as the condition deteriorates), but the Activity Limitation score may stay the same. This is an important and positive outcome to document.

2. **Why/when would I include a rating of carer Distress/Wellbeing?**

A rating the Distress/Wellbeing domain in relation to carers is optional. We recommend you use this rating when you have set goals regarding the distress/wellbeing of carers, and you wish to record an outcome in this area. *Note.* Ratings of Distress/Wellbeing of
carers have not been fully assessed in relation to reliability to date. We plan to assess this aspect of reliability in the future).

3. What happens if another therapist implements treatment after I have assessed a client?
Although it is preferable for the same therapist to perform ratings at the beginning and end of an episode of care, it is possible for another therapist who is familiar with the AusTOMs to make interim and/or final ratings, if necessary. We recommend that ratings of client status be made by clinicians that have been involved in the client’s assessment/treatment, so that the rating is an accurate reflection of the client’s true abilities.

4. What if a client is discharged or leaves therapy before a final rating is made?
As with any outcome measure, the AusTOMs require at least two ratings (initial and final). Therefore, when the client is discharged, you need to rate each domain. You may need to make the rating by reflecting on the client's status at the time of discharge, or at the time that you last saw the client. You could note (using a discharge code) that the client has left the service before optimal discharge from therapy, if that is the case. Example discharge codes are shown in chapter 8. If it is not possible to make a final rating, then you may need to discard the client's rating from the data, or note it as an incomplete case.

5. What about a client who is only seen for an assessment?
If a client is only seen once (for assessment/screening), you do not need a rating of outcome. The exception is when a client is seen for reviews where you have some goals in mind—formal or informal—for the client to achieve (see below).

6. What if the client is being seen only for reviews?
You can use the AusTOMs with clients who are seen for progress reviews, for example those who have been given a home programme or suggestions to follow. Make the initial rating at assessment, and the final rating at discharge from the service. Review sessions provide a good opportunity to make interim ratings of client progress if you wish.

7. Is it possible to use the austoms to determine if therapy has caused the improvement in my client?
The AusTOMs is like any outcome measure; it can show that change in client status has occurred, but it cannot attribute the change to any particular factor such as therapy. In order to determine what has produced the change, you need to conduct research that can control for factors such as spontaneous recovery or the involvement of family, to show that therapy has been responsible for the client's improvement. For example, you could use the AusTOMs as part of a randomized controlled trial (RCT) to show that improvements in client status are due to therapy and not other factors.

8. Can I use the AusTOMs in paediatric populations?
You can use the AusTOMs to rate outcome for infants and children. However, when rating each of the domains, take your client's age into account. For example,
the Participation Restriction domain it would not be relevant to consider a lack of autonomy as an indication of restriction for a young boy, who would not normally be expected to make all of his own decisions. Similarly, it is not appropriate to consider work roles for children.
CHAPTER FIVE

Practice Cases

Six practice case are included for you to practice all the AusTOMs - PT for use in Podiatry scales. Some cases require you to score one scale, or other require you to score two. We have organised the first two cases to help you determine which information you should score in relation to the four domains of Impairment, Activity Limitation, Participation Restriction and Distress/Wellbeing. Chapter 6 provides suggested answers and discussion points.

Practice cases contributed by:
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Case 1:
Scale 5. Pain

Background
Cory is a 10-year-old, typically developing boy. He has a new pain started in the last 6 weeks. Prior to this, he was fully active and enjoying sport. This pain is now affecting his ability to fully participate in his sport. He lives at home with his parents, and older brother. He attends school and plays basketball twice a week. He enjoys school sporting activities during the week.

Impairment
Cory presents with left heel pain. The area is not hot, swollen or red. There is a typical range of foot movement, and limitation of ankle range into dorsiflexion on the left side, but only due to it hurting during testing. In gait, the pain is causing Cory to limit his heel contact. The pain increases after sporting activity. His pain is better controlled when he wears trainers and doesn't exercise for longer than 20 minutes.

Activity Limitation
Cory attempts all his usual activities. He finds that prolonged activity involving running and jumping starts to cause him pain. This affects his speed and agility in performing these tasks. He is self selecting out of sport and reducing the duration of his activities. At the end of a game he struggles to walk comfortably and needs more time to complete this activity.
**Participation Restriction**
Cory has not had any time away from school, and attended all his scheduled activities; however, last week he was unable to compete in his school cross-country race. Sometimes Cory has had to finish basketball training early due to the pain in his heel. He is frustrated that he can’t spend as long with his friends playing.

**Distress/Wellbeing**
Cory gets upset sometimes when his foot is hurting and he is beginning to worry it will never get better. He is relieved that wearing trainers helps a little. His parents have assured him that someone will be able to help and have sought professional help. Cory is fearful that he may miss out on his basketball tournament. He is worried his team may choose other people to play.

Write your scores in the Table below.

### Scale 5: Pain

<table>
<thead>
<tr>
<th>Impairment</th>
<th>Activity Limitation</th>
<th>Participation Restriction</th>
<th>Distress/Wellbeing</th>
</tr>
</thead>
</table>

### Case 2:

#### Scale 4. Neurological Movement Related Functions

**Background**
Lisa is 40 years old and has a genetic neurological condition which has caused progressive physical changes over time. Lisa lives at home with her husband and her 14 year old son. She works part-time, 2 days a week as a receptionist. She has a close network of family and friends. Lisa has a severe pes cavus foot structure and requires ongoing podiatry input.

**Impairment**
Due to her neurological condition, Lisa has experienced progressive muscle wasting with reduced muscle strength in both of her legs and feet. The loss of strength affects her active ankle range of movement and mobility in her lower limbs. She has reduced knee and ankle reflexes and sensory impairment to her midfoot. In gait, she has an atypical walking pattern which also demonstrates instability. She has a bilateral rigid, cavus foot deformity associated with weakness. The foot is unable to adapt to sudden variations in movement easily.

**Activity Limitation**
Lisa is independent with ambulation. She has difficulty with stairs and uneven surfaces. To aid ambulation, she always wears custom footwear and supportive orthotic devices.
which help her foot comfort, confidence, stability and safety. Lisa also manages difficult activities by using handrails and walking mindfully and slower. She is able to complete most activities of daily living (ADLs) but requires some assistance from her family members if the environment and the task are not ideal.

**Participation Restriction**

Lisa is able to continue working part time and is financially stable. She has adjusted her leisure activities to fit her abilities, and found the right balance for her. She drives and is confident independently using all forms of public transport. She maintains a healthy social life with friends and family and doesn’t feel restricted by her circumstances.

**Distress/Wellbeing**

Lisa has a good understanding of her neurological condition. She values the network of family and friends. Overall, she is a happy and cheerful lady who is able to cope with most situations. She understands her own limitations.

Write your scores in the Table below.

**Scale 4: Neurological Movement Related Functions**

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<td>Participation Restriction</td>
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<tr>
<td>Distress/Wellbeing</td>
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**Case 3:**

**Scale 8. Skin Functions**

Edith is a 90 year old lady. She is widowed and lives on her own. Whilst in hospital, she sustained a heel pressure injury. Edith is finding it difficult to complete her rehabilitation and due for discharge in one week.

Edith has limited mobility and spends over 23 hours a day in a bed or chair. She demonstrates muscle weakness sitting to standing. She has a grade 3 wound on her left heel which is not infected, and showing signs of slow but progressive improvement. She generally has very poor skin integrity with reduced perfusion to her lower limbs. She is experiencing moderate amounts of pain, swelling and inflammation at the pressure injury site. Consequently, on standing, her pain increases and instability occurs.

Edith finds rehabilitation difficult to complete now. She needs assistance sitting to stand with zimmer-frame and requires a high backed chair with arms. She is having trouble walking up to 10 meters on flat surfaces. Transferring and showering requires full assistance from nursing staff. She worries about going home and taking care of herself.
She keeps in touch with her friends and family by telephone but has limited visitors. Edith is anxious that the pressure ulcer will affect her planned discharge date, she is keen to return home rather than an aged care facility. Her confidence has been lowered as the event has left her with less autonomy and privacy. Write your scores in the Table below.

Scale 8: Skin Functions

<table>
<thead>
<tr>
<th>Impairment</th>
<th>Activity Limitation</th>
<th>Participation Restriction</th>
<th>Distress/Wellbeing</th>
</tr>
</thead>
</table>

Case 4:  
Scale 1. Balance and Postural Control

Background
Samantha is an 11-year-old girl who attended for assessment of persistent idiopathic toe walking. Samantha is in Grade 6 at a local primary school and is due to begin high school next year. Samantha recently competed in a school cross-country race, which was difficult due to discomfort felt in the back of her legs. Samantha's mother reports that she has had no regression of skills but toe walks most of the time. Her mother is concerned that this may cause consequences down the track if she continues to walk on her tiptoes. Samantha met all of her developmental milestones and there is a family history of toe walking on her mother's side.

Impairment
Toe walking was observed about 95% of the time with little, to no heel contact. Samantha was able to sit, stand and walk independently with no assistance required. Mild bilateral ankle equinus was noted. Samantha was able to complete the lunge test as she was not able to bring her heels to the ground. She was able to maintain an upright body position during the entire assessment and there were no occasions of tripping or falling.

Activity Limitation
Samantha was observed to navigate slowly across different surfaces and textures and sometimes uses the wall for assistance with her balance during complex tasks such as hopping along the length of the hall way or walking across a balance beam.

Participation Restriction
She can become fatigued quite quickly when she is participating in some activities. Samantha is able to participate at home with most tasks but may require some assistance at school with games, school sports or play based activities.
Distress/Wellbeing
Samantha gets upset when other children tease her for walking “funny” at school and outside of school. She requires constant reassurance from her teachers and family for emotional support. Samantha co-operates well with allied health staff members and completes her prescribed exercises at home regularly.

Scale 1: Balance and Postural Control

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<thead>
<tr>
<th></th>
<th>Impairment</th>
<th>Activity Limitation</th>
<th>Participation Restriction</th>
<th>Distress/Wellbeing</th>
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</table>

Case 5:
Scale 3. Musculoskeletal Movement related function

Background
Gary is an 80-year-old man who attends a podiatry appointment for general foot care. He requires assistance with his toenail and skin care as he is unable to safely cut his own toenails at home. Gary describes chronic neck, shoulder and hip stiffness, which makes some tasks difficult, such as bending down to reach his toes. His toenails are causing him a great deal of pain as they are very long. He used to get his wife to help cut them at home, however she has recently had a stroke and is not able to trim his toenails anymore.

Impairment
Initial assessment showed Gary has the inability to reach down to his feet as a result of a reduced range of motion at his upper body. There was also reduced range of motion through ankle dorsiflexion and reduced muscle strength against resistance for all lower limbs muscle groups. Gait assessment showed slow heel-to-toe gait with reduced efficiency of movement.

Activity Limitation
Gary has limited mobility and uses a single-point-stick during ambulation and he uses a long handled shoe horn to assist with putting his shoes and socks on. He tends to wear runners as he finds these most comfortable but will prefer to have Velcro straps as he has difficulty tying his laces. He will require input from Podiatry for regular assistance to complete self-care tasks such as toenail and skin care for his feet.
**Participation Restriction**
Gary is able to continue some daily tasks such as preparing meals, cooking and driving to the local shops. He does have some assistance with household cleaning and vacuuming.

**Distress/Wellbeing**
Gary is concerned that he may end up with a lot of foot pain if he is not able to have his toenails managed. He feels that he is not able to rely on his wife to help with this particular task as she herself is having difficulties after her stroke and this is causing them both a lot of stress and anxiety.

**Scale 3: Musculoskeletal Movement related function**

<table>
<thead>
<tr>
<th>Impairment</th>
<th>Activity Limitation</th>
<th>Participation Restriction</th>
<th>Distress/Wellbeing</th>
</tr>
</thead>
</table>

**Case 6:**

**Background**
Sherrie was referred to Podiatry from her general practitioner for a diabetes foot assessment. She has recently been diagnosed with type 2 diabetes and has noticed some numbness and tingling in her feet. She would also like some advice on footwear as she finds it hard to wear sandals, as they tend to slip off frequently now.

**Impairment**
An assessment was completed to determine her neurovascular status. Sherrie could identify only 1 out of 4 points for both her left and right feet during testing with a 10g monofilament. This indicated that she has a loss of protective sensation to the distal ends of both lower limbs. She also has some evidence of clawing on her lesser digits both non-weight-bearing and on weight-bearing assessment. Detection of vibration sensation was also reduced. Sherrie could only identify the tuning fork at the level of her medial malleoli on both feet.

**Activity Limitation**
Age appropriate walking and running gait patterns noted. All functional tasks were completed sufficiently and independently. Sherrie is able to perform all tasks included in her activities of daily living.
**Participation Restriction**

Sherrie is a mother of 2 children, she is married and works part time, she regularly engages with friends and family and feels confident with her ability to fulfil her roles. She has control over all areas of her decision-making.

**Distress/Wellbeing**

Sherrie found it difficult to acknowledge her diagnosis of diabetes initially, and is concerned about managing her condition. She is worried about how this will impact her across all areas of her life but is able to manage her emotions in most situations. She regularly talks about her fear of sharp objects which causes her some distress.

**Scale 7: Sensory Function**

<table>
<thead>
<tr>
<th>Impairment</th>
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<tbody>
<tr>
<td>Activity Limitation</td>
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<td>Participation Restriction</td>
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<tr>
<td>Distress/Wellbeing</td>
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</tbody>
</table>

CHAPTER SIX

Answers and Discussion Points

This chapter includes suggested answers and discussion points for the six practice case studies. Scoring written cases is actually more difficult than scoring real clients, since you can make more informed AusTOMs ratings about clients you know. It is acceptable for your scores to deviate from these suggestions by 0.5 of a point. For example, with a suggested rating of 2.5, ratings of 2.0 or 3.0 are also acceptable.

All answers and discussion contributed by:
Cylie Williams, PhD, Nina Davies, MSc, Jordyn Linkins, MPod, Antoni Caserta, BPod, Alicia James, PhD, Carolyn Unsworth, PhD. Contact: cylie.williams@monash.edu

Case 1:
Scale 5. Pain

Impairment
Cory has pain on one side only. There is no limitation to movement, except due to pain. In gait, the pain is causes Cory to limit his heel contact. The pain increases after sporting activity. His pain is better controlled by footwear and activity limitation.

Activity Limitation
Cory can attempts all usual activities but prolonged activity causes pain. He is self selecting out of sport and reducing the duration of his activities.

Participation Restriction
Cory has had minimal participation restriction. Sometimes Cory has had to finish basketball training early and is frustrated that he can’t spend as long with his friends playing.

Distress/Wellbeing
Cory gets upset sometimes when his foot is hurting and he is beginning to worry it will never get better. He is relieved that wearing trainers helps a little. His parents have assured him that someone will be able to help and have sought professional help. Cory is fearful that he may miss out on his basketball tournament. He is worried his team may choose other people to play.
Lisa's loss of strength affects her active ankle range of movement and mobility in her lower limbs. She has reduced knee and ankle reflexes and sensory impairment to her midfoot. In gait, she has an atypical walking pattern which also demonstrates instability. She has a bilateral rigid, cavus foot deformity associated with weakness.

**Activity Limitation**
Lisa is independent with ambulation however uses aids to assist. She has difficulty with stairs and uneven surfaces. She is able to complete most activities of daily living (ADLs) but requires some assistance from her family members if the environment and the task are not ideal.

**Participation Restriction**
Lisa works part time and is financially stable. She drives and is confident independently using all forms of public transport. She maintains a healthy social life with friends and family and doesn't feel restricted by her circumstances.

**Distress/Wellbeing**
Lisa has a good understanding of her neurological condition. She values the network of family and friends. Overall, she is a happy and cheerful lady who is able to cope with most situations. She understands her own limitations.

### Scale 4: Neurological Movement Related Functions

<table>
<thead>
<tr>
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<tr>
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<tr>
<td>Distress/Wellbeing</td>
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</table>
Case 3:
Scale 6. Respiratory System Functions

Edith has limited mobility and spends over 23 hours a day in a bed or chair. She demonstrates muscle weakness sitting to standing. She has a grade 3 wound on her left heel which is not infected, and showing signs of slow but progressive improvement. She generally has very poor skin integrity with reduced perfusion to her lower limbs. She is experiencing moderate amounts of pain, swelling and inflammation at the pressure injury site. Consequently, on standing, her pain increases and instability occurs.

Edith finds rehabilitation difficult to complete now. She needs assistance sitting to stand with zimmer-frame and requires a high backed chair with arms. She is having trouble walking up to 10 meters on flat surfaces. Transferring and showering requires full assistance from nursing staff. She worries about going home and taking care of herself.

She keeps in touch with her friends and family by telephone but has limited visitors.

Edith is anxious that the pressure ulcer will affect her planned discharge date, she is keen to return home rather than an aged care facility. Her confidence has been lowered as the event has left her with less autonomy and privacy. Write your scores in the Table below.

Scale 8: Skin Functions

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<tbody>
<tr>
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<td>Distress/Wellbeing</td>
<td>2.5</td>
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</tbody>
</table>

Case 4:
Scale 5. Pain
Scale 8. Skin Functions

Impairment
Samantha was able to sit, stand and walk independently with no assistance required. Mild bilateral ankle equinus was noted. She was able to maintain an upright body position during the entire assessment and there were no occasions of tripping or falling.

**Activity Limitation**
Samantha was observed to navigate slowly across different surfaces and textures and sometimes uses the wall for assistance with her balance during complex tasks.

**Participation Restriction**
She can become fatigued quite quickly when she is participating in some activities. Samantha is able to participate at home with most tasks but may require some assistance at school with games, school sports or play based activities.

**Distress/Wellbeing**
Samantha gets upset when other children tease her for walking “funny” at school and outside of school. She requires constant reassurance from her teachers and family for emotional support. Samantha co-operates well with allied health staff members and completes her prescribed exercises at home regularly.

**Scale 1: Balance and Postural Control**

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<tr>
<td>Distress/Wellbeing</td>
<td>3.5</td>
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</tbody>
</table>

**Case 5:**
Scale 3. Musculoskeletal Movement related function

**Impairment**
Initial assessment showed Gary has the inability to reach down to his feet as a result of a reduced range of motion at his upper body. There was also reduced range of motion through ankle dorsiflexion and reduced muscle strength against resistance for all lower limbs muscle groups. Gait assessment showed slow heel-to-toe gait with reduced efficiency of movement.

**Activity Limitation**
Gary has limited mobility and uses a single-point-stick during ambulation and he uses a long handled shoe horn to assist with putting his shoes and socks on. He tends to wear runners as he finds these most comfortable but will prefer to have Velcro straps as he has difficulty tying his laces. He will require input from Podiatry for regular assistance to complete self-care tasks such as toenail and skin care for his feet.
**Participation Restriction**
Gary is able to continue some daily tasks such as preparing meals, cooking and driving to the local shops. He does have some assistance with household cleaning and vacuuming.

**Distress/Wellbeing**
Gary is concerned that he may end up with a lot of foot pain if he is not able to have his toenails managed. He feels that he is not able to rely on his wife to help with this particular task as she herself is having difficulties after her stroke and this is causing them both a lot of stress and anxiety.

**Scale 3: Musculoskeletal Movement related function**

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<tbody>
<tr>
<td>Impairment</td>
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<tr>
<td>Activity Limitation</td>
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<td>Participation Restriction</td>
<td>3.5</td>
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<tr>
<td>Distress/Wellbeing</td>
<td>3</td>
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</table>

**Case 6:**
Scale 2. Cardiovascular Systems Related Functions  
Scale 8. Urinary and Bowel Continence

**Impairment**
An assessment was completed to determine her neurovascular status. Sherrie could identify only 1 out of 4 points for both her left and right feet during testing with a 10g monofilament. This indicated that she has a loss of protective sensation to the distal ends of both lower limbs. She also has some evidence of clawing on her lesser digits both non-weight-bearing and on weight-bearing assessment. Detection of vibration sensation was also reduced. Sherrie could only identify the tuning fork at the level of her medial malleoli on both feet.

**Activity Limitation**
Age appropriate walking and running gait patterns noted. All functional tasks were completed sufficiently and independently. Sherrie is able to perform all tasks included in her activities of daily living.
Participation Restriction

Sherrie is a mother of 2 children, she is married and works part time, she regularly engages with friends and family and feels confident with her ability to fulfil her roles. She has control over all areas of her decision-making.

Distress/Wellbeing

Sherrie found it difficult to acknowledge her diagnosis of diabetes initially, and is concerned about managing her condition. She is worried about how this will impact her across all areas of her life but is able to manage her emotions in most situations. She regularly talks about her fear of sharp objects which causes her some distress.

Scale 7: Sensory Function

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<td>Impairment</td>
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<td>Activity Limitation</td>
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<tr>
<td>Participation Restriction</td>
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<tr>
<td>Distress/Wellbeing</td>
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This chapter of the manual provides you with an overview of the reliability and validity of the data that support the use of the AusTOMs scales. Reliability refers to the reproducibility of measurement whereas validity refers to the extent to which a measure captures the required information, is accurate, discriminates different levels of performance and relates to a strong theoretical construct. We are in the final stages of publishing the inter-rater reliability, retest reliability and validity.

**Reliability**

**Inter-rater reliability**

We have already examined inter-observer agreement between clinicians’ ratings for all scales (Morris et al., 2005). We obtained percentage agreement scores between clinicians for each domain of the AusTOMs following a training session in which we trained 150 speech pathology, occupational therapy and physiotherapy clinicians to use the AusTOMs scales and to establish competency in rating each domain. Panels of experts prepared the written case vignettes we used to practise ratings on each scale. They also provided detailed descriptions of paediatric and adult clients frequently seen by allied health professionals. We determined retest-reliability of scores four-weeks after the initial training, by measuring the agreement between ratings made at training sessions, and ratings made at follow-up sessions for each therapist.

**Physiotherapy:** The Cardiovascular scale shows a high level of inter-observer agreement whereas most of the other physiotherapy scales contain at least one domain for which less than 80% of clinicians agreed on the rating (Morris et al., 2005). The AusTOMs team is now investigating the reasons why there are lower levels of agreement for these particular examples. We are exploring whether this is because we gave clinicians only one training session and they needed more practice to achieve higher levels of competency, or whether the way in which the vignettes are written affected the clinicians’ ability to provide the same rating consistently. We are also further examining the scales themselves to understand their measurement properties.

**Occupational therapy:** Inter-therapist agreement is high for the Learning and Applying Knowledge scale, the Upper Limb Use scale, and the Carrying Out Daily...
Life Tasks and Routines scale (Morris et al., 2005). These scales are some of the most frequently selected in occupational therapy practice. Subsequent research has also shown the Self Care scale to have moderate to high inter-rater reliability with Intraclass Correlation Coefficients (ICCs) of over .79 for the three domains of Activity Limitation, Participation Restriction and Distress/Wellbeing, and over .70 for Impairment (Scott et al., 2004).

Speech pathology: To date, the Language and Fluency speech pathology scales show satisfactory inter-therapist agreement. Most other speech pathology scales show high levels of inter-rater agreement, although at least one domain has less than 80% agreement in each of the other scales (Morris et al., 2005), and the research team is further testing these.

Retest reliability

Across all of the AusTOMs scales, in the limited number of vignettes we analysed, we found retest reliability to be generally satisfactory (Morris et al., 2005). Nevertheless, some domains show agreement levels that are lower than 80%, indicating the need for further analysis. The next stage of validation involves measuring each clinician’s consistency scores across different time intervals (e.g., 1, 4, 6 and 10 weeks) and using videotapes of clients in addition to written vignettes in the testing process.

The initial testing of the AusTOMs scales indicates that they are sufficiently reliable for clinicians to use them with paediatric and adult clients. As with the development of any scale, further refinements will occur as more data become available and as clinicians provide the team with feedback.

Validity

For detailed information on scale development and face validity, refer to Perry et al. (2004) and Unsworth et al., 2005.

Throughout the development of the AusTOMs tools, we closely involved those who will use the tool. Physiotherapy, occupational therapy and speech pathology clinicians across Australia made a large contribution to the initial development of the tool, in particular to the descriptors used at each level of the domains. Consumers (clients with disabilities, along with client advocates) reviewed the scales and made changes to the wording of the Participation Restriction and Distress/Wellbeing domains. Such involvement enhances the AusTOMs’ face validity.

We used clinicians’ ratings from a six-month period to examine the validity of the scales. The results show that the scales are able to discriminate change in client status over time (from admission to discharge).

The validity of a tool is never confirmed. Many studies are required over time to demonstrate that a tool is operating in the manner that developers intended. Future validity studies could investigate the ability of AusTOMs to predict client discharge data from admission status, and to discriminate between clients with differing impairment severity levels and activity limitations. Recent studies documenting the validity of the AusTOMs include Unsworth (2005), Unsworth (2008), Unsworth, Bearup & Rickard (2008), and Abu-Awad et al., (2013).

Updates on publications from the AusTOMs study will be available on the AusTOMs website: www.latrobe.edu.au/austoms.
Collecting contextual data along with AusTOMs data

To be able to use AusTOMs data for purposes such as monitoring or comparing service quality, you need to collect AusTOMs ratings alongside other data. This may include: client codes (e.g., UR number), ICD-10 codes to describe the disorder, number of sessions (or amount of contact/resources), type of treatment, therapist level (e.g., grade 1; senior) and many other variables. The variables (data) you collect alongside the AusTOMs will depend on the reason you are using the tool. For example:

- If you wish to examine/compare outcomes in relation to treatment types, you need to collect a code (or name) for the type of treatment. You may wish to indicate whether the treatment was group or individual, or what particular therapy type you used, depending on your question;

- If you wish to look at service efficiency, you will need to collect outcome data alongside an indicator of resource use, such as the amount of time that a clinician spends with each client;

- If you wish to make comparisons across centres (benchmarking), each centre needs to collect the same variables, and use comparable codes (e.g., ICD-10 codes, treatment type, and sessions/resources).

In each case, it is important that every clinician using codes (e.g., for treatment type) understands how they are to be used, and uses them reliably. This is not an exhaustive list of suggestions, and you will need to determine for yourself which variables are likely to be of interest to you to collect alongside AusTOMs data. You may already collect many of these variables (such as aetiology codes and number of contacts) within a statistics system in your workplace. In this case, it is ideal if the AusTOMs data can be added to this system, so that data are not collected twice.
**Introducing and using AusTOMs in your setting**

The following steps can be taken to introduce AusTOMs-PT for use in Podiatry in your setting:

1. Therapists need to read the AusTOMs-PT for use in Podiatry manual. Other team members may also read the Occupational Therapy and Speech Pathology Manuals. Team members may watch the training DVD that comes with the AusTOMs for Occupational Therapy kit.

2. Therapists can then score some of the practice cases in the manual.

3. The team needs to decide what data collection form will be used and what information will be collected alongside the AusTOMs data.

4. Therapists can practice rating a sample of approximately 10 clients on their own.

5. Therapists can present a client case to the rest of the team and then all members can practice scoring this case. This process ensures all team members are scoring the AusTOMs in the same way and thus enhances the reliability of the data collected.

6. A system needs to be put in place to enter the data into a database or spreadsheet programme.

7. A start date can be set to commence data collection.

8. One of your team members or a biostatistician needs to periodically summarise the AusTOMs data and use the data to answer clinician questions posed by the team.

The following page shows an example AusTOMs-PT for use in Podiatry data collection form, along with an example of how this form would be completed.
### AusTOMs - PT FOR USE IN PODIATRY

Data Collection Form

**Scale/s used**

| 1. | 2. | 3. |

**ICD-10 CODES**

| 1. | 2. | 3. |

**No. Podiatry sessions**

**AusTOMs Ratings**

<table>
<thead>
<tr>
<th>Code</th>
<th>Impairment</th>
<th>Activity</th>
<th>Participation</th>
<th>Distress Client</th>
<th>Distress Carer</th>
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<tr>
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<td>S1  S2  S3</td>
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</tr>
</tbody>
</table>

**Example completed data collection form**

**Reason for discharge (Please tick):**

1. Treatment complete
2. Therapist ceased treatment
3. Client did not attend
4. Treatment stopped, transferred to other service
5. Acute episode (further event) but remained at facility
6. Treatment stopped, client self discharge
7. Deceased
8. Other (Specify)

**Comments**

*Code: A=Admission (after initial assessment and goal setting), I=Intermediate, F=Final, S=Scale*
## AusTOMs—PT for Use in Podiatry

### Data Collection Form

#### Scale/s used

<table>
<thead>
<tr>
<th>Code</th>
<th>Impairment</th>
<th>Activity</th>
<th>Participation</th>
<th>Distress Client</th>
<th>Distress Carer</th>
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</table>

#### Reason for discharge (Please tick):

1. Treatment complete ✓  
2. Therapist ceased treatment  
3. Client did not attend  
4. Treatment stopped, transferred to other service  
5. Acute episode (further event) but remained at facility  
6. Treatment stopped, client self discharge  
7. Deceased  
8. Other (Specify)  

#### Comments
ICD-10 Disorder Codes for use with AusTOMs - PT for use in Podiatry

The following table provides a brief list of some of the common disorders that people present with when attending podiatry. It is not necessary to use these codes to collect AusTOMs data; we suggest that you only use these if you do not already have a system for collecting/recording disorder information for your clients. The level of coding needs to be tailored to your specific question. In the first edition of the AusTOMs for Physiotherapy, we included aetiology and disorder codes contained in the UK Therapy Outcome Measures manual (Enderby, John, & Petherham, 1998). However, in the interests of international comparison of data, it seems more appropriate to use the International Statistical Classification of Diseases and Health Related Problems (10th edition) (ICD-10) developed by the World Health Organisation (2004). Therapists will need to consult the full ICD-10 listings in order to code all the disorders that people present with when attending physiotherapy, and this can be accessed at: http://www.who.int/classifications/apps/icd/icd10online/. You may also find it useful to highlight the codes you use most frequently. At the end of this section is space for you to add other codes that describe clients’ disorders that you frequently encounter in your practice.

<table>
<thead>
<tr>
<th>Certain infectious and parasitic disease (A00-B00)</th>
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<tbody>
<tr>
<td>B35.3 Tinea pedis</td>
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<tr>
<td>B07.0 Plantar wart</td>
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<table>
<thead>
<tr>
<th>Disease of arteries, arterioles and capillaries (I70-I79)</th>
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<tbody>
<tr>
<td>I73.00 Reynaud’s syndrome without gangrene</td>
</tr>
<tr>
<td>I73.9 Peripheral vascular disease, unspecified</td>
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<table>
<thead>
<tr>
<th>Diseases of the skin and subcutaneous tissue (L00-L99)</th>
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<tbody>
<tr>
<td>L84 Corns and callosities</td>
</tr>
<tr>
<td>L60.0 Ingrowing nail</td>
</tr>
<tr>
<td>L03.119 Cellulitis of unspecified part of limb</td>
</tr>
<tr>
<td>L03.129 Acute lymphangitis of unspecified part of limb</td>
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<table>
<thead>
<tr>
<th>Endocrine, nutritional and metabolic diseases (E00-E90)</th>
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<tbody>
<tr>
<td>E10 Insulin-dependent diabetes mellitus</td>
</tr>
<tr>
<td>E11 Non-insulin-dependent diabetes mellitus</td>
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<tr>
<td>Diseases of the musculoskeletal system and connective tissue (M00-M99)</td>
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<tr>
<td>---------------------------------------------------------------</td>
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<tr>
<td>M66.369 Spontaneous rupture of flexor tendons, unspecified lower leg</td>
</tr>
<tr>
<td>M76.60 Achilles tendinitis, unspecified leg</td>
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<tr>
<td>M77.30 Calcaneal spur, unspecified foot</td>
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<tr>
<td>M20.10 Hallus valgus (acquired), unspecified foot</td>
</tr>
<tr>
<td>M20.5X9 Other deformities of toe(s) (acquired), unspecified foot</td>
</tr>
<tr>
<td>M21.40 Flat foot [pes planus] (acquired), unspecified foot</td>
</tr>
<tr>
<td>M81.0 Age-related osteoporosis without current pathological fracture</td>
</tr>
<tr>
<td>Congenital malformations, deformations and chromosomal abnormalities (Q00-Q99)</td>
</tr>
<tr>
<td>Q66.50 Congenital pes planus, unspecified foot</td>
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<tr>
<td>Q66.80 Congenital vertical talus deformity, unspecified foot</td>
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<tr>
<td>General symptoms and signs (R50-R69)</td>
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<tr>
<td>R60.0 Localised oedema</td>
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<tr>
<td>R60.1 Generalised oedema</td>
</tr>
<tr>
<td>Injuries to the ankle and foot (S90-S99)</td>
</tr>
<tr>
<td>S92.301.A Blister (nonthermal), unspecified foot, initial encounter</td>
</tr>
<tr>
<td>S92.312A Fracture of unspecified metatarsal bone(s), unspecified foot</td>
</tr>
<tr>
<td>Activities codes (Y90-Y99)</td>
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<tr>
<td>Y93.0 Activities involving walking and running</td>
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<tr>
<td>Y93.4 Activities involving dancing and other rhythmic movement</td>
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<tr>
<td>Y93.5 Activities involving other sports and athletics played individually</td>
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<tr>
<td>Y93.6 Activities involving other sports and athletics played as a team or group</td>
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<tr>
<td>Y93.9 Activity, unspecified</td>
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<tr>
<td>Diseases of the musculoskeletal system and connective tissue (M00-M99)</td>
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<tr>
<td>M06 Rheumatoid arthritis</td>
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<tr>
<td>M08 Juvenile arthritis</td>
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<tr>
<td>M15 Polyarthrosis (Osteoarthritis)</td>
</tr>
<tr>
<td>M41 Scoliosis</td>
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<tr>
<td>M47 Spondylosis</td>
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<tr>
<td>M54.3 Sciatica</td>
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<tr>
<td>M54.5 Low back pain</td>
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<tr>
<td>Category</td>
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<tr>
<td>-----------------------------------------------</td>
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<tr>
<td>Mental retardation (F70-F79)</td>
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<tr>
<td>Disorders of adult personality and behaviour (F60-F69)</td>
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<td>Disorders of psychological development (F80-F89)</td>
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### Diseases of the nervous system (G00-G99)

- **G00** Bacterial meningitis, not elsewhere classified
- **G01** Meningitis in bacterial diseases classified elsewhere
- **G04** Encephalitis, myelitis and encephalomyelitis
- **G10** Huntington’s disease
- **G12.2** Motor neuron disease
- **G20** Parkinson’s disease
- **G24** Dystonia
- **G35** Multiple sclerosis
- **G40** Epilepsy
- **G45** Transient cerebral ischaemic attacks and related syndromes (TIA)
- **G60.0** Hereditary motor and sensory neuropathy
- **G61.0** Guillain-Barré syndrome
- **G70.0** Myasthenia gravis
- **G71.0** Muscular dystrophy
- **G80.0** Spastic quadriplegic cerebral palsy
- **G80.1** Spastic diplegic cerebral palsy
- **G80.2** Spastic hemiplegic cerebral palsy
- **G80.4** Ataxic cerebral palsy
- **G81** Hemiplegia
  - **G81.0** Flaccid hemiplegia
  - **G81.1** Spastic hemiplegia
- **G82.0** Flaccid paraplegia
  - **G82.1** Spastic paraplegia
  - **G82.2** Paraplegia, unspecified
  - **G82.3** Flaccid tetraplegia (quadriplegia)
  - **G82.4** Spastic tetraplegia (quadriplegia)
  - **G82.5** Tetraplegia (quadriplegia), unspecified

### Glaucoma (H40-H42)

- **H40** Glaucoma

### Visual disturbances and blindness (H53-H54)

- **H53** Visual disturbances
- **H54** Blindness and low vision
### Diseases of the circulatory system (I00-I99)
- I20 Angina pectoris
- I21 Acute myocardial infarction
- I25 Chronic ischaemic heart disease
- I26 Pulmonary embolism
- I60 Subarachnoid haemorrhage
- I61 Intracerebral haemorrhage
- I63 Cerebral infarction
- I64 Stroke, not specified as haemorrhage or infarction

### Diseases of the respiratory system (J00-J99)
- J43 Emphysema
- J44 Chronic obstructive pulmonary disease
- J45 Asthma

### Congenital malformations, deformations and chromosomal abnormalities (Q00-Q99)
- Q00.0 Anencephaly

### Renal failure (N17-N19)
- N17 Acute renal failure
- N18 Chronic renal failure

### General symptoms and signs (R50-R69)
- R52.0 Acute pain
- R52.1 Chronic intractable pain
<table>
<thead>
<tr>
<th>Injuries to the head (S00-S09)</th>
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<tbody>
<tr>
<td>S00  Superficial injury of head</td>
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<td>S01  Open wound of head</td>
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<tr>
<td>S02  Fracture of skull and facial bones</td>
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<tr>
<td>S04  Injury of cranial nerves</td>
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<td>S06  Intracranial injury</td>
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<tr>
<td>S06.0 Concussion</td>
</tr>
<tr>
<td>S06.1 Traumatic cerebral oedema</td>
</tr>
<tr>
<td>S06.2 Diffuse brain injury</td>
</tr>
<tr>
<td>S06.3 Focal brain injury</td>
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<tr>
<td>S06.4 Epidural haemorrhage</td>
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<tr>
<td>S06.5 Traumatic subdural haemorrhage</td>
</tr>
<tr>
<td>S06.6 Traumatic subarachnoid haemorrhage</td>
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<tr>
<td>S06.7 Intracranial injury with prolonged coma</td>
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<thead>
<tr>
<th>Injuries to the hip and thigh (S70-S79)</th>
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<tr>
<td>S73 Dislocation, sprain and strain of joint and ligaments of hip</td>
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<thead>
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<th>Injuries to the knee and lower leg (S80-S89)</th>
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<tbody>
<tr>
<td>S82 Fracture of lower leg, including ankle</td>
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<tr>
<td>S84 Injury of nerves at lower leg level</td>
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<tr>
<td>S88 Traumatic amputation of lower leg</td>
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<th>Injuries to the ankle and foot (S90-S99)</th>
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<tr>
<td>S98 Traumatic amputation of ankle and foot</td>
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<table>
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<tr>
<th>Burns and corrosions (T20-T32)</th>
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<tbody>
<tr>
<td>T24 Burn and corrosion of hip and lower limb, except ankle and foot</td>
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<tr>
<td>T25 Burn and corrosion of ankle and foot</td>
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<tr>
<th>Toxic effects of substances chiefly nonmedicinal as to source (T51-T65)</th>
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<tr>
<td>T51 Toxic effect of alcohol</td>
</tr>
<tr>
<td>T52 Toxic effect of organic solvents</td>
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<td>T53 Toxic effect of halogen derivatives of aliphatic and aromatic hydrocarbons</td>
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<tr>
<th>Accidents (V01-X59)</th>
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<tr>
<td>V03 Pedestrian injured in collision with car, pick-up truck or van</td>
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<td>V13</td>
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<td>V43</td>
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<td>V44</td>
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<td>W01</td>
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<td>W68</td>
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<td>W70</td>
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Factors influencing health status and contact with health services (Z00-Z99)

| Z89 | Acquired absence of limb (surgical or traumatic amputation) |
Additional ICD-10 disorder codes used in my practice

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<thead>
<tr>
<th>Code</th>
<th>Description</th>
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References


AusTOMs Website: www.latrobe.edu.au/austoms


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<thead>
<tr>
<th>Impact / Activity / Limitation</th>
<th>Participation / Restriction</th>
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<tr>
<td>AusTOMs</td>
<td>Podiatry</td>
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</tbody>
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*AusTOMs* for use in Podiatry
Selection of additional references that comment on AusTOMs, or include AusTOMs in research:


Williams, Gavin. Therapy Outcomes TBI
Notes:

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The AusTOMs for Physiotherapy tool was developed in Australia but can be used internationally to enable clinicians to measure patient outcomes in any setting. This manual provides you with training and information so that you can use the AusTOMs for Physiotherapy scales. Included in the manual are case studies – with answers and discussion points – to help you become familiar with the scales, along with a user’s guide and answers to ‘frequently asked questions’.

The AusTOMs tools were developed from the Therapy Outcome Measure by Enderby and colleagues (1997: 1998; 2006), and use the World Health Organisation’s (2001) domains of health and functioning to describe outcomes in relation to Impairment, Activity Limitation, and Participation Restriction, as well as a fourth domain of Distress/Wellbeing.

Also available are AusTOMs for Occupational Therapy, and AusTOMs for Speech Pathology.

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