THERAPY OUTCOME MEASURES FOR USE INTERNATIONALLY

AusTOMs for OCCUPATIONAL THERAPY

3RD EDITION

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AusTOMs for Occupational Therapy

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The Australian Therapy Outcome Measures (AusTOMs) project was funded by the Commonwealth Department of Health and Ageing. The AusTOMs were developed in Australia from the Therapy Outcome Measure, originated by Professor Pam Enderby, Dr Alex John, University of Sheffield, and Dr Brian Petheram, Frenchay Hospital, Bristol (United Kingdom) and the ICF (WHO, 2001).

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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CHAPTER ONE

Introduction and Background to the AusTOMs

Measuring outcomes using the AusTOMs

Increasingly, therapists need to demonstrate that their interventions are achieving desirable outcomes with clients (Unsworth, 2000; Unsworth, 2011). Outcome measures are an important part of quality assurance and service improvement. Outcome data can show areas that need development, as well as areas of particular strength within a service. "An occupational therapy outcome is the functional consequence for the patient of the therapeutic actions implemented by an occupational therapist." (Rogers & Holm, 1994, p. 872). This definition involves two parts: 1) demonstrating that client change occurred (documenting outcomes), and 2) attributing the change to therapy intervention (therapy effectiveness). Using AusTOMs can help you establish that change in client status has occurred. AusTOMs can also be used in research programs which are designed to determine if change is attributable to therapy. The AusTOMs are not an assessment tool; a client does not have to perform a particular test for you to make a rating. We have designed them to provide a snapshot rating; that is, a rating that broadly reflects a client's status across four domains of health and functioning (discussed in the next chapter). In addition, unlike some outcome measures, the AusTOMs are rated by you, the clinician, not clients. You make a rating based on your clinical judgement, using your knowledge of the client and how they are functioning. Of course, this includes your discussions with the client and carer about their concerns and areas of difficulty.

We developed the AusTOMs to measure therapy outcomes for occupational therapists, physiotherapists and speech pathologists. This manual and the accompanying DVD provides you with training and information so that you can use the AusTOMs for Occupational Therapy scales. Similar manuals are available to guide you in the administration of AusTOMs for Physiotherapy and AusTOMs for Speech Pathology.

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 clinicians to identify where to focus their therapy.

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. Details of commonly used ICD-10 codes are provided in Chapter 8.

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) and Unsworth (2005). 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 physiotherapy scales, and 6 speech pathology scales.

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

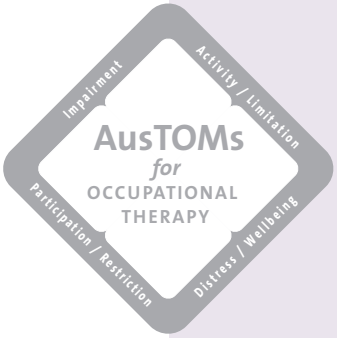
The 6 AusTOMs for Speech Pathology scales are:

Speech
Language
Voice
Fluency
Swallowing
Cognitive-communication

The 9 AusTOMs for Physiotherapy scales are:

Scale 1.	Balance and Postural Control
Scale 2.	Cardiovascular System Related Functions
Scale 3.	Musculoskeletal Movement Related Functions
Scale 4.	Neurological Movement Related Functions
Scale 5.	Pain
Scale 6.	Respiratory System Functions
Scale 7.	Sensory Functions
Scale 8.	Skin Functions
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 and third editions of AusTOMs for Occupational Therapy

The first edition of the AusTOMs for Occupational Therapy kit was published in 2004 and the second in 2007. The AusTOMs-OT are now being used across Australia and around the world, for example, in the UK, Sweden, the USA, Canada, and New Zealand.

In the second and third editions, the AusTOMs for Occupational Therapy scales remain largely unchanged. However, some slight wording changes have been made to improve clarity. Clinicians using the first or second editions of the AusTOMs will be able to continue to use these. Users of the third edition will find:

- Inclusion of a training DVD (while training is not necessary to use the AusTOMs, this DVD talks the viewer through use of the AusTOMs for Occupational Therapy),
- Changes to/ additional material in the manual such as:
  - extra case study examples from clinicians around the world,
  - additional 'Question and Answer' information,
  - ICD-10 codes (WHO, 2004) replace the original aetiology and disorder codes, and
  - an updated reference list
- An Excel template is also available on the AusTOMs website which enables clinicians to upload their data directly into the spreadsheet.

If you already have the first edition of the AusTOMs for Occupational Therapy but would like to purchase the DVD you can do this through the website: www.latrobe.edu.au/austoms.

Translation into other languages

The AusTOMs for Occupational Therapy have been translated into Swedish in 2011 by clinicians and academic staff through the Division of Occupational Therapy at the University of Jönköping, Sweden, and the Arabic translation is now available as well (2014). Please email c.unsworth@latrobe.edu.au if you are interested in translating the AusTOMs for Occupational Therapy into another language.

Feedback

The AusTOMs for Occupational Therapy 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 for Occupational Therapy, 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 on pages 7-8. All of the occupation or disorder-specific scales in each profession were developed from this core scale, meaning that scales across occupations/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 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 (WHO, 2001). The Distress/Wellbeing domain was developed as clinicians felt that this domain—part of the UK Therapy Outcome Measures—was also relevant to clinical practice.

Impairment and Activity Limitation

The Impairment and Activity Limitation domains of the AusTOMs are specific to the scale selected in AusTOMs for Occupational Therapy. We have developed descriptions of a range of behaviours or factors that illustrate the levels of difficulty which clients experience.

The Impairment domain describes structural (anatomical) or functional (physiological or psychological) difficulties that a client may have. For example, there may be an abnormality of spinal structures, such as a spinal cord injury (structural) and/or difficulties with movement, cognitive abilities or psychological status. 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. When rating the Activity Limitation domain, you need to rate all the components of the activity as described in the scale definition that are relevant to the clients age and living circumstances as illustrated in the following three examples:

- when rating Scale 5. Transfers, you need to consider all the transfers included in the definition when making your rating, even though your therapy goal may only be to achieve independent toilet transfers.

- when rating Scale 2. Functional Walking and Mobility, the definition includes skipping, hopping, climbing and jumping. While children are expected to perform these activities, older people are not. Therefore, when rating children you need to include all these components of the definition, whereas these are not relevant for most adults and older persons.

- when rating Scale 8. Domestic Life – Home, the definition includes being concerned about the wellbeing of others in the house. However, this component of the scale is not relevant if the client lives alone.

Finally, while safety is not specifically included in any of the domains, a client's safety in performing an activity may influence your rating.

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 client's level of distress/wellbeing is not just related to 'Work, education and employment', as rated on Scale 11), 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 domians ***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 (for example, Scale 3. Upper Limb Use and Scale 6. Transport Use). 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 upper limb or transport use. 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 baker who sustained burns to his hands cannot work while he recovers. 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.

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 a class activity 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.

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 very young (and therapy may be directed toward the parent), or when you spend time 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 12 AusTOMs for Occupational Therapy scales. Use the spiral bound book of AusTOMs for Occupational Therapy scales when rating clients.

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

Impairments are problems in body structure (anatomical) or function (physiological or psychological) 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-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.

User's Guide

Selecting clients to score using the AusTOMs

Clients of any age and with any diagnosis can be scored on the AusTOMs for Occupational Therapy scales, providing you can score the client on two occasions.

You collect outcome data on clients who are receiving occupational therapy services over a period of time. Usually, this means you will see the client for at least two sessions. However, it is possible to score a client that you see only once, providing an admission and discharge rating can be made. For example, an occupational therapist may visit the client for home assessment and modification, or train a client in the use of adaptive equipment, both as single sessions. You can score such clients when you first see them, and then at the end of the session. This session may last one, or several hours. Hence, you can score any client so long as there is opportunity to make an initial and a final rating. You cannot score a client that you see only once, for example to provide information, unless you also have the opportunity to make a discharge rating which reflects the client's use of this information.

Selecting scales

Select AusTOMs for Occupational Therapy scales on the basis of your assessment findings and the goals of therapy. Choose scales that represent the areas in which your client is experiencing difficulties, and that you will target in therapy. It is in these areas that you might expect to see an outcome of therapy. 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 effect of occupational therapy across an episode of care. The scales do not reflect aetiologies, but therapeutic goals. For example, there is no 'cerebral palsy' scale; you select the scales that reflect the occupational difficulties that your client is having, regardless of the underlying aetiology. Hence, a client with cerebral palsy may be having difficulty with interpersonal interactions and joining in the school program, and therefore Scale 10. Interpersonal interactions and relationships, and Scale 11. Work, employment and education would be selected for scoring.

Clients may present with several occupational problems, each of which you may plan to address in therapy. Therefore, you may choose to rate as many scales as appropriate to reflect the goals you are working on with the client. For example, if you focus therapy

on improving performance in carrying out daily life routines, developing work habits, and improving interpersonal skills, you can choose three AusTOMs for Occupational Therapy scales (that is, scales 4, 10, and 11) to record outcomes.

When to make a rating

The AusTOMs for Occupational Therapy scales are designed for use within the normal process of therapy as outlined in the procedure on page 12.

Make an ***initial rating*** after you have assessed a client at the beginning of an episode of care and set your occupational therapy goals. When setting goals, consider how you and your client understand the timing of achieving these goals. When rating AusTOMs you need to interpret scales related to a client's ability at the time the scale is chosen. For example, if a client is six days post stroke in an acute setting and wants to set driving as a goal, you can proceed in two ways:

- You can make an ***initial rating*** for Scale 6. Transport Use with the client as a driver, and note that a final rating may not be made for several months, or
- You can negotiate with the client that he will be a public transport user for some time and work together on this new goal and provide an ***initial rating*** for Transport Use as a public transport user. You will also need to make a final rating for Scale 6. Transport Use when the client reaches this goal, regardless of whether this scale is used again at a later point if the client commences driver rehabilitation.

You may make an ***interim rating*** if you wish. This may be appropriate for clients in long-term therapy where you periodically re-assess the client, but continue to work on the same goals. We recommend that services specify and standardise the time at which an interim rating is made, for example every six months. Of course, if new goals are set, the corresponding AusTOMs scales are selected for scoring.

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 discharged, put on review, transferred from inpatient to outpatient service, or when you change the goals of therapy.

For example, "Josef" is a 70 year old man who has recently suffered a stroke resulting in a dense right sided hemiplegia. You see him for assessment and work with him to establish initial therapy goals. These goals relate to upper limb function, transfers and self care areas.

In line with these goals, you select and rate the following scales: Scale 5. Transfers, Scale 3. Upper Limb Use and Scale 7. Self Care. The occupational therapy treatment programme commences. Josef begins to meet some of the initial goals and makes significant gains with his ability to transfer himself and you no longer identify this as an area of need. Josef is now very keen to drive again and identifies a new goal related to this.

You acknowledge the end of an episode of therapy and make a final rating using the Transfers scale, while also acknowledging the commencement of a new episode of therapy, and administering an initial rating for Scale 6. Using Transport. You continue

to work with Josef on upper limb use and self care. At the end of the episode of care or when Josef is to be discharged from occupational therapy, you make final ratings using Scale 3. Upper Limb Use, Scale 6. Using Transport and Scale 7. Self Care. See *Figure 1* which shows the process for rating Josef.

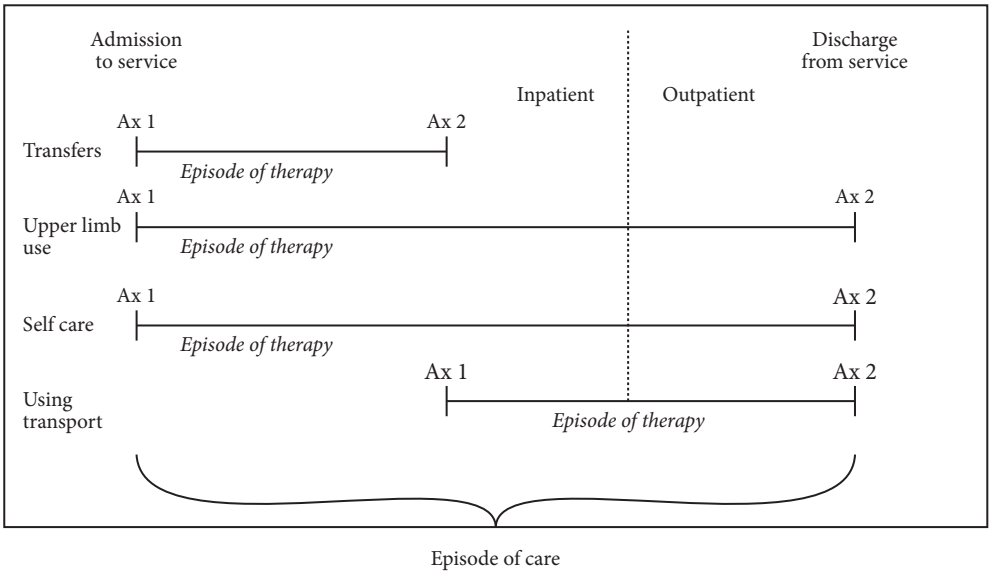


Figure 1: Scoring AusTOMs for Occupational Therapy scales with Josef

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. When 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, you need to rate the Impairment and Activity Limitation domains for ***each scale***, and rate 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 giving information about the client's disorder.

How to choose scale points

Choose scale points according to the "best fit" with the scale descriptions, in relation to your knowledge about the client at that point in time.

Each domain of the AusTOMs scales has six defined levels from 0 to 5, where 0 represents "complete difficulty" in each domain, and 5 represents "no difficulty". Half points are also scored, so the scale has a total of 11 levels. The descriptions at each point are designed to reflect that level, however 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 rate the client. 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.

Make the initial rating by reflecting on the client's abilities and difficulties. Choose a rating from 0-5 (including half points) in each of the four AusTOMs domains. For example, if the client's impairments are more severe than a rating of 2, but not quite as severe as a rating of 1, you can score as 1.5 (see Figure 2).

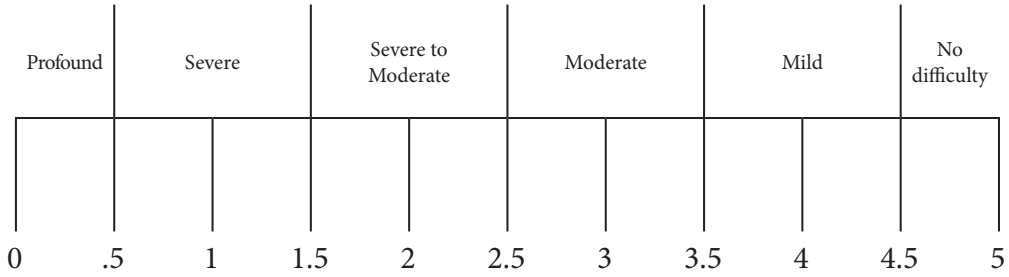


Figure 2: The continuum of scores for the AusTOMs scales.

Summary of the procedure for using the AusTOMs for Occupational Therapy

1. Assess the client using your usual interview and standardised/ non standardised assessment methods.

2. Establish occupational therapy goals with the client (as usual).

3. Select the AusTOMs scale/s that reflect current goals.

4. *Make an initial rating* in each domain using selected scale/s.

5. Implement occupational therapy treatment program.

6. Re-evaluate goals and/or reassess the client using your usual standardised/ non-standardised assessment methods.

7. *Make a final rating* for client on the scale/s when a therapy goal is achieved/ or the client is discharged.

8a. If you establish a new goal at any point during therapy, *make an initial rating* using the relevant AusTOMs for Occupational Therapy scale.

8b. Check that you have scored all scale/s twice (for all four domains) at the completion of the goal/ or episode of occupational therapy care/ or discharge.

An initial and a final rating, using the same AusTOMs for Occupational Therapy scales, are necessary to measure the client's outcome.

CHAPTER FOUR

Scoring Tips and Frequently asked Questions

A. Scoring tips

Amending 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.

Tips for scoring the Impairment domain

Rate severity within 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 extent of the impairment (e.g., a client with a stroke who has a completely flaccid arm); the number of different impairments the client has (e.g., a person with a lower limb amputation, experiencing pain across the surgical incision, and depression); the number of body parts or the percentage of the body affected (e.g., a child with full thickness burns to 20% of their body); and the length of time the impairment is present (e.g., a person with chronic obstructive airways disease who has required hospital admissions on five occasions over the past 12 months). Also consider fluctuations in the presentation of the impairment/s (e.g., conditions such as arthritis or multiple sclerosis) when you rate the AusTOMs scales. Hence, ratings for impairment are comparative. For example when considering people who have paralysis, a paraplegia is less severe than quadriplegia.

For the first three scales:

- Scale 1. Learning and Applying Knowledge,
- Scale 2. Functional Walking and Mobility, and
- Scale 3. Upper Limb Use

consider all the impairments that relate specifically to the scale heading. That is, consider all the mental or sensory functions that affect learning and applying knowledge; consider all the impairments that affect functional mobility and walking as listed on the scale description; and consider all the impairments that affect upper limb function as listed on the scale description.

For the remaining nine scales, consider all the impairments an individual may have ***globally***. Therefore, you need to consider all the client's impairments and rate them on the scoring continuum from 0 to 5 (6 defined points and 11 half points) against all other clients and their impairments, and what is normal structure and function. Novice therapists may find this more difficult than experienced therapists as novices may not have seen enough clients to have a clear idea of the impairment continuum in their mind. For this reason, novice therapists may initially choose to confirm their impairment scores with a more experienced therapist.

Tips for scoring the Activity Limitation domain

Rate severity within the Activity Limitation 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 limitation in activities (e.g., a child with quadriplegic cerebral palsy who is unable to complete self care activities with or without assistive devices); the number of different activity limitations the person has (e.g., a person with stroke may need maximal assistance to shower, and get dressed, and be unable to carry out grooming tasks); the amount of time the limitation is present (e.g., a client with Parkinson's disease may be able to prepare a meal only during the "on" phase of medication); and the number of different environments in which the limitation is evident (e.g., a client may be able to use an electric wheelchair independently and safely in the occupational therapy department, but needs supervision in the rest of the hospital). Rate what the client ***actually does***, in the ***current therapy setting***, and not what the client could do if motivated, or says s/he can do (when you have not seen evidence of this performance).

When making a rating using Scale 3. Upper Limb Use, rate what the client can actually do using both upper limbs. For example, a client may have dense hemiplegia in the left upper limb, but be able to manage all tasks independently with the right upper limb, and therefore score 5. However, if the client needs to undertake tasks bilaterally, and cannot do this, then a lower score may be made.

Tips for scoring the Participation Restriction domain

Participation Restriction is a global construct and therefore you need to reflect globally on the client and his/ her current status to make a rating. 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. An individual's participation in an activity is facilitated or restricted by a range of individual, environmental and societal issues. On admission, it may be difficult to make this rating as you have only just met the client. Therefore, it may be necessary to also talk to other treating health professionals, and the client's family/ caregivers to make an informed rating.

Tips for scoring the Distress/Wellbeing domain

The Distress/Wellbeing domain describes a client's level of concern, as evidenced by anger, frustration, apathy and depression. You can also rate the caregiver's level of Distress/Wellbeing. When making these ratings, consider the client or caregiver on a continuum from 0 to 5, where we expect to score 5 ourselves. In other words, most of us

are able to cope with most situations, and accept and understand our own limitations. When discussing the development of this domain, one therapist jokingly suggested that only the Dalai Lama could score a 5. Of course this is not the case: we expect that all people who are managing their level of concern to achieve this score. Therefore, when scoring the Distress/Wellbeing domain, don't over-inflate your expectations of what is required to score a 5.

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 along with the ICD- 10 disorder codes, so that negative changes over time can be seen in the context of the disease process. As data is collected with many clients over time, you may be able to:

- see which therapy seems most effective in slowing progression of disorders in people with progressive conditions,
- document the expected deterioration for particular disorders over time, or
- see whether therapy has any positive effect (e.g., in terms of the client's or carer's Distress/Wellbeing scores).

If you are working with clients who have deteriorating conditions, 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 outcome to document.

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

If you are working with a client's carer, then you may wish to reflect change in the carer's distress/wellbeing over time by rating the AusTOMs Distress/Wellbeing domain for the carer, as well as the client. For example, you may work with the parents of paediatric clients, or the carers of older clients. You may teach carers new techniques to manage the client that make life easier, or provide reassurance and support. In both these cases, you can reflect the time spent with the carer by rating the AusTOMs Distress/Wellbeing domain in relation to the carer as well as for the client. (***Note***. Ratings of Distress/Wellbeing of carers have not been fully assessed in relation to reliability).

3. What happens if another therapist implements treatment or takes over care of the client after I have done the assessment?

It is possible for another therapist familiar with the AusTOMs to make interim and/or final ratings, as long as at least two ratings (initial and final) are recorded for that client. We recommend that ratings of client status are made by clinicians who have been involved in the client's assessment/treatment, so that the rating is an accurate reflection of the client's true status.

4. What if the client is discharged before a final rating of AusTOMs is made?

As with any outcome measure, the AusTOMs requires 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. Depending on your purpose for collecting outcomes, you could note (using a discharge code) that the client has left the service before optimal discharge from therapy. Example discharge codes are given with the AusTOMs for Occupational Therapy data collection form (see 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 set, or note it as an incomplete case.

5. What about "one-off" therapy sessions?

If you are intending to see a client only once, it may still be possible to make an AusTOMs rating providing you are with the client for enough time to effect change. For example, you may visit a client at home for the purpose of a home assessment. In such a case, you could score AusTOMs when you first meet the client. Over the next two hours you may work with the client to make physical modifications to the home, and teach new ways of undertaking tasks so they may be completed more easily and independently. While the client's impairment scores would not change over this period of therapy, the client's limitation in activities may reduce, and their level of distress may also decrease. Alternatively, you may work in acute care and see a client only once for prescription of, and training to use equipment. In this case you may again score the client when first seen, spend one to two hours with the client prescribing and training in the use of equipment or new techniques to perform daily activities, and then score the client again at the end of the session. Again, while the client's Impairment scores would not change over this period of therapy, the client's Activity Limitation, Participation Restriction and Distress/Wellbeing scores may show improvement.

6. 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.

7. My client has had a stroke. Do I score the Impairment domain by considering his problems against all other clients with stroke, or all clients with any disorder?

You need to score the client's impairments against what is normal, and the worst impairments possible for all clients. Since AusTOMs does not score the severity of diseases or disorders, you are not making a rating of the severity of the stroke. You are making a rating of the severity of the impairments that result from the stroke. You need to rate all the impairments your client experiences globally, on the scoring continuum from 0 (most severe) to 5 (no impairment). A client's AusTOMs impairment score is

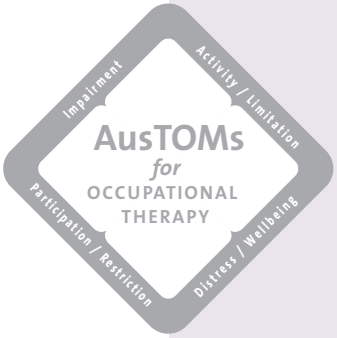
contextualised by the accompanying data which includes the ICD-10 disease/ disorder codes.

8. My client and I are working on a goal related to independent meal preparation. Can I just score this aspect of Scale 8 Domestic Life- Inside the house, or do I have to score all the activities in the definition?

AusTOMs is a global, snapshot outcome measure. This means that it captures broad rather than fine detail, and that you need to rate clients in relation to all the components of each scale. Therefore, you need to rate your client considering all the components of Scale 8. Domestic Life- Inside the House.

9. Can I use the AusTOMs to rate infants and children?

You can use the AusTOMS to rate outcomes for infants and children. However, when rating each of the domains, take your client's age into account. For example, in the Participation Restriction domain it would not be relevant to consider a lack of autonomy as an indication of restriction for a 5 year old girl, who would not normally be expected to make all of her own decisions. Similarly, it is not appropriate to consider work roles when rating children. When rating infants, it can be difficult to rate their level of Participation Restriction and Distress/Wellbeing. In such cases, it may be more appropriate to rate the Participation Restriction and Distress/Wellbeing of the carer.



10. I want to use AusTOMs to measure change in upper limb function with my clients who have had a stroke, and only have one upper limb affected. Can I use Scale 3. Upper Limb Use, to score one limb, or do the scores need to reflect the use of both limbs?

When scoring Scale 3. Upper Limb Use, the scoring descriptions guide you on how to make a rating for your client on both the Impairment, and Activity Limitation domains. When scoring the Impairment domain, the scoring description states that if only one upper limb is affected, then you should rate the severity of impairments affecting this limb, if both are affected, then rate both. Hence, if only one limb is affected, then the score may be higher than when both limbs are affected. Or, if one limb is very severely affected (such as with very dense hemiplegia), then this client may score a lower rating than a client with both upper limb affected by something quite mild (such as mild restriction in range of movement). However, the scoring for the Activity Limitation domain must reflect the use of both upper limbs together. This is because we can often conduct daily living tasks with one arm and still be completely independent. The scoring guide states that if the client can do all tasks independently with one arm, then score as 5. In summary, for your clients with stroke, the Impairment score will reflect the severity of the one upper limb that is affected, however, the Activity Limitation score will reflect the client's ability to carry out ADLs using both upper limbs.

CHAPTER FIVE

Practice Cases

Ten case studies are included for you to practise using the AusTOMs for Occupational Therapy scales. Each case study requires you to score the client in relation to at least two scales. These scales have been selected to match the information in the cases, but of course, any scales could be chosen for these clients. The first three cases are structured to assist you to determine which information should be scored in relation to the four domains. The other cases present information in a mixed format: some provide headings to help you determine which domain the information contributes to, and others are unstructured to allow you to practice selecting the information that contributes to scoring each domain. Cases 7 to 10 have been contributed by clinicians around the world. Chapter 6 provides suggested answers and discussion points

Case 1: Ruth

Scale 8. Domestic Life – Home

Scale 10. Interpersonal Interactions and Relationships

Background

Ruth is 79 years old and has dementia (Alzheimer's type). She lives at home with her husband. The community occupational therapy service received a referral to assess her domestic life and determine if she needs any supports (such as Meals on Wheels), and to assess her level of interpersonal interactions and relationships to determine if she can join the local elderly citizens group.

Initial Assessment Scores

Impairment

Ruth has had dementia for six years now and she frequently forgets to do things. She loses concentration easily. She has severe disturbances in executive functions and she is only able to plan, or problem-solve very simple tasks. Her disease has worsened recently, but the GP believes she will be able to remain at home with the right supports.

Activity Limitation

Ruth is not able to manage daily living activities without her husband and even this is currently proving difficult. Ruth requires constant verbal prompting to complete home

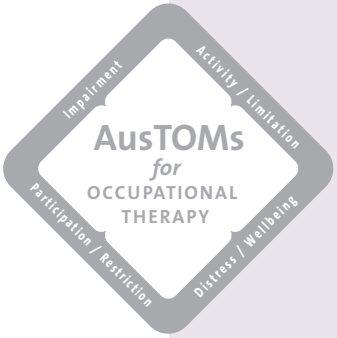
maintenance and cooking activities. However, her husband often completes these since he tires of supervising her. Ruth's husband has always managed all their finances, but when they visit the local milk bar, Ruth can purchase a paper or milk and bread. Ruth enjoys seeing people and she can respond to simple questions with brief responses. However, many of her friends seem to have drifted away over the past year. She is socially appropriate and can maintain good small talk about simple subjects such as the weather or her cat. However, her husband finds that when they go shopping, she likes to give away money ($10 or $20) to buskers, which is something she did not do prior to developing dementia.

Participation Restriction

Ruth requires a great deal of assistance from her husband to join in with their social activities. As noted above, she can only solve simple problems and this means she can only make simple choices.

Distress/Wellbeing

Ruth does not seem very concerned about her difficulties and is generally very cheerful. However, she occasionally needs emotional support from her husband.



Scale 8: Domestic life—Home

Impairment	
Activity Limitation	
Participation Restriction	
Distress/Wellbeing	

Scale 10: Interpersonal Interactions and Relationships

Impairment	
Activity Limitation	
Participation Restriction	SAME
Distress/Wellbeing	SAME

Case 2: Lee

Scale 2. Functional Walking and Mobility
Scale 6. Using Transport

Background

Lee had a left sided stroke six days ago and has just been admitted to rehabilitation. The occupational therapist completed a Canadian Occupational Performance Measure with Lee and they decided to work on functional mobility and walking, and returning to driving.

Initial Assessment Scores

Impairment

Lee has no movement in his left upper limb and has dense hemiplegia, but he can stand, balance and walk on his left leg although he hitches his hip when walking outside and is not steady outside. He has no cognitive deficits.

Activity Limitation

Lee walks using a single point stick both indoors and outdoors, but is slow and unsteady. He requires supervision when walking outdoors to minimise risk of falling. He cannot drive at the moment and has been told that he will require assessment and possible modifications to his car in order to return to driving. The therapists and Lee are working towards return to driving as he lives in a rural area where transport is not available.

Participation Restriction

Where possible, within his schedule, Lee is able to make choices. He currently needs some assistance to fulfil his roles.

Distress/Wellbeing

Lee is quite angry that he cannot drive and that he will need to be tested prior to returning to this activity. On three occasions during the past four days (i.e., frequently), Lee has been abusive to the occupational therapist, physiotherapist or orderly in relation to not being able to drive, and the occupational therapist has had to provide clear guidelines that this is not acceptable behaviour.

Scale 2: Functional Walking and Mobility

Impairment	
Activity Limitation	
Participation Restriction	
Distress/Wellbeing	

Scale 6: Using Transport

Impairment	
Activity Limitation	
Participation Restriction	SAME
Distress/Wellbeing	SAME

Case 3: Sally

Scale 1. Learning and Applying Knowledge
Scale 9. Domestic Life—Managing Resources

Background

Sally is 43 years old and the mother of two children. She is married and has good family support. Although her multiple sclerosis has been stable for a few years, she has

just experienced a relapse, and a decline in function. She is currently at home and the community occupational therapist has just visited her to determine her current status and set related goals. Sally is active in the local community through the local primary school her children attend and the local church. Both these activities are important to her since she does not have paid employment. She goes out on a weekly basis to pay bills and shop. The occupational therapist also wanted to determine if Sally was experiencing any difficulties with learning.

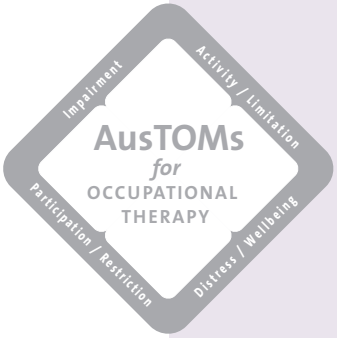
Initial Assessment Scores

Impairment

The occupational therapist undertook several standardised assessments of Sally's cognitive/ perceptual function and noted that while Sally is doing quite well overall, she does have some difficulty with tasks requiring abstract reasoning or judgment. She is currently experiencing moderate pain in her legs, tremor and muscle spasms, which means she cannot walk.

Activity Limitation

Sally is currently using a motorised wheelchair to get out to the shops, bank, school and church, which are only a few streets away. The occupational therapist's assessment suggests that while Sally will be able to manage running the house (getting shopping, and paying bills), she may need some help in new situations or when learning new activities. She may need to see a teller rather than use the automatic teller machine.



Participation Restriction

Although somewhat slower, and using the wheelchair since her relapse, Sally can join in all her regular shopping and banking activities.

Distress/Wellbeing

Sally says she does not feel any different to how she felt prior to the latest relapse, but she reports that she has been a bit more teary and sad about the future, and that she is relying on her husband more for support.

Scale 1: Learning and Applying Knowledge

Impairment	
Activity Limitation	
Participation Restriction	
Distress/Wellbeing	

Scale 9: Domestic Life—Managing Resources

Impairment	
Activity Limitation	
Participation Restriction	SAME
Distress/Wellbeing	SAME

Case 4: Jane

Scale 4. Carrying Out Daily Life Tasks and Routines
Scale 5. Transfers

Background

Jane is 60 years old and recently experienced a left side middle cerebral artery stroke. She was admitted to an acute care facility five days ago and is now medically stable and ready for discharge to a rehabilitation facility.

Discharge Scores

Jane has been quite distressed about having a stroke and becomes upset very easily. The nurses have documented that they need to reassure her often that she will not die, and that she has thrown herself on the floor on two occasions when extremely frustrated.

Jane has dense right sided hemiplegia and severe cognitive and language impairments, which make carrying out her daily life tasks and routines such as organising her personal ADLs difficult. In addition, transferring her is quite difficult, and the occupational therapist has worked on improving stand and pivot transfers.

At discharge Jane requires full assistance from one carer to transfer, although she "works with" the carer in the transfer. She is only able to make the simplest choices about what happens during the day—she can indicate to the nursing staff to adjust the lighting and temperature in the room.

She is also unable to maintain strategies to manage her daily life activities and, while co-operative in therapy, requires a great deal of assistance to carry out personal care tasks and routines.

Scale 4: Carrying Out Daily Life Tasks and Routines

Impairment	
Activity Limitation	
Participation Restriction	
Distress/Wellbeing	

Scale 5: Transfers

Impairment	
Activity Limitation	
Participation Restriction	SAME
Distress/Wellbeing	SAME

Case 5: David

Scale 3. Upper Limb Use
Scale 7. Self Care

Background

David is an 8 year old boy with an acquired brain injury (ABI), resulting from a car accident. David was an inpatient at the local hospital for two months following the car

accident. He has now returned home and lives with his parents and younger brother. He is attending occupational therapy to promote upper limb function and independence with the performance of self care activities such as dressing. It is now three months post accident.

Initial Assessment Scores

David has a moderate cognitive impairment and his speech is dysarthric. This makes it difficult for him to discuss his thoughts and feelings with others. David has a moderate tremor affecting his left side, which is most prominent in his left upper limb. He has increased muscle tone on his left side and experiences a moderate reduction in range of motion in his upper limb due to contractures at his left elbow and wrist. David also has some sensory loss including decreased proprioception, pain and temperature sense.

David is able to stabilise many objects with his left hand to perform bilateral activities where his right hand leads, such as cutting with scissors. He can use his left upper limb for gross motor movement only. His grasp patterns are normal on his right side but are unrefined on his left. He is unable to cut food independently and uses a fork or spoon at mealtimes. David requires very frequent verbal prompts (e.g., to sequence steps with dressing; adjust clothing) when dressing and some physical assistance tying shoelaces, fastening buttons etc.

David has not yet returned to school. He will require the support of a teacher's aide and funding for this is confirmed. He requires supervision at all times due to his decreased awareness of safety. He can make simple choices from a limited range and can ask for help on some occasions (e.g., to take his jumper off when hot). David's mother feels that he misses seeing his friends at school. She has also had a very difficult response to David's ABI. She was initially very distressed. Currently, she requires regular support from her husband, mother, and David's case manager to manage her own emotions. David's mother reports that David sometimes displays frustration when he is unable to complete activities quickly or if he is unable to complete activities, which he used to complete independently prior to his injury. David is able to manage these feelings with only an occasional word of encouragement and generally perseveres well with all activities.

Scale 3: Upper Limb Use

Impairment	
Activity Limitation	
Participation Restriction	
Distress/Wellbeing	
Distress/Wellbeing, carer	

Scale 7: Self Care

Impairment	
Activity Limitation	
Participation Restriction	SAME
Distress/Wellbeing	SAME
Distress/Wellbeing, carer	SAME

Case 6: Peter

Scale 11. Work, Employment and Education

Scale 12. Community Life, Recreation, Leisure and Play

Background

Peter has schizophrenia, which has until recently been very stable. Since he had been well for about five years he decided to try cutting back his medication to see if he would be all right without it. Shortly after this he experienced a psychotic episode (April) and was admitted for two days to an acute psychiatric facility and then discharged home. That was one week ago.

Initial Assessment and Discharge Scores

The case manager visited him and noted that he is 42 years old and works for a printer. He has never married, but has a good network of family (three siblings) and two friends who he sees monthly. He seems stable again now he is back on medication and says he experiences infrequent paranoid thoughts, and these he is able to manage. This is similar to his level of impairment prior to the recent psychotic episode. He is currently working with his case manager to return to work. A work site assessment revealed that Peter was able to manage his usual work tasks, but that fatigue made him slower than usual. He did not need any extra rest breaks. At this time the case manager also noted that he seemed to require frequent reassurance that he was doing well and that things would return to the way they had been. Although he was fulfilling most of his usual roles, he seemed quite subdued and lacking in confidence, to the extent that he needed some prompts to make choices about what he wanted to achieve from therapy.

Peter returned to work and, after three weeks, the case manager re-assessed him (in May) and found that he was completing all his usual work tasks in a timely fashion. However, Peter complained that this seemed to be at the expense of his social life as he was very tired in the evenings and had not been seeing friends or family much. He stated that he was currently only engaging in leisure activities if a friend came and took him out or if one of his siblings called to organise him to do something. For example, to go swimming he needed his sister to accompany and supervise him for safety. He stated that he lacked confidence and was embarrassed about having stopped his medication, and that he felt he needed more support from the case manager than their regular meeting every three weeks. The case manager then set a new goal of increasing leisure time activities.

After two months (July), Peter reported that things had settled very well and that the strategies he had developed with the case manager to increase his leisure activities had been useful. He reported that things seemed back to normal and that he was engaging in his regular leisure activities which included swimming, and having a couple of drinks and a game of darts with a friend at the pub, or dinner with a sibling. He continued to meet the case manager every three weeks as he had done prior to his recent hospital admission to gain support and encouragement as needed.

Initial Assessment Scores (April)

Scale 11: Work, Employment and Education

Impairment	
Activity Limitation	
Participation Restriction	
Distress/Wellbeing	

Initial Assessment Scores (May)

Scale 12: Community Life, Recreation, Leisure and Play

Impairment	
Activity Limitation	
Participation Restriction	
Distress/Wellbeing	

Discharge Scores (May)

Scale 11: Work, Employment and Education

Impairment	
Activity Limitation	
Participation Restriction	SAME
Distress/Wellbeing	SAME

Discharge Scores (July)

Scale 12: Community Life, Recreation, Leisure and Play

Impairment	
Activity Limitation	
Participation Restriction	
Distress/Wellbeing	

CASE 7: Belinda

Scale 5. Transfers

Scale 10. Interpersonal interactions and relationships

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5

Background

Belinda is a 19-year-old lady diagnosed with Rhetts syndrome. Rhetts syndrome is a congenital disability caused by a chromosomal abnormality. Onset of this disability occurs between 6-18 months of age and results in slowed head growth, severe impairment in expressive language, the loss of purposeful hand movements and shakiness of the upper body. Other problems associated with Rhetts syndrome include cognitive impairment, spinal curvature, seizures, teeth grinding and swallowing and breathing difficulties. Belinda displays all of these features.

Belinda lives at home with her parents and two younger siblings. She attended a special developmental school for primary and secondary education and recently transitioned into a supportive adult day service, which she attends daily. Belinda's parents initiated contact with the occupational therapy service at Yooralla because they were experiencing difficulty with the manual handling aspects of her personal care. They were also concerned that the majority of her time at home was spent lying on the couch where she would inevitably fall asleep. Following an initial interview with Belinda's mother, it was agreed the occupational therapist would address issues associated with Belinda's transfers and interpersonal interactions and relationships.

Initial Assessment Scores

Impairment and Activity Limitation
Transfers

Belinda presented with extremely severe physical and cognitive impairments. She had little or no intentional movements of her body other than smiling and swallowing. She was unable to assist in transfers in any way and required maximum assistance to be seated in her wheelchair or change her position in bed. Belinda required support to maintain an upright posture and relied on equipment to assist with this such as her wheelchair. Belinda used pre-intentional communication, which her family interpreted to communicate basic needs such as hunger and pain.

Interpersonal interactions and relationships

Belinda presented with very severe receptive and expressive language difficulties along with a severe cognitive impairment. She demonstrated an awareness of her family and familiar people or environments, however she did not readily initiate interactions with them. Belinda responded to music, colour and movement by smiling or turning her head towards the stimulus.

Participation Restriction

Belinda's family recognised that she had severe difficulties in participating in activities and interacting with the environment. At her day placement she was involved in a variety of sensory-based activities and showed recognition and enjoyment of these activities, however, they were concerned that she was not reaching her full potential in relation to interacting with her family and the home environment.

Distress/Wellbeing for Client and Carer

Belinda was able to indicate distress and pain through vocalizations. At night she "called out" when uncomfortable and her family assisted her to change position in bed.

Her family's concern about managing the manual handling aspects of her care were high. Both Belinda's parents have back injuries associated with long term lifting and handling and her mother was recently diagnosed with another serious health concern, which also impacts on her ability to move and transfer Belinda. In relation to her interpersonal interactions, Belinda's typical response at home was to switch off and fall asleep when lying on the couch. While Belinda appeared unbothered by this, her family were concerned that she was not participating in family life.

Intervention

Occupational therapy intervention for this family consisted of:

- Education and training to assist Belinda's family in understanding her disability, its affects and what interventions were possible.
- Provision of information regarding other supports available to them
- The provision of equipment including an electric hi-lo bed to assist with manual handling, (Belinda's parents were not prepared to consider the use of a hoist at this stage) and a supportive lounge chair to enable Belinda to be seated upright in the room most used by her family.

Discharge Scores

Following the occupational therapy intervention, Belinda was re-assessed on the AusTOMs for Occupational Therapy scales. Her impairment rating on both scales, and activity limitation in relation to Transfers, remained unchanged. However, Belinda's activity limitation in relation to the Interpersonal Interactions and Relationships scale improved so that she experienced only moderate to severe difficulty in interacting; once seated in an upright position in the lounge room Belinda became more alert and responded to a variety of stimuli around her. She could smile when spoken to and turn her head toward people and activities. Her facial responses were appropriate to the situation and her vocalisations increased. While she was able to vocalize to indicate basic needs such as discomfort hunger etc she still required a communication partner to interpret her meaning. Her family also noticed that extended family and friends were more likely to initiate social contact with her when seated in an upright position compared to when she was lying down on the couch. Belinda did not fall asleep when sitting in her lounge chair. Her parent's concern reduced as they observed her interacting and participating in the family's day to day interactions. While her parents' level of anxiety about transfers and moving Belinda continued to cause them a moderate amount of concern, the idea of using equipment rather than holding and lifting her was more distressing for them at present than accepting other intervention strategies such as the use of a hoist.

Initial Assessment Scores

Scale 5: Transfers

Impairment	
Activity Limitation	
Participation Restriction	
Distress/Wellbeing	
Carer Distress/Wellbeing	

Scale 10: Interpersonal Interactions and Relationships

Impairment	
Activity Limitation	
Participation Restriction	SAME
Distress/Wellbeing	SAME
Carer Distress/Wellbeing	

Discharge scores

Scale 5: Transfers

Impairment	
Activity Limitation	
Participation Restriction	
Distress/Wellbeing	
Carer Distress/Wellbeing	

Scale 10: Interpersonal Interactions and Relationships

Impairment	
Activity Limitation	
Participation Restriction	SAME
Distress/Wellbeing	SAME
Carer Distress/Wellbeing	

CASE 8: Amy

Scale 3. Upper Limb Use
Scale 7. Self Care

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Background

Amy is a 35-year-old woman with Huntington's disease. Huntington's disease is a neuro-degenerative disorder that leads to physical, cognitive, and emotional difficulties. She is divorced and lives with her father at home. She attends the Huntington's Outreach Group once per month, and the nurse is concerned about Amy's personal hygiene, so she referred Amy for an occupational therapy assessment.

Initial Assessment Scores

The occupational therapist visited Amy at home, and noted that Amy had moderate to severe chorea movements in her trunk and upper limbs, and dystonic posturing of her

shoulder and upper back. She walked slowly with her head bent, and did not look at her environment. She sat on her sacrum with round back and shoulder depression, and used her arm to reach above her head, behind her back and touch her toes. She had impaired alternating supination and pronation in her forearms and could not oppose her fingers. She used a lateral pincer grasp to hold objects momentarily. She had a strong body odour and her clothes looked dirty. Her fingernails were long and scratch marks were visible on her face, arms and body.

When asked about her abilities, Amy reported that she was totally independent in self-care, and had no concerns about her hygiene. However, she cried when describing that all her friends had drifted away and that her father needed to manage her life for her. She has very limited social integration and relies on her father to take her out. She said that she felt really sad about her situation most of the time. The occupational therapist noted that Amy had limited insight to her personal care status and also noted that Amy had difficulty with memory, planning and organization.

The self care assessment revealed that Amy required full assistance in showering and grooming and moderate assistance in dressing. She could bring food to her mouth but needed assistance to scoop food onto the spoon, and usually spilled the drink from her cup. She was continent but required assistance to wipe her bottom.

After meeting with Amy, the occupational therapist spent some time with Amy's father. He reported that she became aggressive when he tried to offer assistance, and that she lost emotional control easily. He felt upset and helpless and was particularly distressed by her poor hygiene, inability to accept assistance and behavioural problems (aggression and continual crying). He felt he could not cope with looking after her any more.

An urgent respite admission to Huntington Lodge was arranged with the aims of:

1. completing a full self care assessment and assisting Amy to develop a good self care routine,
2. assisting Amy to find more positive and fulfilling activities and a social group to promote her level of wellbeing and participation, and
3. to allow her father to have a break from his role as a carer.

Discharge Scores

After 3 weeks of respite care, Amy returned home. Although Amy's impairments and use of upper limbs and self care ability remained unchanged (as expected), she showed improvements in her level of participation and wellbeing. She responded well to the structured routine at the Lodge and was able to maintain a clean and tidy appearance with physical assistance from the carers. Amy participated in art therapy, card games, music group and a bus trip. She was linked into several social groups that she could continue to participate in after her discharge from the Lodge. Her participation in the structured environment and group activities meant that she was no longer angry, frustrated and aggressive. Amy accepted personal care services three times per week at home, respite care two times per week and continued to attend the Outreach Group. Amy's father reported that she settled very well at home. Although she displayed no aggressive behaviour, she still required frequent emotional encouragement and reassurance. Her father felt he could continue to look after Amy at home.

Due to the degenerative nature of Huntington's disease, Amy's ability to carry out mobility and self-care activities will continually deteriorate, as will her cognitive status. Occupational therapy reviews will be conducted every six months to determine her needs and to provide support to her father.

Initial Assessment Scores

Scale 3: Upper Limb Use

Impairment	
Activity Limitation	
Participation Restriction	
Distress/Wellbeing	
Distress/Wellbeing, carer	

Scale 7: Self Care

Impairment	
Activity Limitation	
Participation Restriction	SAME
Distress/Wellbeing	SAME
Distress/Wellbeing, carer	SAME

Discharge Scores

Scale 3: Upper Limb Use

Impairment	
Activity Limitation	
Participation Restriction	
Distress/Wellbeing	
Distress/Wellbeing, carer	

Scale 7: Self Care

Impairment	
Activity Limitation	
Participation Restriction	SAME
Distress/Wellbeing	SAME
Distress/Wellbeing, carer	SAME

CASE 9: Harold

Scale 2. Functional Walking and Mobility; Scale 3. Upper Limb Use
Scale 5. Transfers; Scale 7. Self Care

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Background

Harold has just celebrated his 80th birthday. He lives in a two storey house with his daughter and to date has not had any input from therapy or social services. His daughter works full time but they enjoy doing some social activities together on the week-end. Harold enjoys maintaining their small garden and attending church and church-related social activities. Harold fell down the concrete stairs at church sustaining an injury to his head and shoulder, and was admitted to the local hospital. Following medical assessment, it was found that he had sustained a fractured left clavicle, fractured skull, and subdural haematoma.

Initial Assessment Scores

An occupational therapy assessment was carried out and the therapist noted that Harold had mildly restricted range of movement (ROM) in his left upper limb, and some mild cognitive and perceptual impairments. However, he had a moderate balance impairment when standing and this affected both transfers, mobility and self care.

Harold required hands on assistance for all transfers, and he required hands on assistance with personal care including dressing, grooming, showering and eating due to a possible apraxia. He demonstrated good gross ROM in his left upper limb, but had clumsy finger control and a weak grasp. He was able to walk with a mobilator (walking frame with wheels) and an assistant to give steadying support and to ensure his safety. Since his admission to hospital Harold has been in reasonable spirits, but has required encouragement to feel that he will make progress and that he will be able to return home, rather than having to move to a nursing home. He currently experiences moderately severe difficulties in fulfilling his roles as a father and home maker, and cannot participate in his regular church and social activities. His daughter is currently making all decisions for her father as Harold seems unable to participate in this at present.

The occupational therapist set goals with Harold to work towards improving his mobility (Scale 2), upper limb function (Scale 3), transfers (Scale 5) and self care (Scale 7). Harold's admission scores were as follows:

Initial Assessment Scores

Scale 2: Functional Walking and Mobility

Impairment	
Activity Limitation	
Participation Restriction	
Distress/Wellbeing	

Scale 3: Upper Limb Use

Impairment	
Activity Limitation	
Participation Restriction	SAME
Distress/Wellbeing	SAME

Scale 5: Transfers

Impairment	
Activity Limitation	
Participation Restriction	SAME
Distress/Wellbeing	SAME

Scale 7: Self Care

Impairment	
Activity Limitation	
Participation Restriction	SAME
Distress/Wellbeing	SAME

CASE 10: Anna

Scale 1. Learning and applying knowledge
Scale 4. Carrying out daily life tasks and routines

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Background

Anna is an 85 year old woman who had a right sided stroke several days ago. She was admitted to the regional hospital for assessment and rehabilitation. Prior to her stroke, she lived alone in an apartment. She used to take daily walks and several times during the week she participated in local church groups and the seniors association. Her children and grandchildren often visited her and took her out on trips. Anna also visited one of her cousins, who lives in sheltered housing, during the week. Anna's goal is to return home and manage her daily routines including cooking, walking and socialising.

The occupational therapist undertook her usual assessments with Anna, including an initial interview and an Assessment of Motor and Process Skills (AMPS). The therapist and Anna then set two goals related to learning new techniques to increase Anna's independence in activities of daily living, and managing her schedule so she could carry out her daily life tasks and routines. Accordingly, the therapist rated Anna on AusTOMs scales 1 and 4. On assessment, the therapist scored Anna as follows:

Initial Assessment Scores

Impairment

AMPS assessment revealed that Anna had a moderate to severe hemiplegia in her left upper limb with associated reduced grasp and flow of motor ability. Anna experienced

decreased attention to her left side (unilateral neglect), so she regularly bumped into things and could not find her way around the ward. She also failed notice when she was holding things in her left hand. Her ADL process ability was below the cut off score on AMPS indicating that her cognitive abilities were moderate to severely affected by the stroke. For example, Anna was unable to retain new information. She seemed to be highly distractible and driven by stimuli in the environment, and was easily exhausted.

Activity Limitation

AMPS assessment indicated that Anna's walking was unsteady but she didn't require any mobility equipment. Anna needed a person to tell her were to go in the ward, and constant directions of what to do during an activity. For example, during activities in the OT department, Anna was very talkative would sit down to chat to other patients if not prompted to continue with her activity. Anna also needed constant prompting to find things on her left side. While she was sometimes able to initiate her self care routines in the morning, Anna was not able to transfer skills taught in one self care activity such as grooming to another activity such as bathing.

Participation Restriction

Anna's children and grandchildren continued to visit her in the hospital. However, she couldn't go outside alone, or take her daily walks, or participate in her usual community groups. Anna had limited involvement in making decisions, and one of her daughters made choices regarding Anna's care. However, she could control her environment at all times.

Distress/Wellbeing

For most of the time, Anna was unconcerned about her situation and said that she felt just like normal. However, at times she seemed to realise the extent of her problems and would then become very anxious and afraid and state that she had lost her will to live. At these times, Anna required encouragement to continue with her therapy program.

Scale 1: Learning and applying knowledge

Impairment	
Activity Limitation	
Participation Restriction	
Distress/Wellbeing	

Scale 4: Carrying out daily life tasks and routines

Impairment	
Activity Limitation	
Participation Restriction	SAME
Distress/Wellbeing	SAME

CHAPTER SIX

Answers and Discussion Points

This chapter suggests answers and discussion points for the practice case studies. Paper cases like these are actually more difficult to rate than scoring real clients, since you usually know more about your real clients and can therefore make more informed AusTOMs ratings.

It is acceptable to have ratings within 0.5 point of our suggested ratings. For example, with a suggested rating of 2.5, ratings of 2.0 or 3.0 are also acceptable.

Remember that although each case requires use of two or more scales, you only score a client once for the Participation Restriction and Distress/Wellbeing domains for admission and once for discharge ratings.

Case 1: Ruth

Impairment

Ruth has severe dementia and this affects multiple areas of her functioning, including problem solving, memory and concentration.

Activity Limitation

Since she requires constant verbal prompting, Ruth scores 2 for scale 8. She scores 3 for this domain for scale 10 since she is only able to interact at a basic level, and giving away money suggests that there is a safety issue when interacting with people outside the house since she may be vulnerable to exploitation.

Participation Restriction

Ruth scores 2 for Participation Restriction, as she requires assistance to fulfill social roles such as wife and friend, and to be able to engage in her domestic role. Ruth also has limited involvement in decision-making.

Distress/Wellbeing

Ruth scores 4 for this domain as she has only mild concern, needing occasional emotional support from her husband.

Scale 8: Domestic Life—Home

Impairment	1
Activity Limitation	2
Participation Restriction	2
Distress/Wellbeing	4

Scale 10: Interpersonal Interactions and Relationships

Impairment	2
Activity Limitation	3
Participation Restriction	SAME
Distress/Wellbeing	SAME

Case 2: Lee

Impairment

Although Lee has no cognitive problems and seems to have reasonably good motor function in his leg, he has no movement in his upper limb therefore, his impairment overall is about 2.5 for both scales.

Activity Limitation

Lee requires supervision to walk outside which equates to a score of 3 for scale 2 (Functional Walking and Mobility). Although he wishes to drive, he cannot at the moment, and therefore scores a 3

Participation Restriction

Since he needs only a little assistance to fulfill his roles, Lee scores 4 for his participation.

Distress/Wellbeing

Lee is angry and distressed about not being able to drive and has been frequently abusive to staff; therefore he scores 1.5 for Distress/Wellbeing.

Scale 2: Functional Walking and Mobility

Impairment	2.5
Activity Limitation	3
Participation Restriction	4
Distress/Wellbeing	1.5

Scale 6: Using Transport

Impairment	2.5
Activity Limitation	3
Participation Restriction	SAME
Distress/Wellbeing	SAME

Case 3: Sally

Impairment

Sally only has difficulty with abstract reasoning, and therefore scores 4 for scale 1. She scores 2 for scale 9 since she has moderate pain in her legs as well as tremor and muscle spasms.

Activity Limitation

Sally may need a little help or extra time to learn a new activity, thus scoring 4 on both scales.

Participation Restriction

Sally can participate in all her usual activities, and fulfill all of her chosen roles, therefore she scores a 5 for this domain.

Distress/Wellbeing

Since Sally is a bit teary and relying on her husband for support, she scores 4.

Scale 1: Learning and Applying Knowledge

Impairment	4
Activity Limitation	4
Participation Restriction	5
Distress/Wellbeing	4

Scale 9: Domestic Life—Managing Resources

Impairment	2
Activity Limitation	4
Participation Restriction	SAME
Distress/Wellbeing	SAME

Case 4: Jane

Impairment

Given her dense hemiplegia and severe cognitive problems, Jane scores 1 for impairment for both scales.

Activity Limitation

Jane requires maximum assistance to carry out daily life tasks and routines, yet is co-operative, therefore scoring 1 for scale 4. For scale 5 (Transfers), Jane scores 1 since she requires maximum assistance from a carer to transfer yet she does work with the carer, and this differentiates her from clients who score 0.

Participation Restriction

She scores 2 for this domain since she can ask for assistance to control her environment and makes only simple choices about her day.

Distress/Wellbeing

Since Jane becomes distressed easily and requires a great deal of reassurance, she scores 1.

Scale 4: Carrying Out Daily Life Tasks and Routines

Impairment	1
Activity Limitation	2
Participation Restriction	2
Distress/Wellbeing	1

Scale 5: Transfers

Impairment	1
Activity Limitation	1
Participation Restriction	SAME
Distress/Wellbeing	SAME

Case 5: David

Impairment

David's upper limb impairment is scored as 3. Although his right upper limb functions normally, his left upper limb is moderately impaired. David experiences tremor, reduced range of movement, and some sensory loss. On the Self Care scale, his cognitive deficits and dysarthric speech suggest a moderate level of impairment thus a score of 3.

Activity Limitation

David needs constant verbal prompting and some hands-on assistance with his self care therefore scoring 2. If he only needed prompting or set-up, then he could have scored 3. For the Upper Limb Use scale, David also scores 2 since he uses his left upper limb for gross motor functions and to stabilise objects.

Participation Restriction

David is able to make simple choices only, and has limited social integration. He has not yet returned to the role of student, but will be able to with support. Therefore, he currently scores 1.5, but when he resumes the role of student, he may score higher.

Distress/Wellbeing

David requires only mild encouragement and therefore scores 4. It is also possible to rate his mother's Distress/Wellbeing. She currently scores a 3.5 since the encouragement

she requires to manage her emotions seems to fall between 2 (she does not need frequent reassurance) and 4 (since she needs just more than occasional support).

Scale 3: Upper Limb Use

Impairment	3
Activity Limitation	2
Participation Restriction	1.5
Distress/Wellbeing	4
Distress/Wellbeing, carer	3.5

Scale 7: Self Care

Impairment	3
Activity Limitation	2
Participation Restriction	SAME
Distress/Wellbeing	SAME
Distress/Wellbeing, carer	SAME

Case 6: Peter

Initial Assessment—Work, Employment and Education

At the time Peter started to work with his case manager on returning to work, he was only having infrequent paranoid thoughts, and his schizophrenia was mild—so a rating of 4 is appropriate in the Impairment domain for the Work, Employment and Education scale.

Note: His condition is stable for the duration of his therapy, therefore his Impairment ratings remain as 4 for both scales at each assessment.

Peter was performing more slowly than usual at work and thus he scored 4 in the Activity Limitation domain. Fatigue was making him slower than usual at work, consistent with a score of 3.5 for Participation Restriction. Peter required frequent support and reassurance, so he scored 2 for Distress/Wellbeing.

Discharge— Work, Employment and Education

In May, his case manager found Peter was completing all his usual work tasks in a timely fashion and reassessed him. He no longer experienced any limitation with regard to work thus scoring 5 in the Activity Limitation domain. However, Peter has limited social integration and is lacking in confidence, therefore scoring 2.5 in the Participation Restriction domain. He expressed a moderate level of concern about his situation, thus scoring 3 in the Distress/Wellbeing domain.

Initial Assessment—Community Life, Recreation, Leisure and Play

At the same time as discharge ratings of the Work, Employment and Education scale were made, Peter and his case manager started to work on a new goal using the

Community Life, Recreation, Leisure and Play scale. In assessing him for his new goal, the case manager gave Peter a score of 3 in the Activity Limitation domain as he still required his sister to take him swimming and to stay to supervise him. Peter's scores in the Participation Restriction and Distress/Wellbeing domains (2.5 and 3 respectively) at the time of "admission" to this new goal are the same as those for "discharge" from his first goal because one action directly followed the other.

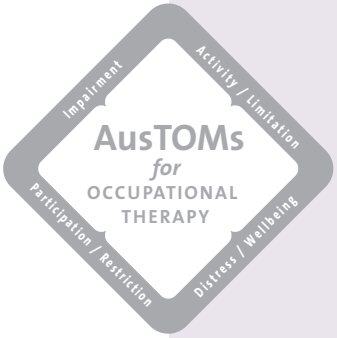
Discharge—Community Life, Recreation, Leisure and Play

In July, the case manager made a final rating for Peter on the Community Life scale. He scored 5 in the Activity Limitation domain reporting that things were "back to normal" and that he was engaging in his regular leisure activities. His participation in community life was no longer being restricted in any way by his disorder, so he scored 5 for Participation Restriction. While Peter achieved the two therapeutic goals, he and his case manager set, he is not discharged from the service. He continues to see his case manager every three weeks for support and encouragement, so a rating of 4 is appropriate in the Distress/Wellbeing domain.

Initial Assessment Scores (April)

Scale 11: Work, Employment and Education

Impairment	4
Activity Limitation	4
Participation Restriction	3.5
Distress/Wellbeing	2



Initial Assessment Scores (May)

Scale 12: Community Life, Recreation, Leisure and Play

Impairment	4
Activity Limitation	3
Participation Restriction	2.5
Distress/Wellbeing	3

Discharge Scores (May)

Scale 11: Work, Employment and Education

Impairment	4
Activity Limitation	5
Participation Restriction	2.5
Distress/Wellbeing	3

Discharge Scores (July)

Scale 12: Community Life, Recreation, Leisure and Play

Impairment	4
Activity Limitation	5
Participation Restriction	5
Distress/Wellbeing	4

CASE 7: Belinda

Initial Assessment Scores

Impairment and Activity Limitation
Transfers

Belinda was assessed as a 0 on the impairment scale as she presented with the most severe presentation of impairments. Belinda was also assessed as a 0 on the activity limitation scale since she was unable to transfer, and did not offer any assistance towards this.

Interpersonal interactions and relationships

Belinda was assessed as 0 on the impairment scale since she has very severe presentation of impairments. Belinda was assessed as a 0.5 on the activity scale since she had severe difficulty engaging in interpersonal interactions. She does initiate some responses to certain stimuli but only under certain conditions.

Participation Restriction

Belinda is assessed as 1 on the participation scale since she has limited social interaction and involvement in decisions making and is unable to fulfill work, education or family roles.

Distress/Wellbeing for Client and Carer

It was very difficult to rate Belinda's level of Distress/Wellbeing due to her communication and cognitive impairments, however, she was only distressed when in pain and otherwise seemed 'content' so she was scored as a 4. However, her family was assessed as 0 since both parents showed high and consistent levels of distress and concern over their ability to transfer and interact with their daughter.

Scale 5: Transfers

Impairment	0
Activity Limitation	0
Participation Restriction	1
Distress/Wellbeing	4
Distress/Wellbeing, carer	0

Scale 10: Interpersonal interactions and relationships

Impairment	0
Activity Limitation	0.5
Participation Restriction	SAME
Distress/Wellbeing	SAME
Distress/Wellbeing, carer	SAME

Discharge Scores

Impairment and Activity Limitation

Transfers

Her impairment rating remained unchanged at 0 (most severe presentation of impairment). On the activity scales her rating also remained unchanged as she continued to require full assistance with her transfers.

Interpersonal interactions and relationships

Belinda's impairment remained unchanged. However, Belinda's activity limitation on the interpersonal interaction scale changed from 0.5 to 1.5. Once seated in an upright position in the lounge room Belinda became more alert, her facial responses were appropriate to the situation and her vocalisations increased.

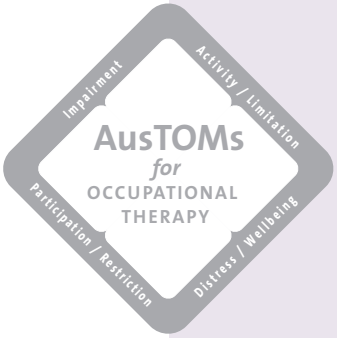
Participation

With the assistance of the upright chair, Belinda no longer fell asleep so frequently, and she was more able to interact and participate in the family's day to day events.

Distress/Wellbeing for Client and Carer

Belinda's level of Distress/Wellbeing remained the same at 4.

However, Belinda's parents level of Distress/Wellbeing changed from a 1 to a 3 since their anxiety and concern about managing the manual handling aspects of her care were reduced. They continue to express a moderate level of concern about managing manual handling and her level of social interactions.



Scale 5: Transfers

Impairment	0
Activity Limitation	0
Participation Restriction	1.5
Distress/Wellbeing	4
Distress/Wellbeing, carer	3

Scale 10: Interpersonal interactions and relationships

Impairment	0
Activity Limitation	1.5
Participation Restriction	SAME
Distress/Wellbeing	SAME
Distress/Wellbeing, carer	SAME

CASE 8: Amy

Initial Assessment Scores

Impairment

Amy has moderate to severe chorea movements in her trunk, upper limbs and dystonia in her shoulders. The score for Upper Limb Use is 2. In addition to her upper limb impairments, she has no insight to her personal hygiene and shows lack of initiation to perform self-care activities, so her impairments score for Scale 7. Self Care is a 2.

Activity Limitation

Amy can initiate gross motor movements, but has difficulty with fine motor control such as lifting a cup to her mouth without spilling the contents. She can use a lateral pincer grasp, however, she is unable to sustain the grasp and drops the objects. Amy requires one person to give constant verbal prompt and/or hands on assistance to perform parts of her self-care activities, such as put food to mouth. Therefore, for both Upper Limb Use and Self Care, she scores a 2.

Participation restriction

Amy is able to make simple choices only such as choosing her food; her father makes most of the decisions. She has very limited social integration, relying on her father to take her out. Her score is 1.

Distress/Wellbeing for Client and Carer

Amy shows aggressive behaviour towards her father, and loses emotional control easily, so her score is 1. Amy's father is very upset, feels helplessness and unable to look after her at home. He displays high and consistent levels of distress and scores a 0.

Scale 3: Upper Limb Use

Impairment	2
Activity Limitation	2
Participation Restriction	1
Distress/Wellbeing	1
Distress/Wellbeing, carer	0

Scale 7: Self Care

Impairment	2
Activity Limitation	2
Participation Restriction	SAME
Distress/Wellbeing	SAME
Distress/Wellbeing, carer	SAME

Discharge Scores

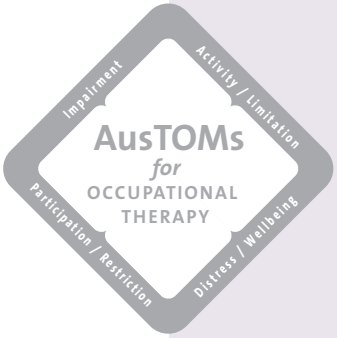
During her admission at Huntington Lodge, Amy's impairment and activity limitation scores remained the same due to the nature of Huntington's disease. However, her participation and Well-being / distress scores all improved. Amy accepted assistance from community services with self care and was able to go out more often with her father. At home, she required frequent emotional encouragement to manage her behaviour. Her father continued to feel moderate concern about his ability to manage, but felt that he had the support he needed to continue to care for Amy at home.

Scale 3: Upper Limb Use

Impairment	2
Activity Limitation	2
Participation Restriction	2
Distress/Wellbeing	2
Distress/Wellbeing, carer	3

Scale 7: Self Care

Impairment	2
Activity Limitation	2
Participation Restriction	SAME
Distress/Wellbeing	SAME
Distress/Wellbeing, carer	SAME



CASE 9: Harold

Impairment

Harold had mildly restricted ROM in his left upper limb which is consistent with a score of 4 for Upper Limb Use. However, his moderate balance impairments means he scored a 3 for both Transfers and Functional Mobility.

Activity Limitation

Since Harold required hands on assistance when he transferred and walked to ensure his safety, he scored a 2 for both these scales. Usually two cares would be consistent with a score of 1.

Harold also required hands on assistance with personal care leading to a score of 2. For Upper Limb Use, Harold demonstrated good gross ROM but clumsy finger control and a weak grasp which is consistent with Level 4.

Participation

Since Harold has moderately severe difficulties in fulfilling his roles and participating in social activities, and has limited involvement in decision making, he scores a 3.

Distress/Wellbeing

Although Harold has generally been in reasonable spirits, he required lots of encouragement from staff which is consistent with a score of 3.

Scale 2: Functional Walking and Mobility

Impairment	3
Activity Limitation	2
Participation Restriction	2
Distress/Wellbeing	3

Scale 3: Upper Limb Use

Impairment	4
Activity Limitation	4
Participation Restriction	SAME
Distress/Wellbeing	SAME

Scale 5: Transfers

Impairment	3
Activity Limitation	2
Participation Restriction	SAME
Distress/Wellbeing	SAME

Scale 7: Self Care

Impairment	3
Activity Limitation	2
Participation Restriction	SAME
Distress/Wellbeing	SAME

CASE 10: Anna

Impairment

Anna has a moderate to severe unilateral neglect, was distractible, had moderate to severe cognitive problems as measured on AMPS assessment and was unable to retain new information. Therefore, she scored a 2 for impairment in relation to Scale 1. Learning and applying knowledge. In relation to Scale 4. Carrying out daily life tasks and routines, both physical and cognitive impairments must be considered. Considering her hemiplegia as well as Anna's cognitive and perceptual problems, Anna's problems are moderate to severe, overall, resulting in a score of 2.

Activity Limitation

For Scale 1. Learning and applying knowledge Anna needed constant verbal prompting and was not able to transfer skills taught in one activity to another. These are consistent with a score of 2. In relation to Scale 4. Carrying out daily life tasks and routines, again,

Anna needed constant verbal prompting and could only initiate activities occasionally. While these findings are consistent with a score of 2, she was just a little better than most other clients scoring at this level and so the therapist scored her at a 2.5. This is hard to reflect in a written case study.

Participation Restriction

Anna relies on moderate assistance to participate, and is not able to fulfil her usual social roles. She also has limited involvement in making decisions and therefore scores a 3 for this domain.

Distress/Wellbeing

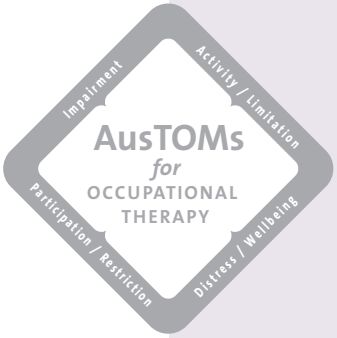
For most of the time, Anna can manage her emotions. However, when she becomes anxious, afraid and feels quite down, she needs lots of encouragement from the therapists to continue with her program. These features are consistent with a score of 3 for this domain.

Scale 1: Learning and applying knowledge

Impairment	2
Activity Limitation	2
Participation Restriction	3
Distress/Wellbeing	3

Scale 4: Carrying out daily life tasks and routines

Impairment	2
Activity Limitation	2.5
Participation Restriction	SAME
Distress/Wellbeing	SAME



CHAPTER SEVEN

Reliability, Validity and Sensitivity of the AusTOMs for Occupational Therapy Scales

This chapter of the manual provides an overview of the reliability, validity and sensitivity 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. ***Sensitivity*** refers to whether the measure can detect small changes in client status.

Reliability

Test-retest and inter-rater reliability

A preliminary study was conducted to examine the test-retest and inter-rater reliability of all the AusTOMs scales including the 12 AusTOMs for Occupational Therapy scales (Morris et al., 2005). In this study, fifty-three occupational therapists were trained to use the AusTOMs. A panel of experts prepared written case vignettes, and we asked therapists to rate these vignettes on completion of an AusTOMs training course. We determined test-retest reliability of clinician's ratings for these vignettes four-weeks after the initial training, by measuring the agreement between ratings made at training sessions, and ratings made at follow-up. The percentage of agreement over time and between clinicians was calculated, and for most scales it was found that there was 60%-100% agreement for test-retest and inter-rater reliability. While these results provide preliminary evidence of reliability, the data collected did not allow for more robust data analyses (such as the use of Intra Class Correlation Coefficients).

More recently, we conducted a detailed test-retest and inter-rater reliability study with a scale used frequently by occupational therapists, Scale 7. Self Care (Scott, Unsworth et al, 2004). Seven occupational therapists rated 15 written case studies on two occasions on the four domains of the Self Care scale. The results showed that the Self Care scale had 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. Test-retest reliability was also reported to be moderate to high, with ICCs of .88 for Activity Limitation, .81 for Participation

Restriction, .94 for Distress/Wellbeing, and .74 for Impairment.
The findings of this study support the reliability of the AusTOMs for Occupational Therapy Self Care scale, however, detailed studies such as this one need to be conducted for the other 11 AusTOMs for Occupational Therapy scales. Finally, we investigated the reliability of the Swedish translation of the AusTOMS -OT. The intra rater reliability was found to be high for nearly all the therapists (ICCs over .745). Test-retest and inter-rater reliability was also studied for the Self care and Transfers scales, with ICCs ranging from .705 to .902 for test-retest reliability and from .762 to .904 for inter-rater reliability (Fristedt, Elgmark & Unsworth, 2013).

Validity

Throughout the development of the AusTOMs, we closely involved those who will use the tool. Occupational therapists across Australia made a large contribution to the 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 minor changes to the wording of the Participation Restriction and Distress/Wellbeing domains. Such involvement enhances the face validity of the AusTOMs. For detailed information on scale development and face validity, refer to Perry et al. (2004).

Concurrent validity

A construct (concurrent) validity study was undertaken by comparing client data collected by the three professions (Speech Pathology, Physiotherapy and Occupational Therapy) on the AusTOMs with data collected on the EQ-5D (Unsworth et al., 2004). The purpose of this study was to examine the measurement properties of the AusTOMs and to compare them with the EQ-5D in real practice. EQ-5D is a short and simple to administer generic measure of health status (Brooks, 1996). EQ-5D provides a descriptive profile of client problems on five dimensions and an overall score for client self-rated health, and generates a single index value that can be used in clinical and economic evaluations of health care and in population health surveys.

We asked two-hundred and five clients to score themselves on the EQ-5D, and the same clients were scored by approximately 115 therapists (physiotherapists, speech pathologists and occupational therapists) using the AusTOMs at admission and discharge. Spearman rank order correlation co-efficients were used to analyze the relationships between scores from the two tools. Moderate to strong statistically significant correlations between the AusTOMs for Occupational Therapy and EQ-5D were found across all four domains ranging from .612 to .748. This data provides preliminary evidence that the AusTOMs for Occupational Therapy and EQ-5D are both measuring global health outcomes (Unsworth et al., 2004).

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.

Sensitivity/Responsiveness

It is also important to determine if the AusTOMs scales are sufficiently sensitive to detect change over time in client status. Data were collected with 466 clients at 12 metropolitan and rural health care facilities using the 12 AusTOMs for Occupational Therapy scales. There was significant change over time in client scores on the four domains of the 12 AusTOMs for Occupational Therapy scales (Unsworth, 2005). The Wilcoxon Signed Ranks tests ranged from Z= -2.280 to Z= -12.186 and were all statistically significant ($p<.05$). Further data collection is required to investigate scale sensitivity with clients in different settings, or who have specific disorders. For example, it needs to be confirmed if each of the scales are sensitive to change when used with clients living in the community following stroke, or with children who have spina bifida. Furthermore, recent research has confirmed these findings, specifically in the Participation domain (Abu-Awad, Unsworth, Coulson & Sarigiannis, 2014).

Research over the past 10 years using the the AusTOMs for Occupational Therapy scales indicates that they are sufficiently reliable, valid and sensitive for clinicians to use them with paediatric and adult clients. As with the development of any new measure, further refinements will occur as more data become available and as clinicians provide the developers with feedback. Research studies by Unsworth (2008), and Unsworth, Bearup & Rickard (2009) also support the growing evidence of the validity and clinical utility of the AusTOMs-OT.

CHAPTER EIGHT

Collecting AusTOMs Data

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, the amount of contact with a client, 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;
- 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., disorder codes, treatment type, and number of sessions and resources).

In each case, it is important that every clinician using codes (e.g., ICD-10 codes, or codes for types of treatment provided) 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 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 disorder 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.

The following pages show a sample data collection form (as provided in the pad of AusTOMs data collection forms), and a list of ICD-10 codes that can be used alongside the AusTOMs for Occupational Therapy.

AusTOMs data can be collected together with the following information:

- Client information such as age, sex, presence of a carer, ICD - 10 disorder codes, and place of discharge, and

Introducing and using AusTOMs in your workplace

The following steps can be taken to introduce AusTOMs for Occupational Therapy in your setting:

1.	Therapists need to read the AusTOMs manual, watch the training DVD, and then attempt to score some of the practice cases in the manual.
2.	The team needs to decide what data collection form will be used and what information will be collected alongside the AusTOMs data. A pad of data collection forms is included in this kit, or therapists can design their own data collection form.
3.	Therapists can practice rating a sample of approximately 10 clients on their own.
4.	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.
5.	A system needs to be put in place to enter the data into a database or spreadsheet programme.
6.	A start date can be set to commence data collection.
7.	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.

AusTOMs for Occupational Therapy

Data Collection Form

AFFIX CLIENT RECORD STICKER HERE

ICD-10 CODES 1. I63 | 2. M06 | 3. | CARER: (e.g. husband, sister) Husband

TIME: (Total face to face contact with client or caregiver) 45 hours. | GROUP OR INDIVIDUAL THERAPY: Individual

TYPES OF THERAPY: 1. ADL Training | 2. Bilateral Isokinematic prog. | 3. Resting splint for RA | 4. | 5.

AusTOMs Ratings

Scale No.	Goal Start Date	Impairment	Activity Limitation	Participation Restriction	Distress/ W. Client	Distress/ W. Carer	Goal End Date	Impairment	Activity Limitation	Participation Restriction	Distress/ W. Client	Distress/ W. Carer
7	1-3-14	2	1				10-6-14	4	3			
3	1-3-14	2	2	2	3	3	10-6-14	3	3	4	4	5
5	1-3-14	2	1				10-6-14	4	4			
8	2-5-14	3	3	3	4	3	10-6-14	4	4			

Discharge Code (Please tick one):

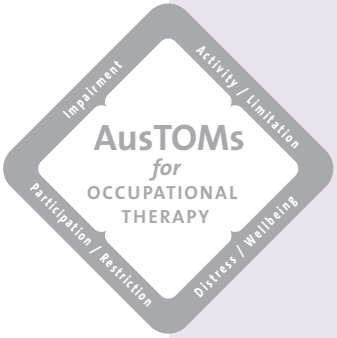
1. Treatment complete ✓	2. Therapist ceased treatment ☐	3. Client did not attend ☐	4. Treatment stopped, transferred to other service ☐
5. Acute episode (further event) but remained at facility ☐	6. Treatment stopped, client self discharge ☐	7. Deceased ☐	8. Other (Specify) ☐

ICD-10 Disorder Codes for use with AusTOMs for Occupational Therapy

The following table provides a brief list of some of the common disorders that people present with when attending occupational therapy. 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 Occupational Therapy, 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 occupational therapy, 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.

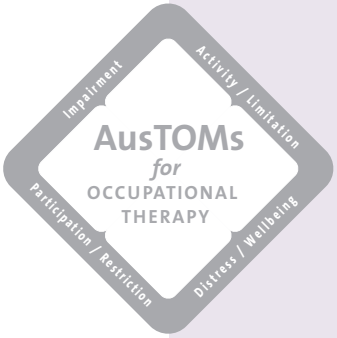
Tuberculosis (A15-A19)	
A15	Respiratory tuberculosis, bacteriologically and histologically confirmed
A16	Respiratory tuberculosis, not confirmed bacteriologically or histologically
Viral infections of the central nervous system (A80-A89)	
A80	Acute poliomyelitis
A83	Mosquito-borne viral encephalitis
A84	Tick-borne viral encephalitis
Malignant neoplasms (C00-C97)	
C15	Malignant neoplasm of oesophagus
C16	Malignant neoplasm of stomach
C17	Malignant neoplasm of small intestine
C32	Malignant neoplasm of larynx
C40	Malignant neoplasm of bone and articular cartilage of limbs
C43	Malignant melanoma of skin
C50	Malignant neoplasm of breast
C70	Malignant neoplasm of meninges
C71	Malignant neoplasm of brain
C72	Malignant neoplasm of spinal cord, cranial nerves and other parts of central nervous system
C73	Malignant neoplasm of thyroid gland

Endocrine, nutritional and metabolic diseases (E00-E90)
E10 Insulin-dependent diabetes mellitus
E11 Non-insulin-dependent diabetes mellitus
Organic, including symptomatic, mental disorders (F00-F09)
F00.0 Dementia in Alzheimer's disease with early onset (before age 65)
F00.1 Dementia in Alzheimer's disease with late onset (after age 65)
F01 Vascular dementia
F01.0 Vascular dementia of acute onset
F01.1 Multi-infarct dementia
F06.7 Mild cognitive disorder
F07 Personality and behavioural disorders due to brain disease, damage and dysfunction
F07.1 Postencephalitic syndrome
F07.2 Postconcussional syndrome
Mental and behavioural disorders due to psychoactive substance use (F10-F19)
F10 Mental and behavioural disorders due to use of alcohol
F11 Mental and behavioural disorders due to use of opioids
F12 Mental and behavioural disorders due to use of cannabinoids
F13 Mental and behavioural disorders due to use of sedatives or hypnotics
F16 Mental and behavioural disorders due to use of hallucinogens
F18 Mental and behavioural disorders due to use of volatile solvents
F19 Mental and behavioural disorders due to multiple drug use and use of other psychoactive substances
Schizophrenia, schizotypal and delusional disorders (F20-F29)
F20 Schizophrenia
F21 Schizotypal disorder
F22 Persistent delusional disorders
F23 Acute and transient psychotic disorders
F24 Induced delusional disorder
F25 Schizoaffective disorders
Mood [affective] disorders (F30-F39)
F30 Manic episode
F31 Bipolar affective disorder



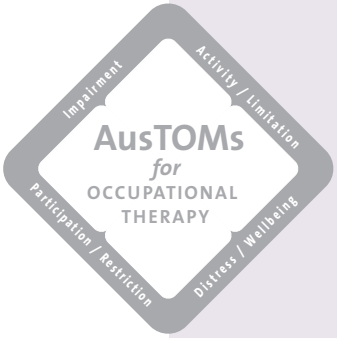
F32	Depressive episode
F33	Recurrent depressive disorder
F34	Persistent mood (affective) disorders
Neurotic, stress-related and somatoform disorders (F40-F48)	
F40.0	Agoraphobia
F40.1	Social phobias
F41	Other anxiety disorders
F41.0	Panic disorder [episodic paroxysmal anxiety]
F41.1	Generalized anxiety disorder
F41.2	Mixed anxiety and depressive disorder
F42	Obsessive-compulsive disorder
F43	Reaction to severe stress, and adjustment disorders
F43.0	Acute stress reaction
F43.1	Post-traumatic stress disorder
F43.2	Adjustment disorders
F44	Dissociative [conversion] disorders
F45	Somatoform disorders
Behavioural syndromes associated with physiological disturbances and physical factors (F50-F59)	
F50.0	Anorexia nervosa
F50.2	Bulimia nervosa
F53	Mental and behavioural disorders associated with the puerperium, not elsewhere classified (Post-natal depression)
Disorders of adult personality and behaviour (F60-F69)	
F60.0	Paranoid personality disorder
F63	Habit and impulse disorders
Mental retardation (F70-F79)	
F70	Mild mental retardation
F71	Moderate mental retardation
F72	Severe mental retardation
F73	Profound mental retardation
Disorders of psychological development (F80-F89)	
F80	Specific developmental disorders of speech and language
F81	Specific developmental disorders of scholastic skills

F81.0 Specific reading disorder
F81.1 Specific spelling disorder
F81.2 Specific disorder of arithmetical skills
F81.3 Mixed disorder of scholastic skills
F82 Specific developmental disorder of motor function
F84.0 Childhood autism
F84.2 Rett's syndrome
F84.5 Asperger's syndrome
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)



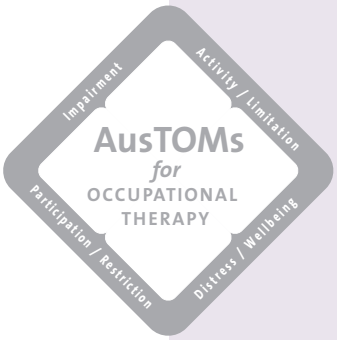
G82.4 Spastic tetraplegia (quadriplegia)
G82.5 Tetraplegia (quadriplegia), unspecified
Glaucoma (H40-H42)
H40 Glaucoma
Visual disturbances and blindness (H53-H54)
H53 Visual disturbances
H54 Blindness and low vision
Diseases of the circulatory system (I00-I99)
I20 Angina pectoris
I21 Acute myocardial 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
Diseases of the musculoskeletal system and connective tissue (M00-M99)
M06 Rheumatoid arthritis
M08 Juvenile arthritis
M15 Polyarthrosis (Osteoarthritis)
M41 Scoliosis
M47 Spondylosis
M54.3 Sciatica
M54.5 Low back pain
Renal failure (N17-N19)
N17 Acute renal failure
N18 Chronic renal failure
Congenital malformations, deformations and chromosomal abnormalities (Q00-Q99)
Q00.0 Anencephaly

Q03	Congenital hydrocephalus
Q05	Spina bifida
Q65	Congenital deformities of hip
Q66	Congenital deformities of feet
Q67	Congenital musculoskeletal deformities of head, face, spine and chest
Q76	Congenital malformations of spine and bony thorax
General symptoms and signs (R50-R69)	
R52.0	Acute pain
R52.1	Chronic intractable pain
Injuries to the head (S00-S09)	
S00	Superficial injury of head
S01	Open wound of head
S02	Fracture of skull and facial bones
S04	Injury of cranial nerves
S06	Intracranial injury
S06.0	Concussion
S06.1	Traumatic cerebral oedema
S06.2	Diffuse brain injury
S06.3	Focal brain injury
S06.4	Epidural haemorrhage
S06.5	Traumatic subdural haemorrhage
S06.6	Traumatic subarachnoid haemorrhage
S06.7	Intracranial injury with prolonged coma
Injuries to the shoulder and upper arm (S40-S49)	
S42	Fracture of shoulder and upper arm
S44	Injury of nerves at shoulder and upper arm level
S46	Injury of muscle and tendon at shoulder and upper arm level
S47	Crushing injury of shoulder and upper arm
S48	Traumatic amputation of shoulder and upper arm
Injuries to the elbow and forearm (S50-S59)	
S52	Fracture of forearm
S54	Injury of nerves at forearm level
S55	Injury of blood vessels at forearm level



S56	Injury of muscle and tendon at forearm level
S57	Crushing injury of forearm
S58	Traumatic amputation of forearm
Injuries to the wrist and hand (S60-S69)	
S62	Fracture at wrist and hand level
S63	Dislocation, sprain and strain of joints and ligaments at wrist and hand level
S63.1	Dislocation of finger
S63.5	Sprain and strain of wrist
S63.6	Sprain and strain of finger(s)
S64	Injury of nerves at wrist and hand level
S65	Injury of blood vessels at wrist and hand level
S66	Injury of muscle and tendon at wrist and hand level
S67	Crushing injury of wrist and hand
Injuries to the hip and thigh (S70-S79)	
S73	Dislocation, sprain and strain of joint and ligaments of hip
Injuries to the knee and lower leg (S80-S89)	
S82	Fracture of lower leg, including ankle
S84	Injury of nerves at lower leg level
S88	Traumatic amputation of lower leg
Injuries to the ankle and foot (S90-S99)	
S98	Traumatic amputation of ankle and foot
Burns and corrosions (T20-T32)	
T20	Burn and corrosion of head and neck
T21	Burn and corrosion of trunk
T22	Burn and corrosion of shoulder and upper limb, except wrist and hand
T23	Burn and corrosion of wrist and hand
T24	Burn and corrosion of hip and lower limb, except ankle and foot
T25	Burn and corrosion of ankle and foot
Toxic effects of substances chiefly nonmedicinal as to source (T51-T65)	
T51	Toxic effect of alcohol
T52	Toxic effect of organic solvents
T53	Toxic effect of halogen derivatives of aliphatic and aromatic hydrocarbons

Accidents (V01-X59)	
V03	Pedestrian injured in collision with car, pick-up truck or van
V13	Pedal cyclist injured in collision with car, pick-up truck or van
V23	Motorcycle rider injured in collision with car, pick-up truck or van
V43	Car occupant injured in collision with car, pick-up truck or van
V44	Car occupant injured in collision with heavy transport vehicle or bus
V53	Occupant of pick-up truck or van injured in collision with car, pick-up truck or van
W01	Fall on same level from slipping, tripping and stumbling
W09	Fall involving playground equipment
W10	Fall on and from stairs and steps
W11	Fall on and from ladder
W68	Drowning and submersion following fall into swimming-pool
W70	Drowning and submersion following fall into natural water
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

Code	Description

References

Abu-Awad, Y., Unsworth, C.A., Coulson, M., & Sarigiannis, M. (2013 accepted). Using the Australian Therapy Outcome Measures for Occupational Therapy (AusTOMs-OT) to measure client participation outcomes. *British Journal of Occupational Therapy.*

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

Brooks, P. (1996). EuroQol: the current state of play. *Health Policy*, 37, 53-72.

Enderby, P., & John, A. (1997). *Therapy outcome measures for speech and language pathology*. San Diego, CA: Singular.

Enderby, P., John, A., & Petherham, B. (1998). *Therapy outcome measures manual: physiotherapy, occupational therapy, rehabilitation nursing*. San Diego, CA: Singular.

Enderby, P., John, A., & Petherham, B. (2006). *Therapy outcome measures for rehabilitation professionals (2nd Edition)*. West Sussex: John Wiley & Sons.

Fristedt, S., Elgmark, E. & Unsworth, C.A. (2013). Reliability of the Swedish translation of the Australian Therapy Outcome Measures for occupational therapy. *Scandinavian Journal of Occupational Therapy, 20, 182- 189.*

Morris, M., Perry, A., Unsworth, C., Skeat, J., Taylor, N., Dodd, K., Duncombe., D., & Duckett, S. (2005). Reliability of the Australian Therapy Outcome Measures for quantifying disability and health. *International Journal of Therapy and Rehabilitation*, 12(8), 340-346.

Morris, M., Dodd, K. & Taylor, N. K. (2004). *AusTOMs for Physiotherapy*. Melbourne, Victoria: La Trobe University.

Perry, A., Morris, M., Unsworth, C., Duckett, S., Skeat, J., Dodd, K., Taylor, N. & Riley, K. (2004). Therapy Outcome Measures for Allied Health Practitioners in Australia: The AusTOMs. *International Journal for Quality in Health Care*, 16 (4), 285- 291.

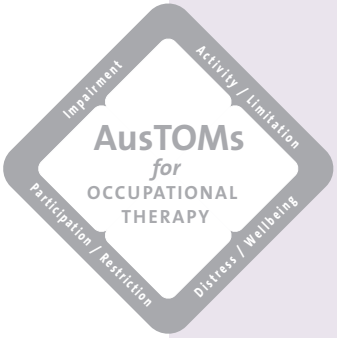
Perry, A., & Skeat, J., (2004). *AusTOMs for Speech Pathology*. Melbourne, Victoria: La Trobe University.

Rogers, J.C. & Holm, M.B. (1994). Accepting the challenge of outcome research: Examining the effectiveness of occupational therapy practice. *American Journal of Occupational Therapy*, 48 (10), 871-6.

Scott, F., Unsworth, C.A., Fricke, J., Taylor, N. (2006). Reliability of the Australian Therapy Outcome Measures for Occupational Therapy (AusTOMs – OT) Self-care scale. *Australian Occupational Therapy Journal*, 53, 265- 276.

Skeat, J., & Perry, A. (2004).Outcomes in practice: Lessons from AusTOMs. *Acquiring Knowledge in Speech, Language and Hearing*, 6 (3), 123- 126.

Skeat, J., & Perry, A. (2005). Outcome measurement in dysphagia: Not so hard to swallow. *Dysphagia*, 20 (2), 390-399.



Skeat, J., Perry, A., Morris, M., Unsworth, C., Duckett, S., Dodd, K., Taylor, N. (2003). The use of the ICF framework in an allied health outcome measure: Australian Therapy Outcome Measures (AusTOMs). In Australian Institute of Health and Welfare, *ICF Australian user guide*. Version 1.0. (pp. 77- 81). Canberra: Australian Institute of Health and Welfare.

Unsworth, C.A. (2000). Measuring the outcome of occupational therapy: Tools and resources. *Australian Occupational Therapy Journal*, 47, 147- 158.

Unsworth, C.A. (2005). Measuring outcomes using the Australian Therapy Outcome Measures for Occupational Therapy (AusTOMs- OT): Data description and tool sensitivity. *British Journal of Occupational Therapy*, 68 (8), 354- 366.

Unsworth, C.A. (2008). Using the Australian Therapy Outcome Measures for Occupational Therapy (AusTOMs-OT) to measure outcomes for clients following stroke. *Topics in Stroke Rehabilitation*, 15 (4), 351- 364.

Unsworth, C.A. (2011). Editorial. Evidence-based practice depends on the routine use of outcome measures. *British Journal of Occupational Therapy*, 74(5), 209.

Unsworth, C.A., Bearup, A., & Rickard, K. (2009). A benchmark comparison of outcomes for clients with upper limb dysfunction following stroke using the Australian Therapy Outcome Measures for Occupational Therapy (AusTOMs-OT). *American Journal of Occupational Therapy*, 63 (6), 732- 743.

Unsworth, C.A., Coulson, M., Swinton, L., & Cole, H. (2014). How much client change, as measured on AusTOMs-OT, indicates a minimum clinically important difference (MCID)? *Forthcoming*.

Unsworth, C.A., & Duncombe, D. (2004). *AusTOMs for Occupational Therapy*. Melbourne, Victoria: La Trobe University.

Unsworth, C., & Duncombe, D.(2005). A comparison of client outcomes from two acute care neurological services using self care data from the Australian therapy Outcome Measures for Occupational Therapy (AusTOMs-OT). *British Journal of Occupational Therapy*, 68 (10), 477- 482.

Unsworth, C., Duckett, S., Duncombe, D., Perry, A., Skeat, J., Taylor., N. (2004). Validity of the AusTOMs scales: A comparison of the AusTOMs and EuroQol-5D. *Health and Quality of Life Outcomes*, 2, 64- 75.

World Health Organization. (2001). *International classification of functioning, disability and health (ICF)*. Geneva: Author.

World Health Organisation, (2004). *ICD-10: international statistical classification of diseases and related health problems* (10th ed.). Geneva: Author.

Selection of additional references that comment on AusTOMs, or include AusTOMs in research:

Brown, A. M., & Pirotta, M. (2011). Determining priority of access to physiotherapy at Victorian community health services. *Australian Health Review*, 35(2), 178-184.

Brunner, M., Skeat, J., & Morris, M. E. (2008). Outcomes of speech-language pathology following stroke: Investigation of inpatient rehabilitation and rehabilitation in the home programs. *International journal of speech-language pathology*, 10(5), 305-313.

Casteleijn, D., & Graham, M. (2012). Domains for occupational therapy outcomes in mental health practices. *South African Journal of Occupational Therapy*, 42(1), 26-34.

Cheung, W., Clayton, N., Tan, J., Milliss, D., Thanakrishnan, G., Maitz, P. (2013). The effect of endotracheal tube size on voice and swallowing function in patients with thermal burn injury: An evaluation using the Australian Therapy Outcome Measures (AusTOMS). *International Journal of Speech-Language Pathology*, 15, 216-220.

Corben, L., Downie, S., & Fielding, L. (2011). Development and trial of an upper limb assessment tool for the acute neurological patient. *The British Journal of Occupational Therapy*, 74(2), 95-105.

Corner, E.J. et al (2013). The Chelsea Critical Care Physical Assessment Tool (CPAx): validation of an innovative new tool to measure physical morbidity in the general adult critical care population; an observational proof-of-concept pilot study. *Physiotherapy*, 99 (1), 33-41.

Downie, S. (2011). Reliability of an Upper-limb Assessment Tool for Acute Neurological Patients. *Hong Kong Journal of Occupational Therapy*, 21 (1), 15-26.

Eyssen, I. C., Steultjens, M. P., Dekker, J., & Terwee, C. B. (2011). A systematic review of instruments assessing participation: challenges in defining participation. *Archives of Physical Medicine and Rehabilitation*, 92(6), 983-997.

Frowen, J. J., & Perry, A. R. (2006). Swallowing outcomes after radiotherapy for head and neck cancer: a systematic review. *Head & Neck*, 28(10), 932-944.

Frowen, J., Cotton, S., Corry, J., & Perry, A. (2010). Impact of demographics, tumor characteristics, and treatment factors on swallowing after (chemo) radiotherapy for head and neck cancer. *Head & Neck*, 32(4), 513-528.

Frowen, J., Hornby, C., Collins, M., Senthi, S., Cassumbhoy, R., and Corry, J. (2013) Reducing posttreatment dysphagia: Support for the relationship between radiation dose to the pharyngeal constrictors and swallowing outcomes. *Practical Radiation Oncology* [online before print publication] http://dx.doi.org/10.1016/j.prro.2012.11.009

Giles, R., Epstein, I., & Vertigan, A. (2011). Clinical Data Mining in an *Allied Health Organisation: A Real World Experience. Sydney*: Sydney University Press.

Greig, C. A., Harper, R., Hirst, T., Howe, T., & Davidson, B. (2008). Barriers and facilitators to mobile phone use for people with aphasia.*Topics in Stroke Rehabilitation*, 15(4), 307-324.

Guo, Y. E., Togher, L., & Power, E. (2013). Speech pathology services for people with aphasia: what is the current practice in Singapore? *Disability & Rehabilitation*, (0), 1-14.

Kessler, D., & Egan, M. (2012). A review of measures to evaluate participation outcomes post-stroke. *The British Journal of Occupational Therapy*, 75(9), 403-411.

Khoei, M. A., Akbari, M. E., Sharifi, F., Fakhrzadeh, H., & Larijani, B. (2013). Translation and Validation of the Activities of Daily Living Scale with Iranian Elderly Cancer Patients Treated in an Oncology Unit. *Asian Pacific Journal of Cancer Prevention*, 14(5), 2731-2737.

Laver Fawcett, A. (2007). *Principles of Assessment and Outcome Measurement for Occupational Therapists and Physiotherapists: Theory, Skills and Application.* Chichester, Wiley.

Maclean, J., Szczesniak, M., Cotton, S., Cook, I., & Perry, A. (2011). *Impact of a laryngectomy and surgical closure technique on swallow biomechanics and dysphagia severity. Otolaryngology--Head and Neck Surgery*, 144(1), 21-28.

Marcotte, T.D., & Grant, I (Eds). (2010). *Neuropsychology of Everyday Functioning.* New York: Guilford.

McGinley, I. L., & Danoudis, M. (2013). Selection of clinical outcome measures in rehabilitation of people with movement disorders: theory and practice. In R. Iansek, M. E. Morris (Eds.). *Rehabilitation in Movement Disorders*, pp. 231-242.

McLeod, S., Harrison, L. J., McAllister, L., & McCormack, J. (2013). Speech sound disorders in a community study of preschool children. *American Journal of Speech-Language Pathology*, 22(3), 503.

Mystakidou, K., Tsilika, E., Parpa, E., Mitropoulou, E., Panagiotou, I., Galanos, A., & Gouliamos, A. (2013). Activities of daily living in Greek cancer patients treated in a palliative care unit. *Supportive Care in Cancer*, 21(1), 97-105.

O'Halloran, R., Worrall, L., & Hickson, L. (2009). A psychometric investigation of speech, language and cognitive communicative rating scales for adults with acquired neurogenic communication disorders in the acute hospital setting. *International Journal of Speech-Language Pathology*, 11(3), 206-219.

Pettersson, I., Pettersson, V., & Frisk, M. (2011). ICF from an occupational therapy perspective in adult care: an integrative literature review. *Scandinavian Journal of Occupational Therapy*, 19(3), 260-273.

Prentice, C. E. & Chipchase, L. (2006). Expert physiotherapists' clinical decision-making in acute care. Part two. *International Journal of Therapy and Rehabilitation*, 13(9), 395-399.

Pritchard, C., Colborne, C., Finney, S., & Brown, C. (2010, September). Inter-rater reliability of the AusTOMs therapy outcome measure in an adult cardiothoracic intensive care population. *Intensive Care Medicine*, 36, S389-S389.

Stapleton, T., & McBrearty, C. (2009). Use of standardised assessments and outcome measures among a sample of Irish occupational therapists working with adults with physical disabilities. *The British Journal of Occupational Therapy*, 72(2), 55-64.

Stocks, R., Dacakis, G., Phyland, D., & Rose, M. (2009). The effect of smooth speech on the speech production of an individual with ataxic dysarthria. *Brain Injury*, 23(10), 820-829.

Swinton, L., Patel, L., Knox, D., & Burley, T. (2011). Describing community rehabilitation outcomes: using the AusTOMs in an early supported discharge service. *Stroke*, 42 (11), E620-E620.

Sykes, C. (2008). The International Classification of Functioning, Disability and Health: relevance and applicability to physiotherapy. *Advances in Physiotherapy*, 10(3), 110-118.

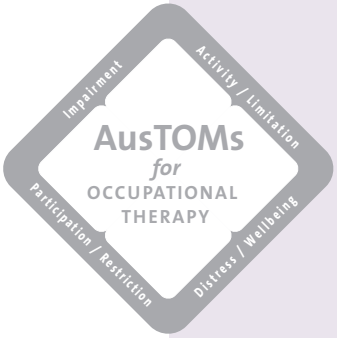
Taylor, O. D., Ware, R. S., & Weir, K. A. (2012). Speech Pathology Services to Children With Cancer and Nonmalignant Hematological Disorders. *Journal of Pediatric Oncology Nursing*, 29(2), 98-108.

Verna, A., Davidson, B., & Rose, T. (2009). Speech-language pathology services for people with aphasia: A survey of current practice in Australia. *International Journal of Speech-Language Pathology*, 11(3), 191-205.

Ward, E., Crombie, J., Trickey, M., Hill, A., Theodoros, D., & Russell, T. (2009). Assessment of communication and swallowing post-laryngectomy: a telerehabilitation trial. *Journal of Telemedicine and Telecare*, 15(5), 232-237.

Washington, K., Thomas-Stonell, N., Oddson, B., McLeod, S., Warr-Leeper, G., Robertson, B., & Rosenbaum, P. (2013). Construct validity of the FOCUS©(Focus on the Outcomes of Communication Under Six): a communicative participation outcome measure for preschool children. *Child: care, health and development*, 39(4), 481-489.

Wenke, R. J., Theodoros, D., & Cornwell, P. (2008). The short-and long-term effectiveness of the LSVT® for dysarthria following TBI and stroke. *Brain Injury*, 22(4), 339-352.



Notes:


Impairment
Activity / Limitation
AusTOMs
for
OCCUPATIONAL
THERAPY
Participation / Restriction
Distress / Wellbeing

Therapy Outcome Measures for use Internationally

AusTOMs (Australian Therapy Outcome Measures) for Occupational Therapy

The AusTOMs for Occupational Therapy 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 Occupational Therapy scales. Included in the manual are several 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.

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