

Allied Health Professions' Office of Queensland

## **Physiotherapy Learner Guide**

**Deliver and monitor an exercise program for mobility**

**April 2017**

## Physiotherapy Learner Guide – Deliver and monitor an exercise program for mobility

Published by the State of Queensland (Queensland Health), April 2017



This document is licensed under a Creative Commons Attribution 3.0 Australia licence. To view a copy of this licence, visit [creativecommons.org/licenses/by/3.0/au](http://creativecommons.org/licenses/by/3.0/au)

© State of Queensland (Queensland Health) **2017**

You are free to copy, communicate and adapt the work, as long as you attribute the State of Queensland (Queensland Health).

For more information contact:

Intellectual Property Officer, Department of Health, GPO Box 48, Brisbane QLD 4001, email [ip\\_officer@health.qld.gov.au](mailto:ip_officer@health.qld.gov.au), phone (07) 3328 9862.

An electronic version of this document is available at

<https://www.health.qld.gov.au/ahwac/html/ahassist-modules/>

### Disclaimer:

The content presented in this publication is distributed by the Queensland Government as an information source only. The State of Queensland makes no statements, representations or warranties about the accuracy, completeness or reliability of any information contained in this publication. The State of Queensland disclaims all responsibility and all liability (including without limitation for liability in negligence) for all expenses, losses, damages and costs you might incur as a result of the information being inaccurate or incomplete in any way, and for any reason reliance was placed on such information.

## Acknowledgement

The Allied Health Professions' Office of Queensland wishes to acknowledge the Queensland Health allied health clinicians who have contributed to the development of the original learning support materials in 2011. In alphabetical order:

Christine Colavitti

Dean Cook

Rita Hwang

Jackie Kraayenbrink

Nicole Lehtonen

Paul Stankunas

As well as a subgroup of the Queensland Health Physiotherapy Advisory Forum Queensland (PAFQ), including:

- Nicole Bellet
- Peter Buttrum
- Kathy Grudzinskas
- Cherie Hearn
- Claire Stewart
- Elaine Unkles
- Judith Wilson

We also acknowledge the contributions of Aged Care Queensland Education Institute.

# Contents

Introduction.....	1
Learner Guide Structure .....	1
Learning requirements .....	1
Self-Completion Checklist.....	2
Recognition for Prior Learning .....	2
Symbols.....	3
Learning outcomes.....	3
Learning topics .....	5
Content.....	7
1. Organisation Practices .....	7
1.1 1.1 Roles and Responsibilities .....	7
1.2 Policies and Procedures .....	14
1.3 Record Keeping.....	22
Key Points .....	30
2. Body Systems .....	31
2.1 Anatomy and Physiology .....	31
2.2 Positions and Planes .....	39
2.3 Anatomical Movements .....	42
2.4 Biomechanics .....	45
During recovery, a patient may move from NWB status to PWB and eventually FWB. Eventually, it becomes advantageous to add some weight to the injured or repaired area to help stimulate more healing. During the final phase, FWB enables the injured person to return to their normal pre-injury functional levels.....	52
2.5 Psychological Effects.....	55
Key Points .....	59
3. Therapeutic Exercise .....	60
3.1 Principles of Exercise Therapy .....	60
3.2 Effects and Benefits of Exercise .....	65
3.3 Exercise Program Design .....	69
Key Points .....	73
SELF-COMPLETION CHECKLIST .....	74
WORKPLACE OBSERVATION CHECKLIST.....	80
RESOURCES.....	82
APPENDECIES .....	83
REFERENCES.....	102

## Figures

Figure 1 The Human Skeleton (Herlihy & Meabius, 2000). .....	34
--	----

Figure 2	Major skeletal muscles of the human body (Herlihy & Meabius, 2000).....	35
Figure 3	Anatomical planes of the human body (Fehrenbach & Herring, 2002) .....	39
Figure 4	Planes and Motions used in Anatomy, (Micheau & Hoa, 2009).....	44
Figure 5	Gait Cycle (Deluzio, 2010) .....	47

## Introduction

Welcome to the Learning Guide for Deliver and monitor an exercise program for mobility.

## Learner Guide Structure

This Learner Guide has been developed specifically for allied health assistants to provide the necessary knowledge and foster the skills required to assist a physiotherapist in delivering and monitoring a client-specific exercise program.

The Learner Guide includes information on:

- Prepare for mobility and movement program
- Conduct mobility and movement programs to restore optimum movement
- Comply with supervisory requirements
- Cleaning and storing equipment
- Recording and documenting information

The Learner Guide has six sections:

1. Introduction
2. Learning Topics
3. Workplace Observation Checklist
4. References
5. Resources and Websites
6. Appendix

Each topic includes sub-topics which cover the essential knowledge from the unit of competency. You will be asked to complete the activities in each topic to support your learning. These activities address the essential skills from the unit of competency and will be part of your assessment.

Throughout the guide, you will be given the opportunity to work through a number of activities, which will reinforce your learning and help you improve your communication and organisation skills, manual handling skills and ability to apply therapeutic exercise practices. Take time to reflect during the module on how you may be able to apply your new knowledge and skills in your role as an allied health assistant.

## Learning requirements

It is important that you have an allied health workplace supervisor who has agreed to support in your study. Regular clinical supervision during the course of your study should also assist you to stay “on track”, provide opportunities for your supervisor to monitor your progress, provide encouragement, and to check that you understand the

information in the learning materials. This will be particularly important if you are having any specific learning difficulties.

Activities and assessment tasks may require access to the internet. If you do not have internet access please talk with your supervisor about your options.

## Self-Completion Checklist

The Self Completion Checklist outlines the underpinning knowledge and skills contained in each of the topics for the unit of competency you will be assessed against. You will be asked to review the list and place a tick in the box if you feel you have covered this information in each section and if you feel ready to undertake further assessment. If you have any questions about this checklist, ask your supervisor.

## Recognition for Prior Learning

If you subsequently enrol in the Certificate IV in Allied Health Assistance you may be able to undertake recognition assessment for the study that you have done. To enable you to gain recognition for the learning you have undertaken in this Learner Guide, it will be necessary for you to complete the Assessment Guide associated with this unit of competency. The assessment activities in this Assessment Guide must be signed off by a **physiotherapist**. Copies (Word version) of the Assessment Guide can be obtained by contacting the AHPOQ team via e-mail: [AH\\_CETU@health.qld.gov.au](mailto:AH_CETU@health.qld.gov.au)



### **Please Note**

Due to the varied environments in which allied health assistance is carried out, the terms 'patient' and 'client' are used interchangeably throughout this resource. Please use your organisation's preferred term when performing your duties.

## Symbols

The following symbols are used throughout this Learner Guide.



**Important Points** – this will include information that is most relevant to you; statistics, specific information or examples applicable to the workplace.



**Activities** – these will require you to reflect on information and workplace requirements, talk with other learners, and participate in a role play or other simulated workplace task. You may use the space provided in the Learner Guide to write down a draft response. Record your final answer in the Assessment Guide.



**Further Information** – this will include information that may help you refer to other topics, complete activities, locate websites and resources or direct you to additional information located in the appendices.



**Case Studies** – these will include situations or problems for you to work through either on your own or as a group. They may be used as a framework for exploration of a particular topic.



**Research** – this refers to information that will assist you complete activities or assessment tasks, or additional research you may choose to undertake in your own time.

## LEARNING OUTCOMES

As an allied health assistant delivering and monitoring an exercise program for mobility, you will be required to perform the following tasks:

Prepare for mobility and movement program by:

- Interpreting program requirements and confirming against the prescribed information provided by the physiotherapist
- Determining the client's availability, according to the organisation's protocols
- Gathering necessary equipment for the mobility and movement program
- Preparing the setting for the mobility and movement program
- Obtaining consent from the client before commencing the mobility and movement program

Conduct mobility and movement programs to restore optimum movement by:

- Assisting with the exercise program according to the instruction of the treating physiotherapist
- Confirming client's understanding of exercise program based on treatment plan prepared by the physiotherapist
- Guiding the client to complete the program according to prescribed treatment plan
- Providing the client with sufficient time, opportunity and encouragement to practice existing and newly developed skills
- Encouraging the client to take advantage of planned and unplanned opportunities to integrate skills developed within the program into normal daily activities
- Providing feedback to the client to reinforce understanding and the correct application of the exercise program
- Monitoring the client during and after the program according to the prescribed treatment plan
- Identifying the need for modifications to the exercise program and report to the treating physiotherapist
- Recognising when client becomes distressed, in pain or communicates their desire to slow down, change activity or stop and follow stepping down procedures outlined in treatment plan or organisation guidelines and report to the treating physiotherapist
- Taking appropriate and prompt action in response to any indicators of adverse reaction to the program or treatment according to relevant protocols and guidelines and report to the treating physiotherapist

Comply with supervisory requirements by:

- Providing client progress feedback to the treating physiotherapist

- Identifying and managing client adherence issues, including subjective and objective reporting of client response to the program, and report to the physiotherapist in a timely manner
- Reporting client difficulties and concerns to the treating physiotherapist in a timely manner
- Implementing variations to the exercise program according to the advice of the treating physiotherapist

Clean and store equipment by:

- Cleaning equipment according to manufacturer's recommendations, infection control requirements and organisation protocols
- Storing equipment according to manufacturer's recommendations and the organisation's protocols
- Reporting equipment faults to the appropriate person(s)
- Labelling or tagging equipment faults, where possible remove from use if unsafe or not working and inform staff in line with organisation procedures

Reporting and documenting information by:

- Documenting information about the program according to the organisation's protocols and reporting requirements
- Using appropriate terminology to document client response, outcomes and identified problems related to the program

## LEARNING TOPICS

The table below outlines the relationship between the topics presented in this Learner Guide and the Essential Knowledge required for completion of the unit of competency.

Topics	Essential Knowledge
Organisation Practices	<ul style="list-style-type: none"> <li>• Australian Physiotherapy Association (APA) Guidelines</li> <li>• legal and ethical considerations relevant to allied health</li> <li>• infection control as it relates to the allied health assistant's role in implementing physiotherapy mobility and movement programs</li> <li>• supervisory and reporting protocols</li> <li>• factors that facilitate effective and collaborative working relationships</li> <li>• record keeping practices and procedures in relation to diagnostic and therapeutic programs/treatments</li> </ul>
Body Systems	<ul style="list-style-type: none"> <li>• Basic musculoskeletal anatomy</li> <li>• basic anatomy and physiology</li> <li>• anatomical terminology</li> <li>• principles of biomechanics</li> <li>• conditions affecting mobility</li> <li>• risks for decreased mobility</li> <li>• psychological effects of disability due to injury or disease and strategies used to cope with this</li> </ul>
Therapeutic Exercise	<ul style="list-style-type: none"> <li>• signs of adverse reaction to different programs and treatment</li> <li>• concepts and procedures for stepping down treatment or intervention when client becomes distressed, in pain or wishes to stop</li> <li>• weight bearing and post fracture implications</li> <li>• therapeutic exercise principles</li> <li>• physiological effects and benefits of active functional exercise</li> <li>• principles of exercise program design</li> </ul>

# Content

## 1. Organisation Practices

This topic covers information about:

- Roles and Responsibilities
- Policies and Procedures
- Record Keeping

Activities in this topic address the following essential skills:

- Use procedures to move and position clients in a safe manner
- Work under direct and indirect supervision
- Communicate effectively with clients in a therapeutic or treatment relationship
- Communicate effectively with supervisors and co-workers
- Use skills in time management, personal organisation and establishing priorities

### 1.1 Roles and Responsibilities

As some allied health assistants using this resource may work across a number of disciplines, not exclusively with physiotherapists the term allied health assistant or AHA will be used throughout.

The role of the allied health assistant (AHA) is to support and assist the physiotherapist in providing client care. The Australian Physiotherapy Association (APA) defines an allied health assistant (physiotherapist assistant) as 'a health care worker who works under the supervision of a registered physiotherapist and holds a Certificate IV in Allied Health Assistance (Physiotherapy) or equivalent. These workers have a range of skills which allow a physiotherapist to confidently delegate a higher level of tasks than other support workers.' (Wellness & Lifestyles Australia, 2009).



The physiotherapist is always directly accountable for a client's treatment but will delegate tasks to the AHA as appropriate. It is the responsibility of the assistant to complete the tasks and liaise with the physiotherapist regarding the client's progress.

Roles and responsibilities of the allied health assistant include but are not limited to:

- Having an understanding of the role of the physiotherapist, AHA's, and aides.
- Understanding the limits of your scope of practice.
- Being aware of and following all relevant safety precautions.
- Only undertaking the tasks for which you are competent.
- Being aware of and complying with relevant aspects of the ethical principles and code of conduct of the physiotherapy profession and the employer.

Roles and responsibilities of physiotherapists working with assistants include:

- Remaining responsible at all times for the delivery of the treatment prescribed by the physiotherapist that is provided by the AHA
- Taking responsibility to instruct and educate assistants, delegate to assistants and evaluate the implementation of delegated tasks, and supervising as necessary
- Having an understanding of the role of the AHA and ensuring delegated tasks are within the AHA's scope of practice and level of competence
- Recognizing and promoting appropriate development and learning opportunities for the assistant



It is recommended that you research further information regarding the role and responsibilities of the physiotherapy assistant. The following websites are a good place to start.

Australian Physiotherapy Association (APA)

<http://www.physiotherapy.asn.au>

Australian Physiotherapy Council (APC)

<https://physiocouncil.com.au/>

Physiotherapy Board of Australia:

From 1 July 2010 new registration requirements were approved by the Physiotherapy Board for accreditation for physiotherapists and are regulated by the Australian Health Practitioner Regulation Agency (AHPRA). You should undertake research and become familiar with all the required codes and guidelines you are required to follow in any role you undertake.

<http://www.physiotherapyboard.gov.au/Codes-and-Guidelines.aspx>

Allied Health Assistant Framework

The Allied Health Assistant Framework details the effective employment and use of AHAs in the Queensland health workforce. The Framework supports delegation of tasks to AHAs and has been developed for Hospital and Health Services to assist the integration of AHA roles into service delivery practices.

<http://qheps.health.qld.gov.au/alliedhealth/html/strategies/allied-health-assistants.htm>

## **Working relationships**

As an AHA, you may be working with a range of people, including physiotherapists, clients and their families, doctors, nurses, client support staff, maintenance and administrative staff. It is important to form an effective and joint working relationship with other members of the team. Ways to facilitate this include:

- participating in helpful and regular communication
- demonstrating reliability – following through on tasks and being consistent
- actively listening to other team member's ideas and points of view
- being an active participant, showing initiative and contributing to the workplace
- being flexible and adapting to changing circumstances
- treating others in a respectful and supportive manner

## Code of Conduct

The Code of Conduct for the Queensland Public Service reflects the principles of integrity and impartiality, promoting the public good, commitment to the system of government, accountability and transparency. As an allied health assistant, you need to be aware of this code and abide by it when working in a Queensland Health facility.

The Code of Conduct for the Queensland Public Service was developed in line with the government's commitment and in consultation with agencies, employees and industrial representatives. The Code was designed to be relevant for all public sector agencies and their employees and reflects the amended ethics principles and values contained in the Public Sector Ethics Act 1994.

(Public Service Commission, 2010)



Further information regarding the Code of Conduct can be found at:

<https://www.qld.gov.au/gov/code-conduct-queensland-public-service>

## Personal Organisation

Often you will be working with more than one client at a time. You may also be working across different areas. You will need to be able to manage your workload to ensure you meet all your role obligations.

The skills that will assist you to manage your workload include:

- The ability to prioritise tasks
- The ability to manage the way you use your available time
- How you personally organise the requirements of your role e.g. reporting, making client notes, entering information into electronic databases and etc

To set your priorities, you should think of tasks as falling within three groups:

- Things that must be done and you cannot put off until another time
- Things that are important that you can put off for a short time but should be completed before you leave for the day
- Things that are not important and can be done when you have time and have completed the tasks from the two groups above. These also include tasks that you would like to do if you have the time, such as re-organise your desk.

If you cannot decide, look at the possible impact upon the client or the situation if you do not complete this task. If the impact will cause harm to the client, then it needs a higher priority. You also have to be realistic about the amount of work you can

complete in any given time or task. The more steps involved in a task, the more time it will take to complete.

Time management involves how you choose to use your time, which includes how long you spend talking to clients or other staff members; how long you take to do notes and reports; how long it takes you to set up a room for an activity and so on. Some workers find that when they analyse how they spend their work time, they may be spending more time with clients than necessary, or may be spending time talking to a work colleague about personal matters and so on. Planning your time assists you to allocate more time to priority tasks to assist you to complete your workload for the day.

You can set goals, or create a task list based on appointments you have or meetings you must attend. You may also need to find other ways to do tasks to ensure you can accomplish more in the time that you have available. You also must be realistic about how many clients you can assist in the time you have available. It is up to you to organise your workload to achieve the expected outcomes of your role.



### **Activity 1: Roles and responsibilities of an allied health assistant**

You may use the space provided below to write down a draft response. Record your final answer in the Assessment Guide.

Reflect on some of the working relationships within your workplace, during the time you have been working in Queensland Health. In particular, think back to a strong working relationship which you have developed in your work area.

1. What are the factors which made this a strong working relationship?

---

---

---

---

---

---

---

---

---

---

2. Why is it important to establish effective working relationships within Queensland Health?

---

---

---

---

---

---

---

---

---

---

Activity continues on the next page



## 1.2 Policies and Procedures

Policies, procedures and directives are formal documents developed for the workplace to ensure work practices are performed to a required standard.

A policy is a statement of intent to achieve a particular outcome, and how that outcome will be achieved. Health service directives are formal documents that contain mandatory outcomes to be achieved by a HHS and may also contain required actions to be completed. For example, there is a Health Service Directive for Patient Safety (November 2014), the objective of which is to monitor the quality of health services delivered by Hospital and Health Services.

<https://www.health.qld.gov.au/directives/docs/hsd/qh-hsd-032.pdf>

Queensland Health policies should always be aligned with Queensland Health's 'strategic direction'. They should be in line with the state and federal legislation on the same matter and be easily accessible for those required to implement the policies (Queensland Health, 2015). On an employee level, we must apply Queensland Health policies and guidelines to our work to ensure we are providing client care that is of a high standard, safe, and accessible to all.



You do not need to be aware of all of Queensland Health's policies. However, you should have an awareness and understanding of specific Queensland Health policies that apply to your role as an AHA.

To find out more about the Department of Health's policy framework:

<https://www.health.qld.gov.au/system-governance/policies-standards/types/default.asp>

The following policies include some that you should review and be familiar with when delivering an exercise program for mobility. Please note: this is not a full list; there will be additional policies relevant to your particular workplace.

- Anti-discrimination and vilification Policy (November 2016)
- Orientation, Induction and Mandatory Training Policy (November 2016)
- Workplace Equity and Harassment Officers Policy (May 2010)



You should discuss with your supervisor or line manager which additional Queensland Health Policies (not listed above) are relevant to your particular workplace and your particular role.

A guideline provides advice on best practice and is intended to be a supporting document to a policy or standard. They cannot be stand-alone documents within the framework'. (Queensland Health, 2015).

A procedure might be applicable to multiple Queensland Health settings, or may be service and location specific. For example, Princess Alexandra Hospital has its own Home Visiting Safety-Community Based Services procedure document specific to its site, which is designed to maintain the safety and security of staff, student health professionals and patients/clients/carers when conducting home visits.

<http://docs.sth.health.qld.gov.au/document/metro-south-health/pr2014-26>

#### Accreditation

At an organisational level, all Queensland Health services must participate in a periodic accreditation process. The National Safety and Quality Health Service (NSQHS) Standards were developed by the Australian Commission on Safety and Quality in Health Care to drive the implementation of safety and quality systems and improve the quality of health care in Australia. The 10 NSQHS Standards provide a nationally consistent statement about the level of care consumers can expect from health service organisations.

In September 2011, Health Ministers endorsed the NSQHS Standards and a national accreditation scheme. This has created a national safety and quality accreditation scheme for health service organisations. <https://www.safetyandquality.gov.au/our-work/accreditation-and-the-nsqhs-standards/>

The primary aim of the National Safety and Quality Health Service (NSQHS) Standards are to protect the public from harm and to improve the quality of health service provision.



The National Safety and Quality Health Service Standards are clearly outlined on the following website.

<http://qheps.health.qld.gov.au/psu/safetyandquality/standards/default.htm>

Review the standards and highlight those standards that you believe will apply to you in your workplace setting.

## Occupational Health and Safety (OHS)

At the start of employment it is common practice that your employer will provide an orientation to the work area. This will include a broad introduction to local policies and procedures, and topics related to Occupational Health and Safety (OHS) including infection control and manual handling. As an allied health assistant you need to be aware of these local policies and procedures and how they relate to your role in assisting the physiotherapist to deliver client care.

You will be expected to comply with the Queensland Health Work health and safety policy (2014) to ensure a safe and healthy work environment and reduce the risk of work related injury and illness.



You can find the Queensland Health Work Health and safety policy (2010) on the following link: <https://www.health.qld.gov.au/system-governance/policies-standards/doh-policy/policy/qh-pol-401.pdf>

It is also essential that you understand your workplace's guidelines for manual handling and how this relates to your role in delivering an exercise program, as well as undergoing the appropriate manual handling training and competency.

## Manual Handling

The manual handling of clients includes any workplace activity where a person is physically moved or supported. It includes the moving, handling and repositioning of clients. Client handling tasks have been identified as a priority hazard exposure for healthcare workers.



It is important to develop good client handling techniques to keep both you and the client safe. Tasks need to be individually assessed. Avoid movements that involve excessive force, sustained or awkward posture, and high repetition. These risks are not restricted to client handling, but also apply to the movement and transportation of equipment.

The Think Smart Program is a client handling guideline developed by Queensland Health to ensure risks associated with client handling are systemically identified, assessed and eliminated or controlled. This approach is based on the 'No Lift' principles which are supported by the Royal College of Nursing, United Kingdom and Australian Nursing Federation which states: 'The manual lifting of clients is eliminated

in all but exceptional or life threatening situations. Manual Handling may only continue if it does not involve lifting most or all of the client's weight.'



The 'Think Smart Client Handling Better Practice Guidelines' second edition can be accessed on the Queensland Health intranet site.

[http://qheps.health.qld.gov.au/safety/safety\\_topics/resources/QHPHG\\_PartB\\_S2.pdf](http://qheps.health.qld.gov.au/safety/safety_topics/resources/QHPHG_PartB_S2.pdf)

As an AHA it is essential that you understand the local guidelines for manual handling and how this relates to your role in assisting the physiotherapist to deliver and monitor an exercise program for mobility. You will need to speak with your supervisor to receive the appropriate skills training and competency assessment required for the area you work in.



Further information on safe manual handling practices can be located at:

[http://qheps.health.qld.gov.au/safety/ergo/resources\\_manual.htm](http://qheps.health.qld.gov.au/safety/ergo/resources_manual.htm)

## Infection Control

'Infection control practices aim to prevent infection transmission by limiting the exposure of susceptible people, (hosts) to microorganisms, (agents) that may cause infection'.

(Queensland Health, Centre for Healthcare Related Infection Surveillance and Prevention, 2008)



The Centre for Healthcare Related Infection Surveillance and Prevention (CHRISP) is the state wide service for Queensland Health to assist with healthcare related infection. Further information is available at <http://www.health.qld.gov.au/chrisp/>

Infection control policies and procedures provide the foundation for a safe healthcare environment for staff and clients. You will need to identify and apply the policies and procedures that relate to your role including:

- standard and additional precautions
- employee health issues e.g. immunisation
- infection surveillance
- environmental issues
- reprocessing of reusable medical and surgical equipment
- equipment and product purchases
- waste management
- building and refurbishment
- food safety
- laundry management

Within health care facilities, infection control programs promote the use of strategies and procedures to prevent or minimise the spread of infection. Standard precautions form the basis for the prevention of infection, these include:

- appropriate hand washing (e.g. before and after client contact, hygiene care)
- immunisation (responsibility to be up-to-date)
- asepsis (sterile, free from contamination)
- cough etiquette (cover mouth when coughing)
- sharp objects management (careful and safe disposal of needles)
- use of personal protective equipment (gloves, mask, protective eye wear, plastic apron and gowns)
- maintenance of a clean, safe environment (e.g. cleaning equipment and workspace)

While delivering an exercise program in your role as an AHA, you may meet clients who are infectious or suspected of being infectious. It is important you are aware of and follow infection control procedures at all times.

### **Performance Appraisal and Development (PAD)**

This is a process to be completed by all Queensland Health staff, which involves setting goals for improving work performance and progressing career paths. This is intended to benefit both staff and the organisation. Your PAD is usually completed once a year and if required a six monthly review of the goals that you set.

There is a clear process and structure for employees participating in a PAD including the use of standardised forms. Participating in PAD ensures:

- clear performance expectations for employees
- feedback and guidance on performance – both positive and negative
- joint identification of learning and developmental needs and activities

In addition, your PAD can be used to identify areas of work you would like to improve or develop. You and your manager can develop a plan about how to achieve your goal. For example, you may wish to improve your knowledge of wheelchair maintenance. In your PAD, you can record this as a goal and work out with your manager how you can learn more. For example, work-shadow another staff member or attend a workshop on the topic.

This plan is designed to be used for long-term career planning as well as short-term needs. For example, perhaps you wish to work in an acute ward setting. Your manager may then plan with you how you can work towards that goal while still working in your current setting.

Goals need to be relevant to your employer and their business of healthcare. Your manager may use your PAD to identify and discuss areas they require you to work on, including if parts of any of your work performance that may be a concern (Queensland Health Human Resources Policy G9, June 2014 viewed 1 December 2016).



Please refer to the Performance Appraisal and Development Policy (June 2014 <https://www.health.qld.gov.au/system-governance/policies-standards/doh-policy/policy/qh-pol-189.pdf>)





## 1.3 Record Keeping

Parts of this section on documentation have been taken with permission from Guidelines for allied health assistants documenting in health records (Queensland Health, 2016):

<https://www.health.qld.gov.au/ahwac/docs/aha/ahadocguide.pdf>

### Documentation

Documentation of client care and interventions by all medical and health professionals is important for a number of reasons:

- as a communication tool to facilitate the continuum of client care
- to allow evaluation of care provided
- for research or epidemiological needs
- to allow clinical unit management
- to meet statutory requirements
- in case the information is required for medico-legal defence

As an AHA you may be required to document certain aspects of client care you are involved in but this will vary according to your workplace. This may include:

- telephone calls
- meetings with other health professionals
- meetings with carers or other related individuals (e.g. teachers)
- missed or cancelled appointments and follow-up of this
- information given or posted to the client
- progress notes following treatments

Criteria for documentation are as follows:

- write in chronological order i.e. in order of time and date
- keep information to the point, accurate and relevant
- ensure there is a client label or identification on each page – always check it is correct
- use black pen only
- ensure your writing is readable
- avoid spare lines and gaps within and between entries
- always time and date entries:
  - try to write the entry as soon as possible after the intervention
  - the time documented is the time that you write the entry
  - use a 24 hour clock e.g. 9 am = 0900

- do not time or date entries looking back into the past
- clearly label your entries:
  - show that you are an allied health assistant
  - outline the nature of your intervention; e.g. 'as per the allied health professional' or 'as per written guidelines and protocol'
- sign entries and clearly print your name and designation (title)
- avoid use of non-standard abbreviations and terms
- record facts only – do not record your own emotional statements or moral judgements
- avoid general terms – try to be specific
- if errors are made:
  - draw a single neat line through writing. Sign and date this change. If the whole entry is an error, write 'Written in error' or 'Written in wrong chart' etc
  - do not use white out correction fluid (liquid paper)
  - do not retrospectively amend

Other important documents that you need to understand are client treatment plans or care plans. On the next two pages and Appendix B are examples of these plans. In particular, it will be relevant to your role as an allied health assistant, to note the following information in a care plan:

- goals of therapy
- exercise prescription including frequency, duration and number of repetitions,
- expected response
- review criteria

(Affix Label Here)

Residents Name: JOE BLOGGS

DOB: 01/01/1920 DOE: 02/03/2009



**PHYSIOTHERAPY ASSESSMENT**

Diagnoses / PHx: STML, GORD, HTN, @ # NOF (OP) + hemiarthroplasty, THA, OA, OP

**MOBILITY & LOCOMOTION (ACFI 2)**

Activity:	Assistance Required:			Equipment Required		
Bed Mobility:	Independent	Supervision	Assistance	x1	x2	x3
On / Off Bed:	Independent	Supervision	Assistance	x1	x2	x3
Transfers (sit-to-stand):	Independent	Supervision	Assistance	x1	x2	x3
Locomotion:	Independent	Supervision	Assistance	x1	x2	x3
Safe Walking Distance:	<u>50m</u>					
Description of Locomotion:	<u>Step through gait pattern trendelenberg, ↓ balance, short steps</u>					

KEY: SM = Standing Machine; LM = Lifting Machine (Sling Hoist); W/C = Wheelchair; Non-Amb = Non-Ambulant; SS = Slide Sheets x 1 or 2; BP = Bed Pole; MG = Monkey Grip; WB = Walking Belt; FR = Fixed Rails; EAB = Electronic & Adjustable Bed

**MUSCULO-SKELETAL STATUS:**

Region:	Joint Range		Strength	
	Left	Right	Left	Right
Shoulder Fl.	Func ROM	Func ROM	3+15	3+15
Should Abd.	↓	↓	↓	↓
Elbow Fl.	↓	↓	↓	↓
Elbow Ext.	↓	↓	↓	↓
Wrist Fl.	↓	↓	↓	↓
Wrist Ext.	↓	↓	↓	↓
Hip Fl.	100°	Func ROM	3+15	3+15
Hip Ext.	20°	↓	↓	↓
Knee Fl.	Func ROM	↓	3+15	3+15
Knee Ext.	↓	↓	3+15	3+15
DF	5°	5°	3+15	3+15
PF	Func ROM	Func ROM	3+15	3+15
Grip			3+15	3+15
Dexterity	Poor	Fair	Good	

Pain, oedema, skin & other issues (mark locations below):

**GENERAL STATUS (circle):**

Sensation:	Intact	Altered / Reduced	No Sensation	Location:
Skin:	Intact	Fragile	Skin Tear	Ulceration
Oedema:	Nil	Mild	Mod.	Severe
Pain:	Nil	Mild	Mod.	Severe
				Location: <u>lower legs</u>
				Location: <u>Neck + (L) hip (rose)</u>

**CARDIO-RESPIRATORY STATUS (circle):**

Breathing:	NAD	SOBOE	SOB @ Rest
Expansion:	Good	Fair	Poor
Cough:	Nil	Dry	Moist
Air Entry:	Good	Fair	Poor

**BALANCE STATUS (circle):**

Supported Sitting:	Good	Fair	Poor	Unable
Unsupported Sitting:	Good	Fair	Poor	Unable
Supported Standing:	Good	Fair	Poor	Unable
Unsupported Standing:	Good	Fair	Poor	Unable

ASSESSMENT / REVIEW DATE(S):	PHYSIOTHERAPIST:	SIGNATURE:
<u>18/07/2011</u>	<u>Lauren Madden</u>	<u>[Signature]</u>

Vivir Healthcare Pty Ltd © Head office: 9 William St, Richmond, Victoria, Australia 3121  
 web: [www.vivir.com.au](http://www.vivir.com.au) tel: +61 3 9696 8958 fax: +61 3 9696 8952 email: [info@vivir.com.au](mailto:info@vivir.com.au) ABN: 90 094 275 260  
 physio podiatry dietetics occupational therapy

(Affix Label Here)  
 Residents Name: JOE BLOGGS  
 DOB: 01/01/1920 DOE: 02/03/2009



PHYSIOTHERAPY CARE PLAN		
Problem:	Goal:	Care Plan / Directives: (Also include directions to additional care plan forms e.g. See exercise form)
Poor mobility + endurance	Improve mobility + endurance	• Mobilise daily IA + WB + TRN to all meals. Encourage to take bigger steps. • PTA to mobilise 2x week IA + WB + TRN 50m + progress as able
Poor ⊕ hip strength	Improve ⊕ hip strength	• PTA to complete exercises 2x week - bndging x 10, SLR x 10, sit → stand x 10, rail exercises (hip ext + crab walking x 10)
Bilateral oedema	Manage oedema	• Apply compression stockings daily • Encourage foot + ankle exercises • Encourage to elevate feet on stool
Neck pain - deep 11m ache + H/H	Manage pain	• Apply heat pack to neck at least 3x week for 30mins (hot/cold) • Refer to physio if pain exacerbates
At risk of decreasing transfers	Maintain safe transfers	• Maintain independance with bed mobility, IA to adjust bed head + prompts <sup>††</sup> lie → sit, IA + WB + TRN tlf bed → chair

Physiotherapist: Lauren Madden Signature: [Signature] Date of Original Completion: 18 / 07 / 2011

EVALUATION			
Evaluation Dates:	Outcome: (Tick response)	Changes: (Are there any changes to problems, goals & / or directives?)	Name / Signature of Physiotherapist:
	<input type="checkbox"/> Being achieved <input type="checkbox"/> Partially achieved <input type="checkbox"/> Not being achieved		Name: ..... Signature: .....
	<input type="checkbox"/> Being achieved <input type="checkbox"/> Partially achieved <input type="checkbox"/> Not being achieved		Name: ..... Signature: .....
	<input type="checkbox"/> Being achieved <input type="checkbox"/> Partially achieved <input type="checkbox"/> Not being achieved		Name: ..... Signature: .....

Please Note: Additional forms may be used to supplement the contents of this document e.g. physiotherapy exercise diagrams

Vivir Healthcare Pty Ltd © Head office: 9 William St, Richmond, Victoria, Australia 3121  
 web: [www.vivir.com.au](http://www.vivir.com.au) tel: +61 3 9696 8958 fax: +61 3 9696 8952 email: [info@vivir.com.au](mailto:info@vivir.com.au) ABN: 90 094 275 260  
 physio podiatry dietetics occupational therapy

## Incident Reporting

You will also be required to document any risks, hazards or incidents within the workplace. You need to be familiar with the policy and procedure for reporting incidents involving staff, clients and visitors. It is essential you know how to use your workplace Clinical Incident Reporting System and know where to find OHS information on the Queensland Health intranet site, QHEPS. For example, if you are involved with an incident such as you are hurt or observed a near miss incident, you are required to fill out a Queensland Health workplace incident report form and give the form to your supervisor or manager to complete. Once the form has been completed, it will be forwarded to the local OHS unit. The OHS unit will then enter your form data into the Incident Management System, commence investigations and any required corrective actions.



This information can be found at:

<http://qheps.health.qld.gov.au/safety/ims/home.htm>



### Activity 3: Documentation

You have been asked by the physiotherapist on the orthopaedic ward to complete an exercise program for mobility with a client who has recently undergone a Total Knee Replacement (TKR). As you walk into this client's room, you find the client sitting on the floor in front of the chair. When you ask them about what has happened and why they are sitting on the floor, they report that they have fallen out of the chair, but are unhurt.

Please answer the following questions. You may use the space provided below to write down a draft response. Record your final answer in the Assessment Guide.

1. What steps would you take to ensure that the client can be safely returned to the chair?

---

---

---

---

---

---

---

---

2. Once the client has been cleared medically and is safely in the bed or chair, who would you report to? What would you report to them?

---

---

---

---

---

---

---

---

Activity continues on the next page.



## Confidentiality

Queensland Health has a commitment to ensuring the privacy and confidentiality of personal information collected. Client information is confidential and care should be taken to ensure that all documented information remains confidential.

Listed below are some general guidelines for maintaining client confidentiality:

- Do not allow anyone to touch or look at a client record unless they are a healthcare provider taking care of that client.
- Carry medical records in a way so as not to expose identifying information such as client details.
- Keep all client records in a safe and secure place.
- Do not take any client files or identifiable client information out of the workplace.
- Do not tell anyone about what is in a client record unless they are taking care of the person.
- Only access information about a client when it is part of your job, it is lawful, or when specific consent is given.
- Do not email client information via public networks (i.e. non Queensland Health email providers).



All health professionals employed by Queensland Health are required to comply with the standards of confidentiality as specified by the Code of Conduct. Further information regarding confidentiality can be found at:

<https://www.qld.gov.au/gov/code-conduct-queensland-public-service>

## Informed consent

Every client has the right to make a decision about any treatment they receive that involves their body, including who can touch them. Medical staff such as a doctor or a physiotherapist is responsible for informing the client about any aspect of treatment. Informed consent can only be given by a client when they understand:

- the reason for the treatment
- what will be done
- how it will be done
- who will do it
- the expected outcomes
- other treatment options
- the consequences or expected outcomes of not having the treatment

There are also legal requirements about informed consent that you need to be aware of:

- A person under 18 years of age cannot give consent, so must have a parent or guardian give the consent
- A person who has been assessed as not having the capacity to make choices cannot give legal consent, so must have a guardian or substitute decision maker give consent (e.g. clients with particular mental health disorders or disorders such as Alzheimer's disease)
- A client who has been sedated or is in a coma or is confused cannot give consent.

Clients have the right to informed choice so they can:

- Leave their condition untreated
- Seek alternative healthcare
- Seek an independent second opinion
- Request a healthcare provider of a particular gender, where possible
- Refuse admission or choose to leave a health facility, regardless of their condition, after explanation of the likely effect on their health

Informed consent is the responsibility of the person diagnosing or treating the client. Your role may include ensuring the client has signed consent on their records and to assist the client with any questions they may have about what program or activity you are going to work with them on. At every stage of a new or unfamiliar program, activity or treatment, you should inform the client so they understand what is happening. If they ask you to stop, you must stop as this is considered to be withdrawal of consent. Please ensure you document any refusal of care in the appropriate manner.

## Key Points

This section of the Learner Guide has covered information related to the topic of Organisation Practices. On completion of this section you should:

Roles and Responsibilities:

- Explain the roles and responsibilities of allied health assistant and other personnel.
- Demonstrate effective and collaborative working relationship.
- Relate the Australian Physiotherapy Association guidelines and the Code of Conduct.

Policy and Procedures:

- Summarise local policy and procedures including OHS, infection control and manual handling

Record Keeping:

- Describe record keeping practices and procedures in relation to diagnostic and therapeutic treatments. Explain why documentation is important, and how entries related to client care should be documented
- Be familiar with and comply with the standards of confidentiality as specified by the Queensland Health Code of Conduct
- Explain incident reporting and documentation

## 2. Body Systems

This topic covers information about:

- Anatomy and Physiology
- Position and Planes of Motion
- Anatomical Movements
- Biomechanics
- Psychological Effects

Activities in this topic cover the following essential skills:

- Work with a group of individuals with specific mobility requirements
- Work under direct and indirect supervision
- Communicate effectively with clients in a therapeutic or treatment relationship
- Communicate effectively with supervisors and co-workers

### 2.1 Anatomy and Physiology

Anatomy is the scientific study of the structure of the body. Physiology is the scientific study of how the body functions. Having a basic knowledge of normal anatomy and physiology gives you an understanding of how the body works and allows you to recognise abnormalities when it is affected by injury or disease.

In this section we will focus on the basic structure and function of the musculo-skeletal system.

#### **The Skeletal System**

The main functions of bones within the skeletal system are to provide:

- support
- protection
- movement
- mineral storage
- blood cell production

The adult human skeletal system contains 206 bones and can be divided into two parts:

1. Axial Skeleton (which includes the skull, vertebral column (spine) and thorax (rib cage))
2. Appendicular Skeleton (which includes bones of the upper and lower limbs, and the pectoral (shoulder) and pelvic girdles)



**Osteoporosis** is a condition where the bones lose minerals such as calcium, causing them to become thin and brittle. This loss of bone thickness is associated with fractures, most commonly in the spine, hip and wrist. Older clients who spend long periods bed ridden or immobile are at increased risk of bone loss. Regular weight bearing exercise such as walking is important to reduce the effects of osteoporosis. Doctors will often prescribe calcium supplements as well as vitamin D to help maintain the calcium levels in the bone for people with osteoporosis.



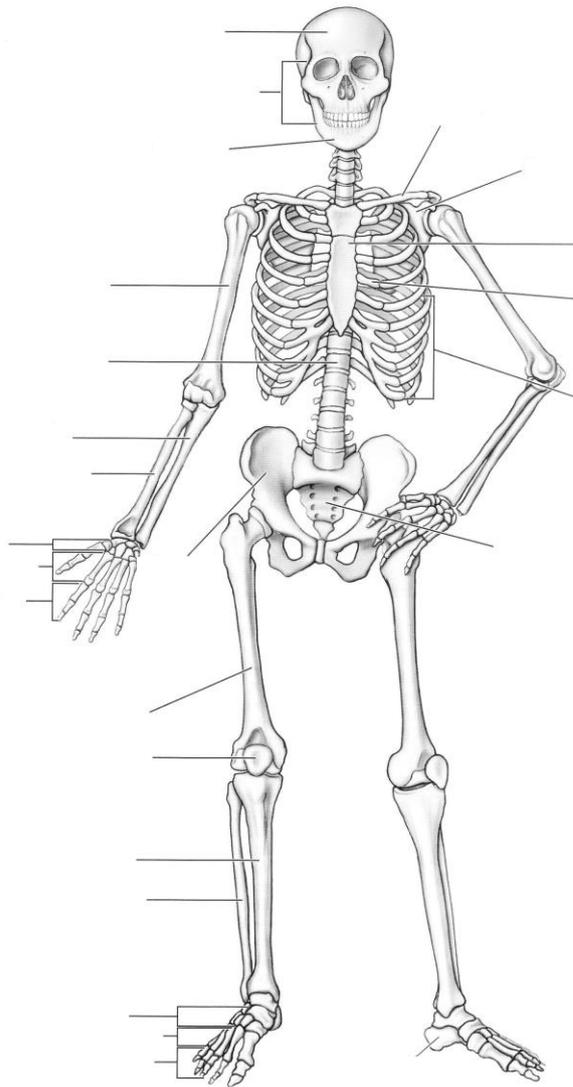
Further information on bones and muscles can be found on Teach PE:  
<http://www.teachpe.com/anatomy/index.php>





**Activity 4: Identify the major bones of the human skeleton  
(continued)**

2. Using the internet or by accessing relevant anatomy textbooks, review the major bones of the human skeleton. Try to identify the bones on yourself, as you label the major bones in the diagram below.



**Figure 1 The Human Skeleton (Herlihy & Meabius, 2000).**

## The Muscular System

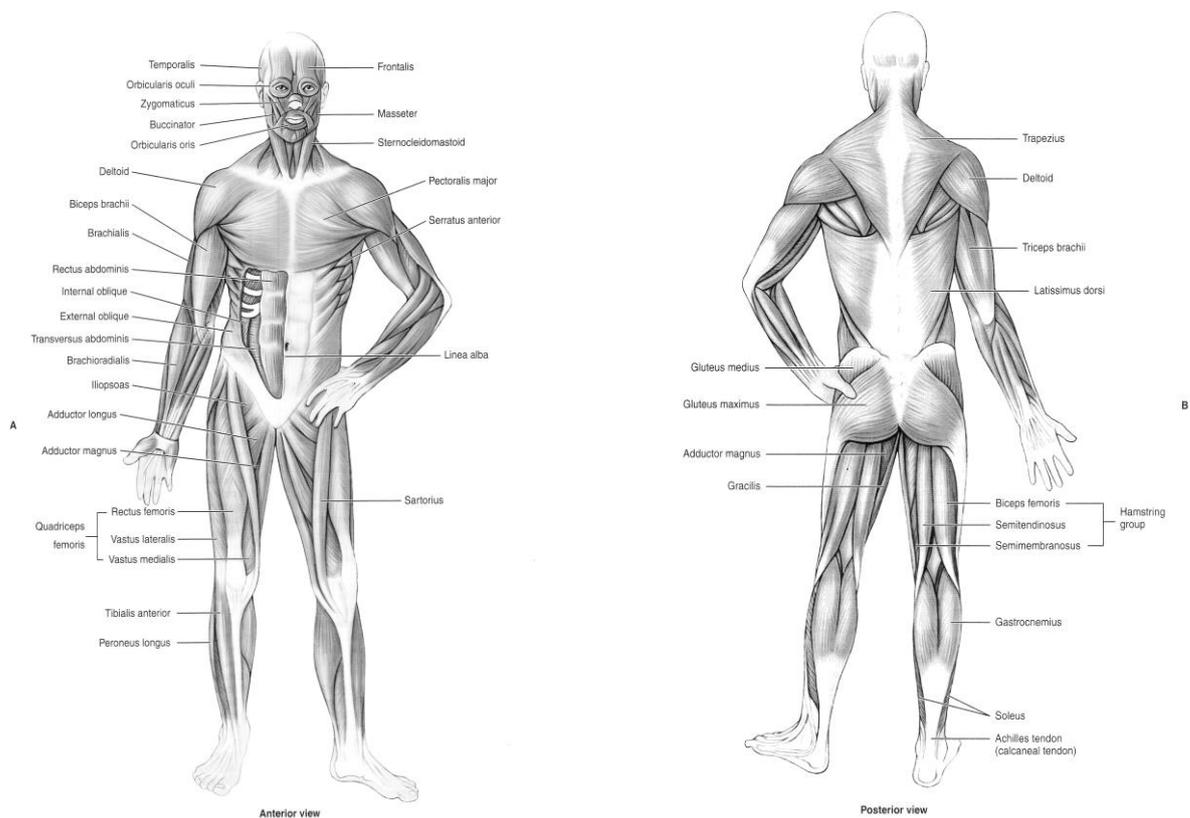
Muscles can be divided into three types:

1. Skeletal
2. Smooth
3. Cardiac

Each type has a different function.

**Skeletal muscle** has the primary function of producing movement. It is sometimes referred to as 'voluntary' muscle; meaning we can generally make it contract and relax at will. Skeletal muscle also plays an important role in other functions including:

- maintaining posture
- assisting the blood flow by acting as a muscle pump
- generating heat during activity, to assist with the maintenance of body temperature



**Figure 2 Major skeletal muscles of the human body (Herlihy & Meabius, 2000).**

**Smooth muscle** is found within organs and around blood vessels. Its functions include controlling the blood flow, contracting to move food along the digestive tract, and regulating movement of materials along passageways e.g. releasing digested food from the stomach into the bowel. It is not a 'voluntary' muscle, meaning we cannot control its contraction or relaxation at will.

**Cardiac muscle** is only found in the heart, and contracts to pump blood around the body.



**Atrophy:** If muscles are not used regularly, they will atrophy or waste away. This can be a significant problem for people in hospital or the community who are bed-bound or have reduced mobility, as well as those with injuries or fractures requiring immobilisation. However, with regular weight bearing and appropriate exercise, muscle size and strength can return.

### Joints or Articulations

The primary function of skeletal joints or articulations is to join bone to bone and allow movement to occur between bones. Different types of joints allow different amounts of movement.

Joints can be classified into three groups according to their structure:

Joint Structure	Function	Example
Fibrous	Bones joined by fibrous tissue. Allows little to no movement.	Skull sutures – join the bones of the skull together.
Cartilaginous	Bones joined by cartilage. Allows a small amount of movement.	Pubic symphysis – joins the pelvic bones together.
Synovial	Bones separated by a joint cavity that contains fluid. Allows a large amount of movement.	Hip Joint – Joins the femur (lower limb) to the pelvis.

**Synovial joints** are mainly located in the upper and lower limbs and have the following characteristic features:

- articular cartilage – a thin layer of cartilage that covers the joint surface of each bone allowing the bones to move smoothly within the joint.
- joint capsule – surrounds the joint and is made up of two layers: an outer layer which provides stability to the joint; and an inner layer which secretes synovial fluid to lubricate the joint surfaces.
- ligaments – reinforce the outer layer of the joint, increasing the stability of the joint.



**Synovial Fluid:** Provides nourishment to the cartilage, and lubrication to the joint to reduce friction during movement. Movement and weight bearing exercise are important to help spread synovial fluid throughout the joint to keep it healthy and prevent stiffness. When the synovial membrane becomes inflamed, it can produce 'too much' synovial fluid, causing swollen joints.

**'Use it or lose it'** – Each joint is able to move through a certain range of motion. If a person stops moving a joint, it can gradually lose the ability to move fully through range. For example, consider a person who injures their knee and is unable to straighten it fully due to pain and swelling.

Over time, the body adapts to this disuse at the end of the movement, the hamstring muscle shortens and the person may develop what is called a contracture; in this case, a permanent bend in the knee. Contractures may be prevented by regular strengthening and stretching exercises, however they can be very difficult to reverse or correct once formed, possibly requiring surgical intervention.



**Osteoarthritis (OA):** is the most common form of arthritis. It usually affects the larger weight bearing joints e.g. hips and knees, but can also affect other joints in the body. In healthy joints, the articular cartilage is smooth, whereas in OA the cartilage breaks down and becomes thin and rough which affects the ability of the joint to move smoothly. The most common symptoms of OA are joint pain, stiffness and swelling. Movement and regular exercise are important to help stimulate the secretion of synovial fluid within the joint and maintain muscular strength around the joint.



### Activity 5: Identify the Major Muscles of the Human Body

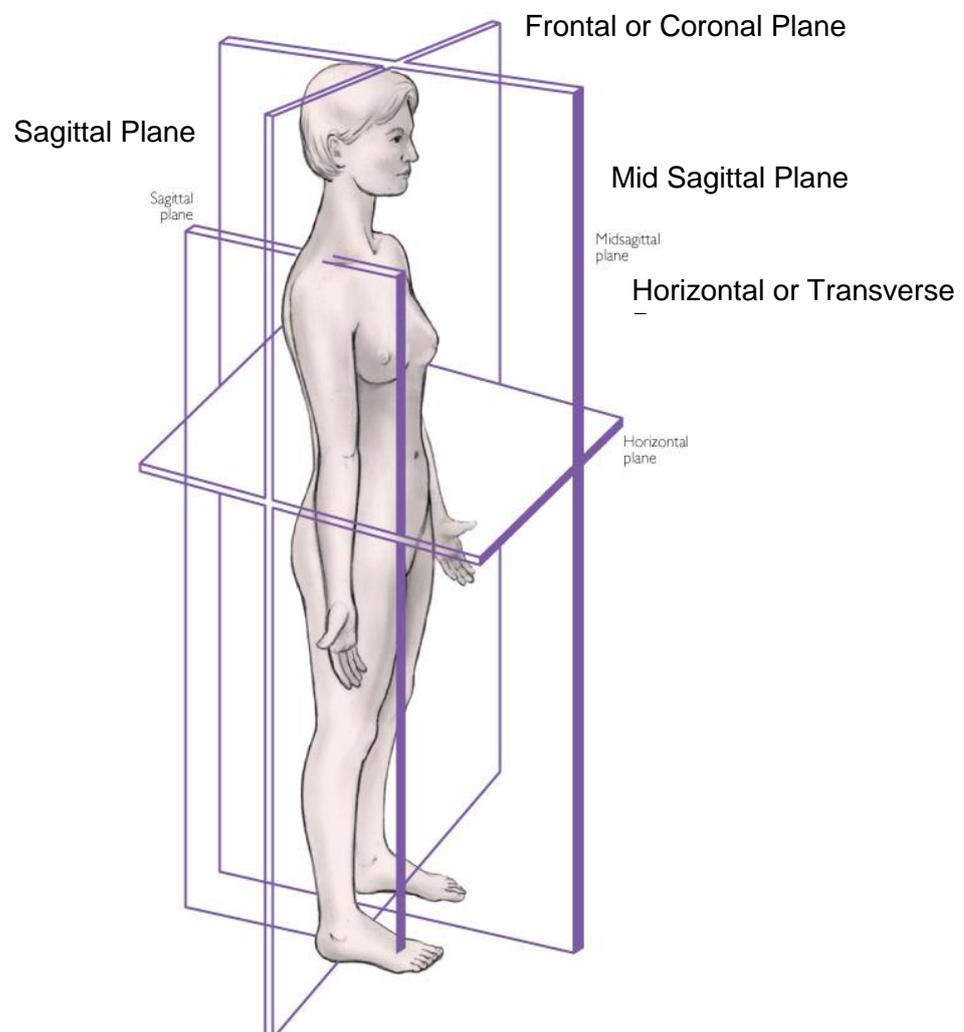
Using the internet or by accessing relevant anatomical text books, review the major muscles of the human body. Try to identify the muscles on yourself as you complete the table below identifying the movements produced by major muscles. You may use the space provided below to write down a draft response. Record your final answer in the Assessment Guide.

Upper Limb		Lower Limb	
Movement	Muscles Involved	Movement	Muscles Involved
Shoulder Flexion		Hip Flexion	
Shoulder Extension		Hip Extension	
Shoulder Abduction		Hip Abduction	
Shoulder Adduction		Hip Adduction	
Elbow Flexion		Knee Flexion	
Elbow Extension		Knee Extension	
Wrist Flexion		Ankle Dorsiflexion	
Wrist Extension		Ankle Plantar Flexion	

## 2.2 Positions and Planes

To ensure consistency in description of anatomical structures, specific anatomical terms were introduced, and while working as an AHA, you will need to be familiar with these common anatomical terms.

When discussing the anatomy of the human body, it is useful to consider the body in a standard position, which allows the relative position of parts of the body to be described accurately and with less confusion. This standard position is called the anatomical position.



**Figure 3** Anatomical planes of the human body (Fehrenbach & Herring, 2002)

A person in the anatomical position is standing up straight, with arms at the sides and palms facing forwards with the fingers extended. The feet are together and facing

forward, as are the head and eyes. A person lying down in the anatomical position is said to be 'supine' when face up, and 'prone' when face down.

Anatomical planes of the body are imaginary lines used to divide the body up into sections.

- Horizontal or transverse plane – lies horizontally and divides the body into superior (upper) and inferior (lower) regions
- Sagittal plane – lies vertically and divides the body into left and right regions
- Mid sagittal plane – divides the body evenly into left and right
- Frontal or coronal plane – lies vertically and divides the body into anterior (front) and posterior (rear) regions

The table below lists terms which describe the location of a particular point on the body in relation to the rest of the body.

### Anatomical Terms of Position

Term	Definition
Anterior/Ventral	Towards the front
Posterior/Dorsal	Towards the back
Superior	Closer to the head
Inferior	Closer to the feet
Medial	Towards the body's midline
Lateral	Away from the body's midline
Proximal	Closer to the trunk, or middle of the body
Distal	Further away from the trunk or middle of the body
Caudal	Directed towards the 'tail' or hind part of the body
Cephalad	Directed towards the head or anterior end of the body
Ipsilateral	On the same side of the body
Contralateral	On the opposite side of the body
Superficial	Near the surface of the body
Deep	Below the surface of the body



## Activity 6: Identifying Anatomical Planes & Positions

From the following list of anatomical planes and positions of the body, select the term that best fit the statements.

You may use the space provided below to write down a draft response. Record your final answer in the Assessment Guide.

Horizontal plane, sagittal plane, mid sagittal plane, frontal plane, medial, superficial, anterior, superior and inferior.

1. \_\_\_\_\_ lies vertically and divides the body into anterior and posterior regions.
2. \_\_\_\_\_ lies horizontally and divides the body into superior and inferior regions.
3. The sternum lies \_\_\_\_\_ to the heart.
4. The knee lies \_\_\_\_\_ to the foot in the anatomical position.
5. \_\_\_\_\_ lies vertically and divides the body into left and right regions.
6. \_\_\_\_\_ divides the body evenly into left and right.
7. The elbow is \_\_\_\_\_ to the shoulder in the anatomical position.
8. The skin is \_\_\_\_\_ to the internal organs.
9. The inside of the knee is also known as the \_\_\_\_\_ side.

## 2.3 Anatomical Movements

The anatomical planes can be used to describe how movement of joints occur, for example flexion and extension occur in the sagittal plane, whereas abduction and adduction occur in the coronal plane. Types of anatomical movements are listed in the table below.

### Types of Anatomical Movements

Movement	Definition
Flexion	The bending of a joint that decreases the angle between bones
Extension	The straightening of a joint which increases the angle between the bones
Internal or medial rotation	Movement of turning around a longitudinal axis towards the body
External or lateral rotation	Movement of turning around a longitudinal axis away from the body
Abduction	Movement away from the midline of the body
Adduction	Movement toward the midline of the body
Circumduction	Circular movement of a limb
Inversion	Turning the sole of the foot inward
Eversion	Turning the sole of the foot outward
Pronation	Turning the hand so that the palm faces downward, or the inward roll of the foot during normal motion
Supination	Turning the hand so that the palm faces upward or the outward roll of the foot during normal motion
Horizontal Flexion	The bending of a joint that decreases the angle between bones in the horizontal plane, e.g. moving the arm across the body horizontally
Horizontal Extension	The straightening of a joint so that the angle between the bones increases in the horizontal plane e.g. the arm moving away from the body horizontally

Movement	Definition
Plantar Flexion	Pointing the foot down
Dorsiflexion	Pulling the toes up towards the shin
Opposition	Movement of the thumb towards the surface of the palm or the pads of the other fingers.
Protraction	Moving anteriorly in the horizontal plane
Retraction	Moving posteriorly in the horizontal plane
Depression	Movement in an inferior direction
Elevation	Movement in a superior direction
Lateral flexion	Bending of the vertebral column to the side



Ask your supervising physiotherapist to demonstrate if you are not clear about any of these definitions.



Further information on anatomical movements and anatomical planes can be found at Teach PE: <http://www.teachpe.com/anatomy/movements.php>. This website contains diagrams and video clips.



## Activity 7: Identifying Anatomical Movements

From the table of anatomical movements on the previous page, select the term that describes the anatomical movement being performed in each of these pictures.

You may use the space provided below to write down a draft response. Record your final answer in the Assessment Guide.

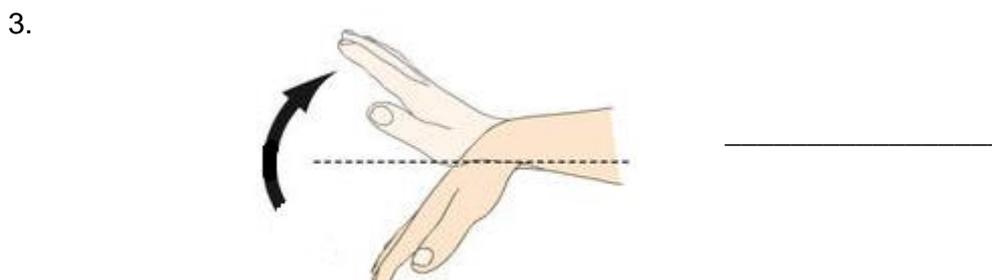


Figure 4 Planes and Motions used in Anatomy, (Micheau & Hoa, 2009)

## 2.4 Biomechanics

Biomechanics is the application of mechanical principles to living organisms – here specifically dealing with the mechanics of the human body.

The human skeleton is a system of bones, and the muscles contract to move these bones. Where muscles begin is called the origin, and where they end is called the insertion. Most muscles originate at a bone. Where they originate and insert will determine the movement they produce when they contract.

Illness, injury or anatomical abnormality can cause abnormal biomechanics, leading to functional problems. Physiotherapists use the principles of biomechanics to develop treatment and exercise programs to improve function, mobility and reduce the risk of injury.

For example, there are a group of muscles in the shoulder which work together to provide stability, called the rotator cuff. If one of these muscles isn't working efficiently, the other muscles will compensate, which can lead to abnormal forces on the joint. This can lead to pain and reduced range of motion of the shoulder. Having knowledge of the shoulder biomechanics helps the physiotherapist to determine what the problem is and come up with treatments to improve it.

Biomechanics is also used in the fields of manual handling and ergonomics. Because you will be working with clients and will be required to assist with client transfers, exercises and mobilising, having an understanding of biomechanics will help you to perform these tasks safely and effectively.

Take for example the common task of lifting a chair. Let's discuss two ways of performing this task. In the first case, you pick up and hold the chair at arm's length away from your body. The mass or weight of the chair is held a long way away from the muscles of your spine, abdomen, and arms which are doing the work to lift the chair. The distance from your body to the chair is referred to as the 'lever arm'. In this case, the lever arm is long and the muscles need to work hard to generate enough force to move the long lever arm. Because more force is required to lift and hold a chair in this way, you are more likely to get injured.

In the second case, you pick up the chair and keep it close to your body. The mass or weight of the chair has remained the same but the lever arm is shorter as the chair is held close to your body. The muscles now do not have to work as hard; and less energy and force are required to hold the chair close. As a result, you will be less likely to get injured.

Being familiar with some of the terminology will help you to communicate with the therapist, as well as appreciate some of the concepts underlying the principles of biomechanics.

### Biomechanics Terminology

Term	Definition
Mass	Weight in a gravitational field
Force	How a body with mass is affected by acceleration or mechanical stress; 'force equals mass times acceleration '
Speed	Distance travelled per unit time
Acceleration	The change in velocity (speed) over time
Work	Exertion or effort directed to produce or accomplish movement
Energy	The capacity to do work, or available power
Power	Work done or energy transferred per unit of time.
Strength	The ability of a person to exert force on physical objects using muscles
Momentum	The power residing in a moving object; the product of a body's mass and its velocity
Axis of rotation	The line around which a three dimensional object will rotate
Pulley	Pulleys are used to transmit rotational motion, or realise a mechanical advantage in either a linear or rotational system of motion.

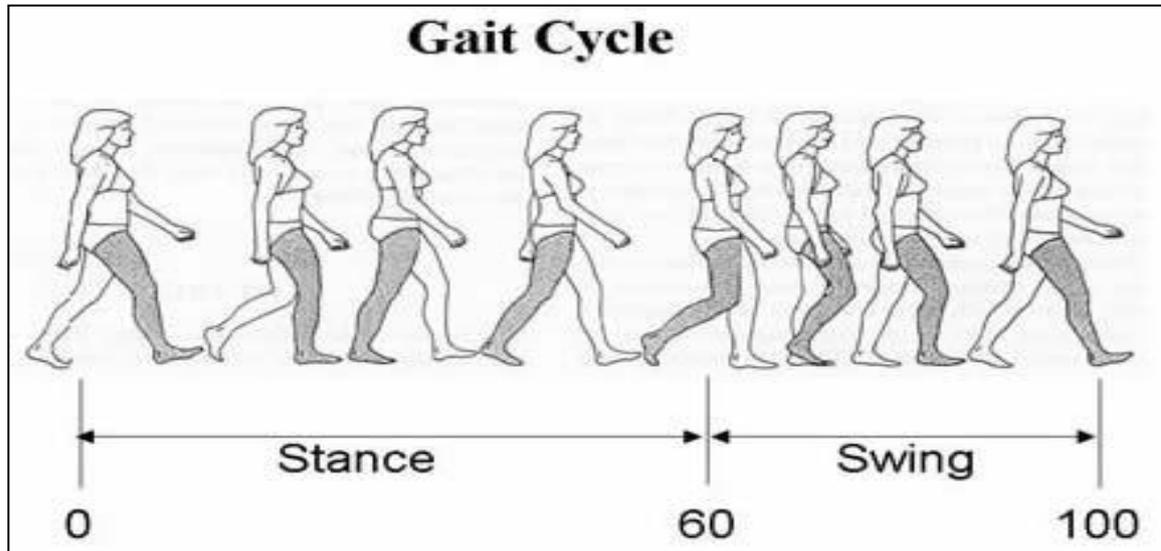


You may not need to be familiar with all of these terms, or there may be additional terms you need to know in your workplace. Check this with your supervising physiotherapist and ask for clarification if there are any terms in the table above you are not sure about.

## Gait

Gait is defined as 'a manner of walking or moving on foot' (Merriam-Webster, 2009). During normal walking, each leg spends 60% of the time in contact with the ground (stance phase) and 40% of time in the air (swing phase).

Figure 5 Gait Cycle (Deluzio, 2010)



You will be involved in the care of clients with many different gait patterns. A client's gait pattern may be changed by:

- pain
- neurological disorders (e.g. stroke, traumatic brain injury, multiple sclerosis, Parkinson's disease and etc)
- a skeletal system abnormality (e.g. leg length discrepancy, arthritic changes and etc)
- muscle weakness (both core stability and in the peripheral muscles)
- normal difference in walking between people

A client may experience an abnormality at any point in the gait cycle, and this will guide the physiotherapist when prescribing a gait training program to improve mobility.

Working as an allied health assistant may require you to be involved in gait training programs, which involve many different goals and clients with many different diagnoses. For example, a gait training program will be very different for a client who has had a stroke, as opposed to a client who has pain in their hip as a result of a recent total hip replacement (THR).



Gait is very complex, and the physiotherapist will determine, and explain to you the specific goals of each gait training program. It is important that you understand that gait training programs can be very different with different client groups.

You may hear gait being described using many different terms, but one of the most common is ataxic gait, or ataxia, which is 'an inability to coordinate voluntary muscular movements that is symptomatic of some nervous disorders.' (Merriam-Webster, 2009)

Clients with an ataxic gait often walk with their feet wide apart, and tend to hold onto furniture or walls to stabilise themselves. Causes of ataxic gait may include traumatic brain injury or stroke.

Another description of gait which you may hear is Parkinsonian gait. This describes the tremor, stiffness and slow movement, which is associated with Parkinson's disease.

Newly added knowledge elements

- conditions affecting mobility
- risks for decreased mobility
- Are these covered in material below?

Other considerations for mobilising clients

- After surgery – mobilising a client after surgery requires consideration of:
  - location of wound incisions
  - drips, drains and other attachments (e.g. oxygen)
  - precautions and contra-indications after surgery
  - previous mobility of the client (e.g. previously walked 100 metres before requiring a rest break)
  - haemoglobin levels – (see information box below)
  - observations and vital signs [blood pressure (BP), oxygen saturations (O<sub>2</sub>), heart rate (HR)]
  - environment (space, obstacles and etc)

## Anaemia



Haemoglobin is the protein in blood that carries oxygen from the lungs to the body's tissues and returns carbon dioxide from the tissues to the lungs. Low haemoglobin is referred to as anaemia.

There are many reasons for anaemia. Some of the more common causes are:

- loss of blood (traumatic injury, surgery, bleeding, colon cancer or stomach ulcer)
- nutritional deficiency (iron, vitamin B12 or folate)
- bone marrow problems (replacement of bone marrow by cancer cells)
- suppression by chemotherapy drugs
- kidney failure

(Siamak, 2007)

Depending on the severity, the symptoms of anaemia may include:

- fatigue
- pale skin
- racing heart or palpitations
- breathlessness
- chest pain
- dizziness
- weakness
- cold hands and feet
- tiring easily
- frequent headaches
- becoming irritated easily
- concentration difficulties

(State Government of Victoria, 2009)



If you observe any of these symptoms in clients, you should stop the exercise, make sure the client is seated or lying safely, and report it to your supervising physiotherapist.

## Postural Hypotension

Postural hypotension, or orthostatic hypotension, is the sudden drop in blood pressure, which occurs when a person suddenly goes from a lying position to a sitting or standing position, especially if the person has been resting flat for an extended amount of time. This sudden drop in blood pressure is caused by blood pooling in the extremities of the body, therefore reducing blood return to the heart and subsequently reducing cardiac output and blood flow to the brain. This is an important consideration when delivering and monitoring an exercise program for mobility.

Postural hypotension can be caused by:

- reduced blood volume (as a result of bleeding)
- medications
- dehydration
- anaemia
- prolonged bed rest
- other disease processes

Some of the signs, (which generally occur after sitting or standing), of postural hypotension include:

- dizziness
- sweating
- distortions in hearing
- blurred vision
- headache
- numbness and tingling
- fainting

Postural hypotension can cause clients to faint. By giving the client time to sit on the edge of the bed before standing or standing for a brief period before beginning to walk, this gives the blood pressure time to adjust and reduce the symptoms associated with postural hypotension. Encourage the client to move the feet up and down to improve circulation and ensure the symptoms are completely gone before mobilising the client.



If a client experiences these signs and symptoms, you should return them to bed (if safe to do so) or lower them onto a chair or the floor, and notify the physiotherapist, nursing and/or medical staff immediately.

## Stair Practice

Clients will often require a mobility review on stairs before they are cleared by the physiotherapist for discharge from hospital. You may need to assist the physiotherapist or supervise the client as they practise with stair mobility exercises, whether on a flight of stairs or on practice-stairs in a gym setting. Stair mobility may also involve the use of a walking aid like crutches or a walking stick.

The sequence used to negotiate stairs using a stick or crutch is as follows:

### Up stairs

1. Hold onto the rail with one hand and have the stick or crutch in the other hand
2. Step up with the 'good leg' or strongest leg
3. Push through good leg to bring up affected leg, or weaker leg
4. Bring up the stick or crutch

### Down Stairs

1. Hold onto the rail with one hand and have the stick or crutch in the other hand
2. Take the weight through the good leg
3. Lower the affected leg and stick or crutch onto the step below
4. Balance through the stick or crutch and bring the good leg down onto that step

A good way to remember this sequence is the saying "The good go to heaven and the bad go to hell". The good leg goes first when going up and the bad leg goes first when going down stairs.



Further information on the use of crutches when using stairs can be found on <http://qheps.health.qld.gov.au/darlingdowns/pdf/fact/fact-179.pdf>

## Weight Bearing

After a fracture or leg joint surgery, the treating doctor may prescribe restrictions on how much weight the client can put through the affected leg. These restrictions are often termed:

- Non weight bearing (NWB) – No weight allowed through the affected limb
- Partial weight bearing (PWB) – Partial weight e.g. 50% is allowed through the affected limb
- Full weight bearing (FWB) – Full weight can be taken through the affected limb

These restrictions need to be strictly followed to allow proper bone healing, prevent further injury and for any internal fixation used during surgery to stabilize the fracture to remain in the correct position.

During recovery, a patient may move from NWB status to PWB and eventually FWB. Eventually, it becomes advantageous to add some weight to the injured or repaired area to help stimulate more healing. During the final phase, FWB enables the injured person to return to their normal pre-injury functional levels.

The physiotherapist will instruct the patient in how to adhere to the prescribed weight bearing status relevant to the mobility aid being used e.g. through the use of crutches or a forearm support frame.

## Use of Walking Aids and Assistive devices

Many clients will require the assistance of a walking aid or assistive device. These include:

- walking stick
- crutches
- four wheel walker (4ww)
- hopper or pick up frame (PUF)
- rollator or forearm support frame (FASF)
- four point stick
- hoist (sling, standing or walking hoist)
- walk belt



Lifetec Queensland provides information, education and consultation on wide range of assistive devices. Further information about mobility aids is available on Lifetec Queensland's website: <https://lifetec.org.au/education/fact-sheets>



Your supervising physiotherapist will instruct you in the safe use of all the walking aids and assistive devices you will encounter in your workplace and direct you in which one is most appropriate to mobilise the client with. This will also include instruction in variations in prescribed weight bearing status. Discuss these considerations with your physiotherapist to reduce the potential risks associated with mobilising a client.



## Activity 8: Signs and Symptoms of Hypotension

Please answer the following questions. You may use the space provided below to write down a draft response. Record your final answer in the Assessment Guide.

1. Outline five signs and symptoms of postural hypotension.

---

---

---

---

---

---

---

2. What can you do to minimise the effects of postural hypotension?

---

---

---

---

---

---

---

3. Identify three common causes of anaemia.

---

---

---

---

---

---

---

## 2.5 Psychological Effects

Injury or disease causing pain and disability can have both a physical and psychological impact on a client. A physical disability may be more obvious, for example a stroke client can't move their arm and leg, while a psychological reaction to a disability may be less obvious and present in various ways:

- altered mood
- feelings of frustration
- decreased self-esteem and self worth
- decreased confidence
- anger
- depression
- anxiety
- feelings of isolation
- grief
- denial

Any illness or injury, whether short or long term, has the potential to have a psychological impact on:

- the client
- their family
- friends and colleagues

As an AHA your main role is to complete a program prescribed by a physiotherapist with your clients, but you also need to have an appreciation of the psychological effects on the client. Getting clients to consent to participating in an exercise program while they are in significant psychological distress can be a difficult task. Often these people have very poor motivation and are very reluctant or fearful of exercise.

Ongoing or severe pain may also take its toll on a client's emotional wellbeing. When analgesia (pain relief medication) doesn't work and pain doesn't respond to the usual therapies, the psychosocial impact can be significant. For example, a client may develop a tolerance for their pain medication, requiring increased doses and multiple medications, which can lead to sleeping disturbances, weight gain and depression.

There are many approaches and techniques to help clients cope with these emotional and psychological reactions to pain and disability. The following general strategies are often used by clinicians to motivate clients and reduce the psychological impact of their disability:

- participate in regular exercise

- listen to the client
- build rapport
- involve family and friends with the treatment
- create a relaxed and supportive environment
- remind the client about goals they may have set with the physiotherapist (e.g. goals around exercise session times, or the goal of going home from hospital)
- be confident in your role
- be prepared to work flexibly in order to reduce barriers to participation
- discuss the client with your physiotherapist regularly and inform them about any psychological or emotional issues impacting on treatment
- request your supervising physiotherapist to review the client if you have any concerns

Maintaining effective reporting with your physiotherapy supervisor is essential so that these clients may be referred to other disciplines for a review, including:

1. the treating medical team
2. a social worker
3. a psychologist or psychiatrist
4. other allied health professionals and etc

Other strategies the physiotherapist might use to improve client participation in therapy include:

- setting short and long term goals
- changing the environment where exercise occurs
- setting up a reward system for when goals are achieved
- keeping activities functional and fun



## Activity 9: Psychological Effects of Disability

Please answer the following questions. You may use the space provided to write down a draft response. Record your final answer in the Assessment Guide.

1. What kind of psychological effects can be caused by injury or disease?

---

---

---

---

---

---

---

2. Provide examples of things you could do to achieve the corresponding strategy in the following table.

For example, what could you do to improve the client's participation in regular exercise? Exercise has positive psychological effects such as lifting mood, decreasing stress and relieving anxiety. Participation in regular exercise can be encouraged by offering a group exercise program which allows for social interaction, in a supportive environment, and can be fun.

Be careful here to work within your scope of practice as an AHA.

Activity continues on the next page



### Activity 9: Psychological Effects of Disability (continued)

Strategy	Example
Participate in regular exercise	
Build rapport	
Involve family and friends in the treatment	
Create a relaxed supportive environment	

## Key Points

This section of the Learner Guide has covered information related to the topic of Body Systems. On completion of this section you should be able to:

### The Skeletal System:

- List the main functions of bones
- Identify the major bones of the human skeleton
- Outline why weight bearing exercise is important in managing osteoarthritis

### The Muscular System:

- List the main functions of skeletal muscles
- Identify the major muscles of the body and what movements they perform

### Joints and Articulations:

- List the main function of joints
- Outline how joints can be classified according to their structure
- Identify the key features of a synovial joint
- Outline why movement and exercise is important in maintaining a healthy joint
- Apply anatomical terms to describe movement
- Identify the major joints of the skeletal system and what movements they allow
- Outline why movement and exercise is important in managing osteoarthritis

### Biomechanics:

- Know some of the terminology and describe how physiotherapists use the principles of biomechanics to develop treatment and exercise programs

### Psychological Effects:

- Outline how injury and disease can have both a psychological and physical impact on clients
- Identify some of the coping strategies that may be useful in managing the psychological effects of disability

## 3. Therapeutic Exercise

This topic covers information about:

- Principles of Exercise Therapy
- Effects and Benefits of Exercise
- Exercise Program Design
- Concepts and procedures for stepping down treatment or intervention when client becomes distressed, in pain or wishes to stop
- Weight bearing and post fracture implications

Activities in this topic cover the following essential skills:

- Work with a group of individuals with specific mobility requirements
- Apply active and passive therapeutic practice and treatment procedures
- Undertake activity analysis – breaking activities down into component parts
- Use procedures to move and position clients in a safe manner
- Work under direct and indirect supervision
- Communicate effectively with clients in a therapeutic or treatment relationship
- Communicate effectively with supervisors and co-workers
- Work effectively with non-compliant clients

### 3.1 Principles of Exercise Therapy

There are three basic principles that can be applied to exercise therapy:

1. Specificity
2. Overload
3. Progression

Becoming familiar with these principles and how they are interrelated will enable you to effectively deliver and monitor an exercise program.

#### **Specificity**

The principle of specificity states that exercise should be specific to the activity you need to perform. In other words, you get what you train for; therefore, in order to get better at a particular skill you must practice that skill. It is important therefore for the treating Physiotherapist to identify where a client's deficits are, and tailor a specific exercise program to a client's needs. For example, if a client has weak quadriceps muscles, they must do specific exercises of the quadriceps to improve their strength.

## Overload

The principle of overload states that a greater than normal load is required to achieve an improvement or adaptation in performance. The amount of overload needed to achieve an improvement in function is determined by frequency (how often), intensity (how hard) and duration or time (how long) you exercise for. For example, if you are trying to increase the strength in a client's quadriceps, you need to make it work more than normal, such as exercising with weights (increased load). As the body adapts to the load, you may need to continue to apply overload by increasing the weights, increasing the repetitions performed of the exercise and increasing the duration of the exercise session or how often they are performed.

## Progression

The principle of progression refers to the gradual increase in the amount of exercise required to achieve an improvement in function or performance. This will vary from client to client depending on their medical condition and exercise capacity. If progression is introduced too slowly, little or no improvement will occur. If it is delivered too quickly, injury can occur and no improvements are made. This principle also stresses the need for rest and recovery.

For example, when trying to increase the strength in a client's quadriceps muscle, you must gradually increase the overload over time to get improvements in strength. However if a client gets very sore you may have progressed them too much, or if there is no improvement, the exercise may not have been progressed enough.



All of these principles should be applied in liaison with the physiotherapist to ensure appropriate selection and progression of exercises.

Before commencing an exercise program with an allied health assistant, the client will have undergone an assessment by a physiotherapist. This will include a thorough review of their medical history and record, a subjective interview, and an objective assessment. On the basis of the assessment findings, a problem list will be formulated from which, in combination with a goal-setting session, a treatment or client care plan can be devised.

### Grades for Manual Muscle Tests

As part of a Physiotherapist's assessment, you may observe them assessing a client's muscle power. This is done by testing different muscle groups and recording a score from 1 to 5. You will not be expected to complete this assessment, but understanding some of the scoring may add to your understanding of a client's exercise goals.

- Grade 0 –No muscle activity detected

- Grade 1 –Palpable contraction, but no movement
- Grade 2 –Full range with gravity eliminated
- Grade 3 –Full range against gravity, with no resistance
- Grade 4 -Full range against gravity and moderate resistance
- Grade 5 -Normal (full range of motion against gravity and maximal resistance)

The type of exercises prescribed for the client will depend upon their muscle power. Examples of intervention may include active, assisted and resisted exercises using weights, powder boards, slings, springs, pulleys, hydrotherapy, various exercise machines such as a treadmill, exercise bicycle and other gym equipment, and Functional Electrical Stimulation (FES).

The physiotherapist will decide when a client will progress their exercise program.

Exercise therapy may be prescribed for many different reasons, and it is important that the physiotherapist tailors an exercise program to each individual. The program may include:

- breathing exercises
- resistance and strength training
- endurance and cardiovascular training
- flexibility and stretching exercises
- mobility exercises or balance training
- a focus on the lower limbs, upper limbs, trunk or whole body

### **Goals of Therapeutic Exercise**

- improve balance, mobility and ambulation skills
- release tight or contracted muscles and soft tissue
- mobilise joints and improve range of motion
- increase breathing capacity
- improve coordination skills
- increase muscle size and strength, and enhance muscle control
- improve cardiovascular fitness and endurance

### **Limitations of Exercise Therapy**

Exercise therapy can only produce results if a client is motivated and compliant with the care plan. It can involve a time commitment and dedication to receive benefits and achieve an optimal outcome. There are also some adverse events that can occur with exercise, which will be discussed later.

Of course, as well as addressing physiotherapist determined impairments, it is vital that any exercise plan is aimed at achieving any specific individual client goals, and that goal setting is carried out jointly with the client and their family or carers.



While a treatment may appear simple, treatment decisions are based on extensive knowledge and education, and well developed clinical reasoning skills. The decision to modify treatment is made by the physiotherapist, in order to ensure client safety at all times.

While as an AHA you are unable to change a client's treatment yourself, you are able to have input into treatment decisions by discussing your work with your Physiotherapist. The information you record and your observations are very important in helping to determine the appropriate treatment for your clients.

### **Contra-indications to Exercise Therapy**

There are some conditions which make it dangerous to exercise, and put the client at risk of sudden cardiac arrest or arrhythmia. A contra-indication is a condition or factor that increases the risks involved in performing an activity. In relation to exercising, an absolute contra-indication means clients with these conditions should not exercise, while relative contra-indications means that clients with these conditions have a higher risk of complications, but may be able to perform exercise at a lesser intensity, with careful assessment, monitoring and medical approval.

Absolute contra-indications to exercise include severe or unstable cardiac conditions, recent acute heart attacks, and acute infection. Clients with medical conditions such as uncontrolled diabetes, uncontrolled blood pressure or heart disease will need to be monitored closely during exercise. It is also important to be aware if a client has a deep venous thrombosis (DVT) or pulmonary embolism (PE), as this may require them to refrain from activity until they have commenced anti-coagulant therapy (blood thinning agents). Similarly, if their blood haemoglobin is low, this will put them at increased risk of fainting during activity. Likewise, if their vital signs are abnormal, this may affect their ability to exercise. In these instances, or if you're ever unsure if a client is appropriate to exercise, you must liaise with the physiotherapist for further guidance.



### Activity 10: Exercise Therapy

Please answer the following questions. You may use the space provided below to write down a draft response. Record your final answer in the Assessment Guide.

1. The physiotherapist, following assessment and demonstration of the task, has asked you to perform sit to stand practice with a client. Why do you think this type of exercise has been prescribed?

---

---

---

---

---

---

---

---

---

---

2. If your client reports that their physiotherapist-prescribed exercise program is too difficult, what would you do? How would you confirm that the program is too difficult? With whom would you communicate this information?

---

---

---

---

---

---

---

---

---

---

## 3.2 Effects and Benefits of Exercise

Physical activity in our daily lives has reduced over time and this has been associated with an increase in health problems such as diabetes and obesity. Regular exercise however has been shown to have many health benefits, and the effects can be both physical and psychological:

Physical Effects Of Exercise
Decreased resting heart rate
Decreased blood pressure
Increased cardiac output
Increased lung volume
Increase in muscle size and strength
Decreased body fat
Decreased blood cholesterol levels
Increased breaking strength of bones & ligaments
Psychological effects of exercise
Decreased tension
Decreased stress
Decreased depression
Decreased anxiety
Increased self-esteem
Increased happiness
Increased social interaction

## Adverse Reactions to Exercise

Although exercise is beneficial, people who have been inactive for some time, are acutely unwell, or suffer from major health problems such as heart disease, can experience adverse reactions to exercise.

Naturally, during any treatment intervention, it is important to closely monitor clients for any form of adverse reaction. It may be important to do pre - and post-exercise measures of blood pressure, heart rate and oxygen saturations, as well as test blood sugar levels in clients with diabetes. This may be done by the nursing staff.

It is important to be aware of some of the signs that might indicate if a client is having an adverse reaction to exercise:

- pallor (skin becoming pale)
- excessive sweating or clamminess
- sudden or excessive shortness of breath not related to increased activity (e.g. increased breathing rate, 'gasping' for breath and etc)
- increased cough or wheeze
- light-headedness or dizziness
- musculo-skeletal pain
- nausea or vomiting
- confusion
- chest heaviness, pain or tightness, angina (referred chest pain originating from the heart)
- rapid heart rate, palpitations or irregular heartbeat\*

\*You may not be able to observe these signs unless the client is wearing a heart monitor. Clients may however complain of palpitations or a 'racing' pulse.



Delayed onset muscle soreness (DOMS) is the pain or discomfort often felt 24 to 72 hours after exercising, which generally eases within 2 to 3 days. This can be quite a common side-effect to any new exercise regime. With a regular exercise program DOMS is lessened. However in some client groups, e.g. clients who have had a stroke, this muscle soreness may impair their function and ability to perform activities of daily living (ADLs). It is important to prevent overworking the muscle groups for these clients.



The National Physical Activity Guidelines for Australians were developed to promote the minimum level of physical activity required for good health. Further information regarding the health benefits of physical activity may be obtained from:

<http://www.health.gov.au/internet/main/publishing.nsf/Content/health-pubhlth-strateg-phys-act-guidelines>



### 3.3 Exercise Program Design

Exercise program design needs to incorporate the basic principles of exercise therapy; specificity, overload and progression. FITT is an acronym used to refer to the variables that can be changed within an exercise program to continue to achieve improvements in function and performance.

FITT stands for:

F – Frequency: how often you exercise

I – Intensity: how hard you exercise

T – Time: how long you exercise for

T – Type: the type of exercise or activity



The physiotherapist is responsible for prescribing the exercise program. Your role as an AHA is to deliver this program and report information back to the physiotherapist about how the client is progressing.

#### Program Phases

To get the most out of an exercise program, the program needs to be designed to achieve the exercise goals with a minimal risk of injury. An exercise program should include the following phases:

**Preparation:** Warming up before exercise helps the body to prepare for activity and reduce the chance of injury. A warm-up should include low intensity movements similar to what will be undertaken in the activity. Cooling-down after exercise is also important to help the body to recover and return to its pre-exercise state. A cool-down should include exercising at a lower intensity. Stretching can also be performed during the warm-up and cool-down, and is best carried out when the muscles are warm and flexible as there is less chance of injury.

**Conditioning:** The conditioning phase is where the basic principles of exercise therapy are used to achieve the desired improvements in performance or function. It's during this phase that the variables within the frequency, intensity, time and type (FITT) principle can be modified to create adaptations.

**Recovery:** Adequate rest and recovery between exercise sessions is important to optimise improvements in performance and prevent injuries from occurring. Hospital

clients who are recuperating from an acute illness can only tolerate short periods of exercise and will require more time to recover.

Adaptation: Refers to the body's ability to adjust to physical demands over time to achieve improvements in performance, skill, and function. The extent of adaptations may vary between clients as individual tolerance to exercise can differ depending on the client's physical and emotional health, therefore it is important that exercise programs are individualised to achieve client's specific needs and goals.

### Program Types

There are many ways to deliver an exercise program. The following are examples of some of the program types that can be used:

Program Type	Example
Continuous	Exercise period is continuous and no rest breaks are taken
Interval	Alternating exercise periods with rest.
Circuit	A group of exercises completed one after the other. May involve a combination of exercises which work different parts of the body.
Sets and Repetitions (reps)	A repetition refers to the number of times a single exercise is carried out. A set refers to a group of repetitions of an exercise in a row. A heavy weight and a low number of reps build strength. A light weight and a high number of reps build endurance.



## Activity 12: Principles of Exercise Therapy

Respond to the case study below. You may use the space provided below to write down a draft response. Record your final answer in the Assessment Guide.



### Case Study: Principles of Exercise Therapy

An 82 year-old hospital client has been in bed for two [2] weeks recovering from community acquired pneumonia. She was previously independent living at home, with no services. She has been able to perform bed exercises for the past week, and has now recovered to the point where she can begin to stand and walk.

Based on your understanding of the principles of exercise therapy, which of the following responses best answer the questions below?

1. Which of the following exercises would be most useful (using the specificity principle) for improving the client's walking ability?
  - a) Static quadriceps exercises
  - b) Bridging exercises
  - c) Sit to stand exercise
  - d) Foot and ankle exercises

The client has now reached the point where she can stand with minimal assistance, and is able to mobilise with a 4 wheeled walker.

2. Based on your understanding of the overload principle, which of the following would the physiotherapist prescribe for improving the strength and endurance of the muscles used for walking?
  - a) Get the client to walk more often during the day
  - b) Get the client to walk for a longer distance each session
  - c) Get the client to walk up and down some stairs
  - d) all of the above



## Activity 12: Principles of Exercise Therapy (continued)

The client has improved to the point where she is ready for discharge home. Prior to discharge, the physiotherapist prescribes a home exercise program.

3. 3. Based on your understanding of the principle of progression, which of the following would most likely form part of the instructions for the home program?
  - a) Get the client to walk more often during the day (frequency)
  - b) Gradually increase the amount of time you walk each day (time)
  - c) After one week, try to walk a little faster for each of your walks (intensity)
  - d) After two weeks, try to find a small hill to walk up (type)
  - e) all of the above

## Key Points

This section of the Learner Guide has covered information related to the topic Therapeutic Exercise. On completion of this section you should be able to:

### Principles of Exercise Therapy

- Describe the three basic principles of exercise therapy: specificity, overload and progression, and how they are applied to an exercise program to improve performance and function.

### Effects and Benefits

- List the physical and psychological benefits of exercise
- Recognise the signs of adverse reaction to exercise
- Outline the National Physical Activity Guidelines and explain how you can incorporate them into your own lifestyle

### Exercise Program Design

- Describe the FITT principle and explain how it can be used to modify an exercise program
- Identify the different phases within an exercise program (preparation, conditioning, recovery and adaptation)
- Outline the differences between the types of exercise programs and how they can be used to achieve the desired therapeutic results.

## SELF-COMPLETION CHECKLIST

Congratulations you have completed the topics for Support the delivery and monitoring of physiotherapy program for mobility

Please review the following list of knowledge and skills for the unit of competency you have just completed. Indicate by ticking the box if you believe that you have covered this information and that you are ready to undertake further assessment.

Essential Knowledge	Covered in topic
The physiological effects and benefits of active, functional exercise	<input type="checkbox"/> Yes
Principles of biomechanics	<input type="checkbox"/> Yes
Basic musculoskeletal anatomy	<input type="checkbox"/> Yes
Basic anatomy and physiology	<input type="checkbox"/> Yes
Anatomical terminology	<input type="checkbox"/> Yes
Therapeutic exercise principles	<input type="checkbox"/> Yes
Principles of exercise program design	<input type="checkbox"/> Yes
Concepts and procedures for stepping down treatment or intervention when client becomes distressed, in pain or wishes to stop	<input type="checkbox"/> Yes
Weight bearing and post fracture implications	<input type="checkbox"/> Yes
Conditions affecting mobility	<input type="checkbox"/> Yes
Risks for decreased mobility	<input type="checkbox"/> Yes
The psychological effects of a disability due to injury or disease and strategies used to cope with this	<input type="checkbox"/> Yes
The signs of adverse reaction to different programs and treatment	<input type="checkbox"/> Yes
Australian Physiotherapy Association (APA) Guidelines	<input type="checkbox"/> Yes
Legal and ethical considerations relevant to allied health	<input type="checkbox"/> Yes
Relevant organisation policy and procedures	<input type="checkbox"/> Yes

Essential Knowledge	Covered in topic
Factors that facilitate an effective and collaborative working relationship	<input type="checkbox"/> Yes
Record keeping practices and procedures in relation to diagnostic and therapeutic programs/treatments	<input type="checkbox"/> Yes



### Activity 13: Questions

For this task you are required to answer the questions that relate to your work as an allied health assistant in delivering and monitoring exercise programs for mobility. You may use the space provided below to write down a draft response. Record your final answer in the Assessment Guide.

#### Questions

4. An allied health assistant is often asked to carry out a mobility program. Outline some of the reasons why this exercise program may be required and the benefits to the client of carrying out such a program.

---

---

---

---

---

---

---

---

5. Outline some of the complications which may be associated with participation in an exercise program.

---

---

---

---

---

---

---

---

Activity continues on the next page





## Activity 14: Practical Work Task

To undertake this assessment activity, you must provide physiotherapy assistance to at least two clients in their home or at an allied health service. The provision of physiotherapy assistance is to be part of a client care plan and all activities are to be confirmed with the supervising physiotherapist. The clients and the physiotherapist must consent to the workplace activity being undertaken as part of your assessment.

You may use the space provided below to write down a draft response. Record your final answer in the Assessment Guide.

You must demonstrate:

- Application of active and passive therapeutic practice and treatment procedures.
- Undertaking activity analysis
- Effective communication with clients, supervisors and colleagues for therapeutic support
- Ability to work under direct and indirect supervision
- Time management skills, personal organisation and establishing priorities
- Safe and effective use of all aids and equipment, including manual handling techniques.
- For each of the clients you have worked with, please provide some information around the following:

What was the background?

- What activities or care plans were you working on?
- What communications did you have with the client, carers, physiotherapist and any other professionals while working with this client?
- What issues did you have to think about in organising your time, work space, equipment and etc?
- What aids and equipment did you use?
- How did you report back at the end of the session?



## WORKPLACE OBSERVATION CHECKLIST

You will be observed assisting with physiotherapy treatments and interventions. You will need to provide support to clients on at least two occasions to demonstrate competence.

Supervisor to date and sign (draft only, please record in the Assessment Guide)

Essential Skills and Knowledge The learner demonstrates the following skills and knowledge:	1 <sup>st</sup> observation date & initial	2 <sup>nd</sup> observation date & initial	Comments	*FER
<ul style="list-style-type: none"> <li>• Demonstrates understanding of benefits of physiological effects and benefits of active functional exercise</li> </ul>				
<ul style="list-style-type: none"> <li>• Demonstrates understanding of the principles of biomechanics, anatomy and physiology</li> </ul>				
<ul style="list-style-type: none"> <li>• Applies anatomical terminology appropriately</li> </ul>				
<ul style="list-style-type: none"> <li>• Demonstrates understanding of therapeutic exercise principles and exercise program design</li> </ul>				
<ul style="list-style-type: none"> <li>• Applies active and passive therapeutic practice and treatment procedures with a group of individuals with specific mobility requirements</li> </ul>				
<ul style="list-style-type: none"> <li>• Demonstrates understanding of the psychological effects of disability due to injury or disease and strategies used to cope with this</li> </ul>				
<ul style="list-style-type: none"> <li>• Demonstrates understanding of the signs of adverse reaction to different programs and treatment</li> </ul>				
<ul style="list-style-type: none"> <li>• Demonstrates understanding of concepts and procedures for stepping down treatment or intervention when client becomes distressed, in pain or wishes to stop</li> </ul>				

Essential Skills and Knowledge The learner demonstrates the following skills and knowledge:	1 <sup>st</sup> observation date & initial	2 <sup>nd</sup> observation date & initial	Comments	*FER
<ul style="list-style-type: none"> <li>Undertakes activity analysis to break activities down to component parts</li> </ul>				
<ul style="list-style-type: none"> <li>Complies Australian Physiotherapy Association (APA) Guidelines</li> </ul>				
<ul style="list-style-type: none"> <li>Works within own role and responsibilities and knows the limitations of self and other allied health team members and nursing, medical and other personnel</li> </ul>				
<ul style="list-style-type: none"> <li>Facilitates effective and collaborative working relationships</li> </ul>				
<ul style="list-style-type: none"> <li>Keeps records according to practices and procedures in relation to diagnostic and therapeutic programs/treatments</li> </ul>				
<ul style="list-style-type: none"> <li>Follows OHS and infection control policies and procedures that relate to the allied health assistant's role in implementing physiotherapy mobility and movement programs</li> </ul>				
<ul style="list-style-type: none"> <li>Uses procedures to move and position clients in a safe manner</li> </ul>				
<ul style="list-style-type: none"> <li>Follows supervisory and reporting protocols of the organisation while working under direct and indirect supervision</li> </ul>				
<ul style="list-style-type: none"> <li>Communicates effectively with clients, co-workers and supervisors</li> </ul>				
<ul style="list-style-type: none"> <li>Uses skills in time management, personal organisation and establishing priorities in work role</li> </ul>				

\*FER – Further Evidence Required

## RESOURCES

The following is a list of websites that you may find useful to gain further information:

- Arthritis Australia: <http://www.arthritisaustralia.com.au/>
- Australian Physiotherapy Association: <http://www.physiotherapy.asn.au/>
- Australian Physiotherapy Council: <https://physiocouncil.com.au/>
- Osteoporosis Australia: <http://www.osteoporosis.org.au/>
- Queensland Health 2016, *Diseases and Infection Prevention*, viewed 5 January 2017, <https://www.health.qld.gov.au/chrisp>
- Queensland Health Occupational Health and Workplace Safety: <http://qheps.health.qld.gov.au/safety/home.htm>
- The National Physical Activity Guidelines for Australians – <http://www.health.gov.au/internet/main/publishing.nsf/content/health-pubhlth-strateg-phys-act-guidelines>



# APPENDECIES

## Appendix 1 Example of care plan

Confidential – Client Profiles and Support Plan		
Client Name: Liam		Date of Birth: 1986
Today's Date: 28/07/2010		Complex Y <input checked="" type="checkbox"/> N <input type="checkbox"/> Next Review Date 28/01/2011
This form to be completed by Care Manager for Complex Care Clients, Service Coordinators for Non-Complex Care Clients. Fields will expand as you type. <b>If issue is not applicable, then N/A should be entered in this field.</b> For guidance refer to AHCS5141 Client Profile & Support Plan - Guide for Completion – use 'Tab' key to move through the form		
Address:	26 Smith Street	
Next of Kin	Mr and Mrs X Name Mr and Mrs X Significant other present: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Dates of last risk assessment (existing client) AHCS9160 Home Risk Assessment Form – 25/07/2010 & 28/07/2010 AHCS9095 Client Manual Handling Risk Assessment Checklist - 25/07/2010 & 28/07/ 2010	6 Month Evaluation Change / No	
Clinical Management Framework Personnel	Occupational Therapist: Spinal Cord Injury Rehabilitation Consultant: Spinal Cord Injury Outreach Nurse: Continence Nurse Specialist: Physiotherapist: G. P.	
Language Spoken at Home	English	
Form of Communication	Verbal	
Interpreter Required: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Specify dialect if relevant:	

<p>Disability: Client Abilities/Limitations</p>	<p>Liam experiences C5/6 incomplete quadriplegia. This has resulted in altered/ limited upper limb function i.e. reduced movement and strength in his arms and altered hand function. Liam relies on a tendonesis grip for many activities of daily living.</p> <p>Liam is able to stand for short periods of time with assistance, however, is unable to walk for more than 3-5 steps depending upon fatigue levels.</p> <p>Liam has altered respiratory function and needs to be reminded to carryout his deep breathing and coughing exercises.</p> <p>Liam experiences severe spasm in his lower limbs, along with altered sensation in his body from the nipple line down.</p> <p>Liam also has a supra-pubic catheter.</p>	
<p>Medical conditions (Fact sheets attached: Yes /1 No <input type="checkbox"/>)</p>	<p>Related to the level of injury Liam is predisposed to experiencing autonomic dysreflexia. He has not experienced this to date.</p>	
<p>Cultural Requirements/Special requisites</p>	<p>Liam has an extremely supportive family where independence is very important and the notion of extended family living is not an expectation. Liam will continue to receive services in the custom built annexe of the family home to ensure privacy and alone time is maintained.</p>	

Living Arrangements	Liam will move into the family home to live with his mother and father. Liam has lived independently for over 5 years. The family home has been modified to ensure that it is wheelchair accessible, and suitable for Liam to promote his independence and privacy,	
Other Relevant Information	Liam had a partner and strong social network prior to his accident. Liam always went to the pub or parties on the weekend and played football at the local football club.	
<p>Client Goals</p> <ol style="list-style-type: none"> <li>1. To be able to go to the local football on Saturday afternoons.</li> <li>2. To be able to go out with his work mates on Friday nights.</li> </ol>	<p><b>6 month evaluation – achieved/not achieved?</b></p>	
<p>Rehabilitation /Care Goals</p> <ol style="list-style-type: none"> <li>1. To increase independence with his personal care routine.</li> <li>2. To increase muscle strength and endurance by implementing exercise routine.</li> <li>3. To reduce muscle spasm and pain in legs by implementing stretching routine.</li> <li>4. To increase overall stamina and reduce fatigue levels by implementing an independent support routine suitable to Liam’s current needs.</li> </ol>	<p><b>6 month evaluation – at discretion of therapist to evaluate program</b></p>	

Treating Therapist	Therapy Goal	Therapy Commencement Date	Therapy Review Date
Occupational Therapist	To increase independence with personal care routine  To increase overall stamina and reduce fatigue levels by implementing an independence support routine suitable to Liam's current needs	28/07/2010	28/01/2011
Physiotherapist	To increase muscle strength and endurance by implementing exercise routine.  To reduced muscle spasm and pain in legs by implementing stretching routine	28/07/2011	28/01/2011
Continence Nurse	To maintain faecal continence by implementing current bowel management plan	28/07/2010	28/01/2011

#### Alerts and Medical Requirements

Coordinators must consult with Care Manager if any of the following care related conditions are part of the client care program	6 month evaluation Change / No Change
Allergies	No Known Allergies

Alerts and Medical Requirements		
<p><i>Neurological Conditions</i> e.g. <i>seizures</i></p>	<p>Autonomic Dysreflexia risk-Emergency. Call an ambulance ph:000 Liam has not experienced this to date. However, some typical signs may include:</p> <ol style="list-style-type: none"> <li>1. Pounding headache</li> <li>2. Rash on neck</li> <li>3. Goose bumps</li> <li>4. Sweating</li> <li>5. Pallor.</li> </ol> <p>Whilst waiting for an ambulance the support worker should try to work out what might be causing this.</p> <ol style="list-style-type: none"> <li>1. Check catheter and empty bag</li> <li>2. Check skin for cuts, prickles, stones in shoes.</li> <li>3. Loosen clothing, particularly belts</li> <li>4. Check if Liam has used his bowels during the previous 24 hours.</li> </ol> <p>Stay with Liam and reassure him until the ambulance arrives.</p>	
<p><i>Respiratory Management</i> e.g. <i>Asthma</i></p>	<p>Liam has reduced ability to inflate his lungs related to his spinal cord injury. This means that Liam needs to be reminded to take deep breaths and cough on a regular basis. Liam has a deep breathing and coughing exercise routine that needs to be implemented twice per day. Liam will take responsibility for this, but may require prompting to perform this, particularly at night when he is tired.</p>	
<p><i>Medication</i></p>	<p>Assistance with medication. Medication is kept in the Webster pack which is located on the top shelf of the kitchen cupboard.</p>	
<p><i>Emergency Management</i> <i>(Ring 000 + Coordinator unless otherwise stated)</i></p>	<p>Support Worker to dial 000 and ask for an ambulance.  Explain that Liam has a C5/6 Spinal Cord Injury and may experience autonomic dysreflexia.  Liam has an emergency pendant alarm</p>	<p><i>Service Advisor consulted Yes</i> <input checked="" type="checkbox"/></p>

Alerts and Medical Requirements		
<i>Behaviour Management</i>	Not applicable	<i>Service Advisor consulted</i> Yes <input checked="" type="checkbox"/>
<i>Family Members as Direct Care Staff for Program</i>		
<i>Family members employed as paid carers</i> yes <input type="checkbox"/> no <input checked="" type="checkbox"/> How many N/A		

Daily Routine		6 Months
Day/Times	Actions	Safe Operating Procedures
Personal Care routine  Mon- Fri 0700-0900  Sat- Sun 0900-1100	Greet Liam and enquire about his night.  Personal Care routine: breakfast medication assistance bowel care urinary catheter management showering/ drying dressing	Ensure that the bed is raised to the hip height of the support worker so that Back attack principles can be used.  Ensure that the brakes are on the commode chair prior to the transfer.  Ensure that the ceiling hoist is in working order and the battery is charged before commencing the transfer.

Daily Routine		6 Months
<p>Therapy Support</p> <p>Mon- Fri 0900- 1100</p> <p>Sat- Sun 1100-1300</p>	<p>Stretching routine</p> <p>Exercise routine</p> <p>Standing Machine</p> <p>Deep breathing and coughing routine</p>	<p>Ensure that the bed is raised to ensure that the height enables the use of back attack principles.</p> <p>Follow the routines as demonstrated in client specific training sessions.</p> <p>Encourage Liam to participate in the actions he can perform independently.</p>
<p>Community Access</p> <p>Monday 1200 – 1500</p> <p>Wednesday 1300 – 1500</p>	<p>Liam is supported to attend the local shops, which are around the corner to buy small grocery items, personal items, clothing and go into the music shop which he loves. The Support Worker walks with Liam whilst he controls his electric wheelchair. Liam will direct where he would like to go and when. He often likes to meet friends for coffee during this time at a local café where his friend works. Liam also likes to eat lunch out at a café.</p> <p>Liam uses this time to go in his wheelchair with the independence Support Worker to the local park which has good accessibility. – he enjoys going out into the fresh air. Liam might decide to go for a walk in the neighbourhood as he takes a strong interest in the building developments in his local area, and follows real estate closely.</p>	<p>Ensure that Liam has his safety belt done up when in the wheelchair. Liam will control the wheelchair; however ensure that manual override instructions are clear before going out. Ensure Liam has his mobile phone with him at all times.</p> <p>If the weather is extremely cold and or wet, Liam will not go outdoors. A maxi taxi can be used. His parents keep cab vouchers which are stored in Liam's bed side drawer.</p> <p>Support Worker not to consume alcohol whilst working with Liam. Ensure that he is comfortable with the situation and be ready to take him home when he decides to go. Ensure Liam's mobile phone is with him.</p>

Daily Routine		6 Months
<p>Community Access Cont.</p> <p>Friday 1600 – 1900</p> <p>Saturday 1300 - 1700</p>	<p>Liam usually likes to go with the Support Worker to the local pub to meet with his Trade mates after work on a Friday. A core group of work friends attend, and Liam requires support with his urinary catheter bag, pressure area care during this time.</p> <p>Liam likes the Support Worker to be part of this social gathering. Liam may ask to go home after a short period depending on his fatigue levels at the end of the week. He might request that a pizza is ordered for home delivery whilst on his way home.</p> <p>The phone number is in his mobile phone.</p>	<p>Liam will go to the local football along the path, as the ground is within 0.6km from his home. If the weather is poor a maxi taxi will be ordered and this can be booked in advance.</p>
<p>Personal Care</p> <p>Mon, Tue, Thurs, Fri 1500 – 1600</p> <p>Wed, Sun 1200 – 1300</p> <p>Sat 1700 – 1800</p>	<p>Assist Liam to transfer from chair to bed. Empty urinary drainage bag and check stoma site</p> <p>Check skin integrity</p> <p>Assist with positioning and pressure area care</p> <p>Place wheelchair on charger</p> <p>Offer Liam a drink</p> <p>Ensure that Liam is set up with the computer, television, music or book</p> <p>Liam might like to rest for this time</p> <p>Assist Liam with his meal on Saturday night as he is usually tired after his day out.</p>	<p>Apply backattack principles for all personal care tasks, particularly transfers and positioning.</p> <p>Liam's family members return home after work and other commitments at approximately 5:00pm at the latest. This is the time the family would prefer not to have support workers in the home.</p> <p>The Support Worker should leave Liam unattended at the end of the shift, ensuring his is comfortable and has access to his phone and his emergency alarm pendant.</p>

Daily Routine		6 Months
<p>Therapy Support</p> <p>Mon – Fri and Sun 2000 - 2100</p>	<p>Stretching routine</p> <p>Deep breathing and coughing routine</p> <p>Liam has chosen not to perform stretching routine on Saturdays (to be reviewed)</p>	<p>Apply back attack principals when supporting Liam to complete his exercise and stretching routine.</p> <p>Use backattacks stances and raise Liam’s bed to hip height.</p>
<p>Personal Care</p> <p>Mon – Sun 2100 - 2300</p>	<p>Assist Liam with oral hygiene, face and hand washing</p> <p>Assist Liam to transfer into bed using hoist.</p> <p>Assist with medication administration</p> <p>Assist Liam with undressing/removal of antiembolic stockings</p> <p>Assist Liam to change into night attire</p> <p>Provide urinary catheter care and attach night bag.</p> <p>Assist with hand hygiene, washing, drying and applying hand cream.</p> <p>Offer Liam a drink</p> <p>Assist with position on his left side.</p>	<p>Apply backattack principals when supporting Liam with his hygiene needs</p> <p>Elevate bed whilst performing personal care tasks whilst Liam is in the bed</p> <p>Encourage Liam to participate in all activities to promote independence.</p>
<p>Inactive Overnight Care.</p> <p>Mon – Sun 2300 – 0700</p>	<p>Liam does not usually require intervention overnight. Liam will call out if he needs assistance with reposition, or stretching to assist with spasms. The Support Worker has a monitor in their bedroom so they can hear Liam when he calls.</p> <p>There is also a backup doorbell that will ring in the Support Worker’s room</p>	

Care/Support Detail	6 month evaluation Change/No Change
<p>Hygiene Bath/Shower</p>	<p>Liam showers daily on a commode chair with a safety belt in place. Ensure the bathroom is warm prior to commencing the shower routine.</p> <p>Adjust the running water and check that the temperature is safe as Liam has altered sensation in his trunk and lower limbs.</p> <p>Ensure that Liam is wheeled into the shower recess safely and that his legs are safely placed on the foot plates of his commode chair.</p> <p>Liam does not use soap as his dries out his skin. He likes to use a soap free shower gel.</p> <p>Encourage Liam to wash the areas he can manage, these are face, trunk arms, hands, between fingers and legs.</p> <p>Liam requires assistance to wash his lower legs, back and bottom.</p> <p>Liam washes his hair every second day and will direct the Support Worker as to when this is to be completed.</p> <p>Liam likes to have a few minutes without the Support Workers involved in his shower routine.</p> <p>Respect his privacy and use this time to change linen and place dry towels on his bed to be used once routine is completed.</p> <p>Ensure Liam washes the stoma site of the supra pubic catheter and rinse well. Liam will turn off the shower.</p>

Care/Support Detail	6 month evaluation Change/No Change	
	<p>Support Worker to provide Liam with 2 towels to keep him warm and commence the drying routine.</p> <p>Liam will dry his own pace, upper-arms, underarms, chest, stomach, groin, upper legs and S.P.C. stoma site.</p> <p>Assist Liam to dry his lower legs, back, and check under his arms.</p> <p>Liam will clean his teeth at the basin prior to being transferred back to bed to complete the drying routine.</p> <p>Transfer Liam onto the bed using the ceiling hoist.</p> <p>Once on the bed Support Worker to assist Liam to roll onto his left side to continue drying his back, bottom and using this time to look at his skin and report any red areas, or skin breakdown to Liam immediately.</p> <p>Roll Liam onto his back once completed and dry under his arms and between his fingers. Ensure Liam's privacy is maintained during this process and he is kept warm.</p>	
Dressing/Grooming	<p>Liam chooses his own clothing and prefers to wear loose comfortable clothing.</p> <p>Liam is able to put on upper body clothing, but will need assistance with his boxer shorts and tracksuit pants. Liam needs full assistance to put on antiembolic stockings that assist with the swelling in his lower legs. Ensure these are not</p>	

Care/Support Detail	6 month evaluation Change/No Change	
	<p>too tight and applied smoothly without creases.</p> <p>Support Worker to ensure that there are no creases or rolled over waistbands in his clothing that might cause pressure areas.</p> <p>Assist Liam to put on his shoes, ensuring they are inspected for creases and small objects prior inside them prior to assisting Liam to put these on.</p> <p>Liam prefers to shave later in the morning and will perform this task. Liam will request that the electric shaver is given to him by the Support Worker. Liam might request the Support Worker to clean the razor.</p> <p>Liam will apply deodorant, and to do his <i>Oral Hygiene</i> hair once his is transferred back into the wheelchair.</p>	
Oral Hygiene	<p>Liam will brush his own teeth at the basin once the shower/dressing routine is completed.</p> <p>Liam attends dental appointments annually.</p>	
Urinary Continence Management	<p>Liam has a supra pubic catheter. The Continence Nurse manages the S.P. C. changes.</p> <p>Support Workers must empty the urinary drainage bag if requested to do so.</p> <p>Standard precautions are to be used for assisting Liam with</p>	

Care/Support Detail	6 month evaluation Change/No Change	
	<p>catheter care.</p> <p>Ensure that gloves are worn prior to emptying the drainage bag. A jug is kept in the bathroom next to the toilet, use this to empty the urine out of the bag and discard into the toilet. Rinse the jug and empty the contents into the toilet. Flush the toilet, remove and discard gloves. Wash hands.</p> <p>The SPC site is to be inspected twice each day, report any concerns such as: redness, inflammation, discharge to Liam for monitoring and follow up with the health professionals.</p> <p>Liam might experience problems with catheter blockages. If this occurs call the Continence Nurse and or an ambulance.</p> <p>Liam will assess his urine for increased sediment, debris and blood. Report any noted changes to Liam.</p> <p>The Continence Nurse will manage the catheter changes which occur every 6-8 weeks.</p>	
Bowel management	<p>Liam has a bowel management plan which has been developed by the Spinal Cord Injury Nurse.</p> <p>Liam takes senokot tablets every night before going to bed and has assisted bowel care every second morning. Liam will direct this.</p> <p>Bowel Care:</p> <p>Assist Liam to roll onto his left side and insert a durolax</p>	

Care/Support Detail	6 month evaluation Change/No Change	
	<p>suppository into his rectum with a lubricated gloved index finger. Once completed, remove and discard glove, roll Liam onto his back with a bluey/protective sheet underneath his bottom and wash hands.</p> <p>Liam will have breakfast whilst waiting for the suppository to work. Liam will direct the Support Worker when it is time to be transferred onto the commode chair. This occurs approximately 30 minutes after breakfast.</p> <p>Transfer Liam onto the commode chair using the ceiling hoist.</p> <p>Wheel Liam over the toilet for him to open his bowels. This may take up to 30 minutes.</p> <p>Encourage Liam to assess the amount of faeces that has been passed into the toilet.</p> <p>Liam does not require a rectal check.</p> <p>Assist Liam to clean his bottom prior to the showering routine commencing.</p>	
Pressure Care	<p>Liam is responsible for his own pressure area care.</p> <p>He will perform his pressure relieving techniques when sitting in the wheelchair. However, he might ask for assistance and a change in position.</p> <p>Liam has a custom-made pressure relieving cushion on his wheelchair at all times. Support</p>	

Care/Support Detail		6 month evaluation Change/No Change
	<p>Worker to ensure that this is clean, intact and placed in the correct position prior to transferring Liam into the wheel chair.</p> <p>When Liam is resting in bed he has a pressure relieving mattress, and may require one turn overnight. Liam will request when it is necessary for the support worker to assist him with this</p>	
Mobility/Positioning	<p>Liam experiences incomplete quadriplegia so has some limited movement in his legs. Liam is able to move his legs using his arms as a lever to change pressure points and can move out of the wheelchair to stand for a few minutes on a good day. Liam will direct when this is possible. Liam sits in the electric wheelchair most of the time when sitting out of bed as he finds this most comfortable.</p> <p>Liam requires assistance with positioning in the bed, particularly when settling for the night. Liam also requires assistance with a position change overnight, particularly if he is experiencing leg and abdominal spasms.</p>	
Manual Handling/ Transfers	<p>Liam transfers using a sling and ceiling hoist. The sling is kept on a hook on the back of his bedroom door. Liam requires the 2 red loops to be attached to the hoist and the 2 blue loops. Check that the loops are securely attached to the hoist prior to</p>	

Care/Support Detail	6 month evaluation Change/No Change	
	<p>commencing the transfer.</p> <p>Liam will use the hand controls to move the hoist. The Support Worker needs to supervise the transfer and assist Liam with correct positioning when he is lowered into the commode chair or wheelchair.</p> <p>Liam also has a standing frame to promote weight bearing which is used as part of his exercise routine.</p> <p>Liam requires assistance and supervision with all transfers - refer to the client manual handling risk assessment for more detail.</p>	
Supervision/Safety Issues	<p>Liam requires supervision with all transfers and particularly when he experiences spasms. Liam had one situation in hospital when the leg spasms made him fall out of bed. This has resulted in Liam requiring reassurance and confidence in relation to his safety during these episodes.</p> <p>Liam can be left alone for 1-2 hours if he is in bed, comfortably positioned, has access to the phone and emergency alarm.</p>	
Meal Preparation/ Dietary Preferences/ Meal Assistance	<p>Liam likes to supervise meal preparation. His mother likes to cook the evening meal however, Support Worker might need to assist Liam to prepare snacks, make hot drinks as requested.</p> <p>The Support Worker prepares breakfast. Liam likes to have a cup of tea when he wakes up</p>	

Care/Support Detail	6 month evaluation Change/No Change	
	<p>followed by cereal and fruit.</p> <p>Liam may ask for a cup of coffee before he commences his personal care routine. This is useful to stimulate his gastrocolic reflex which assists with the bowel routine.</p> <p>Liam prefers to eat meat and vegetables, fruit, etc.</p> <p>However, on Friday nights he prefers pizza after he has been out with his friends. He also likes to drink soft drinks.</p> <p>Liam dislikes spicy food and dislikes fish.</p> <p>Liam uses adaptive equipment to assist him with meal preparation. Assistance might be required related to fatigue.</p>	
Community Access/ Transport	<p>Community access is an important part of Liam's Independence Support Plan. Liam uses his electric wheelchair to travel to the local shops, football club, etc.</p> <p>However, if transport is required for longer distances or related to poor weather maxi taxis are to be booked and the Support Worker travels with him. The taxi vouchers are managed by Liam and stored in his bed side drawer.</p> <p>Liam is awaiting funding for a modified vehicle.</p>	

<b>Care/Support Detail</b>		<b>6 month evaluation Change/No Change</b>
Household Tasks	<p>Wash dishes</p> <p>Clean bathroom</p> <p>Change bed linen and Liam's clothes</p> <p>Hang washing out onto the clothes line</p>	
Shopping	<p>Assist Liam to purchase small grocery items during community access shifts, personal items. Liam's mother does the food shopping.</p> <p>Assist Liam to shop for clothes, shoes as directed by him.</p>	
Financial Dealings – description of tasks receipt/process	Liam is responsible for all his financial affairs. If assistance is required, his father will support him with this.	
Other	Liam likes to have some down time when support workers are present but not directly with him. During these times, household tasks can be performed as per the home care checklist.	
Name	Jane Smith	
Position	Service Advisor	
Date	28/07/2010	
Signature		

## REFERENCES

Darling Downs Hospital and Health Service 2016, Safe Crutch Walking, viewed 1 December 2016, <http://qheps.health.qld.gov.au/darlingdowns/pdf/fact/fact-179.pdf>

Deluzio, K 2010, Gait Cycle, Queens University, Faculty of Applied Science, Mechanical and Materials Engineering, 2010, Ontario, Canada, viewed 5 January 2017, <http://my.me.queensu.ca/People/Deluzio/Gait.html>

Fehrenbach M & Herring S 2002, Illustrated Anatomy of the Head and Neck, W.B. Saunders, Philadelphia, PA.

Herlihy B & Maebius N 2000, The Human Body in Health and Illness 2nd edn, W. B. Saunders, Philadelphia, PA.

Merriam-Webster 2009, Gait, Medline Plus, Merriam-Webster Medical Dictionary, viewed 16 February, 2010, <http://www2.merriam-webster.com/cgi-bin/mwmednlm?book=Medical&va=gait>

Metro South Health 2015, Home Visiting Safety-Community Based Services pr2014-26, viewed 8 February 2017, <http://docs.sth.health.qld.gov.au/document/metro-south-health/pr2014-26>

Micheau, A & Hoa, D 2009, Planes and motions used in anatomy, IMAIOS, Montpellier, France, viewed 5 January 2017, <https://www.imaios.com/en/e-Anatomy/Limbs/Planes-and-motions-diagrams>

Public Service Commission 2010, Code of Conduct- For the Queensland Public service, Public Service Commission Brisbane, Queensland, viewed 24 November 2016, <https://www.qld.gov.au/gov/code-conduct-queensland-public-service>.

Queensland Health 2014, Patient Safety Health Service Directive

QH-HSD-032:2014 , Queensland Health, Brisbane, Queensland, viewed 24 November 2016, <https://www.health.qld.gov.au/directives/docs/hsd/qh-hsd-032.pdf>

Queensland Health 2014, Performance and Development, viewed 5 January 2017, <https://www.health.qld.gov.au/system-governance/policies-standards/doh-policy/policy/qh-pol-189.pdf>

Queensland Health 2014, Work Health and Safety Policy, Queensland Health, viewed on 24 November 2016, <https://www.health.qld.gov.au/system-governance/policies-standards/doh-policy/policy/gh-pol-401.pdf>

Queensland Health 2015, Department of Health Policy Framework, Queensland Health, Brisbane Queensland, viewed 28 November 2016, <https://www.health.qld.gov.au/system-governance/policies-standards/types/default.asp>

Queensland Health 2016, *Diseases and Infection Prevention*, viewed 5 January 2017, <https://www.health.qld.gov.au/chrisp>

Queensland Health, National Safety and Quality Health Service Standards, viewed 28 November 2016, <http://qheps.health.qld.gov.au/psu/safetyandquality/standards/default.htm>

Royal College of Nursing (RCN) 1996, Code of Practice for Client Handling. London: RCN.

Siamak, N 2007, Hemoglobin, MedicineNet.com, WebMD, New York, New York, viewed 8 February 2017, <http://www.medicinenet.com/hemoglobin/article.htm>

State Government of Victoria 2009, Anaemia, Better Health Channel, State Government of Victoria, Melbourne, Victoria, viewed 5 January 2017, <http://www.betterhealth.vic.gov.au/bhcv2/bhcarticles.nsf/pages/Anaemia>

The Australian Council on Healthcare Standards (ACHS) 2015, National Safety and Quality Health Service Standards Program, The Australian Council on Healthcare Standards, Ultimo, NSW, viewed 5 January 2017, [http://www.achs.org.au/media/102238/achs\\_nsqhss\\_brochure\\_v3\\_2015.pdf](http://www.achs.org.au/media/102238/achs_nsqhss_brochure_v3_2015.pdf)

Wellness & Lifestyles Australia 2009, Physio Assistants/Aides, Wellness & Lifestyles Australia Ltd, Kent Town, SA, viewed 5 January 2017, <https://wellnesslifestyles.com.au/articles/>