Allied Health Professions' Office of Queensland

Physiotherapy Learner Guide

Deliver and monitor a client-specific exercise program

April 2017

Queensland Government

Physiotherapy Learner Guide – Deliver and monitor a client-specific exercise program

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

For more information contact:
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An electronic version of this document is available at
https://www.health.qld.gov.au/ahwac/html/ahassist-modules/

Acknowledgement

ClinEdQ, Allied Health 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

Figures

INTRODUCTION

Welcome to the Learning Guide for Deliver and monitor client-specific exercise program.

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:

- Organisation Practices
- Body Systems
- Therapeutic exercise

The Learner Guide has six sections:

- Introduction
- Learning Topics
- Workplace Observation Checklist
- References
- Resources and Websites
- 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

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 a client-specific exercise program, you will be required to perform the following tasks:

Prepare for delivery of a client-specific exercise program by:

- Obtaining information (which may include care plans, exercise plans, treatment plans or the physiotherapist's instructions) about the client-specific exercise program from the physiotherapist
- Determining client availability according to organisation protocols
- Gathering the equipment to deliver the client-specific exercise program (which may include upper or lower limb, trunk or cardiovascular), in line with client needs and specifications of the physiotherapist

Deliver an exercise program based on a treatment plan by:

- Confirming the client's understanding of the exercise program based on the treatment plan prepared by the physiotherapist
- Obtaining informed consent from the client before commencing the exercise program
- Reporting any client misunderstanding or confusion to the physiotherapist in a timely manner
- Guiding the client to complete the exercise program as directed by the physiotherapist
- Identifying and noting any difficulties the client experiences completing the exercise program, using observation, knowledge of biomechanics, and knowledge of the musculo-skeletal system, and reporting to the physiotherapist in a timely manner
- Identifying and managing client compliance issues, including subjective and objective reporting of client response to the program, and report to the physiotherapist in a timely manner
- Providing feedback to the client to reinforce client understanding and correcting application of the exercise program
- Working with the client to plan any follow up exercise sessions and dates
- Seeking assistance when the client presents with needs or signs outside the limits of own authority, skills or knowledge
- Reporting client difficulties to the supervising physiotherapist for advice before continuing the prescribed exercise program

Assist with mobility and movement programs with clients who are unable to actively participate by:

- Monitoring 24-hour posture management and identifying any adjustment requirements according to directives from the physiotherapist

- Assisting the physiotherapist to complete passive movement requirements
- Monitoring respiratory care requirements and conducting necessary action within the prescribed treatment plan and scope of role and responsibilities as defined by the organisation
- Monitoring action to control limb oedema and reporting any changes to the physiotherapist in a timely manner
- Correctly positioning the client according to the client's condition, modesty and treatment or program activities and according to the directive of the physiotherapist
- Talking to the client about treatment or program activities and seeking feedback about comfort and understanding during the session
- Creating a treatment environment that fosters clients to ask questions about progress and activities
- Taking appropriate and prompt action in response to any indicators of adverse reaction to the treatment according to relevant organisation protocols and guidelines

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
- Checking and maintaining equipment according to organisation protocols, manufacturer's guidelines and physiotherapist's guidelines
- Reporting equipment faults to the appropriate people
- Labelling or tagging equipment faults, and remove from use if unsafe or not working and inform staff in line with organisation procedures

Document client information by:

- Using accepted protocols to document information relating to the exercise program in line with organisation requirements
- Using appropriate terminology to document client response, outcomes and identified problems related to the therapeutic exercise program

Comply with supervisory requirements by:

- Assisting with exercise program according to the instruction of the treating physiotherapist
- Providing client progress feedback to the treating physiotherapist
- 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

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
1. Organisation Practices	▪ Relevant organisation policies and procedures ▪ Relevant national and state and territory legislation and guidelines, including Australian Physiotherapy Association (APA) Guidelines ▪ Roles, responsibilities and limitations of yourself and other allied health team members, nursing, medical and other personnel ▪ A working knowledge of record keeping practices and procedures in relation to diagnostic and therapeutic programs or treatments ▪ Occupational Health and Safety policies and procedures that relate to the allied health assistant's role in implementing mobility and movement programs prescribed by the physiotherapist ▪ Infection control policies and procedures that relate to the allied health assistant's role in implementing mobility and movement programs prescribed by the physiotherapist ▪ Supervisory and reporting protocols of the organisation ▪ A working knowledge of factors that facilitate effective and collaborative working relationships
2. Body Systems	▪ Principles of biomechanics ▪ Basic musculo-skeletal anatomy and physiology ▪ Anatomical terminology ▪ A basic understanding of the anatomy and physiology of the skin and the principles of pressure area care ▪ A basic understanding of the reaction to pain within the body ▪ Disease processes relevant to the client groups ▪ Medical terminology required to operate effectively
3. Programs and Treatments	• A basic understanding of the principles of posture management • A basic understanding of the signs of adverse reaction to different programs and treatment • A working knowledge of the equipment and materials used in different programs and treatments • A working knowledge of the monitoring requirements for different programs and treatments • Therapeutic exercise principles • Contraindications for exercise therapy • Client care plans, goals and limitations of exercise therapy

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 manual handling required to assist the client
- Work under direct and indirect supervision
- Communicate effectively with clients in a therapeutic or treatment relationship
- Communicate effectively with supervisors and co-workers

1.1 Roles and Responsibilities

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

The role of the allied health assistant is to support and assist the physiotherapist in providing client care. The Australian Physiotherapy Association (APA) defines a physiotherapy 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 allied health assistant 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 physiotherapists, allied health assistants 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 have appropriate competence
- being aware of and complying with relevant aspects of the ethical principles and code of conduct of the physiotherapy profession (Australian Physiotherapy Association, 2008) and the employer

Roles and responsibilities of physiotherapists working with assistants include:

- remain at all times responsible for the delivery of the prescribed treatment that is provided by the allied health assistant
- take responsibility to instruct and educate assistants, delegate to assistants, and evaluate the implementation of delegated tasks, supervising as necessary
- have an understanding of the role of the allied health assistant and ensure delegated tasks are within the allied health assistant's scope of practice and level of competence
- recognise and promote appropriate professional 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 allied health assistant, 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 members' 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 etc

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

- Tasks that must be done and you cannot put off until another time
- Tasks that are important that you can put off for a short time but should be completed before you leave for the day
- Tasks that are not important and can be done when you have time and have completed the tasks from the two groups above. These are also 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. You also need to include the time it takes you to:

- fill out required paper work
- travel (if required) or time to get to your next client
- gather needed resources or equipment
- set up environments and rooms
- assist clients to fill out paper work
- answer any questions a client will have (extra time for new clients)
- clean any equipment and aids used including other infection control requirements
- have time for meal breaks

Time management involves how you choose to use your time. This 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

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.
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. What are the benefits to you and your clients because of this strong working relationship?

Activity continues on the next page

Activity 1: Roles and responsibilities of an allied health assistant (continued)

Now reflect on your experience with time management, personal organisation and establishing priorities. Answer the following question.

3. You have looked at your workload for the day and realise that you will not have enough time to complete all your scheduled appointments. Explain how you would prioritise your workload.

1.2 Policies and Procedures

Policies and procedures 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 Client 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 a client-specific exercise program. 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 any additional Queensland Health Policies that 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 clients/clients/carers when conducting home visits. http://qheps.health.qld.gov.au/metrosouth/policy/docs/procedure/PR2015-57.pdf

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 (2010) to ensure a safe and healthy work environment and reduce the risk of work related injury and illness.

You can find the Queensland Health OHS 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 Queensland Health's client handling guideline to ensure risks associated with client handling are systemically identified, assessed and eliminated or controlled. This approach is based on the No Lift principles that are

supported by the Royal College of Nursing, United Kingdom and Australian Nursing Federation that 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.'
(Royal College of Nursing, 1996)

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

As an allied health assistant, 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 a client-specific exercise program. 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

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, for example: 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 healthcare 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 (for example, 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)
- sharps 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 (for example, cleaning equipment and workspace)

While delivering an exercise program in your role as an allied health assistant, 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.

Further information regarding Queensland Health Infection Control Guidelines can be found at: https://www.health.qld.gov.au/chrisp/

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 needed 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 manger 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 your work performance are a concern (Queensland Health Human Resources Policy G9, June 2014 viewed 1 December 2016).

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

Activity 2: Policies and procedures

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 why it is important to be aware of relevant policies and procedures within your work area and within Queensland Health.

2. Describe how you would access relevant policies and procedures such as infection control, occupational health and safety and incident management policies. Consider access in terms of resources within the department, people and relevant technology.

3. You have come into contact with a client who has methicillin resistant Staphylococcus aureus (MRSA) colonised in the leg wound and has been using a wheelie walker. What infection control procedure should you use before another client can use the walker? You may find it useful to refer to the Queensland Health internet site on: https://www.health.qld.gov.au/chrisp/

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 allied health assistant 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 health professionals
- meetings with carers or other relevant individuals (for example, 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, that is: in order of time and date
- Keep it to the point, accurate and relevant
- ensure there is a client label or identification on each page—always check that it is the correct client
- use black pen only
- ensure your writing is readable
- avoid spare lines and gaps within and between the 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 24 hour time, For example, 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; for example ‘as per the Allied Health Professional’ or ‘as per written guidelines or protocol’
- sign entries and clearly print your name and designation (title)
- avoid use of non-standard abbreviations and terms
- record facts only—emotional statements or moral judgements should not be recorded
- avoid general terms—be specific
- if errors are made:
- draw a single neat line through the writing. Sign and date this change. If the whole entry is an error, write ‘Written in error’ or ‘Written on wrong chart’ etc
- do not use white out (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

vivir

PHYSIOTHERAPY ASSESSMENT

Diagnoses / PHx: STML, GORD, HTN, (L) # NOF ('09) + hemiarthroplasty, TIA, OA, OP

MOBILITY & LOCOMOTION (ACFI 2)

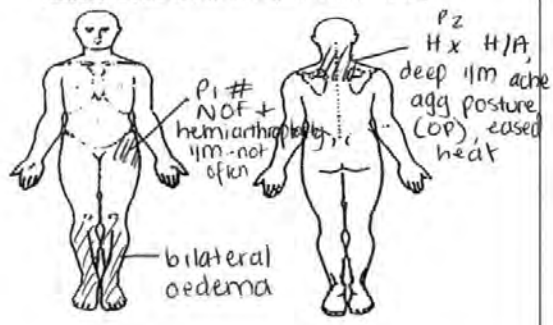
Activity:	Assistance Required:						Equipment Required
Bed Mobility:	(Independent)	Supervision	Assistance	x1	x2	x3	
On / Off Bed:	Independent	Supervision	(Assistance)	(x1)	x2	x3	adjust bed head (EAB)
Transfers (sit-to-stand):	Independent	Supervision	(Assistance)	(x1)	x2	x3	1A + WB + 4WW
Locomotion:	Independent	Supervision	(Assistance)	(x1)	x2	x3	1A + WB + 4WW
Safe Walking Distance:	50m						
Description of Locomotion:	Step through gait pattern trendelenberg, ↓ balance, short steps						

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 Left	Joint Range Right	Strength Left	Strength Right
Shoulder Fl.	Func. ROM	Func. ROM	3+/5	3+/5
Should Abd.	↓	↓	↓	↓
Elbow Fl.				
Elbow Ext.				
Wrist Fl.				
Wrist Ext.				
Hip Fl.	100°	Func. ROM	3/5	3+/5
Hip Ext.	20°	↓	↓	↓
Knee Fl.	Func ROM		3+/5	
Knee Ext.	↓	↓	3+/5	↓
DF	5°	5°	3/5	3/5
PF	Func. ROM	Func. ROM	3+/5	3+/5
Grip			3+/5	3+/5
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	Location:	
Oedema:	Nil	Mild	(Mod.)	Severe	Location:	lower legs
Pain:	Nil	Mild	(Mod.)	Severe	Location	Neck + (L) hip (groin)

CARDIO-RESPIRATORY STATUS (circle):

Breathing:	(NAD)	SOBOE		SOB @ Rest	
Expansion:	(Good)	Fair	Poor	L>R	R>L
Cough:	(Nil)	Dry	Moist	Strong	Weak
Air Entry:	(Good)	Fair	Poor	L>R	R>L

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:
18/07/2011	Lauren Madden	[signature]

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physio podiatry dietetics occupational therapy

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

vivir

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 + ↑WW to all meals. Encourage to take bigger steps. • PTA to mobilise 2 x week IA + WB + ↑WW 50m + progress as able
Poor (L) hip strength	Improve (L) hip strength	• PTA to complete exercises 2 x week - bridging 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 ache + H/A	Manage pain	• Apply heat pack to neck at least 3 x 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 + prompt lie → sit, IA + WB + ↑WW t/f 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:
	Are the Goals: ☐ Being achieved ☐ Partially achieved ☐ Not being achieved		Name: ..... Signature: .....
	Are the Goals: ☐ Being achieved ☐ Partially achieved ☐ Not being achieved		Name: ..... Signature: .....
	Are the Goals: ☐ Being achieved ☐ Partially achieved ☐ Not being achieved		Name: ..... Signature: .....

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

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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.

You will also be required to document any risks, hazards or incidents within the workplace. You need to be familiar with the policy and procedures for reporting incidents involving staff, clients and visitors. It is essential that you know how to use your workplace's Clinical Incident Reporting System and know where to find the Occupational Health and Workplace Safety information on Queensland Health intranet site, QHEPS.

This information can be found at:

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

Activity 3: Documentation

Read the following case study and complete the relevant chart entry for the case study.

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

Case Study: Documentation

Today, Jeremy (a 19-year-old male, 4 weeks post left ankle sprain) attends physiotherapy and you are to carry out the following exercises, at level 4 on the exercise pathway:

– heel raises, 2 sets of 10,
– toe raises, 2 sets of 10, standing on the affected leg
– single leg stance, (SLS) 10 reps for as long as possible,
– calf stretches, 2 reps of 30 seconds,
– balance board for 2 minutes

Your screening assessment of performance includes:

– Calf length: facing the wall with knee bent and touching the wall - measure distance of toe to wall
– Time of SLS

The pathway states that when the client can carry out 10 second SLS on the affected side, they are then to be referred to the physiotherapist to commence quarter squats in SLS.

Activity continues on the next page

Activity 3: Documentation (continued)

Case Study: Documentation (continued)

Jeremy completes all exercises and manages 11 seconds SLS on the left side. The toe to wall distance is 3cm. You ask the physiotherapist to review the client to progress the exercise as per the pathway. The physiotherapist checks Jeremy's technique in doing the new exercise and then leaves you to complete 2 sets of 10 quarter squats in SLS, with the direction that if Jeremy completes that with no concerns, then the new exercise is to replace SLS in his Home Exercise Program (HEP).

Jeremy reports discomfort at the front of the ankle during the calf stretches and balance board activities, but he completes the new exercises with no concerns. His next appointment is in one week, and he is to continue his HEP 3 times daily.

Complete a relevant chart entry for Jeremy.

Confidentiality

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

These are some general guidelines for maintaining client confidentiality:

- do not allow anyone to touch or look at a client's 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, client or employee when it is part of your job, it is lawful, or when specific consent is given
- do not e-mail client information via public networks (that is, non Queensland Health e-mail 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

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 completing 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 relevant National and State/Territory legislation and guidelines, including the Australian Physiotherapy Association guidelines and the Code of Conduct.

Policies and Procedures:

- Outline the difference between a policy and a procedure
- 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 Code of Conduct
- Explain incident reporting and documentation

2. Body Systems

This topic covers information about:

- Anatomy
- Positions and Planes of Motion
- Anatomical Movements
- Biomechanics
- Physiology
- Pain and Disease
-

Activities in this topic cover the following essential skills:

- Apply therapeutic exercise practices
- Undertake activity analysis—breaking activities down into component parts
- Work under direct and indirect supervision
- Communicate effectively with clients for therapeutic support
- Communicate effectively with supervisors and co-workers
- Work effectively with non-compliant clients

2.1 Anatomy

Anatomy is the scientific study of the structure of the body. Having a basic knowledge of normal anatomy gives you an understanding of how the body works and allows you to recognise abnormalities of the body 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 density is associated with fractures, most commonly in the spine, hip and wrist. Older clients who spend long periods of time bed ridden or immobile are at increased risk of bone mineral loss. Regular weight bearing exercise, such as walking, is important to prevent or 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/gcse_anatomy/bones.php.

Activity 4: Identify the major bones of the human skeleton

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. Why is it important to have an understanding of the major bones of the human body?

Activity continues on the next page.

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.

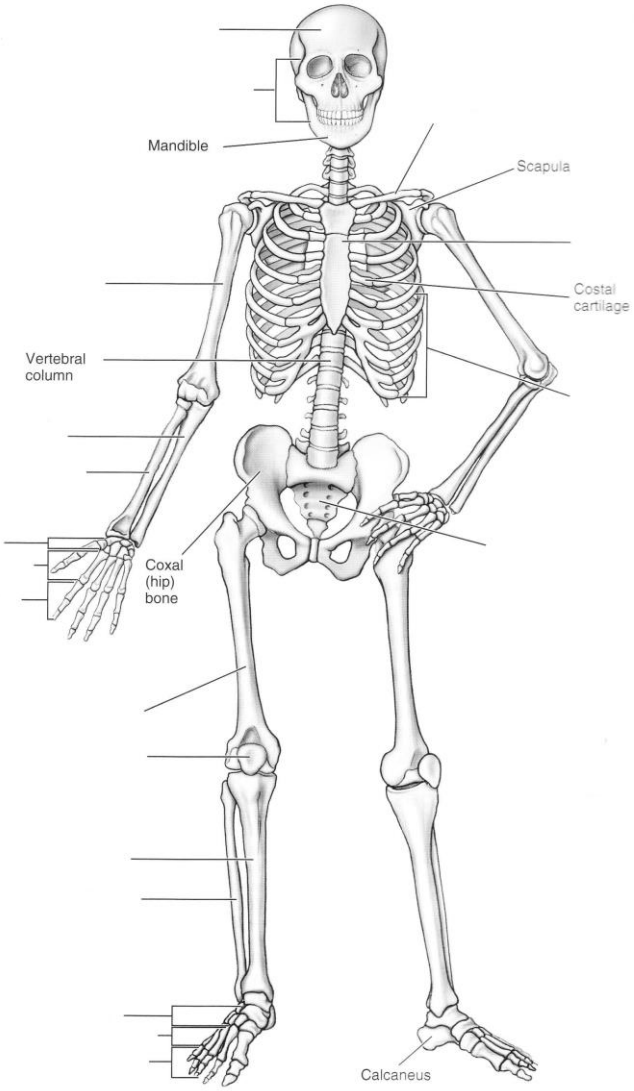


Figure 6 The Human Skeleton (Herlihy & Meabius, 2000).

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

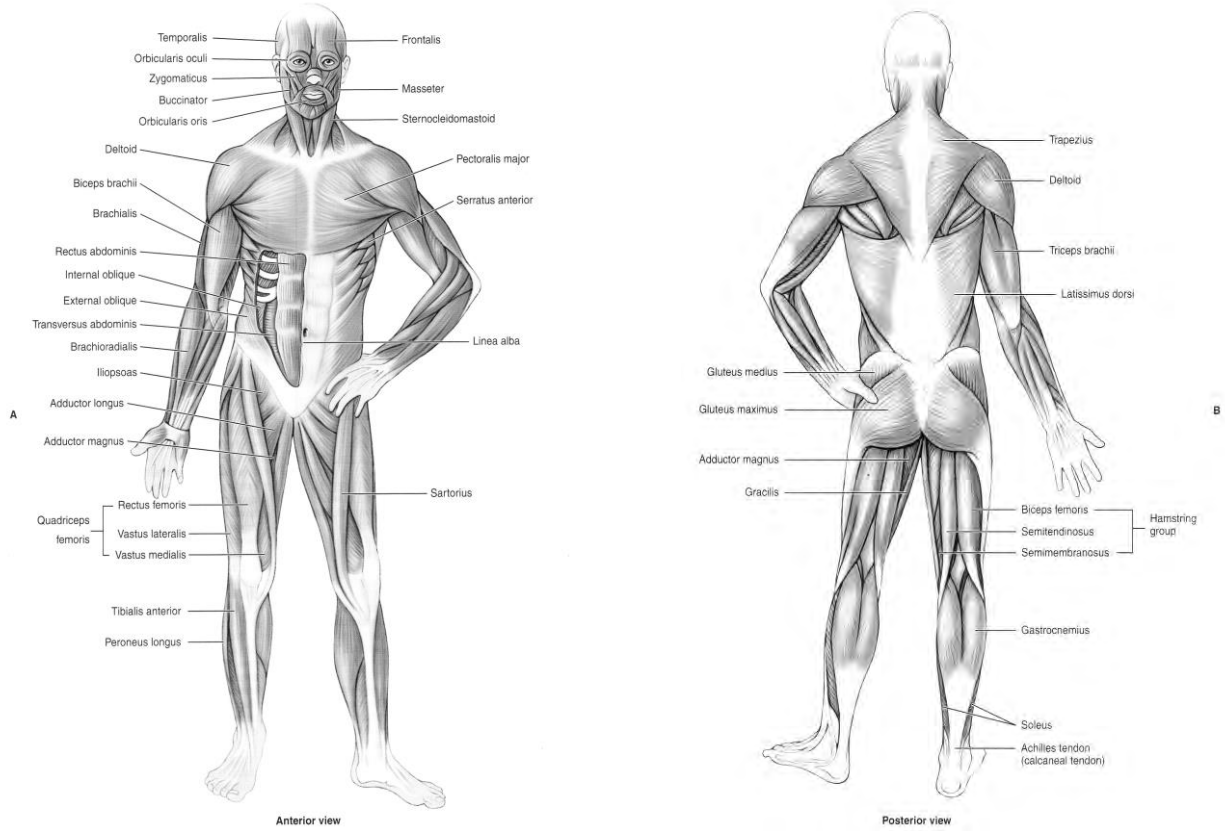


Figure 7 Major skeletal muscles of the human body (Herlihy & Meabius, 2000).

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, for example: 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 or 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 the bones. Different types of joints allow different amounts of movement.

Joints can be classified into three groups according to their structure: fibrous, cartilaginous, and synovial.

Joint Structure	Function	Example
Fibrous	Bones joined by fibrous tissue. Allow little to no movement.	Skull sutures—join the bones of the skull together.
Cartilaginous	Bones joined by cartilage. Allow a small amount of movement.	Pubic symphysis—joins the pelvic bones together.
Synovial	Bones separated by a joint cavity that contains fluid. Allow 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—surrounding the joint and made up of two layers: an outer layer that provides stability to the joint; and an inner layer that secretes synovial fluid to lubricate the joint surfaces
- Ligaments—to 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 is 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 usually affecting the larger weight-bearing joints (for example, hips and knees), but also affects other joints. In healthy joints, the articular cartilage is smooth, whereas in OA, the cartilage breaks down and becomes thin and rough which affects the joint's ability to move smoothly. 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 consistent descriptions of anatomical structures, specific anatomical terms are used. While working as an allied health assistant, you will need to be familiar with these anatomical terms.

It is useful to consider the body in a standard position to allow the relative position of parts of the body to be described accurately and without confusion. This standard position is called the **anatomical position**.

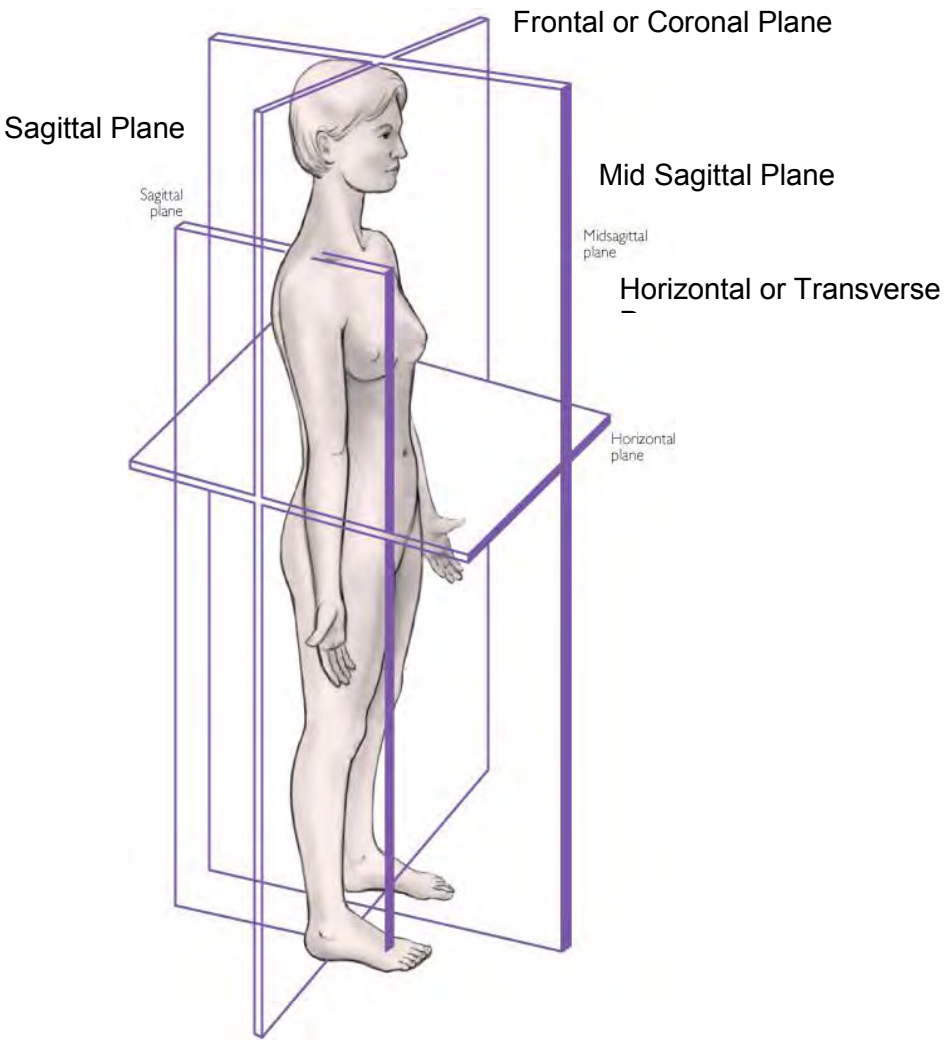


Figure 8 Anatomical planes of the human body (Fehrenbach & Herring, 2002)

A person in the anatomical position is standing up straight. The 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 into sections:

- **Horizontal or transverse plane**—lies horizontally dividing 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 dividing the body into anterior (front) and posterior (rear)

The table below lists terms that 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 and 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	Bending a joint that decreases the angle between bones
Extension	Straightening of a joint that 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, for example 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, for example the arm moving away from the body horizontally
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.

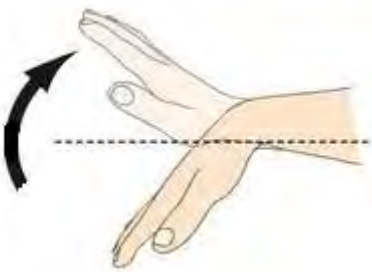
1. _____

2.

_____

___

3.



_____

Figure 9 Planes and Motions used in Anatomy, (Micheau & Hoa, 2009)

2.4 Biomechanics

Biomechanics is the application of mechanical principles to living organisms—here, specifically, the mechanics of the human body.

The human skeleton is a system of bones and 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 muscles 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 and mobility, and reduce the risk of injury.

For example, there are a group of muscles in the shoulder that work together to provide stability, called the rotator cuff. If one of these muscles is not 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 manual handling and ergonomics. Because you will be working with clients and will be required to assist with client transfers, exercises and mobilisation, having an understanding biomechanics will help you to perform these tasks safely and effectively.

Take for example, the common task of picking up a box. There are two ways of performing this task. In the first case, picking up and holding the box at arm’s length away from your body. The mass or weight of the box is held a long way away from the muscles of your spine, abdomen and arms that are doing the work to lift the box. The distance from your body to the box 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 box in this way, you are more likely to get injured.

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

Being familiar with some of biomechanics terminology will help you 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 these terms, or you may need to know additional terms in your workplace. Check this list with your supervising physiotherapist and ask for clarification if you are not sure about any terms in the table.

Activity 8: Biomechanics

Using the example of lifting a chair, try this small experiment:

i. Pick up and hold the chair at arm's length away from your body for 1 minute.
ii. Note any sensations in your body; think about your muscles and skeletal system.
iii. Pick up the chair and hold it close to your body for 1 minute.
iv. Note any sensations in your body; think about your muscles and skeletal system.

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. How did your arms feel after the first lift? Could you hold it for the whole minute?

2. How did your arms feel after the second lift? Could you hold it for the whole minute?

3. How do we relate what we have just learnt to moving the equipment in your workplace? Consider what we are moving, weight of the object and lever arm. For example, think about moving a hoist or carrying mobility aids.

2.5 Physiology

Physiology is the scientific study of how the body functions. There are many different and complex processes of the body. The function of the musculo-skeletal system has already been covered; here we will focus on the skin, pain processing and disease processes.

The Skin

The skin is the body's largest organ. It consists of two layers: the outer epidermis and the inner dermis, with underlying subcutaneous tissue.

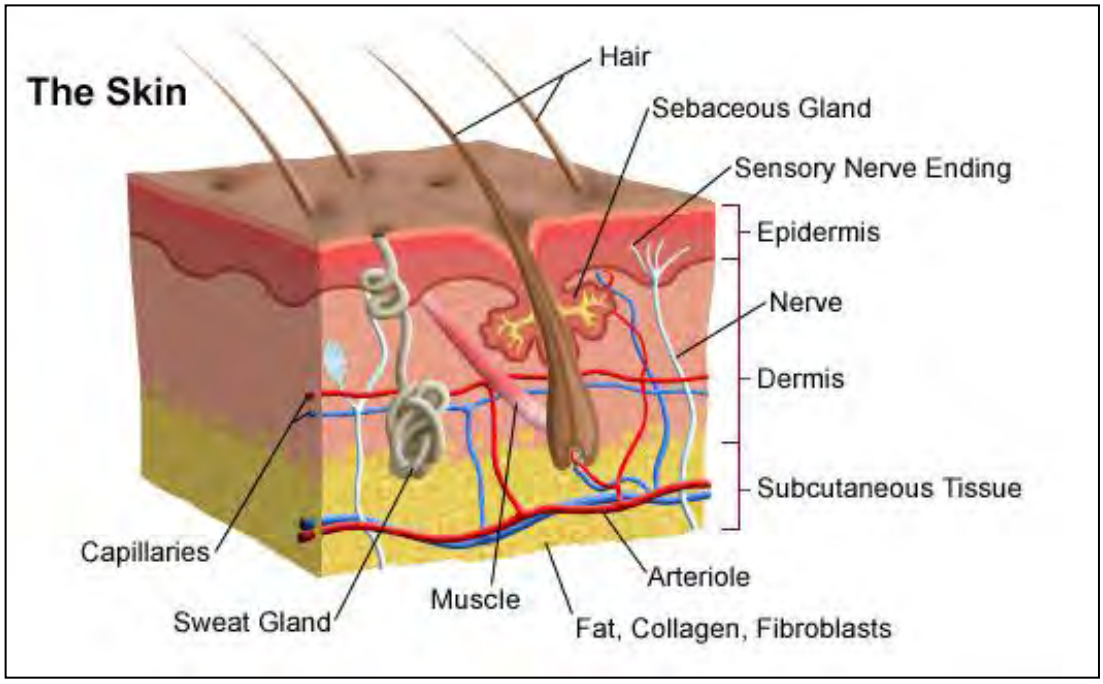


Figure 10 The Anatomy of the Skin (Stanford Medical; Cancer Centre, 2010).

The **epidermis** has no direct blood supply—it is nourished by the network of blood vessels in the dermis. The inner epidermal layer is made up of cells that are living and rapidly dividing. The newly formed cells continuously push older cells closer to the surface, into the outer epidermal layer, further from nutrient supply and subject to constant pressure, wear and tear, leaving the cells dead and flattened.

The **dermis** is a connective tissue layer consisting of a rich network of blood vessels and nerve endings.

Functions of the skin include:

- protection—a barrier between the external environment and underlying tissues
- excretion of salts, water and waste through sweat and sebaceous glands
- body temperature maintenance
- synthesis of Vitamin D, important in normal calcium metabolism
- nutrient storage—the dermis and subcutaneous layer stores lipids or fats
- detection of touch, pressure, pain and temperature stimuli and communication with the central nervous system

As an external barrier, the skin is at risk of damage. A common skin injury in hospitalised or immobile clients is pressure sores or ulcers. Pressure ulcers occur when the skin breaks down as a result of long-standing pressure for example, from splints, bedding, casts or equipment.

Pressure ulcers most commonly occur in tissue over bony prominences or joints, such as the sacrum (lower back bones), ischial tuberosities (sitting bones), greater trochanters (lateral points of the femur), lateral malleoli (ankle bones) and calcaneum (heels).

People most at risk of developing pressure ulcers include those with:

- reduced or absent sensation
- reduced mobility or paralysis
- poor circulation (for example, people with diabetes)
- faecal or urinary leakage
- poor nutritional status or weight loss
- fragile skin
- cognitive impairment
- the elderly

Clients with **spinal cord injury** may have areas of reduced or absent sensation, paralysis of upper or lower limbs and muscle atrophy, putting them at risk of pressure ulcers. Generally, these clients need special pressure-relieving cushions and mattresses; to perform regular pressure lifts in a wheelchair and rolling in bed; lose fitting clothes and shoes; and frequent skin checks to monitor changes in their skin integrity.

Example of pressure care for a client with spinal cord injury can be found in Appendix B on Example of Care Plan.

The Four Stages of Pressure Ulcers

Stage 1

- Skin is reddened but there are no breaks or tears
- Redness disappears in a reasonable time (1–2 hours)

Stage 2

- Skin has broken open
- May look like a scrape, blister or shallow crater in the skin

Stage 3

- The sore extends into the fat layer beneath the skin

Stage 4

- The pressure sore is very deep, extending into muscle and possibly bone, causing significant damage and tissue death (necrosis)
- Serious complications, such as infection of the bone (osteomyelitis) or blood (sepsis), can occur if pressure sores progress

Principles of Pressure Care

Below are some important basic principles of pressure care. Your awareness of these principles will allow you to minimise the risk of pressure injury to your clients.

- prevention is the best treatment
- decrease pressure on any single body area and ensure position is regularly changed

- educate clients about pressure relief: for example, regular weight relieving movements
- ensure clients have adequate nutrition and dietary intake
- teach or reinforce good lifting and transfer techniques to prevent skin damage
- establish a good hygiene and continence regime—keep skin clean and dry
- institute a routine of regular skin checks
- ensure any wounds are well dressed and protected
- position clients so that any existing ulcerated areas are free from pressure (for example, by using pillows or wedges)

Further information on pressure injury prevention can be found at Client Safety and Quality Improvement Service: http://qheps.health.qld.gov.au/psu/pip/default.htm. This website contains client brochure on keep bedsores at bay and information on practical considerations for clients in the community.

Activity 9: Pressure care

Read the case study below and respond to the following questions. You may use the space provided below to write down a draft response. Record your final answer in the Assessment Guide.

Case Study: Pressure Care

You have been asked to do some exercises with Mrs Smith, a frail 90 year old who has been admitted to hospital after falling at home and injuring her hip. She is independent and does not like to be handled by others. When you approach her, she complains that her right foot is sore. On inspection, you see a reddened patch on the heel, with a small blister.

1. What would you do or say to get her to **allow you** to inspect her heel?

2. List four factors that might put Mrs Smith at risk of developing a pressure area?

3. Who would you communicate with about Mrs Smith? What do you think they would do about the situation?

Pain

According to the International Association for the Study of Pain (2010), pain is “an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage”. It is a vital, protective mechanism that allows us to live in an environment filled with potential dangers.

Pain is detected by nociceptors (pain receptors), which are found throughout the body, but are especially common in the skin, joint capsules, outside layer of bones and around walls of blood vessels. There are no pain receptors in the brain, making it insensitive to any potentially painful stimuli inflicted on it. Similarly, there are few pain receptors in the internal organs, which can make it difficult to localise pain in these areas.

Pain may also be referred. In other words, pain can be started off in one area, but felt in another area. For example, pain from a heart attack may be felt in the chest, jaw or down the left arm. Similarly a pinched nerve in the lower back may be felt as pain in the leg.

Pain may be divided into acute and chronic pain.

Acute pain is generally the result of tissue injury, the cause is clear and local treatment of the injury is usually effective in relieving the pain. Treatment of acute pain may involve a combination of analgesia (pain relieving medication), local anaesthetics, steroids, anti-inflammatory medications or ointments, ice, exercise, electrotherapy or physiotherapy, depending on the type and site of pain.

Chronic pain is more difficult to treat. It may be defined as pain that continues beyond the normal time duration that the body needs to heal or recover from injury. This can be anywhere from four to twelve weeks. Chronic pain may be the result of a chronic disease process, such as arthritis (inflammation of the joints) or cancer; or due to a factor related to the acute disease process that continues after the disease has resolved, such as damaged sensory nerves causing pain that has no apparent cause. For example, phantom pain may feel to the client like a sore toe, even though the leg has been amputated.

Chronic pain may also cause a problem called allodynia, in which people are *extra* or *hyper* sensitive and experience pain in response to stimuli that are not normally painful.

For example in this group of people may experience pain with a breeze on their skin, the pressure of water from a shower hitting their body or sheets touching their legs.

There are often complex psychological and physiological components involved in chronic pain. It has been suggested that changes occur in the nervous system in chronic pain clients, which may increase the body's reaction to pain signals or make conventional treatments ineffective, causing ongoing pain perception (Mann & Carr, 2007).

Continuous severe pain may also take its toll on a client's emotional wellbeing. When pain relief medication does not work and pain does not 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 sleep disturbances, weight gain and depression.

It is vital that chronic pain management involves not only treatment of pain symptoms, but also counselling or anti-depressants, to assist in decreasing the perceived level of pain. There is evidence that quality of life for clients with chronic pain is more associated with beliefs about pain rather than with pain intensity.

With pain, it is important to always consider that:

- pain is subjective and personal
- pain perception can be influenced by our personality, emotional state, cultural background, age, gender and coping mechanisms
- past experiences with pain can affect future pain experiences
- pain is a protective mechanism that helps to guard against injury, but can inhibit muscle activity and limit a person's participation in an exercise program. Pain inhibition may be involuntary—the client may be really trying to contract a muscle but the body will not allow this to happen. You will see this often after knee surgery, where, even with good pain relief and genuine effort, the quadriceps muscle will not contract

Clients report pain very differently. As an allied health assistant you need to be aware of the physical signs and symptoms that show a client is in pain. This becomes very important with clients who are unable to communicate. For example, a client with stroke affecting speech, a client who does not speak English, one who may be confused or one who has dementia.

Observe your client. Some pain signs include:

- grimacing facial expression
- withdrawal from touch
- reluctance to move
- protective body posture (for example, limping on a painful leg)

Question and communicate with your client. Ask your client to describe any pain before you start. You can then monitor any changes as you go. A useful scale is the McGill Pain Questionnaire, developed by Melzack (1975). Simply ask what or where their pain is and then ask the client to grade it between zero and ten; zero is no pain and ten is maximum pain.

Pain can be an important determinant of a physiotherapy exercise program. As an allied health assistant, you need to report any new or different pain to your supervising physiotherapist.

You may find clients will report pain to you while performing an exercise program. It is natural to get some aching in muscles or joints with new or more intense exercises than people are used to or to have pain related to their condition. However, if a client reports sudden onset of chest, jaw or left arm pain, or a new, severe pain, it is important to stop the exercise and report this to the physiotherapist and other medical staff immediately.

It is important to recognise the signs of physical distress that are associated with pain, or that may also be present in other medical situations.

Some of the following physical symptoms are observed with clients in pain, but could also occur if someone is about to faint or lose consciousness:

- Clammy or sweaty on touch
- change in facial colour or pale
- nausea
- fast, deep breathing
- confusion
- blurry vision or spots before eyes
- ringing in the ears

Additional physical signs of an emergency that you should be aware of, since the above are also all are signs of a heart attack:

- fullness or squeezing pain in the chest

- jaw pain, toothache, headache
- heartburn or indigestion
- upper or middle abdomen discomfort
- arm pain
- upper back pain

Further information on “how will you recognise a heart attack” can be found on the Heart Foundation website at: http://www.heartattackfacts.org.au/Home.aspx.

The following physical symptoms can all be symptoms of a stroke:

- sudden numbness or weakness of face, arm or leg
- altered sensation or loss of voluntary movement control
- confusion or trouble speaking
- trouble seeing out of one or both eyes
- loss of balance or coordination
- sudden severe headache

Further information on “what is a stroke” can be found on the Stroke Foundation website at: https://strokefoundation.org.au/About-Stroke

All staff need to be familiar with emergency procedures and area alert tones as well as the location of:

- emergency buzzers and trolleys
- fire exits
- fire extinguishers and fire break glass and alarms

Activity 10: Pain

You have been asked to assist with the mobilisation of a client who has had abdominal surgery three days ago.

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.

You may find it useful to discuss these questions with your supervising physiotherapist and refer to the client information guide on "Physiotherapy advice after abdominal surgery-Information for clients"

(Churchill Surgical Physiotherapy Team, Oxford University Hospitals NHS Trust, March 2015, http://www.ouh.nhs.uk/client-guide/leaflets/files/11733Pabdominal.pdf sited 25 January 2017.

1. What are the reasons for mobilising a client with post abdominal surgery even though they may be in pain?

2. What would be normal for a client post abdominal surgery with regards to their pain?

3. What strategies would the physiotherapist recommend to minimise the client's pain during treatment? Consider strategies for chest care, helping the client to move from lying to sitting, mobilising or sitting out in a chair.

Activity continues on the next page

Activity 10: Pain (continued)

4. 4. When would it be necessary to cease mobilising the client with respect to their pain level? Describe the signs and symptoms that the client may be showing.

Disease

Disease can be broadly defined as any condition that impairs or disrupts the normal functioning of the body. We will discuss some of the common disease processes that you may come across when delivering an exercise program to a client group.

The following table is not an exhaustive list and it is recommended that you research other diseases that are relevant to your client groups. Some websites include:

- Australian Institute of Health and Welfare www.aihw.gov.au
- Australian Department of Health and Ageing www.health.gov.au
- World Health Organization www.who.int

Chronic Disease	Description
Cancer	• A class of diseases in which normal cells transform into abnormal cells, which rapidly divide and grow • These cells may invade or destroy nearby tissues and sometimes spread to other parts of the body via the lymph or blood (metastasis)
Dementia	• A decline in cognitive functioning, severe enough to interfere with a person's normal daily activities and social interactions. • Exercise has been associated with significant reductions in the levels of dependence and disability in older adults.
Diabetes	• The body's ability to use glucose is affected • Type 1—the pancreas does not produce enough insulin, so glucose cannot be absorbed to "refuel" cells • Type 2—insulin is produced, but does not work properly and glucose is not absorbed consistently by cells • In both cases, the result is hyperglycaemia (high blood sugar levels)

	• People with diabetes need to carefully monitor their blood sugar levels as exercise can induce hypoglycaemia (low blood sugar levels) and lead to impairment in function

Heart, Stroke and Vascular Disease	• There are many heart conditions that clients may suffer from:
	  ○ Angina
	  ○ Arrhythmias
	  ○ Cardiomyopathy
	  ○ Coronary heart disease
	  ○ Myocardial infarction
	  ○ Hypertension
	• Cerebrovascular Accident (CVA) or Stroke—sudden neurological deficit with duration greater than 24 hours, due to a disruption of oxygenated blood supply to the brain or bleeding

Osteoarthritis, Rheumatoid Arthritis and Osteoporosis	• Osteoarthritis—a degenerative condition where there is loss of cartilage and damage to the joints, leading to pain and stiffness. The pain is often worse when placing weight or pressure on the joint. Osteoarthritis is common as we get older and is caused by wear and tear on a joint. • Rheumatoid Arthritis—an autoimmune disease that causes pain and swelling of the joints. The normal role of body's immune system is to fight off infections to keep us healthy. In an autoimmune disease, the immune system starts attacking its own healthy tissues. For example, in rheumatoid arthritis, the immune system targets the lining of the joints, causing inflammation and joint damage. Rheumatoid arthritis usually affects smaller joints, such as the joints in the hands and feet. However larger joints such as the hips and knees can also be affected.

	• Osteoporosis—condition where the bones lose minerals such as calcium, causing them to become thin and brittle and putting clients at risk of fractures.
Respiratory Diseases	Asthma: • Reversible or reactive airway disease where exposure to allergens, exercise, cold air or medication may result in bronchoconstriction (airway closure), swelling and increased production of mucus (phlegm) Chronic Obstructive Pulmonary Disease (COPD): • A progressive disease process of narrowing and obstruction of the airways, resulting in difficulty getting air in and out of the lungs. Symptoms include increased mucus production, shortness of breath and wheezing

As an allied health assistant, it is important to be aware of any changes in treatment for your client's chronic disease, or the presence of side effects. They may not be able to exercise or their exercise program may need to be modified. In these situations, you must liaise with the physiotherapist and seek guidance on the appropriate course of action.

Activity 11: Disease

Think about a client who you have been involved with recently and the disease or condition that has been affecting them. Using the internet or other resources, write down the major body systems involved in the disease, and how it affects the client.

You may use the space provided below to write down a draft response. Record your final answer in the Assessment Guide. Attach any brochures or relevant handouts that you have found.

Key Points

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

The Skeletal System:

- List the main functions of bones
- Identify the major bones of the human skeleton
-

The Muscular System:

- List the main function 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

Skin Care

- Describe the anatomy and physiology of the skin
- List risk factors for developing pressure ulcers
- State the grades of pressure ulcers
- Outline pressure ulcer prevention techniques

Biomechanics:

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

Pain and Disease

- Describe different types of pain
- Summarise different disease processes

3. Programs and Treatments

This topic covers information about:

- Principles of exercise therapy
- Equipment and materials
- Monitoring requirements
-

Activities in this topic cover the following essential skills:

- Apply therapeutic exercise practices
- Undertake activity analysis—breaking activities down into component parts
- Use manual handling required to assist the client
- Work under direct and indirect supervision
- Communicate effectively with clients for therapeutic support
- 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 interconnected 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 practise that skill. It is important 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, so exercise it 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 improvements 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 too much. On the other hand, 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 conjunction 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 by testing different muscle groups and recording a score from 1 to 5.

You will not be expected to complete this assessment, but understanding 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 co-ordination 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. There should be a time-commitment and dedication to receive benefits and achieve an optimal outcome. Some adverse events can occur with exercise, which will be discussed later.

Of course, as well as addressing impairments determined by the physiotherapist, 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, 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 allied health assistant you are unable to change a client's treatment yourself, you can have input into treatment decisions by discussing your work with the physiotherapist. The information you record and your observations are important in helping to determine appropriate treatment for your clients.

Contra-indications to Exercise Therapy

Some conditions 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 should not exercise, while relative contra-indications means that clients 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 important to be aware if a client has a deep venous thrombus (DVT) or pulmonary embolus (PE), as this may require them to refrain from activity until they have commenced on 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 cases or if you are ever unsure whether a client is able to exercise, you must liaise with the physiotherapist for further guidance.

Activity 12: 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. While working as an allied health assistant, you have been requested to prescribe an exercise program for your clients. How will you respond to this request? How will you ensure that the client receives the appropriate exercise program?

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

Exercise for Neurological Conditions

Neurological conditions are conditions involving disorders of the nervous system. Examples include:

- stroke or cerebral vascular accident (CVA)
- other acquired brain injury (ABI)
- spinal cord injury
- cerebral palsy
- degenerative neurological conditions (including motor neurone disease and multiple sclerosis)
- damage to peripheral nerves (for example, nerves in the arms and legs) and accident and infection affecting the nerves

Clients with neurological conditions require specific exercise programs to address the following problems:

Spasticity (increased muscle tone)—"Spasticity or muscular hypertonicity is a disorder of the central nervous system (CNS) in which certain muscles continually receive a message to tighten and contract" (Shumway-Cook & Woollacott, 2000). With this condition the client's muscles work in opposition, (that is, the agonist and antagonist muscles, which usually co-ordinate to contract and relax at opposite times, now both contract together, causing rigidity within the body). This can have a huge influence on a client's function, pain levels, and pressure area care. Physiotherapy exercise programs for spasticity may involve stretching, positioning, functional training, and weight-bearing exercise. Weight-bearing exercise can help reduce a client's tone and help to prevent the formation of contractures within the muscles.

Flaccidity (low tone)—This condition is characterised by reduced muscle tone, weakness or paralysis. Exercise programs for low tone include; positioning, use of supporting equipment, (for example, slings and orthoses), techniques to promote movement and increase strength.

Reduced balance—"Balance is an ability to maintain the centre of gravity of a body within the base of support with minimal postural sway" (Shumway-Cook et al, 1988). Balance training programs may involve both static (standing or sitting still, or single leg stance), and dynamic (walking, moving, or reaching outside the base of support) balance activities.

Poor co-ordination—Co-ordination is the combination of body movements, which create intended actions. Exercise programs for co-ordination may involve functional activities, sequenced tasks, and completing multiple tasks at one time, to promote body control.

Reduced Proprioception—Proprioception is "the ability to sense stimuli arising within the body" (emedicinehealth.com, 2010). It is the ability to know what our body is doing based on information from our joints, muscles, nerves and etc. Exercise programs for proprioception include blindfolded exercises, body awareness exercises, compensation exercises, and using external sources of feedback (such as bandages) to help clients complete functional tasks.

Reduced strength—Physical strength is the ability of a person to exert force on physical objects using their muscles. Exercise programs for strength include lifting weights, functional exercises like sit-to-stand, cycling programs, walking programs, core stability exercises and bed exercises.

Poor mobility—This is a common focus of physiotherapy treatment. Exercise programs for poor mobility may involve walking, negotiating different surfaces and obstacles and training with various walking aids.

Exercise for medical and surgical conditions

Medical and surgical conditions are many and varied, and clients may benefit significantly from a physiotherapy program. Medical and surgical clients require specific exercise programs to address the following problems:

Respiratory Conditions—affecting a person's breathing. Medical clients may be admitted with respiratory conditions or may develop these in hospital. Surgical clients are at risk of developing respiratory conditions secondary to their surgery. These clients may be prescribed a program involving walking, deep breathing and coughing, percussion and vibration and other sputum clearing devices (such as positive expiratory pressure devices, flutter and acapella).

Cardiac Conditions—affecting a person's heart and circulatory system. These clients may be prescribed an exercise program involving walking, strength training, thoracic range of motion, and functional training.

Poor Mobility—many people admitted with medical and surgical conditions also have poor mobility, and their mobility often deteriorates further with resting in hospital. Mobility programs may include walking, transfer practice, negotiating different surfaces and obstacles, stairs practice, and training with various walking aids.

Other general medical and surgical conditions—a huge number of conditions may lead to a client being admitted to a medical or surgical ward. Other components of a physiotherapy exercise program not previously discussed may include:

- limb exercises for oedema (swelling) management
- tilt tabling for early standing, trunk control, tone management, prevention of contracture etc
- range of motion exercises (passive, active-assisted and active)
- pendulum exercises with orthopaedic clients (allowing the shoulder to passively swing with movement of the body)
- setting up slings and springs to train strength with gravity eliminated

This is not an exhaustive list of client specific exercises, and many other exercises may be appropriate for individual clients. The physiotherapist will make decisions about which specific exercises are appropriate for individual clients.

Posture

We often talk about 'neutral spine' or ideal postural alignment, but what does this mean? The spine has three natural curves—the cervical lordosis (inward curvature of the neck), the thoracic kyphosis (outward curvature of the upper back) and the lumbar lordosis (inward curvature of the lower back). Neutral spine is the natural position of the spine when all three curves of the spine are present and in good alignment.

Ideal postural alignment in standing is when there is neutral spine, and a straight line (called the line of gravity) passes through the ear lobe, the tip of the shoulder, slightly behind the hip joint, slightly in front of the knee and just in front of the ankle bone.

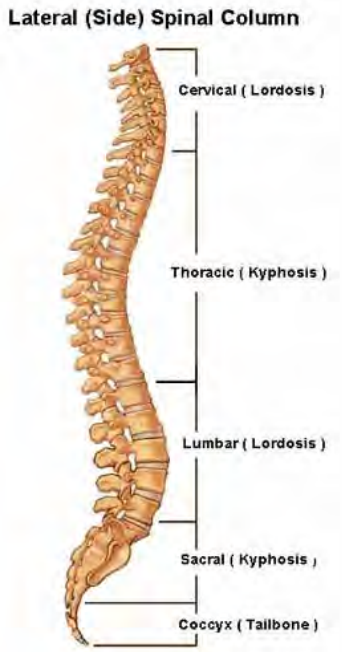


Figure 6 **Spinal Curves. (Bridwell, 2010)**

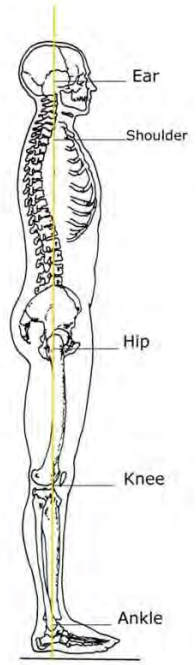


Figure 7 **Ideal Postural Alignment (Eveleigh, 2010)**

When sitting, ideal alignment is where the spine is in neutral, the head is held upright in the midline, the line of gravity passes through the tips of the shoulder and the centre of the hip joint, and the feet are flat on the floor and spaced comfortably apart.

In this posture, minimum stress is applied to each joint. However, if joints are stiff or too mobile, or muscles are weak, shortened or lengthened, it may not be possible to achieve this postural alignment. This can lead to abnormal forces causing excessive wearing of joints, and soft tissues can become weak, stretched or injured by the increased stress.

Poor posture may be due to structural factors or positional factors. Structural deformities are usually the result of congenital anomalies, trauma or disease for example leg length differences. These are generally related to changes in bone and are not easily correctable without surgery; however they can be relieved by proper postural care. Positional factors are most commonly due to poor postural habit (e.g. slouching), however could also be due to muscle imbalance, pain, breathing conditions, muscle spasm, obesity or general weakness. They are generally reversible once the problem has been identified.

Kyphosis is a condition where there is an exaggeration of the normal curve found in the thoracic spine (e.g. a 'dowager's hump'). This could be caused by compression fractures in the spine, for example: with osteoporosis, muscle paralysis, congenital abnormalities and some conditions such as Scheuermann's Disease.

Postural Management

During the day, we regularly change position and posture depending on our level of comfort or the task we are performing. However, consider clients with physical impairments who may not be able to change their position independently.

As a result, they may adopt static, habitual, often asymmetrical positions that can cause pain and discomfort, as well as affecting many different systems and functions such as:

- musculo-skeletal system (contractures, reduced bone density, reduced range of motion, structural deformities and reduce muscle strength)
- neurological system (increase spasticity or muscle tone, alter sensation and joint position sense, weakness)
- respiratory function
- digestion (poor swallowing and aspiration risk)
- skin (pressure ulcers, poor skin integrity and oedema)
- personal hygiene (toileting and cleaning)
- functional ability
- sleep pattern

Postural management is an approach that tries to optimise a client's posture in all the different positions they take on in a day, including in bed, in their wheelchair, and during alternative daytime positioning, to promote function, and enable participation in activities. This may mean providing specialised cushions, supports, wedges, chairs and standing frames to ensure a good aligned posture is achieved, provide a symmetrical position, provide periods of stretch to muscles or provide a stable base of support.

It is particularly important to consider a client's position in bed, as they will generally be spending 8 to 12 hours or more a day lying. Some things that are considered by health professionals in positioning a client in bed are:

- trying to keep the body and limbs as symmetrical as possible
- preventing the legs from crossing, excessively splaying out or always being swept to one side

- preventing the client from being in one position for too long (regular position changes are needed)
- elevating swollen limbs
- supporting hemiplegic or hemiparetic limbs, and positioning to prevent contracture

Specific information on postural management of clients with a stroke can be found on the internet or local hospital resources.

http://qheps.health.qld.gov.au/ahwac/docs/hemiplegic.pdf.

Activity 13: Postural management

Consider a client who has had a right CVA, with weakness and loss of sensation in their left arm and leg. The client complains of a painful left shoulder, some swelling in the left hand and visual deficits on the left side. You have also noticed that the client coughs when drinking tea if drinking when the bed is flat. Using your knowledge of postural management, discuss what would be important to consider when positioning the client in bed or chair. Think about all the highlighted difficulties that the client is experiencing.

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

3.2 Equipment and Materials

As an allied health assistant, you will be required to competently use a wide variety of equipment. Equipment can be placed into a number of groups.

Purpose	Examples
Functional	Chairs, treatment beds, trolleys
Treatment	Electrotherapy, orthopaedic and respiratory
Supportive	Slings, splints, therapeutic clothing-braces
Mobility Aids	Walkers, crutches, walking sticks, hopper frames
Mechanical Lifting Devices	Hoists, tilt tables, lateral transfer air mats
Medical and Emergency	Defibrillators, SAED resuscitation, O_2 delivery

Many types of equipment and materials are used in exercise and positioning programs.

Equipment	Use
Arm cycles	Can be used to improve upper limb endurance and cardiovascular fitness
Cycle ergometers	Can be used for lower limb strengthening, endurance and cardiovascular training.
Free weights	Can be used for strength training; developing the strength and size of skeletal muscles
Pulleys	Can be used for strengthening upper and lower limb muscles. May also be able to assist clients in doing exercises in an active-assisted manner, for example straight leg raise (SLR)
Rowing machine	Can be used to improve endurance and cardiovascular fitness
Stair climber or stepper	Can be used to increase cardiovascular fitness and endurance
Standing frames	Can be used as part of a postural management program, and

	can assist to increase independence, mobility and self-esteem. Standers may be used by people with mild to severe impairments, including spinal cord injury, traumatic brain injury, cerebral palsy, spina bifida, muscular dystrophy, multiple sclerosis and stroke
Exercise balls	Can be used as part of strengthening programs or balance and stability training
Resistance bands	Can be used for strengthening muscles isometrically and isotonically
Tilt tables	Can be used with clients who have had periods of bed rest and are too weak to stand, or to reintroduce to a vertical position. Tilt tabling can be used to facilitate weight bearing, prevent muscle contractures, improve lower limb strength, improve lung function and increase arousal.
Treadmills	Can be used for exercise testing, to improve endurance and cardiovascular fitness, and in gait retraining
Incentive spirometry	Can be used with clients post-operatively or in appropriate clients with poor breathing effort or signs of lung collapse. The client should be encouraged to take a slow deep breath in, holding the breath for 2–3 seconds at full inhalation with expansion of the lower chest
Walking frames (rollators, four wheeled walkers and hopper frames)	Can be used with any client who needs additional support to maintain balance and stability during mobilisation
Wedges, cushions and foam	Can be used to support limbs and trunk in a desired position, or prevent unwanted movement
Weight-training machines	Can be used for strengthening exercises

Equipment Inventory and Storage

Allied health assistants are usually responsible for maintaining an inventory of equipment and reporting to the physiotherapist any items that require attention or maintenance beyond simple cleaning and local infection control measures.

Equipment inventories should record information such as:

- model, make and colour
- name of manufacturer
- year purchased and cost
- any identifying numbers or codes
- unit allocated and location stored
- Safe Working Load (SWL)
- asset number
- when the item is due for maintenance or replacement
- audit date and comments regarding condition of equipment
- identification of lost equipment

All equipment must be labelled with SWL that identifies the upper limit of load for which it can safely be used. This information is essential to reduce risk of injury to the client, yourself and others.

Equipment inventories and audits allow your department to identify faulty equipment, lost equipment and equipment shortages.

Allied health assistants are also responsible (along with other staff members) for storage of equipment. You should establish areas where clean equipment is stored and ready for use, and other areas where used equipment which requires cleaning, is stored and ensure that all staff are aware of these areas.

Some equipment is single client use. So, as an allied health assistant, you may be responsible for maintenance of appropriate stock levels, ordering and disposal of this equipment (see chart below).

Managing of Stock

In many departments, allied health assistants are required to assist with stock management. You may be required to identify low stock levels, order stock and manage the department store room. Included below is an example of a checklist which could be used to manage stock and establish a cleaning regime.

Cleaning Equipment

Allied health assistants are also responsible for cleaning of equipment and some departmental and clinical areas, as per infection control policies and procedures. This is essential to ensure that infections and diseases are not spread from client to client. You should discuss with your physiotherapist any concerns you have with cleaning of equipment. There will be specific chemicals to be used in different situations. For instance, wiping down an exercise mat, where body fluids such as pus, urine or blood, were spilled will require different treatment from a mat that has just gathered dust from storage.

Your facility will have protocols for standard cleaning of equipment and specific infection control measures, with which you need to be familiar. Many facilities also have an Infection control department that can provide further information on products to be used in specific infection control situations.

Stock Checklist

Environment	Date	Comments	AHA initial
Linen replenished		*Order client gowns Med x 4*	
Electrotherapy trolley		*Wheel has been replaced*	
Cleaning materials		*Well stocked*	
Furniture		*Wiped down with AGAR solution due 2 days*	
Infection control		*Fully stocked gloves all sizes/order M masks*	
Respiratory room		*O_2 cylinder empty—added additional from stock*	
Emergency buzzers		*Tested—nil problem*	
Call buzzers		*Bay 2 has loose lead—Fammis done*	

Equipment	Date	Comments	AHA initial
Mobility aids		*Walker 3 requires maintenance brakes*	
Hoists and treatment beds		*Wiped down with AGAR solution*	
Stock cupboard 1		*Corsets, braces and stockings fully sized and stocked*	
Stock cupboard 2		*Order more black pens + sticky notes*	
Exercise stock		*1 kg weights—contact PT replace*	
Treadmill and bikes		*Bike 2 needs new pedals soon—report PT*	

Activity 14: Equipment and materials

Case Study: Equipment and materials

Mr Jones is a 65-year-old admitted to the orthopaedic ward for a total knee replacement. He is allowed to weight bear as tolerated on his leg, and needs to strengthen his knee muscles and improve his cardio respiratory endurance.

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. Using the list on page 101, what equipment might the physiotherapist select for an exercise program for Mr Jones and why?

2. What measures would you need to consider from an infection control point of view when using equipment with Mr Jones? Consider disposable, single-use and multi-use items.

3.3 Monitoring Requirements

As an allied health assistant you will be required to monitor:

- your work and working relationships
- your treatment
- your clients while they are completing their program

Monitoring work and working relationships

This information is essential to ensure that you are working as part of an effective healthcare team. You need to monitor your relationships with:

- your physiotherapist
- your clients
- other members of the health care team
- client's family

Regular performance appraisal and development (PAD) should be completed with your supervisor, which formalises this monitoring process and assists in improving work performances. PADs are also a useful means of communicating your training needs to your supervisor, especially if you do not feel confident with a particular task.

Monitoring treatments

Monitoring treatments allows us to determine whether treatment has been effective, and allows modification of treatment, so goals are achieved. Monitoring also allows you to build up knowledge about what to expect from treatment.

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.

Things to look out for include:

- pallor (skin becoming pale)
- excessive sweating or clamminess
- sudden or excessive shortness of breath not related to increased activity (for example, increased breathing rate, "gasping" for breath 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

Providing feedback to your physiotherapist about treatment progress forms a vital component of the physiotherapist’s monitoring of the exercise program of each client. Information which you should provide to your physiotherapist includes:

- components of the program completed or not completed
- any subjective client reports, e.g. pain, fatigue
- any adverse events during treatment, e.g. falls. Please note: if you observe any adverse events during treatment, an incident report will need to be completed
- your subjective reports of the treatment session

Monitoring Clients

It is vital to monitor clients while they are completing their program. Monitoring may be subjective reports, or specific monitoring tools and measures. There are many measures which may be used to monitor clients, including:

- Rating of Perceived Exertion (RPE) Scale. This requires that the client rate their perceived exertion against a scale. A commonly used RPE scale is the Borg Scale as shown below. The client rates their effort from 6 – 20.

The Borg Scale - Rating of Perceived Exertion

Rating Score	How much effort you feel you are using when performing any activity or exercise
6	
7	Very Very Light
8	
9	Very Light
10	
11	Fairly Light
12	
**13	Somewhat Hard **
14	
15	Hard
16	
17	Very Hard
18	
19	Very, Very Hard
20	

This scale is often used for cardiac rehabilitation, respiratory testing, and walking programs. It can also be used to set the exercise intensity, by asking the client to walk at a speed which causes a rating of, for example 11 (fairly light effort). Your physiotherapist will set the level at which they want someone to work and you may be required to monitor them.

Heart rate (HR). A client's HR may be monitored during an exercise program prescribed by the physiotherapist. HR can provide a guide about the intensity at which an individual is exercising. Below is a table which converts HR beats per minute (bpm) into an RPE. Your physiotherapist will set the desired heart rate for each client, but you may be required to monitor the client while they are completing their program to ensure that they maintain their HR within the desired range.

Heart Rate	RPE	Classification
< 90 bpm	< 9	very light
~ 100 – 110 bpm	10 - 11	light
~ 120 – 130 bpm	12 - 13	moderate
~ 140 – 160 bpm	14 - 16	heavy
> 160 bpm	>16	very heavy

Vital Signs Monitoring. These are measures like heart rate (HR), blood pressure (BP), O_2 saturations (oxygen levels in the blood), and respiratory rate (RR). A physiotherapist may record these results to ensure that the exercise intensity is appropriate, or to assess improvement with an exercise program. They may also be used to assess whether it is appropriate for a client to participate in a physiotherapy intervention. As an allied health assistant, you may be required to record some of this information, and it is vital that you know where the equipment is stored within your facility. Normal values are reported in the table below. These normal values are for fit and healthy people. Some of your clients will never display the normal values listed below.

Normal Values

SYSTEM	NORMAL
Heart rate (adult)	60-100 bpm*(at rest)
Blood pressure	120/80 mm Hg
O_2 saturation	97 -100 % on room air
Respiratory rate	12-20/minute

Additional monitoring. Clients may have lots of monitoring or other devices attached to them. Just a few examples include electrocardiographs (ECGs), arterial lines, extra-ventricular drains, oxygen saturation monitors and etc. You need to discuss with your physiotherapist any other monitoring devices which you may come across.

Clients with a spinal cord injury, particularly those who have tetraplegia, may suffer from a condition called **autonomic dysreflexia**. This is an overactivity of the autonomic nervous system which leads to a sudden onset of excessively high blood pressure. ***This is a medical emergency.***

It can be triggered by any painful or strong stimulus below the level of the injury, which may include bladder or bowel distension, urinary tract infection, scrotal compression, menstruation, gallstones, catheter kinking or even constrictive clothing. Signs and symptoms include elevated blood pressure, pounding headache, lots of sweating, red blotches on skin, flushed face and goose bumps. It is important to remember that clients with a spinal cord injury generally have a lower than normal resting blood pressure, therefore may be symptomatic with a blood pressure in what would be considered the normal range for the general population.

Clients should be sat up with legs dangling down if possible, and the blood pressure should be regularly monitored. It is important to try to identify the source of the irritation and relieve it as able. The most common causes are bladder, bowel and skin, so check the catheter or the client should self catheterise; check the bowel; and loosen any restrictive clothing. If blood pressure does not reduce or the cause cannot be found, the client may require pharmacological intervention and should seek urgent medical treatment.

During the session, it is important for clients to be aware of the Borg's Rate of Perceived Exertion (RPE) Scale and be regularly reviewing the level at which they are working. It is also worthwhile to monitor pain levels during exercise, using a Visual Analogue Scale (VAS) or numerical scale.

Monitoring and Assessment Tools

As part of treatment, your physiotherapist will use a wide range of assessment tools. Some of the more common assessment tools that you may come across, and potentially be involved in using include:

- 6 minute walk test (6 MWT)
- 10 metre walk test (10 MWT)
- timed up and go (TUG)
- standing balance tests such as eyes open/eyes closed (EO/EC) – may also be tested while client is standing on foam blocks to test balance on an unstable surface
- step up (number of times the client can step up onto a standard block height over 15 seconds)
- Motor Assessment Scale for neurological clients (MAS)
- Clinical Outcome Variable Scale for other rehabilitation clients (COVS)

There are many standardised tools that may be used to assess a client. The specific tools that are used will depend upon the facility you work in and the preferences of the physiotherapist. The Queensland Health intranet site is an excellent resource for assessment and monitoring tools.

Recording

Any assessment results must be recorded, and as an allied health assistant you may be required to assist in the recording of these results.

Recording may be:

- directly into client's medical chart
- into a clinical pathways document
- into parallel physiotherapy records until client discharge
- into the client bedside chart
- onto physiotherapy assessment forms

The physiotherapist will clarify this, and will ensure appropriate training is given, if required.

If you are asked to do something for which you have not been trained, or in which you do not feel confident, it is your responsibility to tell your supervising physiotherapist so that suitable or further training can be arranged if appropriate.

Monitoring Service

We have discussed some ways we measure and monitor the immediate responses to our sessions but what else should we do?

It is all our responsibility to always look for ways to improve the service. Ask yourself:

- Are we working efficiently?
- Could we use our time better?
- Do we have all the right equipment for what we are doing?
- Do we have all the skills and training needed?
- Do our clients think we are doing a good job?

All staff within the organisation and service should ask themselves these questions regularly and assess the responses critically.

How do we do this?

Evaluate service delivery through:

- client satisfaction surveys
- staff surveys
- work role evaluations
- performance appraisal and development (PAD)
- audits
- inventories

Information from the evaluation can be used to guide:

- quality improvement activities and initiatives
- professional development activities
- future planning ideas

As part of the allied health team, you should actively and enthusiastically take part in these activities.

Information on initiatives offered by the Client Safety and Quality Improvement Service can be found on: http://qheps.health.qld.gov.au/psu/

Activity 15: Monitoring requirements - Part A

You have been asked by the physiotherapist to moblise a client as part of the allied health assistant role. You have just completed the treatment and the client looks pale and sweaty. They also report feeling faint and needing to sit down.

Outline what you could or should do below. What vital signs, will you, or other staff, be monitoring? When would you call for emergency assistance? How would you do this?

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

Activity 15: Monitoring requirements - Part B

You have been ordering stock for the work area now for a few months, and you have some ideas about how you may be able to do this more efficiently. You think it will save time and make re-ordering easier to track. You may find it helpful to refer to the following quality cycle.

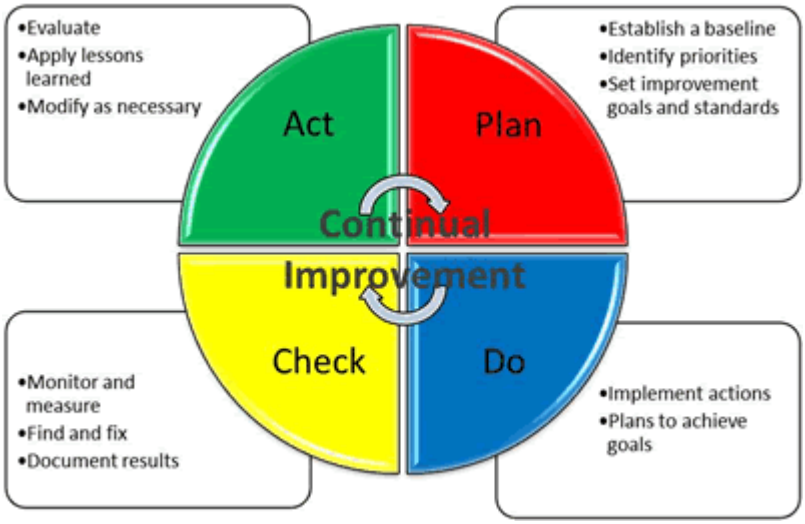


Figure 8: Quality Cycle (Queensland Health, 2017)
http://qheps.health.qld.gov.au/darlingdowns/html/quality-safety/quality.htm

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

1. How do you go about doing this?

Activity continues on the next page

Activity 15: Monitoring requirements - Part B (continued)

Key Points

This section of the Learner Guide has covered information related to the topic of Programs and Treatments. On completion of this section you should:

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.
- Outline the way exercise therapy may be targeted for different conditions
- Distinguish the difference between absolute and relative contra-indications of exercise therapy

Postural Management

- Name the principles of postural management

Monitoring Requirements

- Recognise the signs of adverse reaction to exercise

SELF-COMPLETION CHECKLIST

Congratulations you have completed the topics for Deliver and monitor a client-specific exercise program.

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
Principles of biomechanics	☐ Yes
Basic musculo-skeletal anatomy	☐ Yes
Basic anatomy and physiology	☐ Yes
Anatomical terminology	☐ Yes
Therapeutic exercise principles	☐ Yes
A working understanding of the basic anatomy and physiology of the skin and the principles of pressure area care	☐ Yes
A working understanding of the principles of posture management	☐ Yes
A working understanding of the basic reaction to pain within the body	☐ Yes
Relevant organisation policies and procedures	☐ Yes
Disease processes relevant to the client group/s	☐ Yes
Client care plans, goals and limitations of exercise therapy	☐ Yes
Medical terminology required to operate effectively	☐ Yes
Roles, responsibilities and limitations of self and other allied health team members and nursing, medical and other personnel	☐ Yes
Contraindications for exercise therapy	☐ Yes
A working understanding of the signs of adverse reaction to different programs and treatment	☐ Yes

Essential Knowledge	Covered in topic
Relevant national and state/territory legislation and guidelines, including Australian Physiotherapy Association (APA) Guidelines	☐ Yes
A working knowledge of factors that facilitate an effective and collaborative working relationship	☐ Yes
A working knowledge of the equipment and materials used in different programs and treatments	☐ Yes
A working knowledge of the monitoring requirements for different programs and treatments	☐ Yes
A working knowledge of record keeping practices and procedures in relation to diagnostic and therapeutic programs/treatments	☐ Yes
OHS policies and procedures that relate to the allied health assistant's role in implementing physiotherapy mobility and movement programs	☐ Yes
Infection control policies and procedures that relate to the allied health assistant's role in implementing physiotherapy mobility and movement programs	☐ Yes
Supervisory and reporting protocols of the organisation	☐ Yes

Activity 16: Questions

Case Study: Questions

Mrs Smith, a 76-year-old lady who has recently been admitted to the hospital following a right fractured neck of femur. She has undergone a right hip hemi-arthroplasty surgery and the orthopaedic order includes mobilise with FWB and no hip precautions. She has weakness in her right leg, and has been managed in bed since admission. Her condition has slowly improved and the physiotherapist has decided to transfer Mrs Smith into a chair. Mrs Smith is 85 kg in weight and has very limited ability to assist. She has urinary incontinence and has had a wound infection (with multi-resistant organism) in the right forearm.

As the allied health assistant, you are asked to assist the physiotherapist with this transfer.

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 are some of Queensland Health policies and procedures that you would need to be aware of when assisting with this treatment session? How may implementation of these policies and procedures govern the way we assist Mrs Smith?

Activity continues on the next page

Activity 16: Questions **(continued)**

2. Mrs Smith has now been admitted to the rehabilitation unit. Many team members are involved with her care. What are some of the record keeping, documentation and communication strategies that would be used to ensure the best quality of care for Mrs Smith?

3. Mrs Smith now has an exercise program (see attached) which you have been taught by the physiotherapist to carry out with Mrs Smith.

Highlight all the anatomical terms contained within the exercise program. Write a meaning for each of the terms.

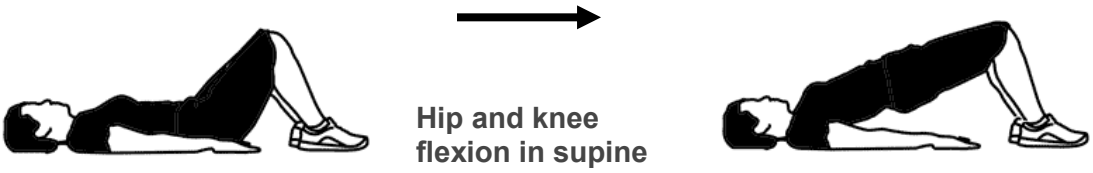
Activity continues on the next page

Activity 16: Questions **(continued)**

Mrs Smith's exercise program

Hip extension (Bridging)

Lying on your back with your knees bent up to no more than 45°, tighten your buttock muscles and slowly lift your bottom from the bed. Hold for 3 seconds and gently relax back down. Repeat 5 times.



Hip and knee flexion in supine

Bend your right hip and knee as far as you can manage towards your chest. Hold for 3 seconds and lower again slowly. Repeat 10 times.

Hip abduction

Move your right leg out to the side, keeping your knee pointed towards the ceiling, then bring your leg back to a straight position slowly (remember NOT to bring your leg across your body). Repeat 10 times.

Quadriceps Strengthening Exercise (Inner Range Quads)

Rest your right knee over a roll, straighten your right leg so that your heel lifts off the bed. Hold for 3 seconds, then slowly lower your foot. Repeat 10 times.

Activity continues on the next page

Activity 16: Questions **(continued)**

4. Communication with the treating physiotherapist must be maintained at all times. Outline when it would be important to feedback to the physiotherapist urgently. What adverse reaction to treatment may the client have exhibited to reflect this need for urgent feedback?

5. Review the principles of therapeutic exercise in the Learners Guide. With reference to each of the principles of exercise therapy, what are some of the ways the physiotherapist may choose to progress Mrs Smith's exercise program? Keep in mind the orthopaedic orders.

Activity 17: 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 assessment.

You must demonstrate:

- Understanding of client care plans
- 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

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

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 etc?
- What aids and equipment you had to use?
- How you reported back at the end of the session?

More space is provided on the following page

Activity 17: Practical work task **(continued)**

Activity 18: Workplace observation checklist

You will be observed providing assistance to deliver and monitor a client-specific exercise program.

You will need to deliver and monitor exercise programs on at least two occasions to demonstrate competence.

Workplace Observation Checklist

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:*	**1st observation date & initial**	**2nd observation date & initial**	**Comments**	***FER**
Demonstrates understanding and applies the principles of biomechanics, anatomy and physiology, and therapeutic exercise				
Demonstrates understanding and applies anatomical and medical terminology appropriately				
Demonstrates understanding basic anatomy and physiology of the skin and the principles of pressure area care				
Demonstrates understanding of the principles of 24-hour posture management				
Demonstrates understanding of the basic reaction to pain within the body				
Applies relevant organisation policies and procedures in work tasks				
Identifies disease processes relevant to the client				
Works with client care plans, goals and limitations of exercise therapy				
Undertakes activity analysis to break activities down to component parts				
Works within own role and responsibilities and knows the				

limitations of self and other allied health team members and nursing, medical and other personnel				
Describes contraindications for exercise therapy and understands the signs of adverse reaction to different programs and treatment				
Works effectively with non-compliant clients				
Complies with national and state/territory legislation and guidelines, including Australian Physiotherapy Association (APA) Guidelines				
Communicates effectively with clients, co-workers and supervisors to facilitate collaborative working relationships				
Uses equipment and materials from different programs and treatments to industry standard				
Monitors requirements for different programs and treatments				
Keeps records according to practices and procedures in relation to diagnostic and therapeutic programs/treatments				
Follows OHS policies and procedures that relate to the allied health assistant's role in implementing physiotherapy mobility and movement programs, including manual handling and infection control requirements				
Follows supervisory and reporting protocols of the organisation while working under direct and indirect supervision				
Uses skills in time management, personal organisation and establishing priorities in work role				

*FER – Further Evidence Required

Resources and Websites

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

- Allied Health Assistance Documentation Manual. Models of Care: Meeting individuals and community needs though workforce design. http://qheps.health.qld.gov.au/ahwac/docs/MOC/mocahaguidedoc.pdf
- Arthritis Australia: http://www.arthritisaustralia.com.au/
- Australian Physiotherapy Association: http://www.physiotherapy.asn.au/
- Australian Physiotherapy Council: http://www.physiocouncil.com.au/
- Osteoporosis Australia: http://www.osteoporosis.org.au/
- The National Physical Activity Guidelines for Australians – Brochure:
- http://www.health.gov.au/internet/main/publishing.nsf/content/health-pubhlth-strateg-phys-act-guidelines

Queensland Health policies and procedures links:

- Anti-Discrimination Policy http:https://www.health.qld.gov.au/__data/assets/pdf_file/0024/164058/qh-pol-101.pdf
- Orientation and Induction https://www.health.qld.gov.au/__data/assets/pdf_file/0034/395845/qh-pol-183.pdf
- Workplace Equity and Harassment Officers Policy https://www.health.qld.gov.au/__data/assets/pdf_file/0034/395854/qh-pol-265.pdf
-
- Queensland Health Occupational Health and Safety Policy http://qheps.health.qld.gov.au/safety/home.htm

Glossary

Medical Terminology

The following table lists some common terms and abbreviations you may come across.

Abbrev	Term	Definition
6MWT	Six Minute Walk Test	A test that measures how far a client can walk in six minutes. May be used as an outcome measure, or to determine suitability for home oxygen.
AF	Atrial Fibrillation	Type of arrhythmia where the atria in the heart quiver instead of contracting, leading to pooling of blood, and the potential for a stroke
AKA (TFA)	Above Knee Amputation (Transfemoral Amputation)	Removal of the lower limb above the level of the knee
AROM	Active Range of Motion	Unassisted movement of a joint
AAROM	Active-Assisted Range of Motion	Partially assisted movement of a joint
Asepsis		The state of being free from disease-causing contaminants.
Aspiration		The inhalation of foreign matter into the lungs e.g. vomit, food, water
Autonomic dysreflexia		An exaggerated response of the autonomic nervous system that occurs in spinal cord injury, leading to rapid increase in blood pressure
BOS	Base of Support	The region bounded by body parts in contact with a support surface or surfaces
BKA (TTA)	Below Knee Amputation (Transtibial Amputation)	Removal of the lower limb below the level of the knee

Abbrev	Term	Definition
BP	Blood Pressure	Pressure of the blood in the arteries, produced by contraction of the heart. Recorded as two numbers, the first (systolic pressure) is measured after the heart contracts, and the second (diastolic) is measured before it contracts.
BSL	Blood Sugar Level	Measurement of the level of glucose in the blood
CF	Cystic Fibrosis	An inherited disease in which a thick mucus clogs the lungs and blocks the ducts of the pancreas
CNS	Central Nervous System	Consisting of the brain and spinal cord
COPD	Chronic Obstructive Pulmonary Disease	A progressive disease process of narrowing and obstruction of the airways, resulting in difficulty getting air in and out of the lungs.
COG	Centre of Gravity	The point near or within something at which gravity can be considered to act
Contracture		The abnormal shortening of a muscle, often resulting in joint deformity and resistance to stretch
Decubitus Ulcer		Lesions where skin and underlying tissues break down causing tissue necrosis (death)
DVT	Deep Vein Thrombosis	Condition in which a blood clot or thrombus forms in a vein, primarily in the leg.
DM	Diabetes Mellitus	A condition in which the body's ability to use glucose is impaired.
Emphysema		A sub-set of chronic obstructive lung disease characterised by shortness of breath. It involves destruction of the lungs over time
FWB	Full Weight Bearing	Leg may take all the body weight in one step
Hb	Haemoglobin	Protein present in red blood cells that reversibly binds oxygen for transport to tissues.

Abbrev	Term	Definition
HF	Heart Failure	Condition in which the heart cannot pump enough oxygenated blood to meet the needs of the body's other organs
HR	Heart Rate	Number of heart beats per minute
Hemiparesis		Weakness of one side of the body
Hemiplegia		Paralysis of one side of the body
HTN	Hypertension	High blood pressure
Isometric		Exercise involving muscular contraction without movement of the involved part of the body, e.g. static quads
Isotonic		Exercise where a contracting muscle shortens against a constant load e.g. when lifting a weight.
NWB	Non Weight Bearing	Leg is not allowed to take any weight, and must be held off the floor
OA	Osteoarthritis	Degenerative disease of the joint cartilage. i.e. 'wear and tear'
Oedema		Swelling of body tissues due to fluid build-up
ORIF	Open Reduced Internal Fixation	Open surgery with fixation of plates or screws to repair a broken bone
Pallor		Pale colour caused by reduced oxyhaemoglobin in skin and mucous membranes
Paraplegia		Paralysis caused by injury or illness that results in total or partial loss of motor function in the lower limbs and torso
PWB	Partial Weight Bearing	Client can gradually begin putting some weight i.e. 30-50% on their leg
PROM	Passive Range of Motion	Fully assisted movement of a joint

Abbrev	Term	Definition
PMHx	Past Medical History	A client's past experiences with illness, disease, surgery and treatments
PCA	Client Controlled Analgesia	Method of allowing a client to administer their own pain relief through a machine.
PVD	Peripheral Vascular Disease	Condition characterised by blockages of the large arteries in the arms and legs
PPM	Permanent Pacemaker	Medical device which delivers electrical impulses to the heart to regulate its beating
PE	Pulmonary Emboli	Blockage of the main artery or branch of the lung by a blood clot, air or fatty tissue
QOL	Quality of Life	An individual's emotional, social and physical wellbeing, including their ability to perform activities of daily living
RA	Rheumatoid Arthritis	Rheumatoid arthritis is a chronic and progressive disease in which the body's own immune system attacks healthy tissue in the joints. Rheumatoid arthritis is characterised by inflammation of the joints, usually in the hands, wrists, knees or feet.
RPE	Rate of Perceived Exertion	Scale that gives a subjective rating of effort of activity, from 6-20, which correlates with heart rate
RR	Respiratory Rate	Number of breaths per minute
SCI	Spinal Cord Injury	Impairment or loss of motor and sensory function in the cervical, thoracic, lumbar, or sacral neurological segments secondary to damage within the spinal cord.
SOB	Shortness of Breath	Also called dyspnoea, it is a sensation of respiratory distress. It is a common symptom of many disorders of the cardiovascular and respiratory systems
SOEOB	Sit on Edge of Bed	
SOOB	Sit out of Bed	

Abbrev	Term	Definition
SLR	Straight Leg Raise	May be used as a quadriceps exercise, or as a test for nerve root irritation or pelvic instability
Sphincter		A sphincter is a structure, usually a circular muscle, that normally maintains constriction of a natural body passage or orifice and which relaxes as required by normal physiological functioning
SpO_2	Oxygen Saturation	Measure of the amount of haemoglobin binding sites in the bloodstream occupied by oxygen
TBI	Traumatic Brain Injury	Injury to the brain caused by trauma
Tetraplegia (also called quadriplegia)		Paralysis caused by injury or illness which results in total or partial loss of motor function and sensation in the upper and lower limbs, and torso.
THR	Total Hip Replacement (hip arthroplasty)	Surgical procedure in which the hip joint (acetabulum and femoral head) is replaced by prosthetic components
TKR	Total Knee Replacement (knee arthroplasty)	Surgical procedure in which the knee joint (distal femoral end and proximal tibia end) is replaced by prosthetic components
TWB	Touch Weight Bearing	Client can rest forefoot on the ground for balance but not for weight bearing
WBAT	Weight Bearing as Tolerated	Client determines the amount of weight bearing for the involved lower extremity, according to their tolerance

Appendices

Appendix 1 Example of care plan

Confidential – Client Profile and Support Plan		
Client Name: Liam	*Date of Birth:* 1986	
Today's Date: 28/07/2010 *Complex Y* ☒ *N* ☐	*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. ***If issue is not applicable, then N/A should be entered in this field.*** *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 ☒ No ☐	
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 ☐ No ☒	Specify dialect if relevant:	
Disability: Client Abilities/Limitations	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. 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. Liam has altered respiratory function and needs to be reminded to carry out his deep breathing and coughing exercises. Liam experiences severe spasm in his lower limbs, along with altered sensation in his body from the nipple line down. Liam also has a supra-pubic catheter.	
Medical conditions (Fact sheets attached: Yes /1 No ❑)	Related to the level of injury Liam is predisposed to experiencing autonomic dysreflexia. He has not experienced this to date.	
Cultural Requirements/Special requisites	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.	
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.	
Client Goals 1. To be able to go to the local football on Saturday afternoons. 2. To be able to go out with his work mates on Friday nights.		***6 month evaluation –*** *achieved/not achieved?*
Rehabilitation /Care Goals 1. To increase independence with his personal care routine. 2. To increase muscle strength and endurance by implementing exercise routine. 3. To reduce muscle spasm and pain in legs by implementing stretching routine. 4. To increase overall stamina and reduce fatigue levels by implementing an independence support routine suitable to Liam's current needs.		***6 month evaluation –*** *at discretion of therapist to evaluate program*

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 reduce muscle spasm and pain in legs by implementing stretching routine	28/07/2010	28/01/2011
Continence Nurse	To maintain faecal continence by implementing	28/07/2010	28/01/2011

	current bowel management plan.		

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	
Neurological Conditions e.g. seizures	Autonomic Dysreflexia risk- Emergency. Call an ambulance ph:000 Liam has not experienced this to date. However, some typical signs may include: 1. Pounding headache 2. Rash on neck 3. Goose bumps 4. Sweating 5. Pallor. Whilst waiting for an ambulance the support worker should try to work out what might be causing this. 1. Check catheter and empty bag 2. Check skin for cuts, prickles, stones in shoes. 3. Loosen clothing, particularly belts 4. Check if Liam has used his bowels during the 5. consider previous 24 hours. Stay with Liam and reassure him until the ambulance arrives.	
Respiratory Management e.g. Asthma	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.	
Medication	Assistance with medication. Medication is kept in the Webster pack which is located on the top shelf of the kitchen cupboard.	
Emergency Management (Ring 000 + Coordinator unless otherwise stated)	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	*Service Advisor consulted Yes* ☒
Behaviour Management	Not applicable	*Service Advisor consulted Yes* ☒
Family Members as Direct Care Staff for Program		
Family members employed as paid carers yes ☐ no ☒ How many N/A		

Daily routine		***6 month***
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.
Therapy Support Mon- Fri 0900- 1100 Sat- Sun 1100-1300	Stretching routine Exercise routine Standing Machine Deep breathing and coughing routine	Ensure that the bed is raised to ensure that the height enables the use of back attack principles. Follow the routines as demonstrated in client specific training sessions. Encourage Liam to participate in the actions he can perform independently.
Community Access: Monday 1200- 1500 Wednesday 1300-1500 Friday 1600-1900	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. 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. 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	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. 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. 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. Liam will go to the local football along the path, as the ground is within 0.6 km from his home. If the weather is poor a maxi taxi

Saturday 1300-1700	this time. 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. The phone number is in his mobile phone.	will be ordered and this can be booked in advance.
Personal Care Mon,Tu, Th, Fri 1500-1600 Wed, Sun 1200-1300 Sat 1700-1800	Assist Liam to transfer from chair to bed Empty urinary drainage bag and check stoma site. Check skin integrity Assist with positioning and pressure area care. Place wheelchair on charger. Offer Liam a drink Ensure that Liam is set up with the computer, television, music or book. Liam might like to rest for this time. Assist Liam with his meal on Saturday night as he is usually tired after his day out.	Apply back attack principals for all personal care tasks, particularly transfers and positioning Liam's family members return home after work and other commitments at approximately 5.00 pm at the latest. This is the time the family would prefer not to have support workers in the home. The Support Worker should leave Liam unattended at the end of the shift, ensuring he is comfortable and has access to his phone and his emergency alarm pendant.
Therapy Support Mon- Fri and Sun 2000-2100	Stretching routine Deep breathing and coughing routine Liam has chosen not to perform stretching routine on Saturdays. (to be reviewed)	Apply back attack principals when supporting Liam to complete his exercise and stretching routine. Use back attack stances and raise Liam's bed to hip height
Personal Care Mon-Sun 2100-2300	Assist Liam with oral hygiene, face and hand washing. Assist Liam to transfer into bed using hoist. Assist with medication administration Assist Liam with undressing/ removal of antiembolic stockings Assist Liam to change into night attire Provide urinary catheter care and attach night bag. Assist with hand hygiene, washing, drying and applying hand cream. Offer Liam a drink Assist with positioning on his left side.	Apply back attack principals when supporting Liam with his hygiene needs. Elevate bed whilst performing personal care tasks whilst Liam is in the bed. Encourage Liam to participate in all activities to promote independence.
Inactive Overnight Care	Liam does not usually require intervention overnight. Liam will call out if he needs assistance with	

Mon-Sun 2300-0700	repositioning, or stretching to assist with spasms. The support worker has a monitor in their bedroom so they can hear Liam when he calls. There is also a back up doorbell that will ring in the Support Worker's room.	
Care/ Support Detail		***6 month evaluation Change / No Change***
Hygiene Bath / Shower	Liam showers daily on a commode chair with safety belt in place. Ensure the bathroom is warm prior to commencing the shower routine. Adjust the running water and check that the temperature is safe as Liam has altered sensation in his trunk and lower limbs. 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. Liam does not use soap as this dries out his skin. He likes to use a soap free shower gel. Encourage Liam to wash the areas he can manage, these are face, trunk, arms, hands, between fingers and legs. Liam requires assistance to wash his lower legs, back, and bottom. Liam washes his hair every second day and will direct the support worker as to when this is to be completed. Liam likes to have a few minutes without the support workers involved in his shower routine. Respect his privacy and use this time to change linen and place dry towels on his bed to be used once routine is completed. Ensure Liam washes the stoma site of his supra pubic catheter and rinse well. Liam will turn off the shower. Support Worker to provide Liam with 2 towels to keep him warm and commence the drying routine. Liam will dry his own hair, face, upper arms, underarms, chest, stomach, groin, upper legs and S.P.C stoma site.	

	Assist Liam to dry his lower legs, back, and check under his arms. Liam will clean his teeth at the basin prior to being transferred back to bed to complete the drying routine. Transfer Liam onto the bed using the ceiling hoist. 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. 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.	
Dressing / Grooming	Liam chooses his own clothing and prefers to wear loose comfortable clothing. 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 too tight and applied smoothly without creases. Support Worker to ensure that there are no creases or rolled over waistbands in his clothing that might cause pressure areas. 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. 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. Liam will apply deodorant, and do his hair once he is transferred back into the wheelchair.	
Oral Hygiene	Liam will brush his own teeth at the basin once the shower/ dressing routine	

	is completed. Liam attends dental appointments annually.	
Urinary Continence Management	Liam has a supra pubic catheter. The Continence Nurse manages the S.P.C changes. Support Workers must empty the urinary drainage bag if requested to do so. Standard precautions are to be used for assisting Liam with catheter care. 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. 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. Liam might experience problems with catheter blockages. If this occurs call the Continence Nurse and or an ambulance. Liam will assess his urine for increased sediment, debris and blood. Report any noted changes to Liam. The Continence Nurse will manage the catheter changes which occur every 6-8 weeks.	
Bowel management	Liam has a bowel management plan which has been developed by the Spinal Cord Injury Nurse. Liam takes senokot tablets every night before going to bed and has assisted bowel care every second morning. Liam will direct this. Bowel Care: Assist Liam to roll onto his left side and insert a durolax 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. 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. Transfer Liam onto the commode chair	

	using the ceiling hoist. Wheel Liam over the toilet for him to open his bowels. This may take up to 30 minutes. Encourage Liam to assess the amount of faeces that has been passed into the toilet. Liam does not require a rectal check. Assist Liam to clean his bottom prior to the showering routine commencing.	
Pressure Care	Liam is responsible for his own pressure area care. He will perform his pressure relieving techniques when sitting in the wheel chair. However, he might ask for assistance and a change in position. Liam has a custom made pressure relieving cushion on his wheelchair at all times. Support Worker to ensure that this is clean, intact and placed in the correct position prior to transferring Liam into the wheel chair. 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.	
Mobility/ Positioning	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. 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.	
Manual Handling/ Transfers	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 commencing the transfer. 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. Liam also has a standing frame to promote weight bearing which is used as part of his exercise routine. Liam requires assistance and supervision with all transfers- refer to the client manual handling risk assessment for more detail.	
Supervision / Safety Issues	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. Liam can be left alone for 1-2 hours if he is in bed, comfortably positioned, has access to the phone and emergency alarm.	
Meal Preparation/ Dietary Preferences/ Meal Assistance	Liam likes to supervise meal preparation. His mother likes to cook the evening meal, however, support workers might need to assist Liam to prepare snacks, make hot drinks as requested. The Support Worker prepares breakfast. Liam likes to have a cup of tea when he wakes up followed by cereal and fruit. 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. Liam prefers to eat meat and vegetables, fruit etc. However, on Friday nights he prefers pizza after he has been out with his friends. He also likes to drink soft drinks. Liam dislikes spicy food and dislikes fish. Liam uses adaptive equipment to assist him with meal preparation. Assistance might be required related to fatigue.	
Community Access/ Transport	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. 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. Liam is awaiting funding for a modified	

	vehicle.	
Household Tasks	Wash dishes Clean bathroom Change bed linen and Liam's clothes Hang washing out onto the clothes line	
Shopping	Assist Liam to purchase small grocery items during community access shifts, personal items. Liam's mother does the food shopping. Assist Liam to shop for clothes, shoes as directed by him.	
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		

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