ALTAS

Assistive Living
Training and Skills

ALTAS

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Erasmus+

Module 1: Introduction to Assistive Living Technology, Digital Literacies and Risk Management.

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INTRODUCTION

This handbook acts as a resource for both students undertaking this Assistive Living Technology (ALT) module, and for the teachers delivering it. It is designed to be utilised both across Europe, and also in specific countries, and it therefore has content that is applicable to most European contexts, and also content that is specific to one country. There are therefore a number of handbooks in circulation, and the version will depend on the European country in which the course is being delivered.

The handbook is designed to be read while the course is being attended. The exercises will form the basis of discussion in the classroom, and in some cases, they need to be undertaken in advance of the classroom interaction. Course teachers will advise students when exercises need to be taken in advance.

Two modules have been designed to enhance and or develop knowledge, skills and competencies for health and social care staff supporting individuals who may be using or considering the use of assistive technologies to promote independence and improve quality of life.

This is the first of two modules, both have been benchmarked against Skills for Health SFHCH61 and SFHCH68 Long-term conditions and Assessment of Individuals' Psychological and Social and Emotional needs for rehabilitation and also Technology to Care eAT. The second module is entitled Using assistive living technology to support effective communication and person-centred care.

Assistive Living Technology in Health and Social Care is not new. Today people are living longer thus the risk of living with longer term conditions becomes greater as we grow older. In addition to this, pressures on health and social care providers to support people in their own homes or in local communities, has led to changes in care delivery and in promoting the use of assistive technologies to promote independence and improve care outcomes (CIRCLE, 2012; Greenhalgh et al, 2015).

LEARNING OUTCOMES

By the end of this module 1 students will be able to:

1) Demonstrate an basic understanding of how ALT can be used to promote independence and self-care in clients with long term conditions

2) Explore and discuss the scope of ALT within health and social care settings

3) Identify the potential benefits, limitations and barriers, in the use of ALT in relation to person centred care.

4) Demonstrate confidence in using Digital Literacies in recording and communicating information

5) Identify potential risks to service users in relation to ALT

1)Demonstrate an understanding of how ALT can be used to promote independence and self-care in clients with long term conditions

2)Discuss the scope of ALT within health and social care settings.

3)Identify the potential benefits, limitations and barriers, in the use of ALT in relation to person centred care.

4) Demonstrate a basic understanding of how Digital Literacies can be used to record and directly communicate information.

5)Identify potential risks to service users in relation to ALT

ASSESSMENT STRATEGY

Formative Assessment

Within this module, a range of formal and informal assessment procedures will be employed during the learning process to support you in achieving the learning outcomes and to improve your performance in the summative assessment. To meet the formative element of the module you will have access to a variety of media packages and you will be expected to provide evidence of your understanding via a range of online and class activities.

Summative Assessment

15-minute presentation: and 1,500 word supporting paper (Learning outcomes 1, 2, 3, 4, & 5) (scenario based)

ASSIGNMENT GUIDANCE

Poster Presentation: Part one

Carry out an initial assessment of a person who has long-term conditions and identify the types of ALT required to promote independence health and well-being. (LOs 1 and 2 and 4)

Supporting paper: Part two

In relation to your given scenario: Discuss the potential barriers and examine the potential sources of risk in relation to ALT when promoting independence and health and well-being. (LOs 3&5)

ASSIGNMENT SUBMISSION

Part 1

Presentation Date	Time and venue TBC
Provisional marks available by:	Date…..
	Please submit your presentation slides as a PDF file and remember it must be submitted before 12.00 noon.

Part 2

Deadline for submission of plans or drafts:	Date..TBC
Assignment Submission Date:	Date TBC
Provisional marks available by:	Date TBC
Please note:	Your assignment should be generated electronically and submitted online.

Both parts of the assessment must be passed to achieve the module learning outcomes.

CONFIDENTIALITY STATEMENT

There should be no reference within your assessed work to any name or identifying information relating to patients/clients or any staff member of any organisation. Inclusion of such information will result in a failed submission. Where it is relevant to state the name of any organisation, the information should be supported by reference to published documents that are available to the general public and form approved official documentation relating to the operation and provision of that organisation.
It would be considered relevant to include the name of an organisation when:

- Discussing/debating/analysing published data relating to the performance of that organisation.
- Discussing/debating/analysing published and approved policy and strategy of that organisation.
- Discussing/debating/analysing published research/evaluations/audit/opinion, which relates to and names that organisation.

Where the assignment requires reflection or analysis of specific practice/patient/client/service user scenarios, confidentiality must be maintained using pseudonyms. Whilst retaining the essence of the scenario, where necessary some information may be altered to enhance anonymity, e.g., changing the number of siblings/children/place or type of work/accommodation or housing.

SECTION ONE: Introduction to Assistive Technologies

The content of section one should take approximately one day to undertake. Guidance for classroom interaction is listed below.

Welcome and introduction to the module, directed study and online activities

Pair work - Provide examples of technology used in daily life/ examples of technology used to promote health and wellbeing. Note examples down on *post -its* or record electronically on a group PADLET. https://padlet.com/. Class discussion.

View Power Point Presentation. *Introduction to Long term conditions and the concept of self-care*. (Online or face to face.)

Activity – case studies of LTC. In groups identify the health needs of someone living with (MS, Dementia, Depression, Asthma, and Diabetes. Etc. with specific reference to self-care needs.

View Power Point Presentation – *Introduction to Assistive living technology. Video case study*

View the video **what is telehealth?** https://www.youtube.com/watch?v=fiw4zHefZXY

View the Video **what is telecare**? https://www.youtube.com/watch?v=5LPflW4bNcg

If in the UK, View the Video **NHS Widening digital participation**.
https://www.youtube.com/watch?v=xxuxbr9L__M

If in the UK, view A guide to The Mi Smarthouse.
https://www.youtube.com/watch?v=J4o8eni1v-k

Read Article:
Eight technologies that will change health and social care: The dihttp://helensandersonassociates.co.uk/5-things-ive-learnt-about-telecare/gital revolution. www.kingsfund.org.uk

Activity
Identify the different categories of ALT. Briefly describe the function of each category in promoting health and wellbeing. Record your findings and feedback to the group.

SECTION TWO: The Scope of ALT within health and social care.

The content of section two relates to learning outcome two. It should take approximately one day to undertake. Guidance for classroom interaction is listed below.

Theory recap from previous session

Class activity

Key terminology word quiz.eg Quizlet https://quizlet.com/latest

View Presentation – *case studies to highlight the scope of ALT within health and social care*.

Students to view video case studies.

Activity.
Select one case study and answer the following questions.

1. what specific health or social care needs does the individual have?
2. What kind of ALT does the individual use?
3. how does the use of ATL help the induvial to meet their health or social care needs.

Class activity – regarding the students own area of work, select a client living with a long-term condition, identify a specific health /social care need. Identify an example of ALT that could be used to meet a specific need, e.g. communication, safety, mobility problems. Identify the benefits to the client in terms of health, wellbeing and the promotion of independence. Record findings on a poster format, share findings with group and discuss.

Picture card game – "*Name that ALT*". students are asked to view a selection of picture cards illustrating an example of ALT. Students are required to categorize the cards under the correct ALT headings, e.g. telehealth, telemedicine, digital participation.

Activity
Explore the online resources.
Find one example of telehealth **and** telemedicine.
Briefly discuss the advantages in helping your chosen client to adopt ALT. In relation to the client, carer, and health/social care service.
List choose 1 example from each ALT category that are available to help your client in terms of health /wellbeing and independence.
Briefly search the literature and seek evidence to support your choice of ALT.
Write a brief report of your findings. Support your work with accurate references using the Harvard System.

If in the UK: **Activity**
Each student is asked to access the NHS Apps Library available at https://apps.beta.nhs.uk/

1. Select one long term condition, explore the Apps library and choose one App that could help to manage and improve the client's health.
2. What is the function of the APP.?
3. Who is the App suitable for?
4. How does the client access the App?
5. How does the App work?
6. Identify the benefits and barriers to effective use.
7. If an App is labelled NHS Approved, what does this mean?

Upload findings on to module blog.

SECTION THREE: Barriers to Assistive living Technology.

Section three relates to LO 1 & 3. The content of section three should take approximately one day to undertake. Guidance for classroom interaction is listed below.

There are many positives in using assistive living technologies to promote independence and well-being. However, it is important to understand potential barriers. This includes personal barriers identified by the individual and or family member. This may include fear of new technologies, lack of confidence in its use, accepting assistance is required, concerns that introducing an assistive aid may reduce support given by health and social care workers themselves, thus reducing the risk of social isolation.

Health and social care providers may also experience barriers including, designing a package tailored to the individual within restrictive budgets, service integration, risk assessments, staff training, monitoring, maintaining and updating, access to ALT and for some health and social care staff the fear of redundancy or changes to job role.

Activities: Classroom or individual

View PowerPoint presentation - *Barriers to ALT*

Watch the video presentations entitled "*service users and carers perspectives*"

In groups, write down what you think are the barriers to ALT. Factors to consider:
Individual, family/carer, the health care worker, financial, behavioural, social, emotional, physical, environmental. How do the barriers occur?

Activity
Divide the group into 2/3 smaller groups, ask students to offer a solution to the barriers identified by another group. Receive and discuss feedback.

Guest Speaker or video case study. "**Living with Thalidomide- "Benefits and limitations of ALT** ".
Question and answer session.

Class Activity
Read the online article, "who is pepper" Available at https://www.ald.softbankrobotics.com/en/robots/pepper

Group debate, read the short news article "Pepper Robot" and watch the associated video clip; http://www.bbc.co.uk/news/education-38770516

"Robots could help solve social care crisis" – Discuss.
Consider the arguments for and against this statement and write down your thoughts.

Introduction to directed study.

Read though the case studies contained within the "online community folder", select one case study that is of interest to you.

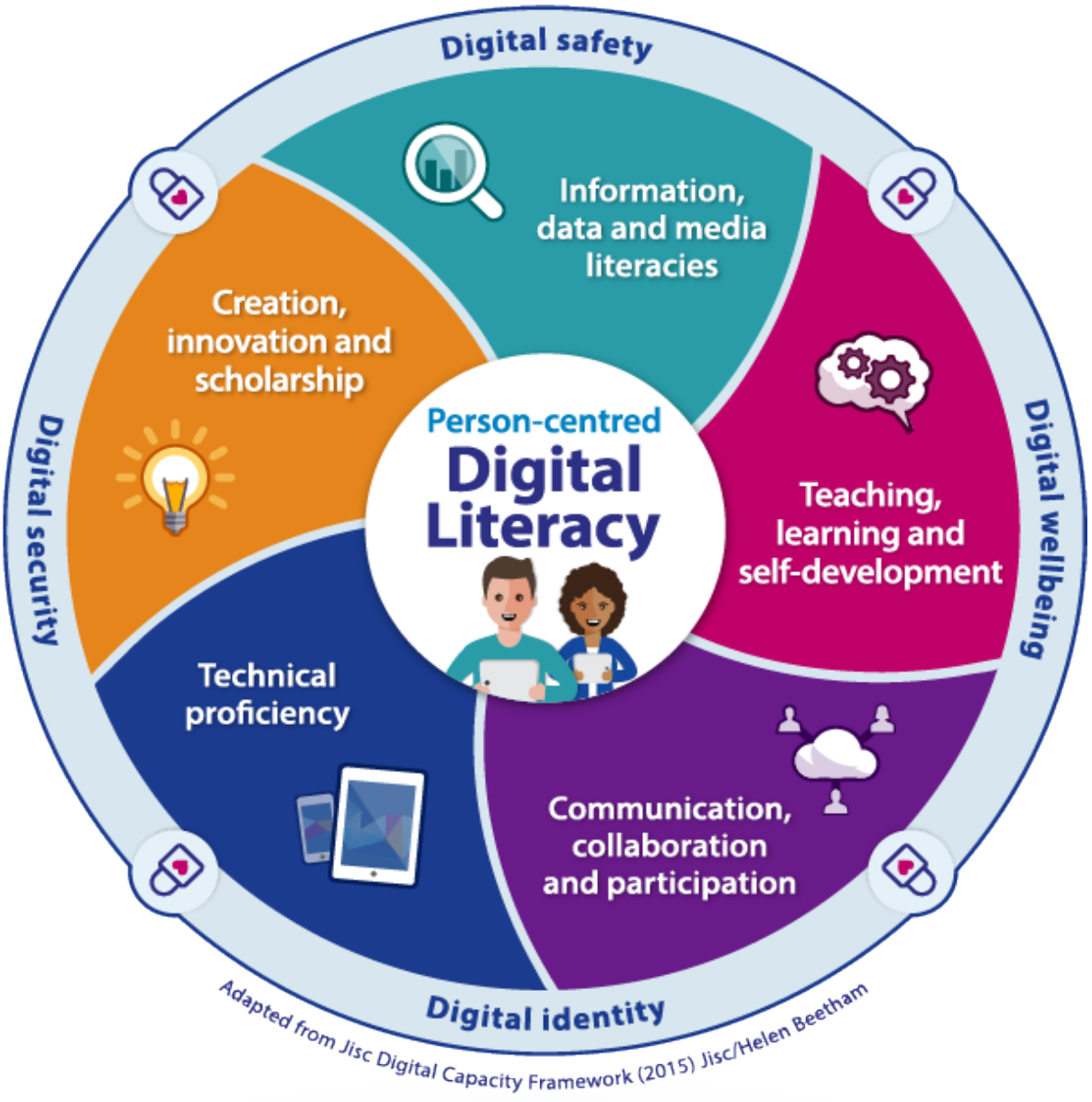
1. Identify the specific health and social care needs of the individual living with a long-term condition.
2. Consider the different ALT categories and explore the online resources. Select one ALT intervention that could help to meet the identified need.
3. Identify the potential benefits to the client?
4. Identify the potential barriers or limitations to use?
5. Would the service user/carer require specific training or support?
6. Briefly describe the role of the health care worker in supporting the service user/carer in engaging with ALT.

SECTION FOUR: Digital Literacies

The content of section four relates to LO4. It should take approximately one day to undertake. Guidance for classroom interaction is listed below.

Definition: Digital literacies are the capabilities which fit someone for living, learning and working, participating and thriving in a digital society.

Digital literacy domains: Becoming a digitally literate person involves developing



Health Education England. https://hee.nhs.uk/our-work/research-learning-innovation/technology-enhanced-learning/digital-literacy

Lecture /presentation - Introduction to digital literacies within context of Health and Social care**,(** skill required to enhance communication**). This link provides further information: (https://www.jisc.ac.uk/guides?f[]=field_project_topics:425)**

Activity
Digital literacy self-assessment, an example of a student survey may be found at: http://jiscdesignstudio.pbworks.com/w/file/40474922/Student%20survey.doc

Students are asked to complete a digital literacy self-assessment tool, to identify areas of confidence and skills that require further developed. (insert link to self-assessment tool .)

Activity
Students are asked to complete a short personal reflection about their own understanding and use of digital communication tools.
Students are asked to formulate a personal action plan. This will help both the student and the tutor to address any knowledge and skill gap.

Activity
Consider your own area of practice, select one case study to base your work upon.
Write down a summary, to include the nature of condition, specific health and social care needs, identify the specific communication needs of the service user.
Describe the digital communication device that is used to enhance communication or select a device that could be used in the future.

Please answer the following questions:

1. What are the benefits and limitations of the selected device?
2. What is the importance of powering and recharging devices?
3. Due to the electrical nature of device power source, what are the potential hazards?
4. What are the security measures that must be taken when using the internet, especially in terms of data protection?

Presentation /Video Digital identity and internet safety.

What is a digital tattoo?
"Our digital identity, or tattoo, is the permanent collection of data about us that is available online. Each time we post a picture, a blog, a status or a tweet, we are adding to that digital identity".
Binary Tattoo.2017. http://www.binarytattoo.com/about-us/

Activity

Ask students to get into small groups and discuss the following issues.
How many social networking sites do you belong to?
Do you shop online?
Do you search for information in relation to work, study or leisure activities? Provide examples of online interactions that commonly ask for personal data?

What are the risks of uploading personal information? e.g. personal risk, professional risk?
Who is reading your information?

Can you control who has access to your personal information?
What is done with your personal information?
How could your online digital tattoo have an impact on your employer, service users, family /friends?
What can be done to protect personal identify?
What are the benefits of a positive digital identity?

Present your findings on a poster, be prepared to discuss your findings with your group.

Activity
Read the online article "**what is internet security** "available at http://www.bbc.co.uk/webwise/0/22717881

Select one of the related internet links on the same page, read the information and write a summary of your findings. What have you learnt from your reading? How will this information be used to promote the safe use of digital communication with service users?

Access lyndia.com .Available at https://www.lynda.com/Education-Elearning-tutorials/Digital-footprint/511288/582671-4.html?org=edgehill.ac.uk
And watch presentation entitled **Internet Safety for students**. Write down the key headings identified and make a note of what you have learnt about the topic. How could this information be used to protect the interests and rights of service users?

HM Government Cyber Aware. Is it secure? *Cyber Aware*. https://www.cyberaware.gov.uk/

Upload your findings onto the blackboard discussion area.

Activity
Read the online information entitled**_what is a search engine?** and watch the related video. http://www.bbc.co.uk/webwise/0/22562913

Digital Unite. **Searching and Browsing**. https://www.digitalunite.com/guides/using-internet-0/searching-browsing

Choose a search engine, using the search tips found on the BBC Webwise page, entitled *what is a search engine*? search for a long-term condition that you are interested In. provide a brief overview of the condition. Make a note of the relevant web address. Explore the internet further for a patient information site that is related to your chosen condition.

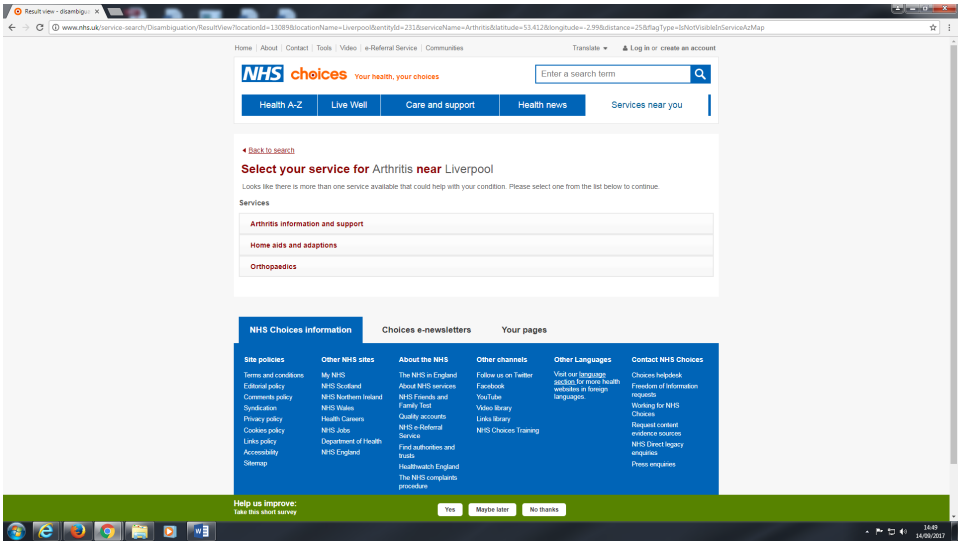
Answer the following questions:

1. What is the web site name and web address?
2. What is the aim of the site?

3. How could the available information promote health and independence?
4. Does the site facilitate methods of online communication with other service users or professionals? E.g. blogs, online forums.
5. Would you recommend this site to a service user, if so please give reasons?

In relation to you chosen long term condition, select one geographical area. Using the search tools via the internet identify the key NHS and voluntary services available in that area to support someone living with the chosen LTC.
What are the aims and function of the selected services?

Example



You are invited to share your findings with the group online. Record your findings save them on to a word document and upload the document on to the blackboard discussion area. Participate in a show case session within class.

Work based activity
Demonstrate interaction with services users /health care professionals by using the basic features of communication tools, (e.g. Mobile phone, Smart phones, Smart TVs, VoIP Chat, Skype calls and email & PC,s, iPads)

Complete a communication tool evidence log

Example

Device	Safety Issue	Aim of communication	Communication Outcome
Text messaging	The person may forget an appointment	Appointment reminder	Appointment attended as planned , positive outcome

SECTION FIVE: Introduction to Risk Management and ALT

Content relates to Learning outcome 5.

Risk management is concerned with the assessment, analysis and management of risks. It is simply recognising which events (hazards) may lead to harm in the future and minimising their likelihood. (how often?) and consequence (how bad?).
National Patient Safety Agency .2017.
http://www.nrls.npsa.nhs.uk/resources/?entryid45=59825&q=0%C2%ACrisk%C2%AC&p=3

The success of risk management depends on creating and maintaining safe care systems, reducing probability of adverse events, maintaining person centred care and reporting any concerns through effective systems of communication.

Clinical risk management is concerned with improving quality and safety within health and social care practice. The success of any risk management is to raise awareness of any potential hazards or risk of harm and then acting to prevent or reduce those risks.

Face to face or online access to power point presentation – Introduction to risk assessment and AL

Activity

Picture Game./Quizlet. *Risk, Hazard or Harm*? Discuss solutions.

Five Steps to Easy Risk Assessment (National Patient Safety Agency, 2007)

Example Risk Matrix

CONSEQUENCES						
	Catastrophic	Yellow	Orange	Red	Red	Red
	Major	Yellow	Orange	Orange	Red	Red
	Moderate	Green	Yellow	Orange	Orange	Red
	Minor	Green	Yellow	Yellow	Orange	Orange
	Negligible	Green	Green	Green	Yellow	Yellow
		Rare	Unlikely	Possible	Likely	Almost certain
	LIKELIHOOD					

Consequence- For example **catastrophic** means death or debilitating permanent injury and **minor** means requiring first aid.

Likelihood- This must be estimated over a stated period or related to a given activity.

Frequency	1 Rare	2 Unlikely	3 Possible	4 Likely	5 Almost certain
How often might it happen (per procedure/episode or within a specified timeframe)?	Can't believe that this will ever happen or recur.	Do not expect it to happen or recur but it is possible	Might happen or recur occasionally	Will probably happen or recur but it is not a persistent issue	Will undoubtedly happen or recur, possibly frequently

Risk Scoring- The risk scores are not intended to be precise mathematical measures of risk, but they are useful when prioritising control measures for the treatment of different risks.

Low risk (green) - Quick, easy measures implemented immediately and further action planned for when resources permit.

Moderate risk (yellow) Actions implemented as soon as possible, but no later than the next financial year.

High Risk (orange) Actions implemented as soon as possible, and no later than six months.

Extreme risk (red) - Requires urgent action. The Trust Board is made aware and it implements immediate corrective action.

The above information is not meant to be prescriptive but is intended for guidance. (National Patient Safety Agency, 2007).

Activity

Example of risk assessment
Health and Safety checklist for classrooms. In pairs carry out a risk assessment of the classroom, record your findings on the enclosed form.

Available at http://www.hse.gov.uk/risk/classroom-checklist.pdf

Watch video presentation, (or 3D simulation).
Follow the 5 step risk assessment process and record your findings, followed by class discussion.

Introduction to directed study

Activity

1. A Consider your place of work, examine the equipment that is available within the area, how frequently is the equipment checked? What are the checks for?
2. Are some devices checked more than others? Why might this be?
3. Consider the assistive technologies used in your work place, (including non-electrical) how would you recognise defects?
3. What systems are in place for you to report defects?
4. Have you received any training in relation to risk assessment? How could you access further help and support.
5. Record your findings on the provided template.

Work Based Activity

Access the Health and safety Executive site. Available at http://www.hse.gov.uk/risk/index.htm . Review the risk assessment templates. Within your own area of work .

Activity

Safety of devices

Assistive living technologies, includes all aids that can promote health and well-being and promote independence. Safety should remain paramount at all times. All aids must be fit for purpose. The health and social care worker must be able to recognise potential hazards and act accordingly. Some defects can be found by visual examination but some defects can only be found by portable appliance testing (PAT), although there is guidance to suggest frequency of testing there is no legal time span. Although the more frequency products are used, the guide, suggest more frequency testing. NHS and social care products such as lifting devices including hoist and beds; medical devices, sensors are usually tested on an annual basis. Electrical equipment that has been tested will have a date and signature on it to identify it has been checked.

Activity.

Risk management – non-clinical example.

The use of a gas/electric cooker in supported living accommodation.

1. what can go wrong when using a cooker? what are the Hazards?
2. what could be the cause of the problem?
3. what are the key issues to be learnt?
4. What can be done to prevent such problems happening in the future?
5. long term, what can be done or put in place to reduce the risk of harm?

Risk Management - ALT

1.Reflect upon when you have used ALT within your area of work or at home.
2 Identify a situation where there was a problem in using the technology.
2. What went wrong?
3.What are the factors that could have lead to the problem e.g. lack of training
4. What could be done to prevent this happening again?

Write a short reflective piece, do demonstrate your understanding of the risk management process. 500 words Approx.

Personal Reflection Activity

Consider your role be in supporting a service user to select and use ALT. which other members of the multi professional team may be involved?
Describe a time when you have helped a service user to access information about ALT? Where did you find the information? Did the information format need to be changed to meet the needs of the service user? How?
How could you support a service user to express their choices and concerns in relation to ALT?
Within your area of work, how would you deal with maintenance and repair issues in relation to ALT?
Give an example when you have supported someone to use ALT, which procedures did you follow? How did you record your actions?

Upload your reflection to the module blog area, to receive tutor feedback.

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Activity

Using a case study example from your own area of work or choose one of the online case studies, carry out a risk assessment in relation to assessment of need and selection of ALT, ensure you follow the 5 steps of risk assessment.

Present you findings using an online collaborative tool. Discussion and feedback to follow.

APPENDIX 2

Glossary

Long Term Condition – any health condition that cannot at present be cured, but can be managed with medicines and/or therapy: This includes conditions such as diabetes, heart failure, COPD, arthritis, depression, and dementia.

Telehealth (remote care) - Electronic sensors or equipment that monitors vital health signs remotely, e.g. in your own home or while on the move. These readings are automatically transmitted to an appropriately trained person who can monitor the health vital signs and make decisions about potential interventions in real time, without the patient needing to attend a clinic

Telecare - Personal and environmental sensors in the home that enable people to remain safe and independent in their own home for longer. 24-hour monitoring ensures that should an event occur the information is acted upon immediately and the most appropriate response put e expected to rise due to an aging population and unhealthy lifestyle choices.

Wellness Services - to encourage people to adopt and maintain a healthy lifestyle, to prevent or delay the need for support.

Assistive Living Technologies

Assisted living technology (ALT) is used as part of a range of services that help people maintain independence.

The increase in people using ALT means that employers and staff need to be more aware of what types of ALT is available and how it can be used. Just as technology has become part of everyday life, the use of ALT has also become more acceptable and established. www.skillsforecare.org.uk

Technology Enabled Health Care. TEC

Technology enabled care (TEC) includes telehealth, telecare, telemedicine, telecoaching and self-care services that put people in control of their own health, wellbeing and support, keeping them safe, well and independent and offering them and their families' peace of mind.

TEC also includes personalised sensors and apps that can support fitness, health, care and wellbeing for individuals and carers. Other terms used to cover TEC services include digital health, health IT, mHealth, eHealth, smart home technologies, artificial intelligence and internet of things.

mHealth and apps

Accredited fitness and health/care apps (including mental health) are available for use on smartphones and tablets and are often referred to as mobile health or mHealth.

Digital health

eHealth, Health IT and digital health are broader terms that can also include web-based home health support systems as well as electronic health and care records used by practitioners. Increasingly, they cover predictive data analytics, machine learning, care robotics, virtual reality, voice operable systems and artificial intelligence. https://www.tsa-voice.org.uk

APPENDIX 3

Learning Resources

Useful Websites.

https://www.england.nhs.uk/tecs/

http://www.independentforlonger.com/our-community

https://www.tsa-voice.org.uk/

https://www.england.nhs.uk/digitaltechnology/

https://www.hft.org.uk/

https://www.learningdisabilitytoday.co.uk/assistive-technology/

http://www.northwestassistivetechnology.nhs.uk/

http://liverpool.gov.uk/social-care/adult-social-care/living-independently/telecare-alarms-and-equipment/

http://www.liverpooltalkshealth.info/

http://www.hse.gov.uk/

http://www.nrls.npsa.nhs.uk/resources/healthcare-setting/

Journals

Journal of Telemedicine and Telecare

Journal of Enabling Technologies

Assistive Technology: The Official Journal of RESNA

Disability and rehabilitation: Assistive Technology

Assistive Technology

Technology and Disability