

STUDY GUIDE

TELEHEALTH

SHORT COURSE



HOW TO WORK THROUGH THIS COURSE

Over the following pages, you will move through a logical, self-paced learning experience that can enlighten and educate you on Telehealth.

It is important from the outset to understand that learning about something is not the same as just reading about it. Learning implies a permanent change in what you know and can do.

Anyone can read a book and understand it; but for most people the detail of what you read is largely forgotten.

Reading something once only puts information into short-term memory. It is soon lost if you don't 'work' on it. Studying the same information takes longer, but by thinking about it and processing it you can transfer that information to long-term memory. This way, you will enhance your ability to recall and apply that information for years to come. If you take your time to work through the 7 lessons that follow, you will learn.

Read, Reflect, Research, Revise

Throughout the following pages, you will find not only things to read about, but also things to do:

1. Throughout each lesson, there are suggestions of things to do under the headings "Learn More". These are all sorts of ideas about things you can do in order to explore the subject further.
2. At the end of each lesson, there is an interactive self assessment test (assignment), for you to undertake. When you click on this, your computer needs to be online. You will be taken to our cloud-based online school. The answers you choose will be evaluated immediately, and your results can be seen on completion of each test. You can return and repeat tests if you wish.

Undertaking these tasks will involve reflection, research and revision of the topics you read about. By repeatedly encountering each topic in different ways, your perspective on each subject will broaden, and the commitment of information to longer term memory will strengthen.

You don't need to undertake all of the suggested tasks if you don't want to; but we strongly recommend that you do some in each lesson, and that you take all of the self-assessment tests.

The more time you spend doing these things, the stronger your learning will be.

Completing the Course

After completing all 7 lessons you will be presented with a final assessment which can also be undertaken online.

Do not attempt to do this until you have worked through all 7 lessons, and feel like you have learnt the subject well.

Upon finishing this final assessment you will immediately see your final results, and you can save a pdf copy of those results as a "Certificate of Completion".

Welcome Audio

Click the button below to listen to the welcome audio for this course. This feature is supported by most computers and some mobile devices.



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LESSON 1 SCOPE AND NATURE OF TELEHEALTH SERVICING

Aim

Determine how telehealth services can provide an alternative to face-to-face consultations for a variety of different health practitioners.

Introduction

Many professionals and organisations have awoken to the enormous potential for service delivery through technology. This need to develop and use technology developed even further due to the COVID-19 pandemic.



‘Telehealth’ as an umbrella term for a range of services known as TECS (Technology Enabled Care Services). It is a generic term used to describe different technologies provided to meet the health needs of individuals, as well as training of healthcare workers, and meetings of healthcare professionals and administration staff. Components of telehealth can include:

- **Telecare** – remote care for less able people or vulnerable people e.g. elderly, disabled, learning disabilities, etc. It is aimed at helping to keep these people living in their homes and to maintain independent living. It can include the use of pull cords in sheltered housing/care homes, 24/7 alarm services, etc. It also includes

services such as smoke detectors, carbon monoxide detectors, increased or decreased temperature, passive infrared, movement sensors, enuresis sensors, epilepsy sensors, medication reminders, etc.

- **Telehealth for people with chronic conditions** – enabling individuals with long-term conditions to self-manage e.g. blood pressure, blood glucose monitors, people with COPD, diabetes, heart disease, etc.
- **mHealth** – services accessed by mobile phone or computer apps. This is aimed at younger people or those with increased flexibility. It can be used for people with dementia e.g. GPS walking services.

Suggested Tasks: ▼

Throughout this course you will be provided with suggested tasks and reading to aid with your understanding. These will appear in the right hand column. Remember: these tasks are optional. The more you complete, the more you will learn, but in order to complete the course in 20 hours you will need to manage your time well. We suggest you spend about 10 minutes on each task you attempt, and no more than 20 minutes.

- **Assistive technologies (environmental controls)** – services that allow people to carry out daily activities such as opening curtains, turning on lights or TV, using computers, etc. These are aimed at people with severe disabilities to enable them to function more independently.
- **Telemedicine** – a branch of telehealth concerned with the use of different types of technology and telecommunications to enable doctors to support patients, provide remote care, and share information with other professionals typically by video call. It may be used for diagnoses, prescriptions, discussing x-rays and other acute health services. Unlike telehealth it does not include training, teaching or meetings with non-healthcare personnel.
- **Telenursing** – enables nursing staff to provide remote services, etc.

Telesurgery

In the field of surgery, telehealth is used for medical education, diagnostic or therapeutic assistance and consultations with remote patients. Telesurgery can also include a scenario in which a surgeon at a primary operating site consults with a colleague when he or she encounters a complex or unexpected problem during surgery. Advanced technological tools have also demonstrated the potential to assist surgeons with preoperative training and planning through using three-dimensional virtual images replicating a specific patient's case. Future possibilities for this area of telehealth include the use of remote robotic arms that can perform

precise surgical procedures directed by a practitioner from a distant site.

Telesurgery requires a network with high reliability and the ability to transfer large amounts of data without delay and error. Fortunately, telecommunication technology is advancing at an exponential rate and with the development of both satellite and inexpensive broadband capabilities, the future of telesurgery is very promising. This has the potential to improve patient outcomes, surgical training, and confidence during complex procedures.

Virtual Reality

The application of virtual reality (VR) in medicine has the potential to refine many different areas of telehealth, such as 3D visualisation of anatomy, surgical stimulators, virtual clinic rooms, and so on. For example, VR psychotherapy is proving to be a useful tool to help treat psychological disorders such as panic disorder, agoraphobia, and fear of flying through virtual exposure therapy. VR head-mounted displays can immerse the patient in a simulated situation. Application of VR systems can offer new opportunities for practitioners and patients to simulate real-life situations in a controlled and safe environment.

However, reports of patient experiences using virtual reality have suggested that the use of this technology can result in adverse health effects, such as nausea, disorientation, general discomfort, and blurred vision. This can become particularly problematic for patients with severe symptoms, so before virtual reality headsets can be implemented as a permanent tool in telehealth, these issues must be resolved.