

**Summer Independent Learning**

<b>Subject/Group</b>	<b>BTEC Extended Diploma in Health and Social Care (Y12-Y13)</b>
<b>Topics</b>	<b>Anatomy and Physiology Research Methods Reading</b>
<b>Timescale</b>	<b>15 – 24 hours + reading</b>
<b>To be completed by</b>	<b>This work must be completed and handed in to your subject teacher on the first day of term</b>

**SECTION ONE: ANATOMY AND PHYSIOLOGY**

**TASK 1 (A1 CELLS):**

**A1 How cells work**

- The function and structure of cells, including membrane, nucleus, ribosomes, rough and smooth endoplasmic reticulum, mitochondria, centrioles, lysosomes and Golgi apparatus.

Create an A4 poster, labelling all parts of the cell (shown above). Make sure you explain the function and structure of each part of the cell.

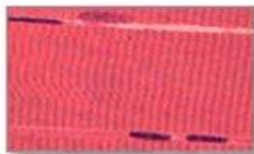
**TASK 2 (A2 TISSUES):** Tissues are groups of similar cells carrying out specific functions. In this unit, we will look at:



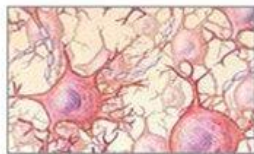
Connective tissue



Epithelial tissue



Muscle tissue



Nervous tissue

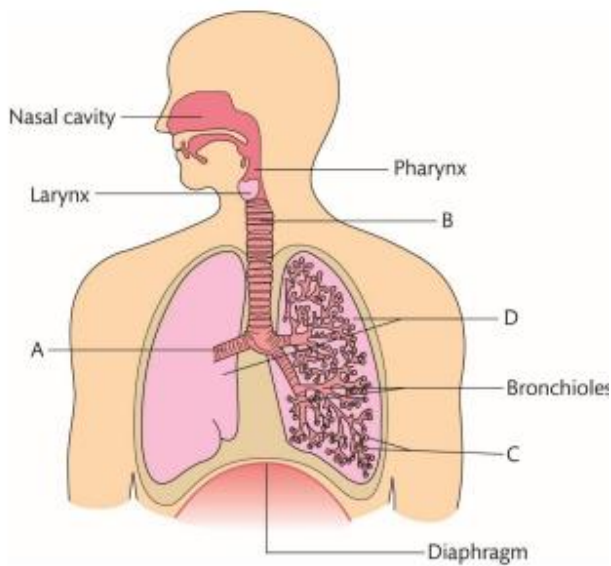
For each type of tissue, you need to explain the function and structure, then identify where it is located in the body. You can present this in a table or as a report.

**TASK 3 (A3 BODY ORGANS):** Produce an A3 mind map, identifying all the following body organs: Heart, lungs, brain, stomach, liver, pancreas, duodenum, ileum, colon, kidneys, bladder, ovaries/testes, uterus, and skin.

You need to include a picture of the organ, the structure and the function of each.

**TASK 4 (B3 RESPIRATORY SYSTEM):**

The respiratory system allows oxygen in the air to enter the body, and to be taken up by cells and tissues. The respiratory system also eliminates carbon dioxide from the body.



**PART 1:** Which letters on the diagram show the following parts of the body?

Bronchi: \_\_\_\_\_

Lungs: \_\_\_\_\_

Trachea: \_\_\_\_\_

Alveoli: \_\_\_\_\_

**PART 2:** Produce a table to explain the structure and function of the following parts of the respiratory system: Trachea, bronchi, lungs, bronchial tree, and alveoli.

**PART 3:** Describe how the tissue in the nose is adapted to its function (refer to the characteristics of ciliated epithelial tissue that prevent the entry of foreign bodies into the respiratory system, and that warm and moisten air).

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**PART 4:** Explain the role of the intercostal muscles and the diaphragm in the process of inspiration and expiration.

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**PART 5:** Watch the following video: <https://www.youtube.com/watch?v=57byXpOUpSU>. Using the space provided below, draw a diagram showing the process of 'Gaseous exchange' and 'Diffusion'

## **SECTION TWO: RESEARCH METHODS**

### **Background/Context**

*There are many reasons why research is carried out into contemporary health and social care issues, for example to explore the effect of diet on health and wellbeing or the provision and impact of addiction centres in the local community.*

*As a health and social care professional you will need to understand the purpose of research, how it is carried out and the importance of research for improving the wellbeing of those using health and social care services.*

*This is an externally assessed unit made up of types of issues where research is carried out in the health and social care sector, research methods in health and social care and carrying out and reviewing relevant secondary research into a contemporary health and social care issues.*

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Don't forget to use your Health and Social Care textbooks and other resources to help you complete this work.

Unit 4 is found in the BTEC Health and Social Care Student Book 2.

**There are THREE parts to this work. ALL parts are mandatory.**

1. A variety of activities aimed at developing your understanding of enquiries into research.
2. Read and analyse a research document.
3. Produce a research poster.

**PART ONE**

**Purpose of Research**

The purpose of research is to find out information or gain knowledge. Research is a systematic or orderly procedure that explores issues to establish facts or reach new conclusions.

**Activity 1**

There are FOUR key purposes of research in health and social care. **What are they?**

1	
2	
3	
4	

**Activity 2**

Using reputable websites, identify TWO examples of research that have been carried out in health and social care within the last five years.

	Name of research projects, the web links and a summary of the research conducted
Health	<p><b><u>Research article 1</u></b></p> <p>Title of research project:</p> <p>URL link:</p> <p>Summary of the research that has been conducted:</p>

	<p><b><u>Research article 2</u></b></p> <p>Title of research project:</p> <p>URL link:</p> <p>Summary of the research that has been conducted:</p>
Social Care	<p><b><u>Research article 1</u></b></p> <p>Title of research project:</p> <p>URL link:</p> <p>Summary of the research that has been conducted:</p> <p><b><u>Research article 2</u></b></p> <p>Title of research project:</p> <p>URL link:</p>

	Summary of the research that has been conducted:
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**Activity 3**

As part of your learning, you need to have a clear understanding of the key terms used within this Unit.

**Define the following key terms used in research.**

<b>Command verb/key terms</b>	<b>Definition/Explanation</b>
Article	
Issue	
Health and social care practice	
Research methods	
Qualitative research	
Quantitative research	



Primary research	
Secondary research	
Ethical issue	
Literature review	

**Activity 4**

Research involves the collection of data. Data can be numerical, or it can be descriptive. Numerical data can be statistically analysed whereas descriptive data cannot be measured. There are several methods used to collect the data. In the table below are examples of the commonly used research methods.

There are several research methods which you need to know about.

Below is a table which includes most the research methods you will come across in Unit 4.

- Define each research method
- Identify ONE strength and ONE weakness for EACH research method

<b>Research methods</b>	<b>Strengths</b>	<b>Weakness</b>
Observations <b>Definition:</b>		
Interviews <b>Definition:</b>		
Focus Groups <b>Definition:</b>		
Experiments <b>Definition:</b>		
Surveys <b>Definition:</b>		
Questionnaires <b>Definition:</b>		
Case studies <b>Definition:</b>		

## PART TWO – READING TASK

Read the two articles and complete a SQ3R worksheet (see next page) for each article.

**Article 1:** <https://www.wypartnership.co.uk/application/files/4316/0284/3010/bame-review-report-summary.pdf>

**Article 2:** <https://workforce.wypartnership.co.uk/application/files/5316/4555/4180/WYHCP - People Plan - Workforce Strategy 2021-2025 Public summary.pdf>

## PART THREE – RESEARCH TASK

### What can we learn from...

### The 'Women's Health – Let's Talk About It' research

In spring 2021 the Department of Health and Social Care (DHSC) launched a 'call for evidence' to inform the government's very first Women's Health Strategy.

Your task is to complete background research on the Women's Health Strategy and produce a research poster on the 'Women's Health – Let's Talk About It' research. Using the links below:

- <https://www.thewomensorganisation.org.uk/wp-content/uploads/2022/01/Womens-Health-Survey-findings-2022.pdf>
- <https://assets.publishing.service.gov.uk/media/6308e552e90e0729e63d39cb/Womens-Health-Strategy-England-web-accessible.pdf>
- <https://assets.publishing.service.gov.uk/media/62d93c65d3bf7f2862f26a48/Womens-Health-Strategy-easy-read.pdf>

Posters are widely used in the academic community, and most conferences include poster presentations in their program. Research posters summarise information or research concisely and attractively to help publicise it and generate discussion.

The poster is usually a mixture of a brief text mixed with tables, graphs, pictures, and other presentation formats. At a conference, the researcher stands by the poster display while other participants can come and view the presentation and interact with the author.

## What Makes a Good Research Poster?

- Important information should be readable from about 3 metres away
- Title is short and draws interest
- Word count of about 300 to 800 words
- Text is clear and to the point
- Use of bullets, numbering, and headlines make it easy to read
- Effective use of graphics, colour and fonts
- Consistent and clean layout

## What to include?

- Introduction to the research
- Why do we need a Women's Health Strategy?
- What did the survey involve?
- What were the priority topics?
- What did the results show?
- What were the gaps in data and research?
- What are the disparities in health outcomes for women?
- What are the future recommendations?
- Include images and ensure that all your work is in your own words and referenced.

## Examples of Research Posters

Partial funding by:

### Colorectal Cancer Screening and Sociodemographic Disparities Among Latino Subgroups in Marion County, Florida

Kaeli Flannery, MPH,<sup>1,2</sup> Laura Ramirez Diaz, MPH,<sup>1</sup> Robin Lewy, MA,<sup>1</sup>

1. Rural Women's Health Project, Gainesville, FL. 2. University of Florida, College of Public Health and Health Professions.

#### BACKGROUND

- Colorectal cancer (CRC) is the third-leading cause of death among Latino men and women.<sup>1</sup>
- CRC incidence and mortality among Latinos is declining.<sup>1</sup> However, rates are variable across countries of origin.<sup>2</sup>
- Studies show Latinos are less likely to adhere to current CRC screening guidelines as compared to other racial/ethnic groups.<sup>3</sup>
- Foreign-born Latinos have a lower likelihood of receiving a CRC screening as compared to U.S. born Latinos.<sup>4</sup>
- Disparities in CRC screening are hypothesized to be associated with sociodemographic factors: language, culture, and health care access.
- Appropriate interventions to increase CRC screening among Latinos remain understudied, particularly across country of origin.<sup>5,5</sup>

#### RESULTS

**Table 1. Sociodemographics by Country as Percent of Total Sample**

Country	Number of participants	Uninsured	Limited English proficiency	No regular clinic	Low pre-test knowledge of CRC
All countries	67	36%*	67%*	16%	57%*
Cuba	5	0%	100%	80%	0%
Dominican Republic	18	50%	53%	28%	61%
Ecuador	2	50%	100%	50%	100%
Honduras	4	100%	100%	100%	100%
Nicaragua	2	0%	100%	0%	0%
Mexico	12	36%	92%	33%	33%
Puerto Rico	11	0%	64%	36%	36%
USA	5	20%	0%	40%	80%
Venezuela	6	67%	67%	36%	33%

\*P<0.05 are indicated with an asterisk. P-value generated from Fisher's Exact Test.

Participants 50 years and older (n=31)

Participants ≥50 Screened for CRC Prior to Study

Uninsured Participants ≥50 Screened for CRC Prior to Study\*

\*P<0.05 are indicated with an asterisk. P-value generated from Fisher's Exact Test.

**CRC Knowledge Pre- and Post- Promotora Education**

28% of participants requested referral assistance and were linked to CRC screening.

#### CONCLUSIONS

- Country of origin was significantly associated with prior CRC screening.
- English proficiency, pre-test knowledge of CRC, and health insurance status were significantly associated with country of origin.
- Among those ≥50, health insurance status was significantly associated with prior CRC screening.
- Knowledge of CRC screening guidelines doubled post-*promotora* education.

#### OBJECTIVE

To increase knowledge of CRC among Latinos and to identify key predictors of CRC screening across Latino subgroups in Marion County, FL.

#### METHODS

Promotora de salud model

Recruitment

Latinos ≥18 years old recruited by a *promotora* during community outreach

↓

Baseline data collection

Sociodemographic questionnaire and pre-test administered

↓

Education

Education session on prevention and detection using *fotonovela* format

↓

Endline data collection

Post-test administered

↓

Linkage

Referral to medical services and CRC screening

#### DISCUSSION

- Sociodemographic barriers to CRC screening may vary across Latino subgroups.
- Knowledge and awareness of CRC may be influenced by health education in countries of origin and social position in the U.S.
- Future public health interventions should focus efforts on linkage to care in most vulnerable Latino subgroups.
- Other areas for research include barriers to CRC screening among foreign vs. US-born Latino subgroups, as immigration status can determine health insurance access.
- *Promotora* models are a culturally and linguistically-appropriate mechanism to increase knowledge of CRC.

#### REFERENCES

1. American Cancer Society. *Cancer Facts and Figures for Hispanic/Latinos 2018-2020*. Atlanta: American Cancer Society, Inc; 2018.
2. Pinheiro PS, Callahan KE, Gomez SL, et al. High cancer mortality for US-born Latinos: evidence from California and Texas. *BMC Cancer*. 2022;22(1):478. doi:10.1186/s12885-022-3460-2
3. Castañeda SF, Gallo LC, Nodora J, et al. Colorectal cancer screening among Hispanic/Latinos in the HCHS/SOL sociocultural ancillary study. *Preventive Medicine Reports*. 2019;15:100947. doi:10.1016/j.pmedr.2019.100947
4. Ellison J, Jandorf I, Villegas C, Winkler G, Dukeman K. Screening Adherence for Colorectal Cancer Among Immigrant Hispanic Women. *J Natl Med Assoc*. 2011;103(8):683-688.
5. Stern MC, Zhang J, Lee E, Despen D, Liu L. Disparities in colorectal cancer incidence among Latino subpopulations in California defined by country of origin. *Cancer Causes Control*. 2016;27(2):147-155. doi:10.1007/s10552-015-0693-4

#### REFERENCES

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# The 'Technology in Palliative Care' (TIP) study: a Delphi study to define research priorities for the use of technology for the clinical management of people with serious illness

Amara Callistus Nwosu,<sup>1,2,3</sup> Tamsin McGlinchey,<sup>3</sup> Stephen Mason<sup>3</sup>

<sup>1</sup>International Observatory on End of Life Care, Lancaster University, Lancaster, UK;  
<sup>2</sup>Marie Curie Hospital Liverpool, Liverpool, UK;  
<sup>3</sup>Palliative Care Institute Liverpool, Liverpool University Hospitals NHS Foundation Trust, Liverpool, UK



## Background

The development of data driven technology presents an opportunity to improve quality and efficiency of healthcare provision and patient experience. It is important to carefully evaluate current and planned future developments, to identify research priority areas and determine how resources should be best utilised. To ensure the healthcare system, and wider society, benefits from this technology, it is important to engage key stakeholders to determine how resources should be best utilised. This project aimed to explore how digital technology can improve the care of people with palliative care needs by setting 'priority areas' for further research and development.

## Aims

This project aimed to explore how digital technology can improve the care of people with palliative care needs by setting 'priority areas' for further research and development.

## Methods and Objectives



**Objective 1:** Scoping review to identify existing and future uses, and examples, of data-driven technology to support patients living with advanced cancer;



**Objective 2:** Delphi Process (informed by CREDES guidance<sup>1</sup>) for consensus on 'priority research areas' identified from the scoping review.



**Objective 3:** Develop International Collaboration to facilitate and support future grant applications.

## Respondents

"This is a global study"

In Round 1 and Round 2, the majority of participants resided in the UK (85%) although overall there was representation from 11 countries, across Europe, North America, South America and Asia (see figure 1).



Table 1. Demographic information

Demographics	Round 1 (n=103)	Round 2 (n=55)
<b>Occupation</b>		
Clinical (nurse/doctor)	72% (74)	68% (38)
Academic	16% (16)	20% (11)
Healthcare Management	4% (4)	4% (2)
Lay Volunteer	3% (3)	5% (3)
Allied Health Professional	3% (3)	3% (1)
Charitatively informed	3% (3)	-
Technology/Computing	2% (2)	-
<b>Age</b>		
Median	49	45
<b>Gender</b>		
% Female	62% (64)	55% (34)

Figure 1. Participating Countries

The majority of participants were from a clinical background (72%), female (62%), with a median age of 45 (see Table 1).  
 Just over half of participants took part in Round 1 and Round 2.

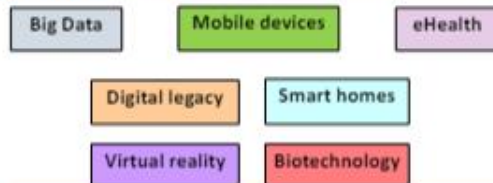
"Topics with high agreement involved issues relating to governance, cybersecurity and ethical issues of healthcare data"



## Results

One hundred and eight experts (from healthcare, academic and technology) from 11 countries participated in round 1 Delphi. The second round Delphi questionnaire was completed by 55 (53% of 1st round) participants in nine countries. Eleven experts attended the final consensus meeting. A total of 16 priorities were selected (from a list of 33) which were summarised into eight themes. These themes were: Big Data; mobile devices; eHealth/telehealth; virtual reality; smart homes; biotechnology and digital legacy. A public engagement meeting of six lay representative was conducted to discuss each priority area in depth and identify future research questions

## Priority research areas



## Conclusion

The identified priorities represent a wide range of important emerging areas in field of digital health, personalised medicine and data science. Collaborative studies are required to address these priority areas, which will aim to improve the care and experience for people with palliative care needs, forward.

## References

- Using information technology to improve the NHS (2016) Department of Health and Social Care, accessed via [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/540946/using-information-technology-to-improve-the-nhs.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/540946/using-information-technology-to-improve-the-nhs.pdf). [Accessed May 2018]
- Zinger S, Payne SA, Bross I, Radbruch L, Breeney SG (2017) Guidance on Conducting and Reporting Delphi Studies (CREDES) in palliative care: Recommendations based on a methodological systematic review. *Palliative Medicine* 31(2):686-700. doi:10.1177/0269233117069026



# SQ3R

SURVEY • QUESTION • READ • RECITE • REVIEW

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## 1. SURVEY

Answer the following questions before reading the text.

-What is topic of the text?

\_\_\_\_\_

-What is the title of the text?

\_\_\_\_\_

-Notice any subtitles, headings, or chapters. How is the text organized?

\_\_\_\_\_

-Describe a picture or graphic included in the text.

\_\_\_\_\_

## 3. READ

Look for the answers to your three questions as you actively read the text. It is important to take the time to re-read any sections or portions of the text that are unclear.

## 4. RECITE

Write a short summary of the text in your own words.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## 2. QUESTION

Before you start reading, write three questions you have about the text.

**1** \_\_\_\_\_  
\_\_\_\_\_

**2** \_\_\_\_\_  
\_\_\_\_\_

**3** \_\_\_\_\_  
\_\_\_\_\_

## 5. REVIEW

Answer each question you generated before reading the text.

**1** \_\_\_\_\_  
\_\_\_\_\_

**2** \_\_\_\_\_  
\_\_\_\_\_

**3** \_\_\_\_\_  
\_\_\_\_\_

# SQ3R

SURVEY • QUESTION • READ • RECITE • REVIEW

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## 1. SURVEY

Answer the following questions before reading the text.

-What is topic of the text?

\_\_\_\_\_

-What is the title of the text?

\_\_\_\_\_

-Notice any subtitles, headings, or chapters. How is the text organized?

\_\_\_\_\_

-Describe a picture or graphic included in the text.

\_\_\_\_\_

## 3. READ

Look for the answers to your three questions as you actively read the text. It is important to take the time to re-read any sections or portions of the text that are unclear.

## 4. RECITE

Write a short summary of the text in your own words.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## 2. QUESTION

Before you start reading, write three questions you have about the text.

**1** \_\_\_\_\_  
\_\_\_\_\_

**2** \_\_\_\_\_  
\_\_\_\_\_

**3** \_\_\_\_\_  
\_\_\_\_\_

## 5. REVIEW

Answer each question you generated before reading the text.

**1** \_\_\_\_\_  
\_\_\_\_\_

**2** \_\_\_\_\_  
\_\_\_\_\_

**3** \_\_\_\_\_  
\_\_\_\_\_

## **SECTION TWO: READ A BOOK**

How often do you read a book for pleasure?

What stops you from choosing to read a book?

Why read? Clark and Rumbold (2006) identify several main areas of the benefits to reading for pleasure:

- Reading attainment and writing ability
- Text comprehension and grammar
- Breadth of vocabulary
- Positive reading attitudes
- Greater self-confidence as a reader
- Pleasure in reading in later life
- General knowledge
- A better understanding of other cultures
- Community participation
- A greater insight into human nature and decision-making

Over the summer, we would like you to read at least one book (this can be fiction / non-fiction and does not have to be related to Health and Social Care). Be prepared to give feedback to the rest of your class in September; you might want to prepare a flashcard to help.

We have books available in college (see your teacher) or you can borrow books from your local library, for free, once you have registered. You can also buy books from charities shops, often for under a pound.

<https://www.wakefield.gov.uk/libraries-and-local-history/your-local-library/>

<https://www.barnsley.gov.uk/services/libraries/>

### **SIL Checklist**

Have you:

- Completed ALL tasks for section one on Anatomy and Physiology?
- Completed ALL 3 parts for section two on Research Methods?
- Referenced your work correctly?
- Read a book and prepared a flashcard?



**If you have difficulty in accessing IT resources to produce this work, you may complete it by hand, making sure you write clearly and neatly.  
Make sure you have put your name on all sheets of paper.**