



University of Wales Trinity Saint David

LCHS007

POPULATION HEALTH AND
DIGITAL HEALTH PROMOTION

GROUP PRESENTATION

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Population Health and Digital Health Promotion

Chronic Obstructive Pulmonary Disease

Category chosen
Adults 65 plus

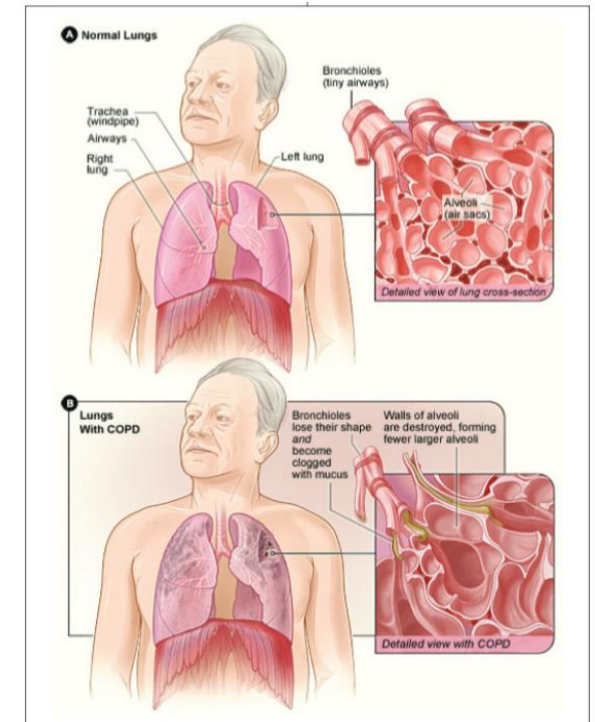


Figure 1 – Cross section of normal lungs (A) and lungs with COPD (B).

Reprinted with permission from: National Heart, Lung, and Blood Institute. Diseases and Conditions Index: COPD.⁵ Revised June 2010. http://www.nhlbi.nih.gov/health/dci/Diseases/Copd/Copd_Whats.html. COPD, chronic obstructive pulmonary disease.

Source;<https://www.google.co.uk/imgres?imgurl=https%3A%2F%2Fimages.everydayhealth.com%2Fimages%2Flung-respiratory%2Fcopd%2Fwomen-have-more-severe-copd-symptoms-than-men-722x406.jpg&tbid=IPZ3zLEu-boerM&vet=12ahUKEwiSysj60dGAAXWfmCcCHYNTBPMQMygEegUIARDNAQ..i&imgrefurl=https%3A%2F%2Fwww.everydayhealth.com%2Fcopd%2Fwomen-suffer-more-severe-copd-symptoms-than-men-study-says%2F&docid=oB17B79KE3R2JM&w=722&h=406&q=copd%20in%2065%20plus&ved=2ahUKEwiSysj60dGAAXWfmCcCHYNTBPMQMygEegUIARDNAQ>

COPD Activities

- Education
- Nutrition
- Physical activity



The aim of these activities is to reduced or delay the progression of COPD in older Adult and to maintain a good health and well-being(NHS .nd)

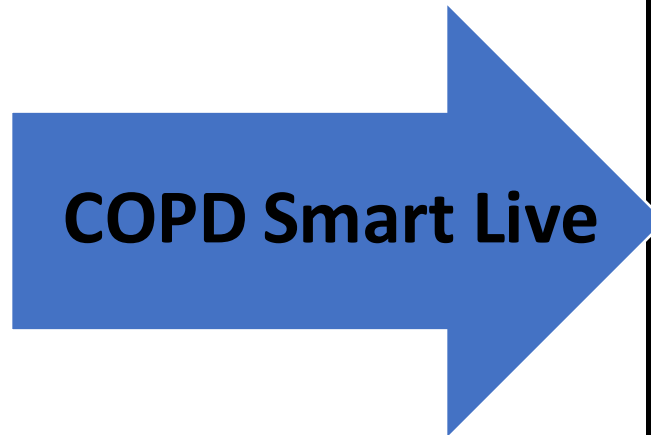
New Designed Digital Health Promotion

COPD Smart Live



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Existing Developed Designed Device – myCOPD APP



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Task one
presenter

- Elizabeth Kokori – 1910041

Title: Digital Health Intervention for Older Adults 65+with Copd

COPD Smart Live

- COPD is a common lung disease that limits air flow and affects breathing, according to the World Health Organization (WHO).
- People with COPD may experience phlegm buildup or damage to their lungs. Symptoms include a cough, sometimes accompanied by phlegm, breathing problems, wheezing, and tiredness (WHO, 2023).



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Chosen Digital Health Promotions

Telehealth Health Intervention Platform

- The Department of Health defines telehealth as a service that "uses equipment to monitor people's health in their own homes... '[monitoring] vital signs including blood pressure, blood oxygen levels, or weight' (Department of Health 2009).
- People use the wearables equipment at home, and occasionally outside the home, to measure the vital signs that would typically be measured by a health care provider, which helps to
- Decrease frequent trips to the GP office. Telehealth is also expected to assist detect changes, which could minimise the amount of unexpected hospital admissions. (Department of Health 2009).



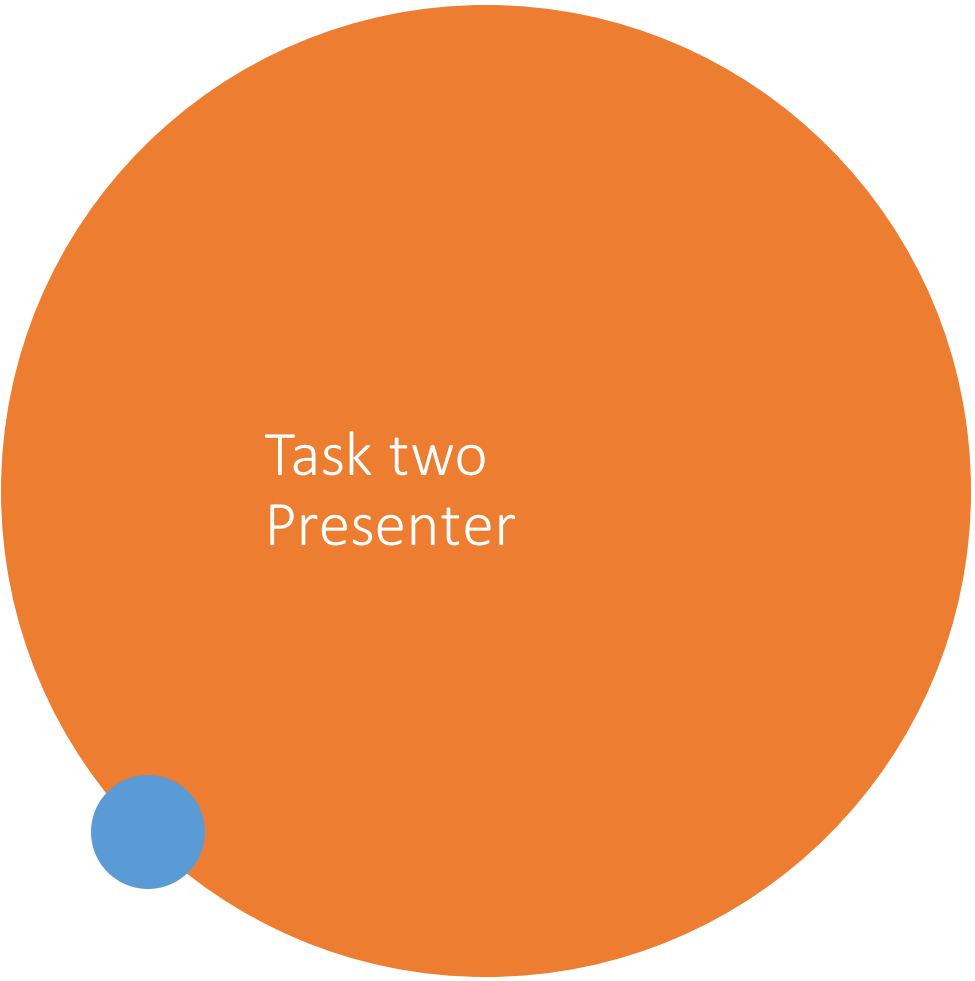
National Guidelines

- The diagnosis and treatment of COPD in adults 16 years of age and older, including emphysema and bronchitis, is covered by the National Institute for Health and care Excellence guidelines.(NICE, 2019)
- It is also designed to help COPD patients who receive a diagnosis earlier, so that they can benefit from treatment to reduce symptoms, improve quality of life and prolonging their lives(NICE, 2019).
- The national guidelines also applies to
 - Health care professionals
 - People living with COPD and their family (NICE, 2019).
 - **Possible consequences of not addressing the concerns of COPD include:**
 - Skeletal muscle weakness
 - Reduced functional exercise capacity.
 - Impaired quality of life
 - Depression and anxiety
 - Increase mortality. (Shrikrishna and Hopkinson, 2012)



Statistics

- It is estimated that 1.2 million persons are expected to be living with confirmed COPD(British Lung Foundation, 2023).
 - 11% and 18% of adults aged 65 years or older are living with COPD (British Lung Foundation, 2023).
 - Description of COPD Smart Live
 - COPD Smart Live is a digital inhaler that has a sensor integrated in to track and record factual information on patient usage and inhaler usability.(Pleasants et al., 2022).
 - Users can observe and track their inhaler use on a connected patient app technology, and they can share their reports with their healthcare team via an online platform for healthcare professionals(Pleasants et al., 2022).
 - This device was chosen because of its evidence of performance
 - It is found to be reliable and effective for respiratory health condition like asthma and COPD
 - It promotes patients' independence and improves their health and well-being (NHS .nd)
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Task two
Presenter

- Kanika Kanika - 2229261
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Chosen planning Model

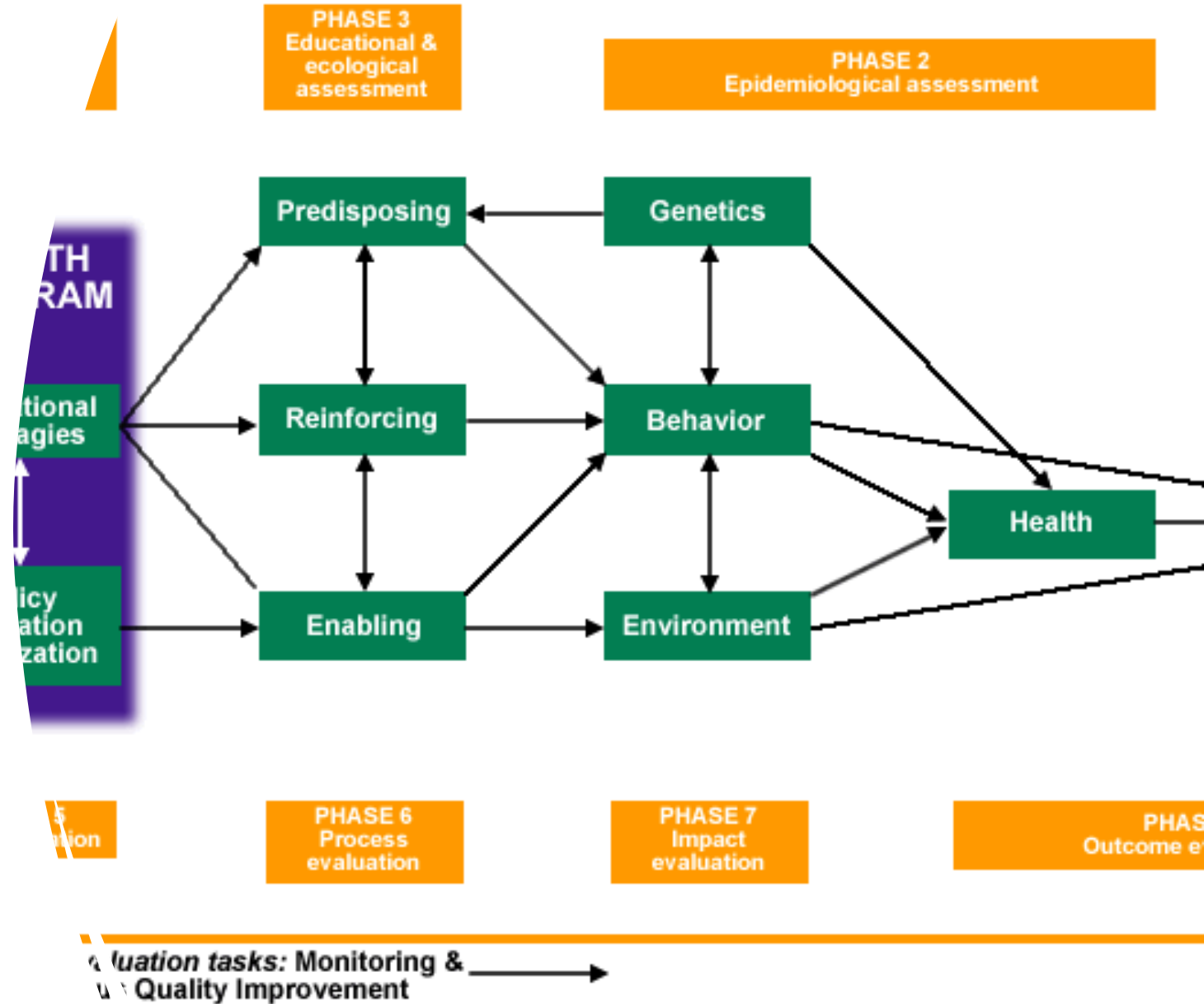
- The PRECEDE-PROCEED model (PPM) can be used in planning and implementation of health promotion
 - PRECEDE stand for
 - Predisposing, reinforcing, enabling constructs in educational diagnosis and evaluation
 - PROCEED stands for
- Policy, regulatory and organisational constructs in education and environmental development (Ruralhealthinfo.org, 2018)



Planning Model

This model has 5 phases:

- Social diagnosis
- Epidemiological Diagnosis
- Behavioural and environmental diagnosis
- Education and organisational diagnosis
- Administrative and policy diagnosis (Ku.edu, 2020)



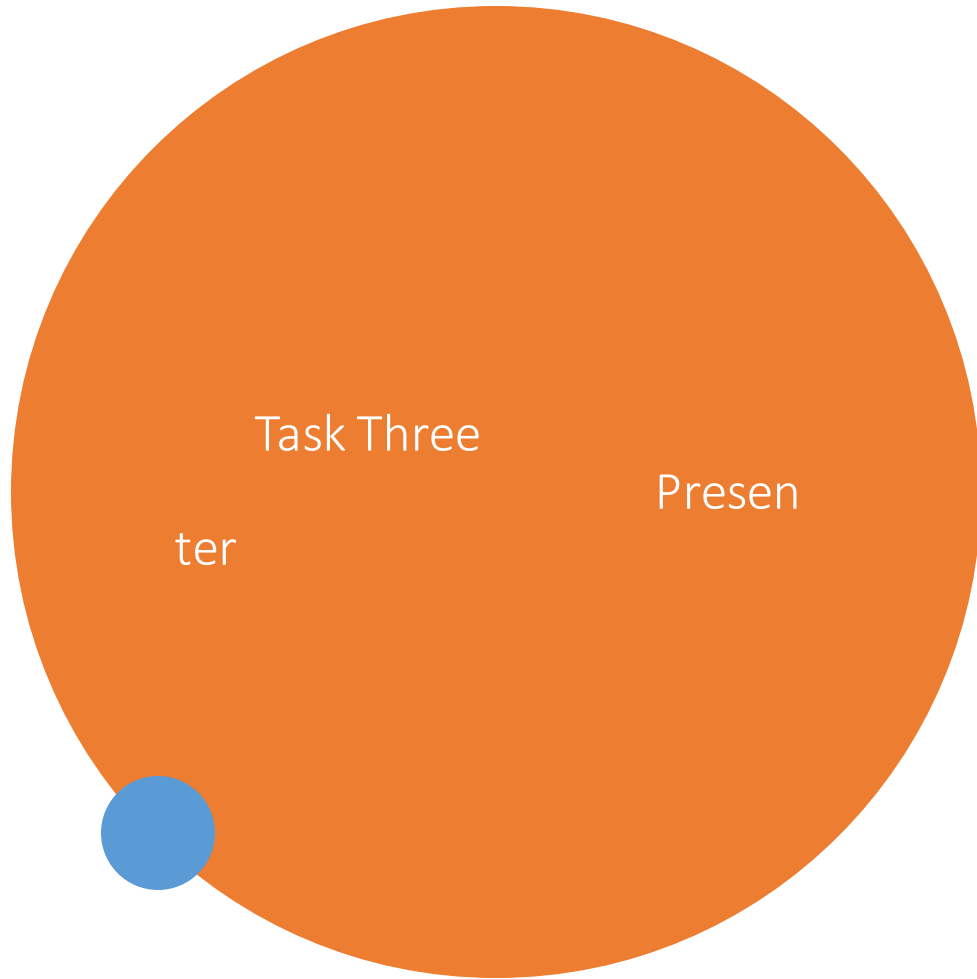
How the planning model will be used to deliver the digital health promotion model

- This model can help to provide an approach for the process of telehealth to properly conceive, plan, implement and evaluate the digital intervention (Kim *et al.*, 2022)
- It can be a structural participatory model that can be used to incorporate the ideas with the help of older adults with COPD (National Institute of Biomedical Imaging and Bioengineering, 2020)

Continued

- Telehealth can be used to provide healthcare at a distance for older adults with COPD
- Proper planning is required so that the implementation does not become highly complicated for older adults with COPD





- SeethaKumari Ganasala – 2226332



STAKEHOLDERS

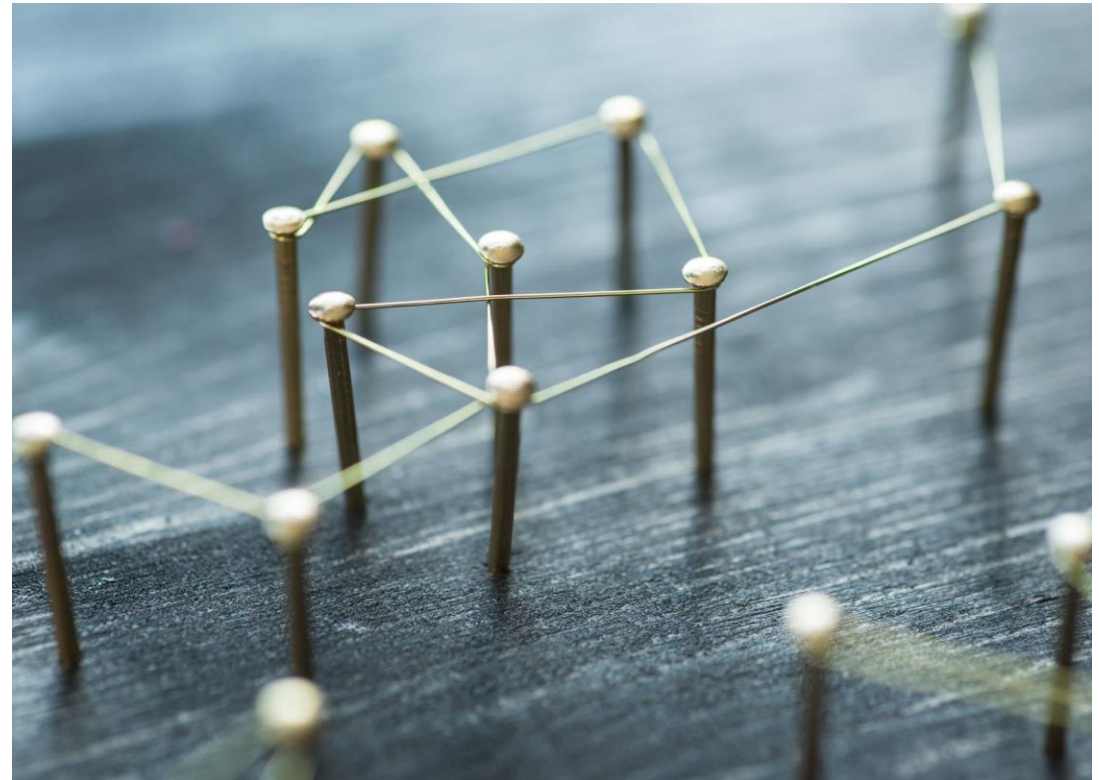
- Any person, team (or) organization that has a greater influence over a project's success or failure is referred to as a stakeholder.
- Stakeholders, whether internal or external to the organization funding the project, typically have a vested interest in the success of the project.(Barney. N,et.al.,2023)
- The core principles of stakeholder theory are collaboration, fostering relationships, honesty, equity, kindness, long-term thinking, and identifying solutions that benefit all involved parties.
- A corporation can only be successful and reach all of its objectives when its stakeholders have come to an understanding of its objective.
- In order to fulfil patient expectations, healthcare organizations must become more flexible, educated, and adaptable in order to save costs and errors while boosting productivity and quality.
- Any person or organization that is either directly or indirectly affected by how the healthcare sector functions is referred to as a stakeholder.(Dr.Ramakrishnan.,2023).

POTENTIAL STAKEHOLDERS

- Different stakeholders involved in the implementation of smart inhalers. They are:
 - Asthma patients.
 - HCPs (Hospital care plan system).
 - Policy makers (viz; public health institution, health insurance companies and patient organisation).
 - Smart inhaler developers (pharmaceutical companies).(Van de Hei. S.J., et.al., 2023).
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-
- And also who are the stakeholders participated in the implementation of myCOPD digital app is mentioned below. The main stakeholders are:
 - Patients, Social and health care professionals, COPD experts, NHS consultants, Clinical practitioners. (my mhealth ,2023).
 - In the UK's first NHS approved digital therapeutic for COPD is myCOPD digital app.

POTENTIAL BARRIERS

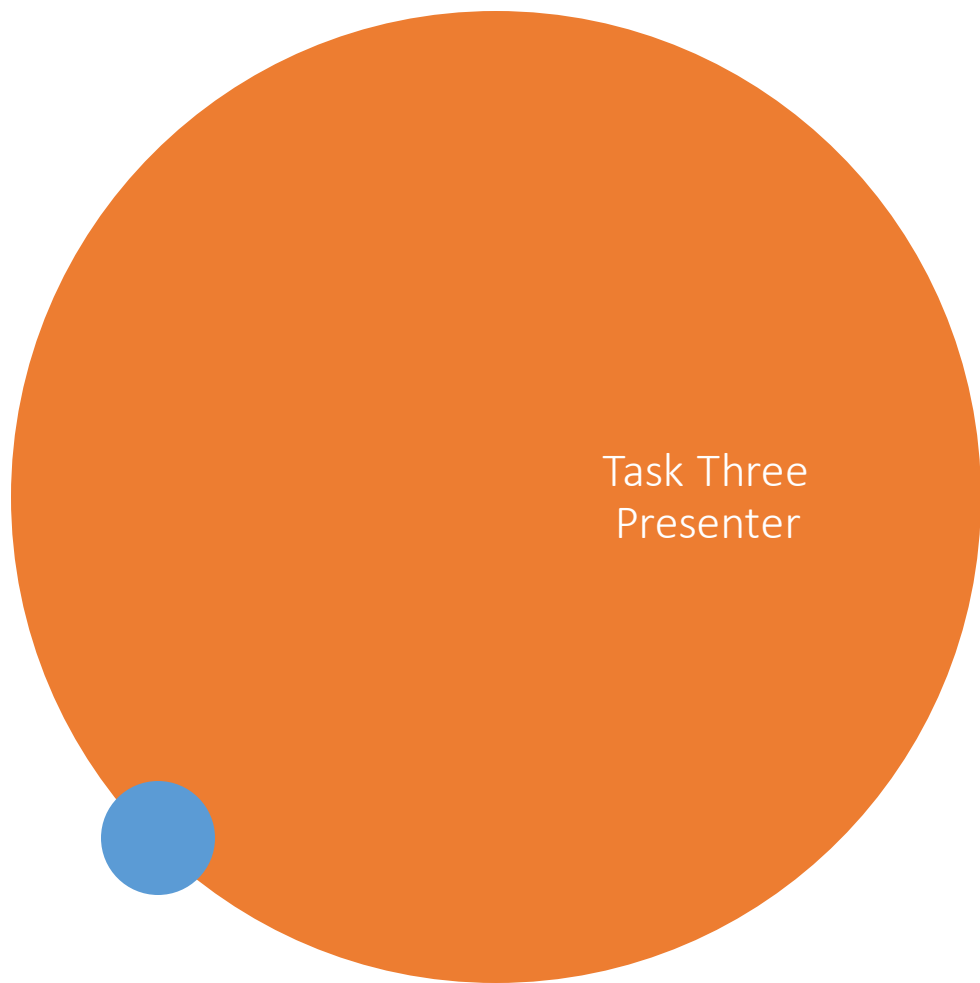
- Poor internet facilities.
- Lack of education.
- Lack of electronic monitoring devices.
- Poor technical skills.
- Limited digital self management skills.
- Lack of social connectivity.
- Language barrier.
- Less Accessibility.(Wilson. J.M.,2023)



POTENTIAL BARRIERS

- Religious, cultural barriers.
- Having disabilities
- Low income.
- Long term health conditions.
- Being socially isolated.
- Mental health issues.
- Difficulty of retaining information.
- Living a chaotic life. (Crooks. M. G., et.al.,2023)
-





Task Three
Presenter

- Andreea Lupu-1906519



Legal consideration

Task 3

- Law
- A cumulation of rules, set up by the Government aiming to maintain peace,
- social order and justice within the society, this to provide shielding to whole population and protect their interests.

(The National Archives, 2018)

Laws that apply in this sector

Data Protection (2018)

General Data Protection Regulation (GDPR)



Legal consideration

- Lack of a known legal and regulating framework, accountability, data ownership, and health inequity, among others.
- Digital health has developed patient care and is mapped to continue doing so
- Patient data is kept safe at all costs

(Department of Health and Social Care, 2018)

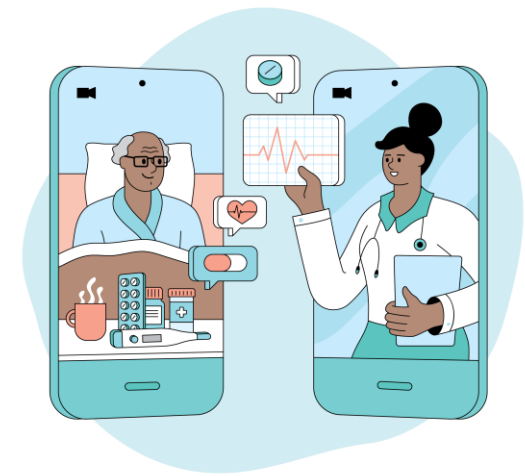


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Ethical considerations

- Large zone that overlooks the ethical, legal as well as the social considerations
- Continuing to look after and protect the welfare and security of population groups as well as individuals and their interests
- Overlooks privacy as well as consent, and how data is handled

(www.ncbi.nlm.nih.gov, n.d.)



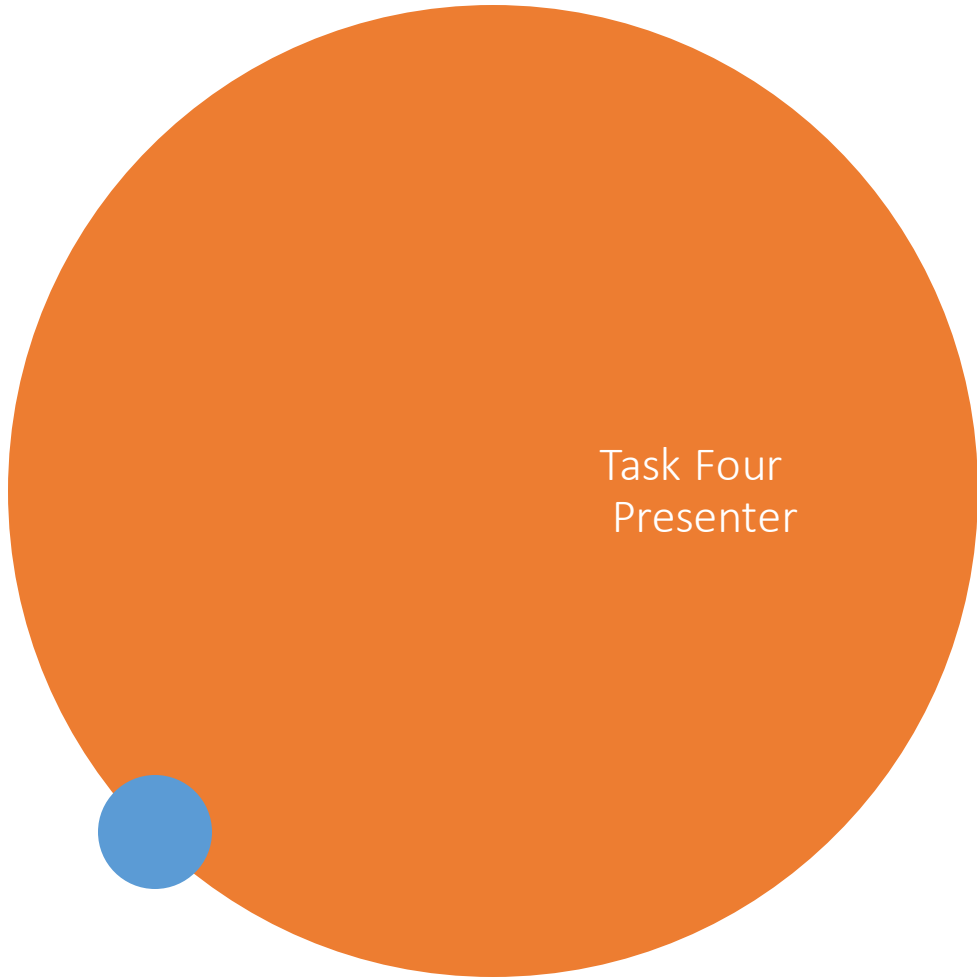
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Potential ethical consideration issues

- Data collection within privacy settings would be a potential issue
- Anonymisation is much harder to achieve
- Data hacks are more likely
- Access through other networks is a possible liability

Schoentgen & Wilkinson
(2021)

Ethical concerns	Telehealth e.g. Apps, platform, eHealth	Artificial intelligence	Robotics	wearable
Consent & privacy	High	Moderate	Moderate	High
Security	High	Low	Moderate	Moderate
Accuracy	Moderate	High	Moderate	Moderate
Inclusion	Moderate	High	Low	Low
Cyberbullying	High	Moderate	Low	Low
Transparency	Moderate	High	Moderate	Moderate
Accountability	Moderate	High	Moderate	Moderate



Task Four
Presenter

- Nidhi Miteshbhai Shah - 2224182





Benefits of the chosen digital health promotion Intervention COPD smart live

- The benefits of using smart **inhalers** for COPD for the age group 65 need to be identified which would have a better effect on the health of the patients effectively.
- It would develop medication adherence for better inhalation methods that would develop the quality of breathing for the patient and meet the aims of having better health effectively.

COPD smart live

- It would also support in managing the time and savings due to less consultation and maintaining good health with better inhalation technique and using the method to enhance the capability of breathing for the patients affected with the disease.
- The data in the smart inhalers would monitor the psychological aspects and also issues like weather and pollution where it will give better information which would support in self-management of their health issue with clinical practitioners and help digital biomarker identification to identify the risks for the patients and avoid high exacerbations for them effectively (Watson *et al.*, 2022).



Benefits of the chosen digital health promotion app (COPD app)



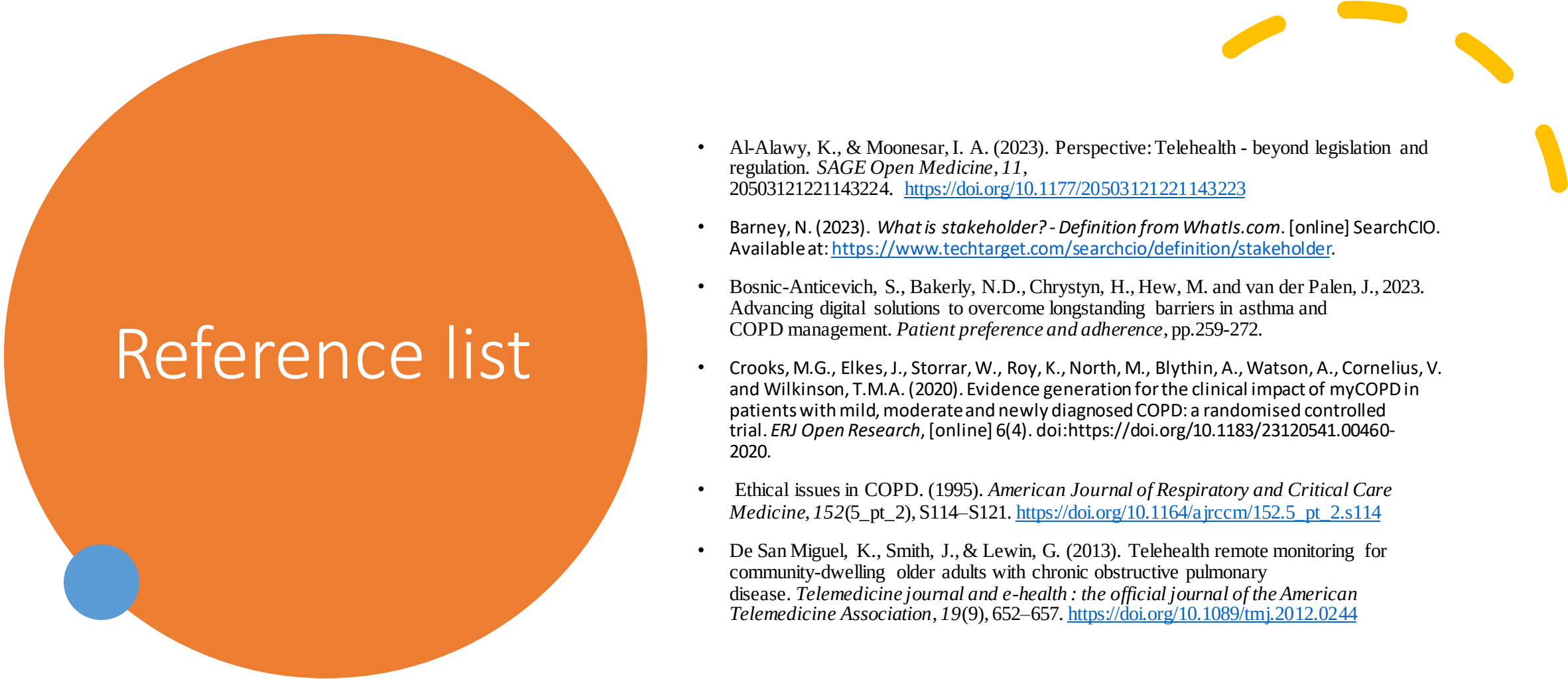
Implications of the Digital health promotion intervention on Policies, research and Education

- The implication of smart inhalers in terms of policies, research and education should be considered which would give an opportunity to understand the issues and use the device effectively.
- In terms of policies, data privacy needs to be maintained where it should provide effective methods to manage the breach and provide better use of the smart inhalers and meet the expectation of the respective age group.

Implications of the Digital health promotion intervention on Policies, research and Education

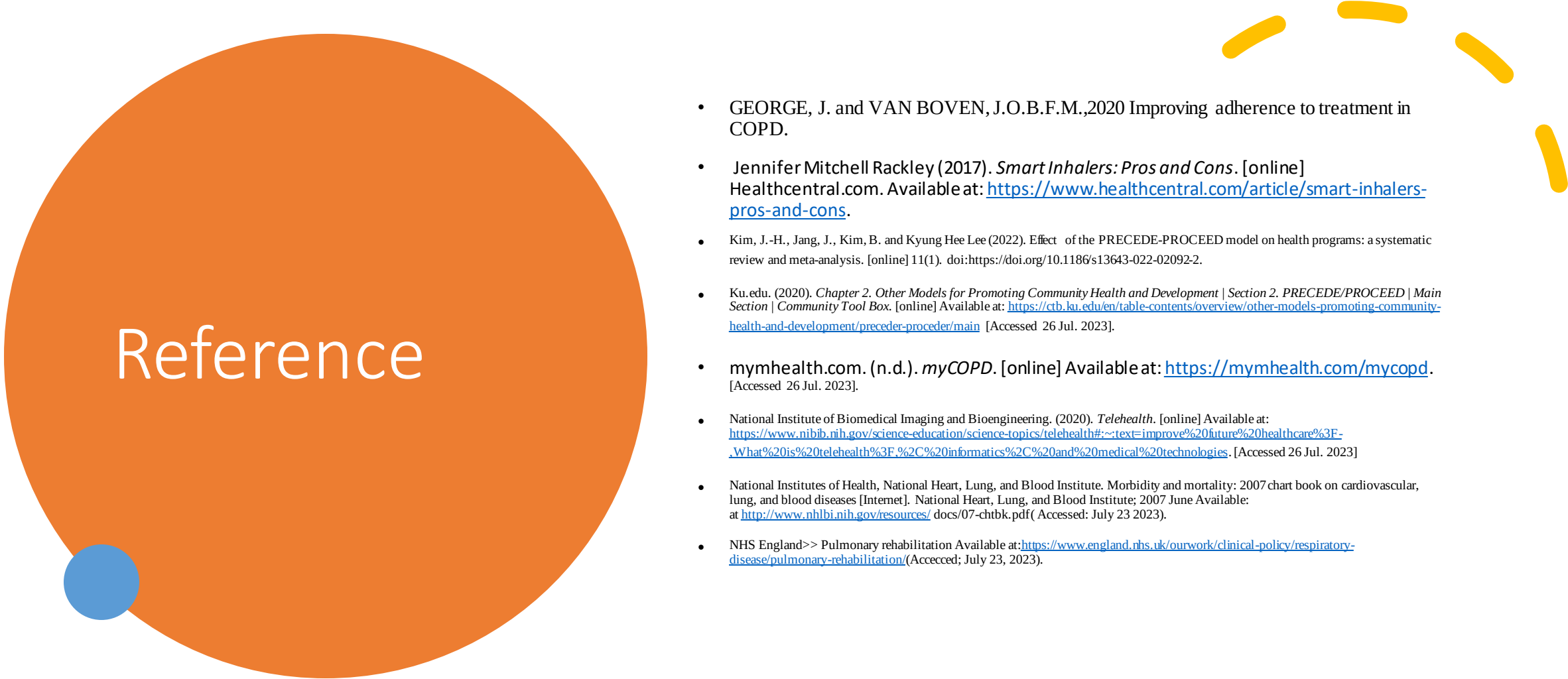
- This issue should be maintained by using better actions where the policies would support both the patients and the healthcare settings to use the device efficiently.
- In terms of education, the lack of knowledge about the use of smart inhalers should be developed by using good initiatives to attain better quality health effectively.





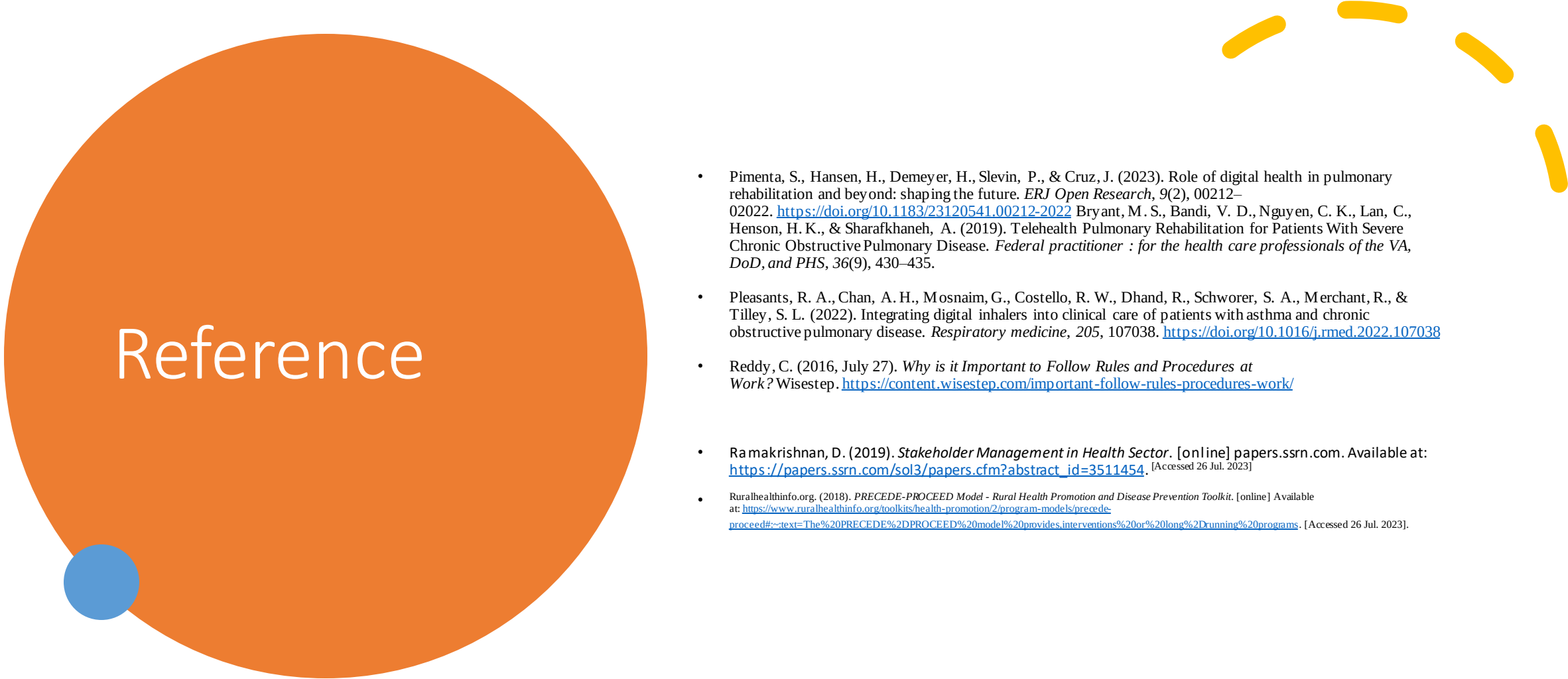
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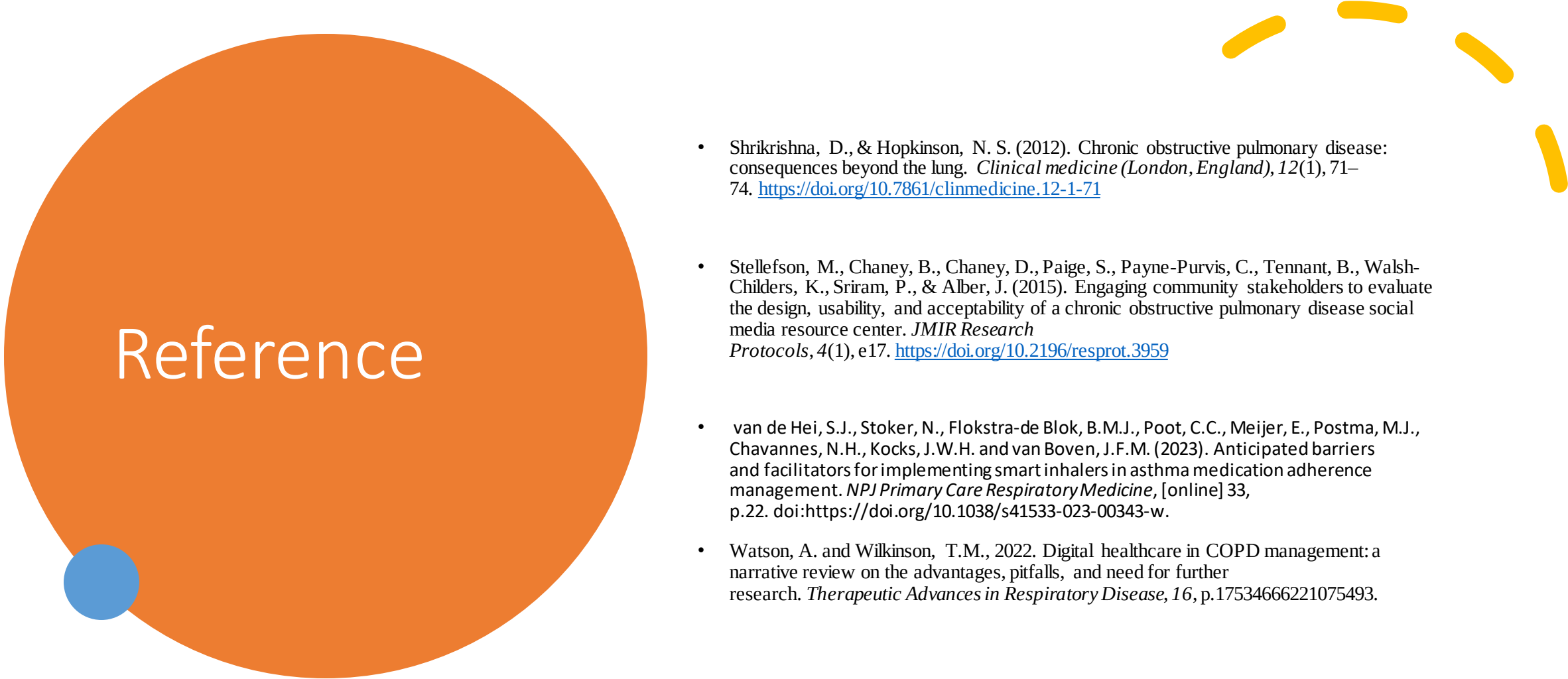
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