

Lifestyle diseases and Patient A

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Lecturer	Laila Surani
Student	Camilla Torello
Student ID	2010042



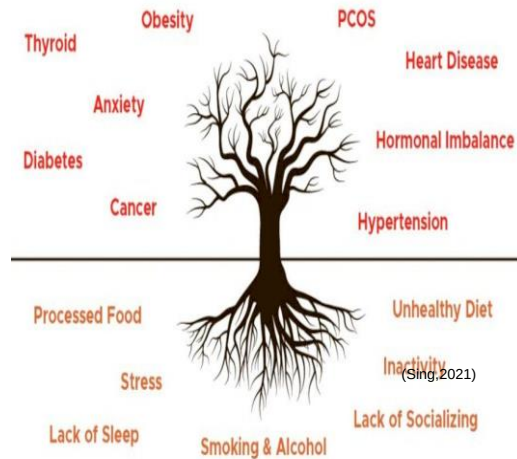
UNIVERSITY OF WALES
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Lifestyle

Lifestyle has a significant influence, both physical and emotional (Farhud, 2015)

Aim in measuring lifestyle

Focus on directing the right prevention plan
Minimise health inequality and variation in care(ACT,2021)
Reducing deaths
Reducing costs for NHS and Public Health England
Be sure care services deliver their own particular needs
Empower individuals to make the right choice



“60% of the elements that influence an individual healthiness is attributive to lifestyle.(WHO, 2016)

Lifestyle diseases are illnesses caused by life choices and by the type of life quality. They are non-communicable diseases.

The causes could be: Modifiable behavioural risk factors/ Non-modifiable risk factors/ Metabolic risk factors.

The aims of measuring and monitoring the lifestyle are as below:

“Reduce clinical inertia and focus on prevention – the need for change
Minimise health inequality and variation in care change and put forward
detailed measures

reduce premature deaths

the new approach that empowers individuals to make healthy choices and
gives communities the tools to address their own, particular needs.”(HM
Government, 2010)

Patient A

Smoking over 20 cigarettes a day
Drinking 1 or 2 units per week
Heart disease in family history
No heart attack in medical history
White British
An office worker in a big City
Limited Physical activity
55 years old male, born prematurely

COPD

“Chronic obstructive pulmonary disease (COPD) is the name for a group of lung conditions that cause breathing difficulties.”(Nhs, 2022)

Causes:

- **Smoking**
- **Asthma**
- **Living in a high pollute environment**
- **Sedentary life**
- **Unhealthy diet**
- Genetic disorder
- Working with certain chemicals
- **Early life events(prematurity, pneumonia or childhood asthma)**

By analysing the lifestyle of Patient A through a questionnaire, it can be established that Patient A has significant risk factors and behavioural patterns that can lead to a developed Copd. The slide highlights the overall causes of COPD and the one especially applicable for Patient A. “1.17 million of UK residents have been diagnosed with COPD in 2020/2021, equivalent to 1.9% of the population” (NHS, 2022). “About 1% of people with COPD, the disease results from a genetic disorder that causes low levels of a protein called alpha-1-antitrypsin (AAt)” (Maioclinic, 2022)

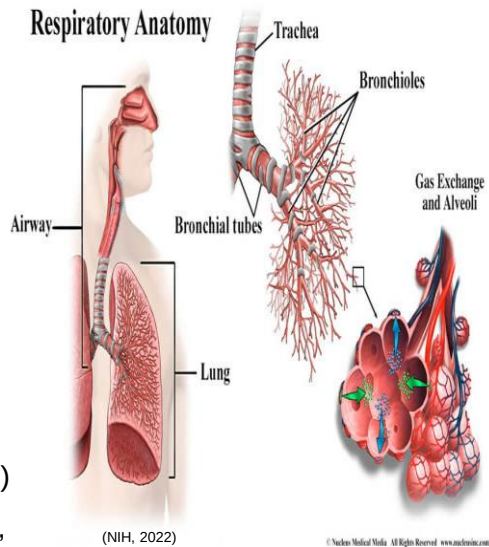
Respiratory system

- Nose
- Mouth
- Throat(pharynx)
- Larynx
- Trachea
- Large airways(bronchi)
- Small airways (bronchioles)
- Lungs
- Alveoli(air sacs)

“There are three overall processes involved in your breathing:

- moving air in and out of your lungs (ventilation)
- oxygen-carbon dioxide exchange (diffusion)
- pumping blood through your lungs (perfusion)”

(Hecht, 2018)



The respiratory system is characterised by different organs.

The system allows the body to carry out a process called gas exchange.

The respiratory system IS “responsible for the exchange of carbon dioxide and oxygen in the human body. This system also helps remove metabolic waste products and keep pH levels in check.”(Biggers, 2020).

Is divided into 2 tracks: the upper and the lower. The upper organs are highlighted in yellow, the lower in brown.

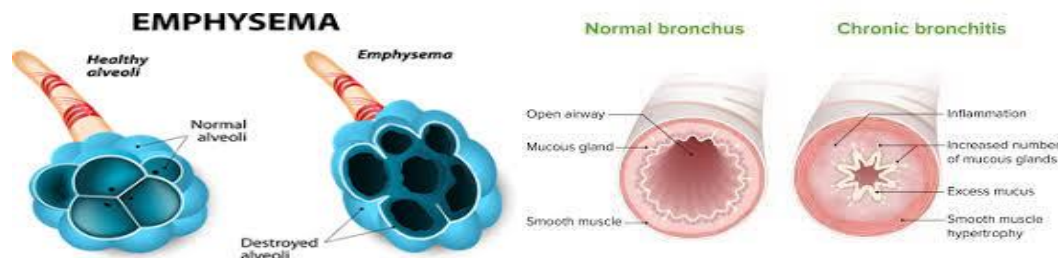
“The airways are pipes that carry oxygen-rich air to the alveoli in your lungs. They also carry the waste gas carbon dioxide out of your lungs.”(NIH,2022)

Usually, we have elastic lungs and airways(Laureau et al, 2019).

The airways in the lungs are responsible to transport oxygen-rich air to the lungs when we breathe in. Filled with air, the air sacs resemble a small balloon, and they deflate when we exhale. The remaining air will pass out of the body.

How COPD affect the Respiratory system

Emphysema	Chronic bronchitis
linings(tissue) of the tiny air sacs(alveoli) in your lungs become damaged The tissue between the sacs are damaged or destroyed and create a big air pocket The air is left inside the damaged tissue The oxygen is not moving through the bloodstream The lungs are filling slowly	" overproduction and hypersecretion of mucus by goblet cells"(Kim et al,2013) Reduce airflow in the airways, decrease the elasticity of the airways and air sacs and lungs by thickening and inflaming the walls



Chronic obstructive pulmonary disease (COPD) is a condition that can be manifested in a different form because the respiratory system can be damaged in various different steps. COPD normally affect the lower track and in particular the alveoli or the bronchi or bronchioles. The main damaged are the below mentioned:

Airways and sacs less elastic

The walls of the air sacs are destroyed.

The airways walls inflamed

Alveoli are damaged.

In the slide, it can be seen a deeper description of the main two conditions and how the damage is caused.

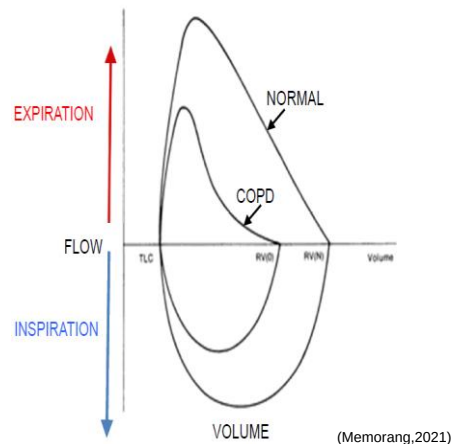
Patient A risks

- Smoker cough
- Mucus
- Shortness of breath
- Tightness of chest
- Low energy
- Swollen ankle, feet or hands
- Blue fingernails
- Frequent cold
- Possible kidney failure

COPD can lead to:

- Pulmonary hypertension (high blood pressure in arteries)
- Lung cancer
- Heart attack
- Respiratory infection like pneumonia
- Depression

Flow volume curve in COPD



In the slide can be seen what Patient A risks are if his lifestyle is not improved. COPD is a long term condition and the lack of management can lead to a serious issue, even death in certain situation

Recommendations

- Check BMI
- Stop smoking
- Blood test
- Undertake a spirometry
- Ct scan
- Lungs x-ray
- Arterial blood gas test
- Use steroid inhaler
- Pneumonia vaccine
- Oxygen therapy
- Pulmonary rehabilitation
- Bullectomy
- Lung transplant



“Chronic Obstructive Pulmonary Disease (COPD) is the third leading cause of death worldwide, causing 3.23 million deaths in 2019”(who,2021)

Highlighted above are the recommendation needed to be followed to monitor, prevent or management of the condition. It should be mentioned also that Uk is taking action on the management by creating legislation and policy with the aim to help the individuals. The main legislations/policies that are disclosing COPD are:

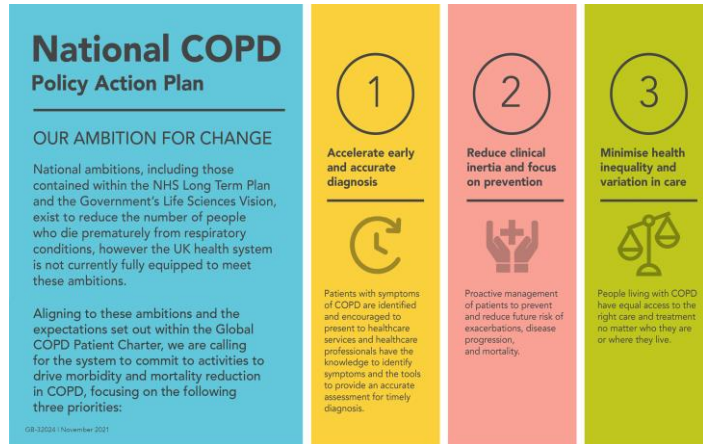
- Bhs long term plan
- Government’s Life Sciences Vision
- WHO Package of Essential Noncommunicable Disease Interventions (PEN)
- WHO Global Action Plan for the Prevention and Control of Noncommunicable Diseases (NCDs)
- United Nations 2030 Agenda for Sustainable Development.
- Framework Convention on Tobacco Control
- Public Health Responsibility Deal
- NICE Quality Standard for COPD

Services that helps

Department of health

Respiratory health and good lung health
Early accurate diagnosis
Active partnership between healthcare professionals and people with COPD
Chronic disease management
Tailored evidence-based treatment for the individual “
 (Department of health,2007)

ACT UK



(Primary Care Respiratory Society et al, 2021)

“COPD costs the NHS more than £800 million per year.”(Jackson,2018)

Department of health strategy:

Reduce the number of people with COPD who die prematurely through a proactive approach to early identification, diagnosis and intervention

To ensure that people with COPD, receive safe and effective care

Improve the respiratory health and well-being of all communities and minimise inequalities between communities

On-going support as they self manage their condition

To enhance the quality of life for people with COPD

and to reduce the need for unscheduled health care“(Department of health, 2007)

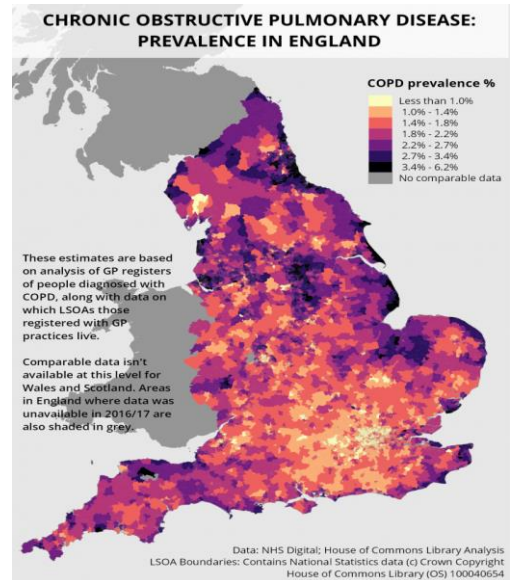
“ACT on COPD National Working Group is a group of 20 clinicians and patient advocacy group representatives from across the UK, convened and funded by AstraZeneca. This plan is based on input gathered from UK based clinicians, policymakers and professional bodies, and also builds upon existing work, for example, the Taskforce for Lung Health’s five-year plan for lung health”(UK ACT,2021)

Conclusion

COPD will become one of the world's most serious health problems.

Policies and government can do more to address good lifestyle habits.

A **prevention campaign** that actually works in awareness-raising in the public is what is much needed. The support also should be constant and available, the NHS should work in improving the **timely access to services**.



(Nhs digital, 2017)

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