Activity 1: Potential impacts of future developments answers

# Funding of public healthcare

## Benefits for healthcare staff

* well-funded healthcare systems can invest in ongoing training and education for their staff.
* well-prepared healthcare professionals are essential in responding to public emergencies

## Disadvantages of public health funding

* funding may be stretched as more users access care
* there may be constraints on budgets leading to lower salaries and reduced incentives for people to join the NHS
* healthcare staff may struggle to deliver quality care due to limitations in resources caused by budget constraints

# Private healthcare

## Benefits for healthcare staff

* higher salaries and more professional autonomy
* better access to advanced resources and potential for research and innovation

## Disadvantages of private healthcare

* expense of treatment
* lack of universal coverage for all patients
* care may be fragmented if divided between different providers
* patients with better health care plans may receive better treatment options

# Demographics

Demographics are used to categorise a population by criteria such as age, sex, and income.

## Benefits for healthcare staff

* healthcare staff experience professional growth by working with people of various ages, backgrounds and health needs thus improving their problem-solving skills
* evolving healthcare needs lead to more interdisciplinary collaborations leading to more effective patient care

## Disadvantages

* Changes in life expectancy
* Increase in complex care needs
* Increase in obesity rates

## Disadvantages if numbers of patients increase

* reduced access to care
* limited treatment options
* decline in quality of care due to budget constraints
* changes in funding and demographics can exacerbate health inequalities
* pressure on emergency services
* workforce stress and burnout
* resource constraints
* increased workload of staff
* difficulty in recruitment If salaries are not competitive

# Technological infrastructure

## Benefits to patients

* improved accessibility of patient records leads to improved patient care

## Benefits to healthcare staff

* advanced analytics can help identify trends, track disease outbreaks and optimise the utilisation of resources.
* cost savings as resources are used more efficiently
* access to large datasets can improve medical research and development of new treatments
* remote access
* collaboration across services

## Disadvantages

* cost of implementing changes
* Increased risk of data breaches
* integrating systems from different areas of the NHS
* disruption as new systems installed
* digital divide for patients lacking access to technology
* extensive training and education needed

# Regenerative medicine

## Benefits for patients

* restore function to damaged organs or tissues (such as scar tissue)
* problems of sufficient and matching donors are reduced along with waiting times for treatment
* there is a potential for long-term solutions, reducing the need for repeated treatments, surgeries or hospital stays
* improved quality of life
* reduced risk of rejection particularly if patients’ own cells are used

## Benefits for healthcare staff

* Has the potential to provide possible cures for diseases that are currently incurable.
* By offering potential cures for chronic diseases, it could alleviate the cost pressures on healthcare systems of life-long medical conditions.

## Disadvantages

* unlicensed clinics offering miracle cures may spring up
* high costs of treatment which may limit access for patients
* availability may be only available at specialist centres
* ethical concerns around the source of cell sources used for treatment
* treatment strategies are new, so the long-term success rates or side effects are unknown

# Biomarkers

## Benefits for healthcare staff

* streamlines data collection reducing administrative time allowing staff more time to allocate to other cases
* biomarker data allows for more informed decision-making and personalised treatment plans
* could increase success rate of drug development programmes

## Disadvantages

* false positives or negatives in readings
* biomarkers may not cover all aspects of a patient’s health
* expensive to develop tests
* patients may struggle to consistently provide data affecting reliability of results

# Remote care

## Disadvantages

* poor internet connectivity or device malfunction
* remote care cannot replace physical examinations
* patients may miss the personal interaction and emotional support from in-person visits
* not all patients are comfortable with technology
* subtle clues important for diagnosis may be missed in a virtual environment

# Patient self-management

## Benefits for patients

* patients feel empowered and by monitoring their own health with digital health monitors, improve their quality of life by making healthy lifestyle choices such as healthy eating and regular exercise
* fostering long-term engagement in monitoring health may lead to better outcomes for the patient

## Disadvantages

* patients may need education to effectively self-manage their condition
* some patients may struggle to adhere to self-management plans. Patients may be overconfident so may misinterpret their symptoms leading to delayer intervention

# Artificial intelligence

Machines that can perform tasks usually associated with human intelligence

## Benefits for patients

* improved diagnosis and treatment
* AI-driven chatbots and virtual assistants can provide patients with information, answer their questions, and support them in managing chronic conditions
* can improve triaging systems, where a patient can input symptoms and be directed to a suitable service
* AI can optimise appointment scheduling and resource allocation

## Disadvantages

* displacement of jobs
* challenges to integrating new systems and training staff
* ethical issues
* resistance to change by staff