

## HUMAN GEOGRAPHY: Health issues

Health is physical, mental and social well-being and the absence of disease. It varies between different parts of the world.

- Morbidity means illness
  - prevalence – total number of cases in a population at a particular time
  - incidence – the number of new cases in a population during a particular time period
- Global patterns of morbidity differ depending on the type of disease:
  - infectious diseases – more common in poorer countries
    - malnutrition
    - lack of clean water and sanitation
    - overcrowding
    - poor access to healthcare
    - limited health education
    - disease vectors eg mosquitoes
  - non-communicable diseases – more common in wealthier countries
    - higher proportion of older people
    - unhealthy lifestyle – more obesity etc
- Mortality means death. High morbidity tends to cause high mortality. Mortality rate is how many people die in a population over a period of time.
  - wealthy areas have high mortality rate for cancer caused by high incidence, but only a low percentage of cases result in death
  - mortality rate from cancer is lower in poorer areas caused by low incidence, but percentage resulting in death is higher.
  - The risk of dying from a disease is much higher in poorer countries because:
    - malnutrition reduces body's ability to fight disease
    - poor access to healthcare – can't get the necessary drugs

### APPROACHES TO HEALTHCARE

In poorer countries, national income low thus spending on health low. Larger proportion of healthcare funding spent on treating. Little money left for preventative care and education. Preventing disease is often more effective at improving health. Foreign aid can help poorer countries improve healthcare in the short term, but longer term solutions are needed.

A key issue in LEDCs is the lack of medical services to remote rural populations. One solution to this is training local people in basic healthcare and employing them to provide services to their local communities. There are advantages and disadvantages:

- advantages: relatively inexpensive; creates jobs; increases community independence; local basic healthcare workers less likely to migrate
- disadvantage: can't replace fully trained medical professionals, long term solutions needed

### Issues in MEDCs

- health not great in MEDCs partly due to ageing population – more people suffer from age-related illnesses eg cancer, heart disease. = big strain on NHS etc.
- lifestyle choices affect health: choosing to eat healthily and avoid unhealthy habits improves health
- the key barrier is people ignoring medical advice

There's more of a focus on preventative care in MEDCs:

- providing vaccinations
- health awareness campaigns to promote good lifestyle choices (eg *Change4Life*)
- providing support services to help people improve their health eg smoking cessation
- early diagnosis eg cancer, heart disease, antenatal

## EFFECTS OF DISEASE

The cost of any disease to a country includes:

- health – increased poor health of the popn and some permanent disability, death
- economic development – slow economic development due to increasing death rates: thus fewer taxes to govt, decreased productivity, increased healthcare costs
- lifestyle – increased poverty, impaired learning, downward spiral – poverty trap.

### CASE STUDY: HIV/AIDS

- HIV destroys the immune system. It causes AIDS, which causes death.
- HIV is transmitted through sexual contact, sharing needles, blood transfusions, contaminated medical equipment.
- Anti-retroviral drugs (ART) can slow down the development of HIV to AIDS. HIV can be prevented by practising safe sex, screening blood donors and using sterile medical equipment.
- 2/3 of the population & 90% of children living with HIV/AIDS are in sub-Saharan Africa. Why?:
  - societal stigma: people are reluctant to get tested or seek help
  - gender inequality: in some African countries, men are socially dominant – making women less likely to insist on condom use, so they are more vulnerable to HIV/AIDS. Also widespread use of sex workers.
  - limited health and sex education: people aren't aware of what HIV is, and aren't informed of how they can avoid it
  - limited healthcare: people with HIV/AIDS are less likely to be diagnosed, so they're more likely to pass it on.
- over 70% of global deaths from HIV/AIDS occur in SSA, because:
  - high number of cases
  - poor healthcare – ART isn't affordable, poor availability
  - poor health, nutrition and hygiene, increasing the risk of other infections that can be fatal because HIV destroyed the immune system.

#### HIV/AIDS in UGANDA

- urban prevalence peaked at 30% in 1986. 1987 control programme launched and prevalence fell, steady 01-05 but now rising again
- significant education – govt promoted ABC (Abstain, Be Faithful, Use Condoms) approach
- 1990 USAID programme took condom usage from 7% to 85%
- 1997 same day testing and counselling service
- 2004 free ART funded by World Bank and Global Fund \$70M, but now large nat debt
- status of women poor – many forced to turn to sex work to fund ART... which increases AIDS spread
- massive impact on healthcare, running out of beds so people not receiving treatment, people caring for family so reduced productivity etc.

### CASE STUDY: CORONARY HEART DISEASE

- CHD is a disease where the heart doesn't get enough blood, it can lead to a heart attack.
- CHD has no cure but can be controlled with treatment eg aspirin, surgery. Early diagnosis and access to health care increase life expectancy
- risk of developing CHD reduced by lifestyle changes such as healthy eating, exercise
- CHD is a non-communicable disease, more common in wealthier countries because:
  - ageing populations – risk of developing CHD increases with age
  - lifestyle factors – an unhealthy lifestyle and being obese or overweight increases the risk of developing CHD
- cases of CHD are increasing in LEDCs and NICs as their wealth increases, because of:
  - increasing life expectancy

- social, economic and cultural changes – people are adopting Western diets and lifestyles eg smoking
- CHD caused 14% of global deaths in '97. Over 80% of deaths occur in LEDCs and NICs:
  - poor healthcare – treatments unaffordable or unavailable
  - limited health education – people unaware of effects of lifestyle changes eg smoking
- death rates falling in wealthier countries because of improvements in diagnosing people at risk, development of effective treatments and awareness campaigns to prevent the disease
  - in UK, a major part of this is preventing obesity. Policies include National Child Measurement Programme, Change4Life, recent 'sugar tax'
  - UK: 1 in 5 men and 1 in 7 women die from CHD each year
  - death rates falling since 70s but still among highest in Europe
  - N/S divide – death rates highest in Scot and N.England, lowest in S.England. Positive correlation between # deaths and level of deprivation

### **GLOBALISATION IN HEALTH**

- TNCs affect global health by their actions:
  - how they treat employees – wages, safety standards, healthcare provided
  - how they market products – eg tobacco, fatty foods, formula milk
  - how they sell products – eg tobacco, medical drugs and supplies, and how much they charge
  - what products they choose to research and develop – eg healthy foods and medicines
- Pharmaceutical firms research, develop, produce and distribute drugs to treat disease. Affect world health as control which drugs developed, and prices charged.
  - Research and Production
    - more money to be made in wealthier countries, so pharma companies often choose to research and produce drugs for diseases mainly affecting these countries. Thus improved health in wealthier countries.
    - as part of CSR, some pharma firms use profits made in MEDCs to subsidise research into diseases affecting LEDCs – improving health in LEDCs.
  - Distribution and Sales
    - companies get exclusive rights for 20 years to produce and market their drugs. They set the price
    - affects global health because poorer countries can't afford it
    - through deals with wealthier countries, some firms provide free or cheaper drugs to poorer countries eg HIV ART

### **CASE STUDY: GlaxoSmithKline (GSK)**

- GSK produces almost 4 Bn packs of medicines and health care products each year, including a quarter of the world's vaccines
- produces products for MEDCs, as well as LEDCs
- makes large profit from drug sales, but also donates some drugs to LEDCs. eg 750M tablets to treat over 1.3M people with elephantitis
- invests portion of profit into community programmes to help people in need - ~4% of pre-tax profits in 2007.

### **TOBACCO**

- 1/3 the population >15 smokes. 80% of smokers are in poorer countries
- 4M die annually from tobacco-related illnesses: lung cancer, heart disease.
- tobacco-related illnesses traditionally associated with wealthier countries as they take longer to develop, but as life expectancy increases in poorer countries these illnesses are becoming more common

- WHO treaty protects health by restricting tobacco advertising, regulating contents of tobacco products, making sure they are packaged and labelled correctly and regulating who they're sold to
- concerns that tobacco companies are targeting countries that haven't signed the treaty. They are accused of aggressive marketing to target vulnerable populations (eg young people) and exploiting people's lack of knowledge about tobacco's health effects. Could result in increased tobacco-related illnesses in these countries

#### CASE STUDY: BRITISH AMERICAN TOBACCO (BAT)

- BAT is one of the largest tobacco suppliers in the world. It mainly targets African, Indian and Indonesian markets.
- uses controversial advertising techniques to sell its products – strong accusations that it attempts to advertise and sell its products to young children, in an attempt to get them addicted to tobacco and create lifelong customers
- one alleged technique is 'single stick' cigarettes – which are forbidden in most developed countries, as they are far more accessible to young children with a limited income.
- primary brands are Pall Mall and Embassy. The tobacco plants for these are grown in warm equatorial environments, and BAT will often employ the local populace in the tobacco farming industry. This brings numerous advantages and disadvantages to the countries, eg Malawi:
  - Advs: large source of income – 2/3 Malawi's annual income; provides employment – ¾ popn dependent on tobacco farming, 7M direct and indirect jobs; employment for women; CSR programmes can fund clean water or healthcare – 40k people get clean water in Malawi courtesy of tobacco TNCs
  - Disadvs: child labour; tobacco poisoning; 'all eggs in one basket'; growing tobacco cash crops rather than food = famine; pay very low;

#### Strategies to reduce the impact of smoking in the UK

- ad campaigns showing shocking and graphic risks of smoking aired in prime time TV
- ban on cigarette sales to under 18s – formerly under 16s
- cigarettes behind counter, hidden from public view, cigarette vending machines illegal
- indoor smoking illegal, including enclosed areas (eg pub gazebos)
- cigarette packaging generic and plain, with 'smoking kills' etc warnings
- NHS offers free smoking cessation clinics
- Framework Convention on Tobacco Control (FCTC) – international agreement outlining minimum standards on tobacco control. Most countries signatories, notable exceptions: USA, India.

### **HEALTH IN THE UNITED KINGDOM**

#### Distribution

- general health trend in the UK is a north-south divide: those in the south are healthier than those in the north and in Scotland.
- eg life expectancy: Dorset 79, Glasgow 69 (males, 1991). Morbidity has a similar pattern

#### Factors affecting

- income – wealthier people tend to be healthier because they have better access to exercise facilities and healthcare, and are more educated about health issues. Pattern of household income in the UK matches the pattern of life expectancy.
- age structure – older people are more likely to suffer from age-related diseases. All regions have an ageing population, but some areas have a higher proportion of old people than others because more retired people choose to live there eg rural and coastal areas
- occupation type – manual jobs up to 3x more likely to suffer from poor health than non-manual. Due to higher risk of accidents and exposure to hazardous substances.
  - More people do manual work in the North.

- People doing non-manual jobs more likely to suffer from stress and mental health problems
- education – better educated, the more likely to choose a healthy lifestyle. Poor education means poor knowledge of how to stay healthy.
- environment and pollution – those in polluted areas eg cities, near major roads, are more likely to suffer from poor health. Eg London has high mortality rate from respiratory diseases, whereas Devon and Cornwall have much less pollution and better health.
- gender – women live longer than men, but are twice as likely to have higher morbidity from chronic illnesses, and three times as likely to suffer from migraines. Also less likely to take part in sports – some leisure facilities have introduced 'ladies only' sessions to encourage participation

#### The effect of an ageing population on healthcare provision

- ageing population requires more money to be allocated to certain healthcare services
  - specialised wards – to care for growing population of elderly
  - increased screening for age-related diseases
  - more residential care homes and carers
  - more mobile healthcare services to cope with increasing immobilised elderly population
- more older people means more people are retired and fewer people are working – so less tax revenue to pay for health and social services

#### CASE STUDY: HEALTH IN WIRRAL

##### Healthcare provision in Wirral

- Wirral PCT decides on health services needed by the population and secure the continued provision of the services needed for the general population. Provides primary care itself and commissions other organisations to provide secondary care.
  - primary care: doctors, dentists, opticians, pharmacists, health visitors, over 60 GP surgeries.
- Wirral Hospitals Trust responsible for most major ops and specialist treatments. Referral from GP or A&E
- Cheshire and Wirral Partnership NHS Trust (CWP) provides specialist treatment and services for mental health issues, learning disabilities, drug and alcohol problems
- Clatterbridge Centre for Oncology NHS Foundation Trust – provides specialist cancer treatment for the North West.

##### Health profile

- varies greatly both within the area and when compared to rest of England
- many stats are worse than the national average: Wirral's average life expectancy for both men and women is lower than the national average, as well as the number of people who "eat healthily".
- however many stats better than nat avg, eg number of adults smoking cigarettes, number of people obese.
- massive inequalities within Wirral in terms of employment, environment and deprivation.
  - N and E Wirral have lower health standards due to higher deprivation
  - W Wirral eg Caldy, Hoylake, have better healthcare and longer life expectancies due to a higher standard of living and generally higher income
  - Wirral Strategic Partnership has prioritised health inequalities including smoking, alcohol abuse, employment, teen pregnancies and child obesity as target areas.

##### Strategies to improve health

- free health clinics
- free activities like yoga, salsa dancing, 5-a-side football
- free healthy living courses eg cookery lessons, smoking cessation
- extensive opportunities for leisure through parks, open spaces, the coastline, and subsidised leisure centres.

## COMPARING HEALTHCARE SERVICES

- socialist: UK NHS
  - funded through taxation. 17% total govt spending
  - GPs, many with limited 'catchment areas', refer to relevant healthcare, A&E
  - must have an address: no GP access for homeless
- forced: France
  - compulsory: must pay % of salary towards health insurance. People pay less than 1% salary with employers contributing 13% of their salary. Optional top-up of 2.5% to help access better healthcare.
  - those earning less than 6600EUR are covered by the state
  - GPs, but referrals not required for hospital treatment
- voluntary: USA
  - almost entirely private, based on free market and survival of the richest models
  - individuals choose a health insurance package that covers the necessary treatment and pay premiums for that insurance, varies massively
  - healthcare for family of four is about \$10 000/yr – half the wage of a Walmart employee. Little govt funding if any.
  - treatment that you can receive is limited to what you have paid for
  - For those without insurance *Medicaid* provides very basic state assistance – means tested. *Medicare* is for those over 65
  - ACA / Obamacare made health insurance mandatory, capped premiums, and subsidised insurance for the poor.

## **FAMINE AND STARVATION**

- malnutrition results from dietary deficiency eg lack of access to specific nutrient or to food in general
- undernourishment is when people consume too little food over a certain period of time

### Causes of famine

- drought – lack of rainfall = lack of water for plants, leads to crop failure & livestock death, which lead to food shortages, primarily for subsistence farmers but in more extreme cases whole countries
- disease – spread of disease through crops can quickly eliminate a year's harvest
- population increase – if population increases too quickly eg sudden influx of refugees, food supplies may not be able to scale to demand.
- cost – when demand for food outstrips its supply, the cost increases. As food prices rise, people become unable to afford food and begin to starve.

### CASE STUDY: FAMINE IN ETHIOPIA

- initial famines due to civil war and drought were in 1984/5
  - famines occurred again in 2000 due to drought
  - in all cases drought led to crop failure. In 2000 and 1984/5 there had been poor rainfall for three years prior. Crops failed and cattle had to be slaughtered – unusual as usually used for milking rather than meat.
  - lack of rain due to cooler sea temps in Atlantic and Pacific, so less evaporation, less rain
  - civil war between Ethiopia and Eritrea made it difficult to get food into landlocked Ethiopia
  - exponential increase in popn post-200
- Consequences:
  - 1984 famine: 40 000 at risk of starvation, incl 15 000 children
  - 2000: 95% of livestock killed
  - 1M killed in both
  - Massive price rises in 2000, milk became scarce due to cattle slaughter, 43% popn affected, spread of TB in refugee camps
- Responses
  - Oxfam and MSF attempted to provide aid
  - Live Aid
  - Poor rainfall Early Warning System set up
  - Govt now holds 350 000 tonnes of food in reserve in case of drought, but fell to 50 000 following 2000 without replacement
- Issues w/ responses
  - aid not well distributed due to poor infrastructure
  - corruption – aid going to army rather than towards food – led to some countries delaying donations
  - medical workers killed in the civil war
  - powdered milk sent – but needed water, and there was a drought...

### Other issues relating to famine

- overdependence on aid can result in worsened situation and damage to the agricultural economy
- disaster fatigue – people tired of donating money, desensitized
- coordination between NGOs and govts can fall apart
- food sent needs to be non-perishable, easily transported and of local tastes.

## OBESITY

- “the excessive gain of body fat to the point at which it impairs a person’s health”
- most often caused by energy input > energy output, but can be triggered by genetic conditions
- BMI = mass/height<sup>2</sup>. <18.5 = underweight, 25-30 overweight, >30 obese
- causes: lifestyle changes, move from manual labour to desk jobs thanks to modernisation and mechanisation of industry; private vehicle ownership; increase in TV watching; high calorie food now easily accessible and is often cheaper than ‘healthy’ options
- consequences: strain on public healthcare systems; increased taxation or insurance premiums; etc...
- reducing the prevalence:
  - promoting healthy living – public health programmes focus heavily on schoolchildren
  - UK: laws require simpler food labelling, portions, RDAs/Reference Intakes
  - Denmark: ‘fat tax’ on butter, milk, meat, etc. Abandoned a year later.
  - development of low-sugar and low-calorie versions of popular products
- Brazil:
  - Family Health programme raised awareness of exercise programmes and healthy food choices
  - govt monitors obesity trends within adults and children
  - food advertising laws – high fat/sugar foods carry a warning sign in the advert