

Paying for National Health

Contents: Decision-making simulation concerning the cost of medical treatment under the National Health Service.

Time: Homework plus 2 periods.

Intended use: GCSE Biology, Human Biology and Integrated Science. Links with work on prevention and cure of certain medical problems; covers health education, heart disease, kidney disease, drug abuse, hip failure, AIDS and care of the new-born and the elderly. Several areas of human biology are covered, and the unit would be useful during revision.

Aims:

- To develop awareness of the cost of the National Health Service, and the way it is financed
- To develop awareness of the most important items in Health Service costs, and the difference between capital costs and running costs
- To show the need for compromise and negotiation between several equally deserving cases when limited resources are allocated
- To provide opportunities to practise skills in communication, in particular the presentation and negotiation of a case.

Requirements:

- For each student: copy of General Briefing
- For each group: copies of the appropriate Briefing sheets (one per group member).

The National Health Service is organized into fourteen Regions, and each Region is organized into Districts. The information in the Briefing sheets is based on data provided by the Salford District Health Authority, which is itself part of the North Western Regional Authority.

Suggested use

There are several ways the unit can be used. One possibility is as follows:

- 1 Give each student a copy of the General Briefing to study. This could be done for homework the preceding evening.
- 2 Select five 'interest groups' from the eight available. Allocate each student to one of the groups, and issue the appropriate Briefing sheets. The preparation tasks for the different 'interest groups' vary in complexity. Some are very simple, while others require a certain amount of mathematical competence. Teachers may wish to bear this in mind when allocating students to groups.
- 3 Allow the groups up to 20 minutes working together to prepare their cases. (Guidelines for doing this are given on the Briefing sheets.)
- 4 Bring the groups together. Allow each group no more than 2 minutes to present their case. The presentation could be by a single spokesperson, or could be a joint effort. During the presentations it would be helpful to draw up a summary table on the blackboard or overhead projector. The table on the next page gives the correct values.

<i>Interest group</i>	<i>Capital cost of scheme</i>	<i>Running cost per year</i>	<i>Number of patients benefiting</i>
1 Heart disease treatment			
(a) Heart Attack Response Team	£20 000	£40 000	100
(b) Heart transplants	—	£150 000	10
2 Health Education Service	£15 000 (if 5 Health Education Officers appointed)	£75 000 (if 5 Health Education Officers appointed)	up to 250 000
3 Kidney disease treatment			
(a) Hospital machines	£173 000	£292 000	24
(b) Home treatment	£232 800	£168 000	24
4 Drug Dependence Unit	£65 000	£100 000	50
5 Intensive care facilities for new-born babies	£400 000	£200 000	100
6 Geriatric care			
(a) Community care	—	£75 000	
(b) Extra geriatric beds	£100 000	£25×28×365 = £255 500	245
7 Hip replacements	£84 000	£55×4×365 = £80 300	100
8 AIDS service	£87 000	£48 500	100

- 5 By means of a chaired discussion, decide how the money should be allocated. This could be initiated by the Chairperson making a statement such as 'We cannot provide *all* these services because we only have £1 million to spend this year. What are we going to do?' Negotiation and compromise will be necessary, with 'interest groups' having to reduce their proposed schemes.

During these negotiations it will be necessary to have at least one neutral party present. This could of course be the teacher, but an effective procedure would be to bring in an outside 'expert', such as a local Health Education Officer, a representative of the local Health Authority or a doctor.

Other possible approaches

- With a suitable class, the final negotiations could be chaired by a student, with perhaps a panel of students representing the District Health Authority.
- Instead of making an oral presentation, each group could prepare a press release making out the case for their particular scheme. The press releases could then be assessed by the teacher or outside expert. Discussion should follow naturally.
- It would be valuable to use the unit in conjunction with a visit to a local hospital.

PAYING FOR NATIONAL HEALTH

General Briefing

The National Health Service cost £16 billion (£16 000 000 000) a year to run in 1985. This is about £50 per second. Most of the money for the Health Service comes from the taxes and the National Insurance Contributions we pay. The money is limited and there is not enough to pay for all the health services we would like. Often there are difficult choices to make about where to spend money.

In this unit you will be looking at the choices that might have to be made in the imaginary Health District of Norton.

The Norton Health District

Norton is an industrial city of 250 000 people. It is part of the large urban area of Greater Norchester, which has a population of 2.5 million (see Figure 2). Many of Norton's traditional industries are declining and unemployment is high.

In this exercise we will imagine the Norton Health Authority has an extra £1 million (£1 000 000) to spend this year.

In addition there will be an extra £0.75 million (£750 000) to be spent in each following year. The Health Authority can therefore afford to improve some of their services.

How the money could be spent

There are several different 'interest groups', each wanting to spend money in different ways. The interest groups are concerned with:

- Heart disease treatment
- Health Education Service
- Kidney disease treatment
- Drug Dependence Unit
- Intensive care facilities for new-born babies
- Geriatric care (care of the elderly)
- Hip replacements
- AIDS service.

What you will be doing

You will be in one of the 'interest groups'. Your group's job will be to study your Briefing sheet and prepare your case. Later the various interest groups will come together. Your group will have to present their case and try to persuade the others why you should be allocated money. You will then all work together to decide how the money should be divided up.

Remember — there is
£1 000 000 to spend this year
£750 000 to spend each following year



Figure 1 Waiting to see the doctor

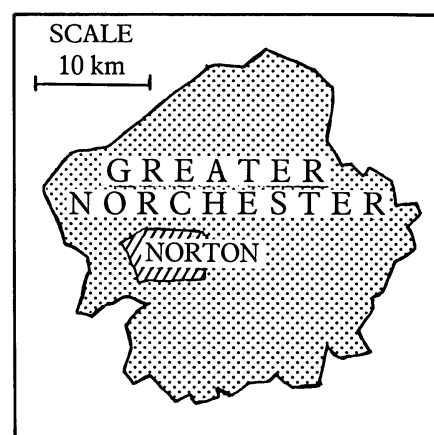


Figure 2 Norton and Greater Norchester

Briefing sheet 1

Heart disease treatment

Norton has one of the worst records of heart disease in the country. Heart disease is approximately 30 per cent higher than the national average. In 1984, nearly a thousand residents died from heart attacks. This was almost half the total deaths in Norton from all causes. 75-80 per cent of these deaths from heart attacks were in the over-65 age group.

There are two ways the situation could be improved if money was available.

(a) Heart Attack Response Team

To provide a 'flying squad' able to respond quickly to heart attack cases. The team would give emergency treatment in people's homes before taking them to hospital. This would need a doctor, two nurses and a driver. They would be on standby duty 24 hours a day. These staff would do other duties when not answering calls.

The total running costs, including salaries, drugs, travel, etc., would be **£40 000 per year**. A specially converted and equipped ambulance would also be needed at a capital cost of **£20 000**. This ambulance would last 5 years.

Estimated number of patients benefiting from this additional service: **100 per year**

(b) Heart transplants

Heart transplants need highly specialized equipment and staff. They are only done in one or two centres in England. There are never enough hearts donated to meet the demand. In any case, not every patient is suitable for this type of treatment.

The approximate cost to send a patient from Norton to an existing Heart Transplant Centre is estimated at **£15 000 per patient**.

Estimated number of patients it would be possible to treat: **10 per year**.

What you should do

- 1 Prepare your case so you can argue the benefits of spending money on treating heart disease. You may want to elect a speaker to present your case, or you may want to share the job.
- 2 Make sure you know the total *capital cost* (that is, 'setting-up' cost) of your scheme.
- 3 Make sure you know the total *running cost* of your scheme per year.
- 4 You may not be allowed enough money to provide the whole scheme. Decide how you would be prepared to reduce it if necessary.

Briefing sheet 2

Health Education Service

Doctors believe that diseases such as heart disease and cancer are linked with habits such as smoking and diet. If people could be persuaded to stop smoking and improve their diet, heart disease and cancer could be cut down.

One Health Education Officer's salary and supporting costs would amount to **£15 000 per year**. If people were persuaded to be more health conscious, for example, by giving up smoking, less health care would be needed. This would save the Health District money.

If enough Health Education Officers were appointed, efforts could be made in other areas. For example, health education can help reduce drug abuse. It can encourage parents to use ante-natal care, and help to avoid unnecessary deaths of new-born babies.

Costs per Health Education Officer = **£15 000 per year** (including salary, publications and secretarial assistance).

If more than two officers are appointed, there will be capital costs of **£5 000** for each extra officer. This will be needed to provide an office base.

It is generally recommended that there should be one Health Education Officer per 50 000 people. However, many Health Districts have less than this. The population of Norton is 250 000.

Estimated numbers of patients who would benefit: up to **250 000**, depending on number of officers appointed.

What you should do

- 1 Prepare your case so you can argue the benefits of spending money on a Health Education Service. You may want to elect a speaker to present your case, or you may want to share the job.
- 2 Make sure you know the total *capital cost* (that is, 'setting-up' cost) of your scheme.
- 3 Make sure you know the total *running cost* of your scheme per year.
- 4 You may not be allowed enough money to provide the whole scheme. Decide how you would be prepared to reduce it if necessary.

Briefing sheet 3**Kidney disease treatment**

In the past, diseases of the kidneys often proved fatal. They can now be treated successfully by two methods: transplants and kidney machines. Transplants are carried out on patients in a neighbouring District. However, there are not enough kidneys donated to meet the demand. In any case, not all patients are suitable for this type of treatment. Kidney machines for 'renal dialysis' are therefore needed. The patient has to be connected to the kidney machine for ten hours or so, two or three times each week.

These machines could either be in hospitals or in patients' homes.

(a) Hospital machines

Existing hospital accommodation could be converted to provide up to 6 beds and machines.

*Cost of 6-bed Renal Dialysis Unit**Capital costs:*

6 machines at £8000 each	£ 48 000
Conversion of hospital accommodation	£125 000

Running costs.

Doctors, nurses and technical staff	£250 000 per year
Running costs of machines — 6 at £7000 each	£ 42 000 per year
Estimated number of patients benefiting	24

(b) Home treatment

A further **24** patients could be treated by having kidney machines installed in their own homes. These patients would use the hospital unit only to train to use their machines. The estimated training time is three months per patient.

Costs of home treatment

No additional costs for doctors and nurses if the hospital unit has already been built.

Capital costs:

24 machines at £8000 each	£192 000
Home alterations — 24 at £1700 each	£ 40 800

Running costs:

24 home machines at £7000 each	£168 000
Number of patients benefiting	24

What you should do

- 1 Prepare your case so you can argue the benefits of spending money on treating kidney disease. You may want to elect a speaker to present your case, or you may want to share the job.
- 2 Make sure you know the total *capital cost* (that is, 'setting-up' cost) of your scheme.
- 3 Make sure you know the total *running cost* of your scheme per year.
- 4 You may not be allowed enough money to provide the whole scheme. Decide how you would be prepared to reduce it if necessary.

Briefing sheet 4**Drug Dependence Unit**

Drug abuse and glue sniffing have increased alarmingly in the Greater Norchester region, particularly among young people. It is estimated that there are over a thousand drug addicts in the Greater Norchester region. A Drug Dependence Unit is urgently needed to help these people break their addiction. Without this help there will be further unnecessary deaths of young people.

To convert existing hospital accommodation to provide a Drug Dependence Unit would cost £325 000. The unit would cost £500 000 a year to run.

However, the unit would not just benefit Norton. It would also provide a specialized service to the rest of Greater Norchester. The unit would therefore get extra funds from the Greater Norchester Regional Health Authority. Norton would only pay one-fifth of the total costs.

The net cost to Norton would therefore be:

Capital costs	£ 65 000
Running costs	£100 000 per year
Estimated number of patients treated in Norton	50

What you should do

- 1 Prepare your case so you can argue the benefits of spending money on a Drug Dependence Unit. You may want to elect a speaker to present your case, or you may want to share the job.
- 2 Make sure you know the total *capital cost* (that is, 'setting-up' cost) of your scheme.
- 3 Make sure you know the total *running cost* of your scheme per year.
- 4 You may not be allowed enough money to provide the whole scheme. Decide how you would be prepared to reduce it if necessary.

Briefing sheet 5**Intensive care facilities for new-born babies**

The death rate among new-born babies has always been high in Norton. Out of 3200 births in 1979, 70 babies died. This is almost twice the national average. It is one of the worst new-born death rates in the country. Additional intensive care facilities for new-born babies would mean many of these young lives could be saved.

Costs for four intensive care cots in a special unit*Capital costs:*

Conversion of part of existing Maternity Unit	£300 000
Equipment	£100 000

Running costs:

Doctors, nurses and other running costs	£200 000 per year
Estimated number of babies benefiting per year	100

What you should do

- 1 Prepare your case so you can argue the benefits of spending money on intensive care facilities for young babies. You may want to elect a speaker to present your case, or you may want to share the job.
- 2 Make sure you know the total *capital cost* (that is, 'setting-up' cost) of your scheme.
- 3 Make sure you know the total *running cost* of your scheme per year.
- 4 You may not be allowed enough money to provide the whole scheme. Decide how you would be prepared to reduce it if necessary.

Briefing sheet 6**Geriatric care (care of the elderly)**

The number of people in Norton over the age of 75 is expected to increase dramatically over the next ten years. It is expected to rise from about 14 000 to around 16 000. This age group needs a considerable amount of hospital treatment. To meet national standards for geriatric care, it is estimated that Norton needs an extra 35 geriatric beds.

However, this number of beds could be reduced if more people were looked after in the community. By looking after people in their own home, the number of extra geriatric beds needed could be reduced.

(a) Costs of a Community Care Team

A Community Care Team would consist of community nurses and health visitors. By increasing the support given to old people in their own homes, many hospital admissions could be prevented. Even when people did need to go into hospital, the length of stay could be reduced in many cases. The number of extra geriatric beds required could be reduced by about 7, to 28 in total, while still treating the same number of patients.

Running costs of Community Team:

4 community nurses, 3 health visitors	£70 000 per year
Travelling expenses	£ 5 000 per year

(b) Costs of extra geriatric beds*Capital costs:*

A ward of up to 28 beds could be converted from existing accommodation at a cost of **£100 000**

Running costs:

Each of the 28 geriatric beds costs a total of **£25 per day** for medical, nursing and other staff. This includes general services such as laundry and catering.

Estimated number of patients benefiting per year: **245**

What you should do

- 1 Prepare your case so you can argue the benefits of spending money on geriatric care. You may want to elect a speaker to present your case, or you may want to share the job.
- 2 Make sure you know the total *capital cost* (that is, 'setting-up' cost) of your scheme.
- 3 Make sure you know the total *running cost* of your scheme per year.
- 4 You may not be allowed enough money to provide the whole scheme. Decide how you would be prepared to reduce it if necessary.

Briefing sheet 7**Hip replacements**

Hip replacements are of enormous benefit to elderly people. They help keep them mobile, so they can continue to get out and about and enjoy life. However, the average waiting time for a hip replacement in Norton is one year.

If a small extension to the existing wards was built, four extra beds could be provided for hip replacement operations. It would not be necessary to build a new operating theatre. Within the existing operating theatres it would be possible to carry out 100 hip replacements each year. This would go a long way to meeting the total need.

Capital costs:

To build and equip the four-bed extension

£21 000 per bed

Running costs:

The daily running cost for each bed is **£55** for medical, nursing and other staff. This includes general services such as laundry and catering.

Estimated number of patients treated per year **100**

What you should do

- 1 Prepare your case so you can argue the benefits of spending money on hip replacements. You may want to elect a speaker to present your case, or you may want to share the job.
- 2 Make sure you know the total *capital cost* (that is, 'setting-up' cost) of your scheme.
- 3 Make sure you know the total *running cost* of your scheme per year.
- 4 You may not be allowed enough money to provide the whole scheme. Decide how you would be prepared to reduce it if necessary.

Briefing sheet 8

AIDS service

Much publicity has been given to the alarming new disease AIDS (Acquired Immune Deficiency Syndrome). AIDS is making more and more demands on the Health Service. Help is needed both for those who actually have the disease and those who fear they may have been in contact with it.

The Norton Immunology Laboratory tests blood samples for suspected AIDS. Demand for these tests has risen dramatically over the last three years. In 1982, there was no AIDS work. In 1985, AIDS testing exceeded all other forms of blood testing. This takes up time which in the past was used for other purposes. Extra resources are needed to help the laboratory cope.

There is also a need for specialists to advise suspected AIDS carriers. Two clinic sessions per week would be needed.

Costs of AIDS service

<i>Capital</i>	<i>costs:</i>
Extra laboratory space	within
Immunology Department	£50 000
Computer system to analyse test results	£37 000

Running costs:

Laboratory technician to carry out tests	£10 000 per year
Laboratory equipment, chemicals and computer running costs	£26 000 per year
Specialist advice clinic	£12 500 per year

Estimated number of patients receiving tests and advice per year	100
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What you should do

- 1 Prepare your case so you can argue the benefits of spending money on an AIDS service. You may want to elect a speaker to present your case, or you may want to share the job.
- 2 Make sure you know the total *capital cost* (that is, 'setting-up' cost) of your scheme.
- 3 Make sure you know the total *running cost* of your scheme per year.
- 4 You may not be allowed enough money to provide the whole scheme. Decide how you would be prepared to reduce it if necessary.