

### Transitivity and Monotonicity

Transitivity implies if A is preferred to B and B is preferred to C, then A should be preferred to C.[1] In each of the blocks of questionnaire, choice set number 3 with alternatives as hospital A and hospital B (i.e. from the choice design) was taken as a base for the transitivity test. The questions used for the transitivity test were spread out evenly as possible across the choice task. Therefore, another choice set number 6 was manually added (to the choice design) keeping hospital B attribute levels the same as in the choice set 3 but with a new alternative, hospital C with completely different attribute levels. Another additional choice set number 9 was manually added taking characteristics of hospital A from the choice set 3 and characteristics of hospital C from choice set 6. In short, the transitivity test was structured as follows:

Choice set number 3: Hospital A=A, Hospital B=B

Choice set number 6: Hospital A=B, Hospital B=C

Choice set number 9: Hospital A=A, Hospital B=C

However, in the questionnaire in each of the choice sets the alternatives were named as hospital A and hospital B. So, if the respondent made choices in a cyclic order (prefer A to B and prefer B to C and prefer C to A; prefer B to A, C to B, and then prefer A to C), the choice was considered intransitive and thus irrational.

Though not essential for rationality, monotonicity, is a desirable axiom of consumer theory and implies that more is preferred to less.[2] Therefore, another choice set number 12 where one hospital alternative was obviously dominant in terms of all attributes was manually added (to the choice design). It was assumed that individuals preferred the alternative with shorter travel time, shorter waiting time, low risk of mortality, low risk of readmission, shorter length of stay and outpatient follow-up at their local hospital. Any violation of monotonicity axiom in the respondent choices was considered irrational.

## Reference:

1. Ozdemir S, Mohamed AF, Johnson FR, et al. Who pays attention in stated-choice surveys? *Health economics* 2010;19:111-8.
2. Lancsar E, Louviere J. Deleting 'irrational' responses from discrete choice experiments: a case of investigating or imposing preferences? *Health economics* 2006;15:797-811.

**Table S1: Regression results from the pilot study**

<b>Attributes</b>	<b>Coefficients (SE) (Main effects-MNL)</b>
Travel time	-0.01 (0.003)***
Waiting time	-0.007 (0.0013)***
Length of stay	-0.10 (0.04)*
Risk of death	-0.28 (0.05)***
Risk of readmission	-0.16 (0.04)***
Outpatient follow-up	-0.62 (0.17)***

\*\*\*p<0.001, \*p<0.05; SE=Standard Error,

**Table S2. Regression results after recoding selected variables as categorical**

Attributes	MNL	MIXL	GMNL		
	(Main effects)	(Main effects)	(Main effects)		
	Coefficients (SE)	Coefficients (SE)	SD (SE)	Coefficients (SE)	SD (SE)
<b>Travel Time</b>	-0.0065 (0.0009)***	-0.0094 (0.0020)***	0.0160 (0.0026)***	-0.0105 (0.0022)***	0.0165(0.0026)***
<b>Waiting Time</b>	-0.0039 (0.0007)***	-0.0051 (0.0010)***	0.0046 (0.0010)***	-0.006 (0.0013)***	0.0049 (0.0010)***
<b>Length of Stay</b>	-0.0277 (0.0168)	-0.0608 (0.0265)*	0.1459 (0.0429)***	-0.0744 (0.0302)*	0.1541 (0.0419)***
<b>Risk of Death</b>					
(Base level: Low (1 in 100))					
Mild (3 in 100)	-0.6103 (0.319)	-0.3169 (0.4903)	0.2563 (0.6952)	-0.6024 (0.5483)	0.2919 (0.3664)
Moderate (5 in 100)	-1.8155 (0.288)***	-2.0607 (0.4388)***	0.3318 (0.5390)	-2.4479 (0.5104)***	0.0473 (0.4896)
High (7 in 100)	-1.5249 (0.161)***	-2.1425 (0.2830)***	1.3199 (0.2785)***	-2.4847 (0.3624)***	1.3312 (0.2726)***
<b>Risk of Readmission</b>					
(Base level: Low (1 in 100))					
Mild (3 in 100)	0.3326 (0.1296)*	0.3297 (0.1864)	0.3266 (0.6027)	0.4436 (0.2119)*	0.5174 (0.2913)
Moderate (5 in 100)^	-	-	-	-	-
High (7 in 100)	-0.7728 (0.1219)***	-0.9753 (0.1986)***	0.7813 (0.2846)**	-1.1345 (0.2297)***	0.8667 (0.2689)***
<b>Outpatient Follow-Up</b>					
(Base level: Local hospital)					
Distant hospital	-0.8455 (0.1027)***	-1.0647 (0.1808)***	0.9440 (0.1821)***	-1.2177 (0.2222)***	1.0642 (0.1940)***
<b>Sample size (Observations)</b>	148(2960)	148(2960)	-	148 (2960)	-
<b>Log Likelihood</b>	-796	-751	-	-747	-
<b>AIC</b>	1612	1539	-	1533	-
<b>BIC</b>	1680	1640	-	1647	-

\*\*\*p<0.001, \*\*p<0.01, \*p<0.05; SE=Standard Error, SD= Standard Deviation; AIC= Akaike information criterion; BIC = Bayesian information criterion, ^ could not be estimated because of collinearity issues

# Survey on Hospital Preferences

(Block-1)

This survey is being carried out by a researcher in health economics at the Institute of Health & Society, Newcastle University. We would like to know what is important to you when thinking about hospitals which provide accident and emergency care. To do this we will ask you to **make a series of choices between two hospitals** which do not exist, but this will allow us to understand what people think is important when designing emergency services. We would like to know which hospital you personally would prefer to go to if you were suddenly unwell and had called 999, and whether your view would change if the hospitals performed differently e.g. reduced or increased waiting times or survival rates. We have not suggested a reason why you would be unwell, but it is not a painful condition. You would require treatment on the same day to feel better and this can only be given in hospital.

The answers you provide here will only be used for research purposes and will not directly affect the healthcare that you need. There are no right or wrong choices, we are just interested in knowing your views. **You cannot be identified from your answers.** Please do not write anything which might give away your identity.

The hospitals **differ** in terms of the following ways:

- 1) **Travel time to the hospital:** This is the time it takes you to reach the hospital by ambulance.
- 2) **Waiting time in the A&E department to be seen by a doctor or nurse who can provide treatment:** This is the time you need to wait at the A&E to be given specific treatment for your problem by a doctor or nurse.
- 3) **Length of stay at the hospital before going home:** This is the number of days you need to stay in this hospital.

- 4) **Risk of dying from the illness:** This is a comparison of the average number of persons dying because of this illness after attending hospital.
- 5) **Risk of being re-admitted to the hospital after going home:** This is the likelihood of being re-admitted to the hospital after you are discharged.
- 6) **Outpatient care after emergency treatment:** This is the hospital you need to go for outpatient care after discharge following your emergency treatment.

**All other aspects of the two hospitals are the same.**

Example of the task (*Please do not fill this one*)

**Imagine you have an emergency healthcare need which requires calling an ambulance. Below are two hospitals, Hospital A and Hospital B, each with different characteristics. If you have a choice, which hospital would you choose from below?**

	<b>Hospital A</b>	<b>Hospital B</b>
<b>Travel time to hospital</b>	1 and half hours	1 hour
<b>Waiting time in the A&amp;E department to be seen by a doctor or nurse who can provide treatment</b>	4 hours or more	Less than 30 minutes
<b>Length of stay at the hospital before going home</b>	3 days	5 days
<b>Risk of dying from the illness</b>	Moderate (5 in 100 patients)	Mild (3 in 100 patients)
<b>Risk of being re-admitted to the hospital after going home</b>	Mild (3 in 100 patients)	Moderate (5 in 100 patients)
<b>Outpatient care after emergency treatment</b>	At a hospital which is about an extra 1 hour travel time from your local hospital	At your local hospital
<b>Which hospital would you choose to go in an emergency? (Please tick one box)</b>	<input type="checkbox"/>	<input type="checkbox"/>

In this example,

- It takes 1 and half hours to reach hospital A and takes 1 hour to reach hospital B.
- You need to wait 4 hours or more in the A&E to be treated in hospital A, but less than 30 minutes hospital B.
- The length of stay in Hospital A is 3 days whereas it is 5 days in Hospital B.
- Patient has moderate risks of death in Hospital A but has mild risks in Hospital B.
- The risk of being re-admitted is mild for Hospital A and is moderate for Hospital B.
- Outpatient care, after emergency treatment, at hospital B is provided at local hospital and at hospital A is provided at a hospital which is about 1 hour travel time away from the local hospital.

Here if hospital B is chosen, the box in the Hospital B column is marked with a  $\checkmark$  in the box. Or if hospital A is chosen, the box in the Hospital A column is marked with  $\checkmark$ .

**In addition, we will ask you few other questions about you, but remain assured that no questions will identify who you are.**

It takes about 15 minutes to complete the survey. Your participation in this survey is voluntary and you can stop at any time without providing any reason. If you do complete the survey it is not possible to remove your answers later. We cannot identify them, but nobody else will know your answers either. Should you have any queries regarding the survey you can contact the researcher on this telephone 01912087821, or email: [nawaraj.bhattarai@ncl.ac.uk](mailto:nawaraj.bhattarai@ncl.ac.uk) .

If you agree to take part in this survey, then please choose which emergency hospital you would like to go to in the following situations. **Please note that in each of the situations the characteristics of hospitals change.**

For each situation please indicate which hospital you prefer by putting a tick (✓) in the appropriate box.

#### Scenario 1

**Imagine you have an emergency healthcare need which requires calling an ambulance. Below are two hospitals, hospital A and hospital B, each with different characteristics. If you have a choice, which hospital would you choose from below?**

	Hospital A	Hospital B
<b>Travel time to hospital</b>	1 hour	1 and half hours
<b>Waiting time in the A&amp;E department to be seen by a doctor or nurse who can provide treatment</b>	2 and half hours	1 hour
<b>Length of stay at the hospital before going home</b>	3 days	5 days
<b>Risk of dying from the illness</b>	Mild (3 in 100 patients)	Moderate (5 in 100 patients)
<b>Risk of being re-admitted to the hospital after going home</b>	Mild (3 in 100 patients)	Moderate (5 in 100 patients)
<b>Outpatient care after emergency treatment</b>	At your local hospital	At a hospital which is about an extra 1 hour travel time from your local hospital
<b>Which hospital would you choose to go in an emergency? (Please tick one box)</b>	<input type="checkbox"/>	<input type="checkbox"/>



## Scenario 2

Imagine you have an emergency healthcare need which requires calling an ambulance. Below are two hospitals, hospital A and hospital B, each with different characteristics. If you have a choice, which hospital would you choose from below?

	Hospital A	Hospital B
<b>Travel time to hospital</b>	1 hour	1 and half hours
<b>Waiting time in the A&amp;E department to be seen by a doctor or nurse who can provide treatment</b>	1 hour	2 and half hours
<b>Length of stay at the hospital before going home</b>	5 days	3 days
<b>Risk of dying from the illness</b>	High (7 in 100 patients)	Mild (3 in 100 patients)
<b>Risk of being re-admitted to the hospital after going home</b>	Moderate (5 in 100 patients)	Mild (3 in 100 patients)
<b>Outpatient care after emergency treatment</b>	At a hospital which is about an extra 1 hour travel time from your local hospital	At your local hospital
<b>Which hospital would you choose to go in an emergency? (Please tick one box)</b>	<input type="checkbox"/>	<input type="checkbox"/>

## Scenario 3

Imagine you have an emergency healthcare need which requires calling an ambulance. Below are two hospitals, hospital A and hospital B, each with different characteristics. If you have a choice, which hospital would you choose from below?

	Hospital A	Hospital B
<b>Travel time to hospital</b>	2 hours or more	Less than 30 minutes
<b>Waiting time in the A&amp;E department to be seen by a doctor or nurse who can provide treatment</b>	4 hours or more	1 hour
<b>Length of stay at the hospital before going home</b>	1 day or less	6 days or more
<b>Risk of dying from the illness</b>	Low (1 in 100 patients)	High (7 in 100 patients)
<b>Risk of being re-admitted to the hospital after going home</b>	High (7 in 100 patients)	Low (1 in 100 patients)
<b>Outpatient care after emergency treatment</b>	At your local hospital	At a hospital which about an extra 1 hour travel time from your local hospital
<b>Which hospital would you choose to go in an emergency? (Please tick one box)</b>	<input type="checkbox"/>	<input type="checkbox"/>

## Scenario 4

Imagine you have an emergency healthcare need which requires calling an ambulance. Below are two hospitals, hospital A and hospital B, each with different characteristics. If you have a choice, which hospital would you choose from below?

	Hospital A	Hospital B
<b>Travel time to hospital</b>	1 hour	1 and half hours
<b>Waiting time in the A&amp;E department to be seen by a doctor or nurse who can provide treatment</b>	4 hours or more	Less than 30 minutes
<b>Length of stay at the hospital before going home</b>	5 days	3 days
<b>Risk of dying from the illness</b>	Moderate (5 in 100 patients)	Mild (3 in 100 patients)
<b>Risk of being re-admitted to the hospital after going home</b>	Moderate (5 in 100 patients)	Mild (3 in 100 patients)
<b>Outpatient care after emergency treatment</b>	At your local hospital	At a hospital which is about an extra 1 hour travel time from your local hospital
<b>Which hospital would you choose to go in an emergency? (Please tick one box)</b>	<input type="checkbox"/>	<input type="checkbox"/>

## Scenario 5

Imagine you have an emergency healthcare need which requires calling an ambulance. Below are two hospitals, hospital A and hospital B, each with different characteristics. If you have a choice, which hospital would you choose from below?

	Hospital A	Hospital B
<b>Travel time to hospital</b>	1 and half hours	1 hour
<b>Waiting time in the A&amp;E department to be seen by a doctor or nurse who can provide treatment</b>	2 and half hours	1 hour
<b>Length of stay at the hospital before going home</b>	3 days	5 days
<b>Risk of dying from the illness</b>	Moderate (5 in 100 patients)	Mild (3 in 100 patients)
<b>Risk of being re-admitted to the hospital after going home</b>	Mild (3 in 100 patients)	Moderate (5 in 100 patients)
<b>Outpatient care after emergency treatment</b>	At a hospital which is about an extra 1 hour travel time from your local hospital	At your local hospital
<b>Which hospital would you choose to go in an emergency? (Please tick one box)</b>	<input type="checkbox"/>	<input type="checkbox"/>

## Scenario 6

Imagine you have an emergency healthcare need which requires calling an ambulance. Below are two hospitals, hospital A and hospital B, each with different characteristics. If you have a choice, which hospital would you choose from below?

	Hospital A	Hospital B
<b>Travel time to hospital</b>	Less than 30 minutes	1 and half hours
<b>Waiting time in the A&amp;E department to be seen by a doctor or nurse who can provide treatment</b>	1 hour	2 and half hours
<b>Length of stay at the hospital before going home</b>	6 days or more	3 days
<b>Risk of dying from the illness</b>	High (7 in 100 patients)	Mild (3 in 100 patients)
<b>Risk of being re-admitted to the hospital after going home</b>	Low (1 in 100 patients)	Mild (3 in 100 patients)
<b>Outpatient care after emergency treatment</b>	At a hospital which is about an extra 1 hour travel time from your local hospital	At your local hospital
<b>Which hospital would you choose to go in an emergency? (Please tick one box)</b>	<input type="checkbox"/>	<input type="checkbox"/>

## Scenario 7

Imagine you have an emergency healthcare need which requires calling an ambulance. Below are two hospitals, hospital A and hospital B, each with different characteristics. If you have a choice, which hospital would you choose from below?

	Hospital A	Hospital B
<b>Travel time to hospital</b>	2 hours or more	Less than 30 minutes
<b>Waiting time in the A&amp;E department to be seen by a doctor or nurse who can provide treatment</b>	Less than 30 minutes	4 hours or more
<b>Length of stay at the hospital before going home</b>	6 days or more	1 day or less
<b>Risk of dying from the illness</b>	Moderate (5 in 100 patients)	Mild (3 in 100 patients)
<b>Risk of being re-admitted to the hospital after going home</b>	Low (1 in 100 patients)	High (7 in 100 patients)
<b>Outpatient care after emergency treatment</b>	At a hospital which is about an extra 1 hour travel time from your local hospital	At your local hospital
<b>Which hospital would you choose to go in an emergency? (Please tick one box)</b>	<input type="checkbox"/>	<input type="checkbox"/>

## Scenario 8

Imagine you have an emergency healthcare need which requires calling an ambulance. Below are two hospitals, hospital A and hospital B, each with different characteristics. If you have a choice, which hospital would you choose from below?

	Hospital A	Hospital B
<b>Travel time to hospital</b>	1 and half hours	1 hour
<b>Waiting time in the A&amp;E department to be seen by a doctor or nurse who can provide treatment</b>	1 hour	2 and half hours
<b>Length of stay at the hospital before going home</b>	3 days	5 days
<b>Risk of dying from the illness</b>	Mild (3 in 100 patients)	Moderate (5 in 100 patients)
<b>Risk of being re-admitted to the hospital after going home</b>	Mild (3 in 100 patients)	Moderate (5 in 100 patients)
<b>Outpatient care after emergency treatment</b>	At your local hospital	At a hospital which is about an extra 1 hour travel time from your local hospital
<b>Which hospital would you choose to go in an emergency? (Please tick one box)</b>	<input type="checkbox"/>	<input type="checkbox"/>

## Scenario 9

Imagine you have an emergency healthcare need which requires calling an ambulance. Below are two hospitals, hospital A and hospital B, each with different characteristics. If you have a choice, which hospital would you choose from below?

	Hospital A	Hospital B
<b>Travel time to hospital</b>	2 hours or more	1 and half hours
<b>Waiting time in the A&amp;E department to be seen by a doctor or nurse who can provide treatment</b>	4 hours or more	2 and half hours
<b>Length of stay at the hospital before going home</b>	1 day or less	3 days
<b>Risk of dying from the illness</b>	Low (1 in 100 patients)	Mild (3 in 100 patients)
<b>Risk of being re-admitted to the hospital after going home</b>	High (7 in 100 patients)	Mild (3 in 100 patients)
<b>Outpatient care after emergency treatment</b>	At your local hospital	At your local hospital
<b>Which hospital would you choose to go in an emergency? (Please tick one box)</b>	<input type="checkbox"/>	<input type="checkbox"/>



## Scenario 10

Imagine you have an emergency healthcare need which requires calling an ambulance. Below are two hospitals, hospital A and hospital B, each with different characteristics. If you have a choice, which hospital would you choose from below?

	Hospital A	Hospital B
<b>Travel time to hospital</b>	Less than 30 minutes	2 hours or more
<b>Waiting time in the A&amp;E department to be seen by a doctor or nurse who can provide treatment</b>	1 hour	2 and half hours
<b>Length of stay at the hospital before going home</b>	1 day or less	6 days or more
<b>Risk of dying from the illness</b>	High (7 in 100 patients)	Low (1 in 100 patients)
<b>Risk of being re-admitted to the hospital after going home</b>	Low (1 in 100 patients)	High (7 in 100 patients)
<b>Outpatient care after emergency treatment</b>	At a hospital which is about an extra 1 hour travel time from your local hospital	At your local hospital
<b>Which hospital would you choose to go in an emergency? (Please tick one box)</b>	<input type="checkbox"/>	<input type="checkbox"/>

## Scenario 11

Imagine you have an emergency healthcare need which requires calling an ambulance. Below are two hospitals, hospital A and hospital B, each with different characteristics. If you have a choice, which hospital would you choose from below?

	Hospital A	Hospital B
<b>Travel time to hospital</b>	Less than 30 minutes	2 hours or more
<b>Waiting time in the A&amp;E department to be seen by a doctor or nurse who can provide treatment</b>	2 and half hours	1 hour
<b>Length of stay at the hospital before going home</b>	6 days or more	1 day or less
<b>Risk of dying from the illness</b>	Low (1 in 100 patients)	High (7 in 100 patients)
<b>Risk of being re-admitted to the hospital after going home</b>	Moderate (5 in 100 patients)	Mild (3 in 100 patients)
<b>Outpatient care after emergency treatment</b>	At a hospital which is about an extra 1 hour travel time from your local hospital	At your local hospital
<b>Which hospital would you choose to go in an emergency? (Please tick one box)</b>	<input type="checkbox"/>	<input type="checkbox"/>

## Scenario 12

Imagine you have an emergency healthcare need which requires calling an ambulance. Below are two hospitals, hospital A and hospital B, each with different characteristics. If you have a choice, which hospital would you choose from below?

	Hospital A	Hospital B
<b>Travel time to hospital</b>	2 hours or more	Less than 30 minutes
<b>Waiting time in the A&amp;E department to be seen by a doctor or nurse who can provide treatment</b>	4 hours or more	Less than 30 minutes
<b>Length of stay at the hospital before going home</b>	6 days or more	1 day or less
<b>Risk of dying from the illness</b>	High (7 in 100 patients)	Low (1 in 100 patients)
<b>Risk of being re-admitted to the hospital after going home</b>	High (7 in 100 patients)	Low (1 in 100 patients)
<b>Outpatient care after emergency treatment</b>	At a hospital which is about an extra 1 hour travel time from your local hospital	At your local hospital
<b>Which hospital would you choose to go in an emergency? (Please tick one box)</b>	<input type="checkbox"/>	<input type="checkbox"/>

## Scenario 13

Imagine you have an emergency healthcare need which requires calling an ambulance. Below are two hospitals, hospital A and hospital B, each with different characteristics. If you have a choice, which hospital would you choose from below?

	Hospital A	Hospital B
Travel time to hospital	1 and half hours	1 hour
Waiting time in the A&E department to be seen by a doctor or nurse who can provide treatment	Less than 30 minutes	4 hours or more
Length of stay at the hospital before going home	5 days	3 days
Risk of dying from the illness	Mild (3 in 100 patients)	Moderate (5 in 100 patients)
Risk of being re-admitted to the hospital after going home	High (7 in 100 patients)	Low (1 in 100 patients)
Outpatient care after emergency treatment	At your local hospital	At a hospital which is about an extra 1 hour travel time from your local hospital
Which hospital would you choose to go in an emergency? (Please tick one box)	<input type="checkbox"/>	<input type="checkbox"/>

**Could you please indicate how easy or difficult it has been to complete the above choice sets** (Please tick only one of the boxes)

Very difficult

Difficult

Somewhat Difficult

Neutral

Somewhat Easy

Easy

Very Easy

**Finally, we would be grateful if you could provide the following information about you.** (Remain assured that no questions will identify who you are)

**Are you a male or female?** (Please tick one of the boxes below)

Male

Female

Prefer not to say

**Which of the following age group do you belong to?** (Please tick one of the boxes below)

16-29 30-34 35-39 40-44 45-49 50-54 55-59 60-64 65-69 70-75 75-79 80-84 85+ 

**What is your post code?** (Please fill in below; we only need your partial post code, not the house/flat or street name, example NE30)

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**What is the name of the GP surgery you are registered with?** (Please write in the space below. Please note we will not contact them. This is simply to help understand the results of the survey better).

.....

**In the last 12 months how many times have you visited the hospital with emergency healthcare need?**

0 1 2 3 4 or more

**Under each heading, please tick the ONE box that best describes your current state of health.**

**MOBILITY**

- I have no problems in walking about
- I have slight problems in walking about
- I have moderate problems in walking about
- I have severe problems in walking about
- I am unable to walk about

**SELF-CARE**

- I have no problems washing or dressing myself
- I have slight problems washing or dressing myself
- I have moderate problems washing or dressing myself
- I have severe problems washing or dressing myself
- I am unable to wash or dress myself

**USUAL ACTIVITIES** (e.g. work, study, housework, family or leisure activities)

- I have no problems doing my usual activities
- I have slight problems doing my usual activities
- I have moderate problems doing my usual activities
- I have severe problems doing my usual activities
- I am unable to do my usual activities

**PAIN / DISCOMFORT**

- I have no pain or discomfort
- I have slight pain or discomfort
- I have moderate pain or discomfort
- I have severe pain or discomfort
- I have extreme pain or discomfort

**ANXIETY / DEPRESSION**

I am not anxious or depressed

I am slightly anxious or depressed

I am moderately anxious or depressed

I am severely anxious or depressed

I am extremely anxious or depressed

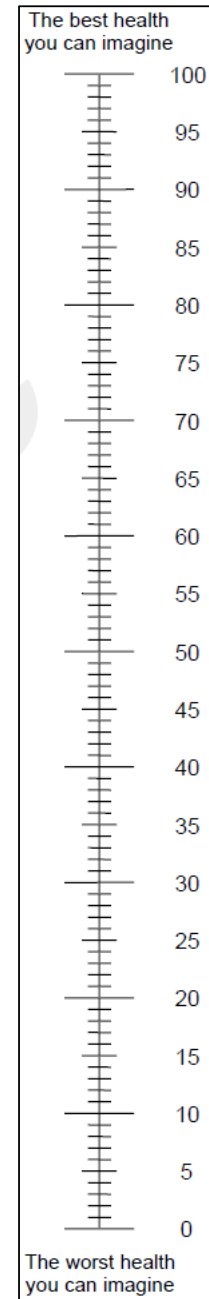
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**How would you rate the current state of your health?** (Please indicate by marking whichever point on the scale below indicates how good or bad your health state is today, imagining best state is marked 100 and the worst state is marked 0)

Now please write the number you marked on the scale in the box below

Your health today =



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**Thank you for taking part in this survey.**

# Survey on Hospital Preferences

(Block-2)

This survey is being carried out by a researcher in health economics at the Institute of Health & Society, Newcastle University. We would like to know what is important to you when thinking about hospitals which provide accident and emergency care. To do this we will ask you to **make a series of choices between two hospitals** which do not exist, but this will allow us to understand what people think is important when designing emergency services. We would like to know which hospital you personally would prefer to go to if you were suddenly unwell and had called 999, and whether your view would change if the hospitals performed differently e.g. reduced or increased waiting times or survival rates. We have not suggested a reason why you would be unwell, but it is not a painful condition. You would require treatment on the same day to feel better and this can only be given in hospital.

The answers you provide here will only be used for research purposes and will not directly affect the healthcare that you need. There are no right or wrong choices, we are just interested in knowing your views. **You cannot be identified from your answers.** Please do not write anything which might give away your identity.

The hospitals **differ** in terms of the following ways:

- 7) **Travel time to the hospital:** This is the time it takes you to reach the hospital by ambulance.
- 8) **Waiting time in the A&E department to be seen by a doctor or nurse who can provide treatment:** This is the time you need to wait at the A&E to be given specific treatment for your problem by a doctor or nurse.
- 9) **Length of stay at the hospital before going home:** This is the number of days you need to stay in this hospital.

- 10) **Risk of dying from the illness:** This is a comparison of the average number of persons dying because of this illness after attending hospital.
- 11) **Risk of being re-admitted to the hospital after going home:** This is the likelihood of being re-admitted to the hospital after you are discharged.
- 12) **Outpatient care after emergency treatment:** This is the hospital you need to go for outpatient care after discharge following your emergency treatment.

**All other aspects of the two hospitals are the same.**

Example of the task (*Please do not fill this one*)

**Imagine you have an emergency healthcare need which requires calling an ambulance. Below are two hospitals, Hospital A and Hospital B, each with different characteristics. If you have a choice, which hospital would you choose from below?**

	<b>Hospital A</b>	<b>Hospital B</b>
<b>Travel time to hospital</b>	1 and half hours	1 hour
<b>Waiting time in the A&amp;E department to be seen by a doctor or nurse who can provide treatment</b>	4 hours or more	Less than 30 minutes
<b>Length of stay at the hospital before going home</b>	3 days	5 days
<b>Risk of dying from the illness</b>	Moderate (5 in 100 patients)	Mild (3 in 100 patients)
<b>Risk of being re-admitted to the hospital after going home</b>	Mild (3 in 100 patients)	Moderate (5 in 100 patients)
<b>Outpatient care after emergency treatment</b>	At a hospital which is about an extra 1 hour travel time from your local hospital	At your local hospital
<b>Which hospital would you choose to go in an emergency? (Please tick one box)</b>	<input type="checkbox"/>	<input type="checkbox"/>

In this example,

- It takes 1 and half hours to reach hospital A and takes 1 hour to reach hospital B.
- You need to wait 4 hours or more in the A&E to be treated in hospital A, but less than 30 minutes hospital B.
- The length of stay in Hospital A is 3 days whereas it is 5 days in Hospital B.
- Patient has moderate risks of death in Hospital A but has mild risks in Hospital B.
- The risk of being re-admitted is mild for Hospital A and is moderate for Hospital B.
- Outpatient care, after emergency treatment, at hospital B is provided at local hospital and at hospital A is provided at a hospital which is about 1 hour travel time away from the local hospital.

Here if hospital B is chosen, the box in the Hospital B column is marked with a  $\surd$  in the box. Or if hospital A is chosen, the box in the Hospital A column is marked with  $\surd$ .

**In addition, we will ask you few other questions about you, but remain assured that no questions will identify who you are.**

It takes about 15 minutes to complete the survey. Your participation in this survey is voluntary and you can stop at any time without providing any reason. If you do complete the survey it is not possible to remove your answers later. We cannot identify them, but nobody else will know your answers either. Should you have any queries regarding the survey you can contact the researcher on this telephone 01912087821, or email: [nawaraj.bhattarai@ncl.ac.uk](mailto:nawaraj.bhattarai@ncl.ac.uk) .

If you agree to take part in this survey, then please choose which emergency hospital you would like to go to in the following situations. **Please note that in each of the situations the characteristics of hospitals change.**

For each situation please indicate which hospital you prefer by putting a tick (✓) in the appropriate box.

#### Scenario 1

**Imagine you have an emergency healthcare need which requires calling an ambulance. Below are two hospitals, hospital A and hospital B, each with different characteristics. If you have a choice, which hospital would you choose from below?**

	Hospital A	Hospital B
<b>Travel time to hospital</b>	2 hours or more	Less than 30 minutes
<b>Waiting time in the A&amp;E department to be seen by a doctor or nurse who can provide treatment</b>	Less than 30 minutes	4 hours or more
<b>Length of stay at the hospital before going home</b>	6 days or more	1 day or less
<b>Risk of dying from the illness</b>	Moderate (5 in 100 patients)	Low (1 in 100 patients)
<b>Risk of being re-admitted to the hospital after going home</b>	Mild (3 in 100 patients)	Moderate (5 in 100 patients)
<b>Outpatient care after emergency treatment</b>	At your local hospital	At a hospital which is about an extra 1 hour travel time from your local hospital
<b>Which hospital would you choose to go in an emergency? (Please tick one box)</b>	<input type="checkbox"/>	<input type="checkbox"/>

## Scenario 2

Imagine you have an emergency healthcare need which requires calling an ambulance. Below are two hospitals, hospital A and hospital B, each with different characteristics. If you have a choice, which hospital would you choose from below?

	Hospital A	Hospital B
<b>Travel time to hospital</b>	Less than 30 minutes	2 hours or more
<b>Waiting time in the A&amp;E department to be seen by a doctor or nurse who can provide treatment</b>	2 and half hours	1 hour
<b>Length of stay at the hospital before going home</b>	6 days or more	1 day or less
<b>Risk of dying from the illness</b>	Low (1 in 100 patients)	High (7 in 100 patients)
<b>Risk of being re-admitted to the hospital after going home</b>	High (7 in 100 patients)	Low (1 in 100 patients)
<b>Outpatient care after emergency treatment</b>	At a hospital which is about an extra 1 hour travel time from your local hospital	At your local hospital
<b>Which hospital would you choose to go in an emergency? (Please tick one box)</b>	<input type="checkbox"/>	<input type="checkbox"/>

## Scenario 3

Imagine you have an emergency healthcare need which requires calling an ambulance. Below are two hospitals, hospital A and hospital B, each with different characteristics. If you have a choice, which hospital would you choose from below?

	Hospital A	Hospital B
<b>Travel time to hospital</b>	Less than 30 minutes	2 hours or more
<b>Waiting time in the A&amp;E department to be seen by a doctor or nurse who can provide treatment</b>	Less than 30 minutes	4 hours or more
<b>Length of stay at the hospital before going home</b>	1 day or less	6 days or more
<b>Risk of dying from the illness</b>	Low (1 in 100 patients)	High (7 in 100 patients)
<b>Risk of being re-admitted to the hospital after going home</b>	High (7 in 100 patients)	Low (1 in 100 patients)
<b>Outpatient care after emergency treatment</b>	At a hospital which about an extra 1 hour travel time from your local hospital	At your local hospital
<b>Which hospital would you choose to go in an emergency? (Please tick one box)</b>	<input type="checkbox"/>	<input type="checkbox"/>



## Scenario 4

Imagine you have an emergency healthcare need which requires calling an ambulance. Below are two hospitals, hospital A and hospital B, each with different characteristics. If you have a choice, which hospital would you choose from below?

	Hospital A	Hospital B
<b>Travel time to hospital</b>	Less than 30 minutes	2 hours or more
<b>Waiting time in the A&amp;E department to be seen by a doctor or nurse who can provide treatment</b>	2 and half hours	Less than 30 minutes
<b>Length of stay at the hospital before going home</b>	3 days	5 days
<b>Risk of dying from the illness</b>	High (7 in 100 patients)	Low (1 in 100 patients)
<b>Risk of being re-admitted to the hospital after going home</b>	Low (1 in 100 patients)	High (7 in 100 patients)
<b>Outpatient care after emergency treatment</b>	At your local hospital	At a hospital which is about an extra 1 hour travel time from your local hospital
<b>Which hospital would you choose to go in an emergency? (Please tick one box)</b>	<input type="checkbox"/>	<input type="checkbox"/>

## Scenario 5

Imagine you have an emergency healthcare need which requires calling an ambulance. Below are two hospitals, hospital A and hospital B, each with different characteristics. If you have a choice, which hospital would you choose from below?

	Hospital A	Hospital B
<b>Travel time to hospital</b>	1 hour	1 and half hours
<b>Waiting time in the A&amp;E department to be seen by a doctor or nurse who can provide treatment</b>	1 hour	2 and half hours
<b>Length of stay at the hospital before going home</b>	5 days	3 days
<b>Risk of dying from the illness</b>	Mild (3 in 100 patients)	Moderate (5 in 100 patients)
<b>Risk of being re-admitted to the hospital after going home</b>	Mild (3 in 100 patients)	Moderate (5 in 100 patients)
<b>Outpatient care after emergency treatment</b>	At your local hospital	At a hospital which is about an extra 1 hour travel time from your local hospital
<b>Which hospital would you choose to go in an emergency? (Please tick one box)</b>	<input type="checkbox"/>	<input type="checkbox"/>

## Scenario 6

Imagine you have an emergency healthcare need which requires calling an ambulance. Below are two hospitals, hospital A and hospital B, each with different characteristics. If you have a choice, which hospital would you choose from below?

	Hospital A	Hospital B
<b>Travel time to hospital</b>	2 hours or more	1 and half hours
<b>Waiting time in the A&amp;E department to be seen by a doctor or nurse who can provide treatment</b>	4 hours or more	1 hour
<b>Length of stay at the hospital before going home</b>	6 days or more	3 days
<b>Risk of dying from the illness</b>	Low (1 in 100 patients)	Moderate (5 in 100 patients)
<b>Risk of being re-admitted to the hospital after going home</b>	Low (1 in 100 patients)	Low (1 in 100 patients)
<b>Outpatient care after emergency treatment</b>	At your local hospital	At your local hospital
<b>Which hospital would you choose to go in an emergency? (Please tick one box)</b>	<input type="checkbox"/>	<input type="checkbox"/>

## Scenario 7

Imagine you have an emergency healthcare need which requires calling an ambulance. Below are two hospitals, hospital A and hospital B, each with different characteristics. If you have a choice, which hospital would you choose from below?

	Hospital A	Hospital B
<b>Travel time to hospital</b>	1 hour	1 and half hours
<b>Waiting time in the A&amp;E department to be seen by a doctor or nurse who can provide treatment</b>	4 hours or more	Less than 30 minutes
<b>Length of stay at the hospital before going home</b>	3 days	5 days
<b>Risk of dying from the illness</b>	Moderate (5 in 100 patients)	Mild (3 in 100 patients)
<b>Risk of being re-admitted to the hospital after going home</b>	Moderate (5 in 100 patients)	Mild (3 in 100 patients)
<b>Outpatient care after emergency treatment</b>	At your local hospital	At a hospital which is about an extra 1 hour travel time from your local hospital
<b>Which hospital would you choose to go in an emergency? (Please tick one box)</b>	<input type="checkbox"/>	<input type="checkbox"/>

## Scenario 8

Imagine you have an emergency healthcare need which requires calling an ambulance. Below are two hospitals, hospital A and hospital B, each with different characteristics. If you have a choice, which hospital would you choose from below?

	Hospital A	Hospital B
<b>Travel time to hospital</b>	2 hours or more	Less than 30 minutes
<b>Waiting time in the A&amp;E department to be seen by a doctor or nurse who can provide treatment</b>	Less than 30 minutes	4 hours or more
<b>Length of stay at the hospital before going home</b>	1 day or less	6 days or more
<b>Risk of dying from the illness</b>	Mild (3 in 100 patients)	Moderate (5 in 100 patients)
<b>Risk of being re-admitted to the hospital after going home</b>	High (7 in 100 patients)	Low (1 in 100 patients)
<b>Outpatient care after emergency treatment</b>	At a hospital which is about an extra 1 hour travel time from your local hospital	At your local hospital
<b>Which hospital would you choose to go in an emergency? (Please tick one box)</b>	<input type="checkbox"/>	<input type="checkbox"/>

## Scenario 9

Imagine you have an emergency healthcare need which requires calling an ambulance. Below are two hospitals, hospital A and hospital B, each with different characteristics. If you have a choice, which hospital would you choose from below?

	Hospital A	Hospital B
<b>Travel time to hospital</b>	Less than 30 minutes	1 and half hours
<b>Waiting time in the A&amp;E department to be seen by a doctor or nurse who can provide treatment</b>	Less than 30 minutes	1 hour
<b>Length of stay at the hospital before going home</b>	1 day or less	3 days
<b>Risk of dying from the illness</b>	High (7 in 100 patients)	Moderate (5 in 100 patients)
<b>Risk of being re-admitted to the hospital after going home</b>	High (7 in 100 patients)	Low (1 in 100 patients)
<b>Outpatient care after emergency treatment</b>	At a hospital which is about an extra 1 hour travel time from your local hospital	At your local hospital
<b>Which hospital would you choose to go in an emergency? (Please tick one box)</b>	<input type="checkbox"/>	<input type="checkbox"/>

## Scenario 10

Imagine you have an emergency healthcare need which requires calling an ambulance. Below are two hospitals, hospital A and hospital B, each with different characteristics. If you have a choice, which hospital would you choose from below?

	Hospital A	Hospital B
<b>Travel time to hospital</b>	1 and half hours	1 hour
<b>Waiting time in the A&amp;E department to be seen by a doctor or nurse who can provide treatment</b>	4 hours or more	Less than 30 minutes
<b>Length of stay at the hospital before going home</b>	6 days or more	1 day or less
<b>Risk of dying from the illness</b>	Low (1 in 100 patients)	High (7 in 100 patients)
<b>Risk of being re-admitted to the hospital after going home</b>	Low (1 in 100 patients)	High (7 in 100 patients)
<b>Outpatient care after emergency treatment</b>	At a hospital which is about an extra 1 hour travel time from your local hospital	At your local hospital
<b>Which hospital would you choose to go in an emergency? (Please tick one box)</b>	<input type="checkbox"/>	<input type="checkbox"/>

## Scenario 11

Imagine you have an emergency healthcare need which requires calling an ambulance. Below are two hospitals, hospital A and hospital B, each with different characteristics. If you have a choice, which hospital would you choose from below?

	Hospital A	Hospital B
<b>Travel time to hospital</b>	2 hours or more	Less than 30 minutes
<b>Waiting time in the A&amp;E department to be seen by a doctor or nurse who can provide treatment</b>	4 hours or more	Less than 30 minutes
<b>Length of stay at the hospital before going home</b>	1 day or less	6 days or more
<b>Risk of dying from the illness</b>	Low (1 in 100 patients)	High (7 in 100 patients)
<b>Risk of being re-admitted to the hospital after going home</b>	Low (1 in 100 patients)	High (7 in 100 patients)
<b>Outpatient care after emergency treatment</b>	At a hospital which is about an extra 1 hour travel time from your local hospital	At your local hospital
<b>Which hospital would you choose to go in an emergency? (Please tick one box)</b>	<input type="checkbox"/>	<input type="checkbox"/>



## Scenario 12

Imagine you have an emergency healthcare need which requires calling an ambulance. Below are two hospitals, hospital A and hospital B, each with different characteristics. If you have a choice, which hospital would you choose from below?

	Hospital A	Hospital B
<b>Travel time to hospital</b>	2 hours or more	Less than 30 minutes
<b>Waiting time in the A&amp;E department to be seen by a doctor or nurse who can provide treatment</b>	4 hours or more	Less than 30 minutes
<b>Length of stay at the hospital before going home</b>	6 days or more	1 day or less
<b>Risk of dying from the illness</b>	High (7 in 100 patients)	Low (1 in 100 patients)
<b>Risk of being re-admitted to the hospital after going home</b>	High (7 in 100 patients)	Low (1 in 100 patients)
<b>Outpatient care after emergency treatment</b>	At a hospital which is about an extra 1 hour travel time from your local hospital	At your local hospital
<b>Which hospital would you choose to go in an emergency? (Please tick one box)</b>	<input type="checkbox"/>	<input type="checkbox"/>

## Scenario 13

Imagine you have an emergency healthcare need which requires calling an ambulance. Below are two hospitals, hospital A and hospital B, each with different characteristics. If you have a choice, which hospital would you choose from below?

	Hospital A	Hospital B
<b>Travel time to hospital</b>	1 and half hours	1 hour
<b>Waiting time in the A&amp;E department to be seen by a doctor or nurse who can provide treatment</b>	1 hour	2 and half hours
<b>Length of stay at the hospital before going home</b>	5 days	3 days
<b>Risk of dying from the illness</b>	High (7 in 100 patients)	Low (1 in 100 patients)
<b>Risk of being re-admitted to the hospital after going home</b>	Moderate (5 in 100 patients)	Mild (3 in 100 patients)
<b>Outpatient care after emergency treatment</b>	At your local hospital	At a hospital which is about an extra 1 hour travel time from your local hospital
<b>Which hospital would you choose to go in an emergency? (Please tick one box)</b>	<input type="checkbox"/>	<input type="checkbox"/>

**Could you please indicate how easy or difficult it has been to complete the above choice sets** (Please tick only one of the boxes)

Very difficult

Difficult

Somewhat Difficult

Neutral

Somewhat Easy

Easy

Very Easy

**Finally, we would be grateful if you could provide the following information about you.** (Remain assured that no questions will identify who you are)

**Are you a male or female?** (Please tick one of the boxes below)

Male

Female

Prefer not to say

**Which of the following age group do you belong to?** (Please tick one of the boxes below)

16-29 30-34 35-39 40-44 45-49 50-54 55-59 60-64 65-69 70-75 75-79 80-84 85+ 

**What is your post code?** (Please fill in below; we only need your partial post code, not the house/flat or street name, example NE30)

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**What is the name of the GP surgery you are registered with?** (Please write in the space below. Please note we will not contact them. This is simply to help understand the results of the survey better).

.....

**In the last 12 months how many times have you visited the hospital with emergency healthcare need?**

0 1 2 3 4 or more

**Under each heading, please tick the ONE box that best describes your current state of health.**

**MOBILITY**

- I have no problems in walking about
- I have slight problems in walking about
- I have moderate problems in walking about
- I have severe problems in walking about
- I am unable to walk about

**SELF-CARE**

- I have no problems washing or dressing myself
- I have slight problems washing or dressing myself
- I have moderate problems washing or dressing myself
- I have severe problems washing or dressing myself
- I am unable to wash or dress myself

**USUAL ACTIVITIES** (e.g. work, study, housework, family or leisure activities)

- I have no problems doing my usual activities
- I have slight problems doing my usual activities
- I have moderate problems doing my usual activities
- I have severe problems doing my usual activities
- I am unable to do my usual activities

**PAIN / DISCOMFORT**

- I have no pain or discomfort
- I have slight pain or discomfort
- I have moderate pain or discomfort
- I have severe pain or discomfort
- I have extreme pain or discomfort

**ANXIETY / DEPRESSION**

I am not anxious or depressed

I am slightly anxious or depressed

I am moderately anxious or depressed

I am severely anxious or depressed

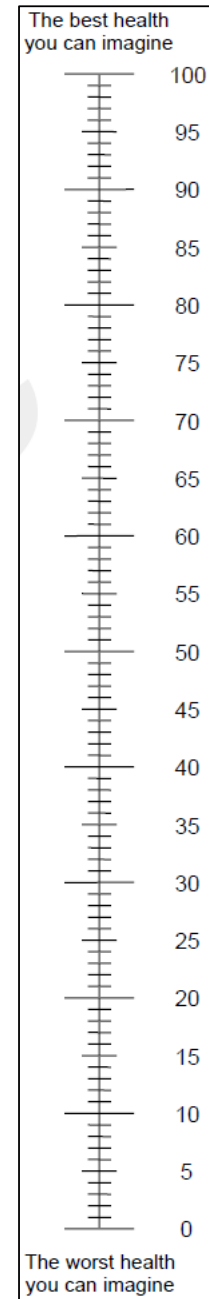
I am extremely anxious or depressed

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**How would you rate the current state of your health?** (Please indicate by marking whichever point on the scale below indicates how good or bad your health state is today, imagining best state is marked 100 and the worst state is marked 0)

Now please write the number you marked on the scale in the box below

Your health today =



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**Thank you for taking part in this survey.**

