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Using Adaptive Choice Based Conjoint (ACBC) analysis to predict individual patient preferences for pharmaceutical treatment of osteoarthritis.

Basem Al-Omari

Background

- Eliciting *individual* patient preferences is important alongside eliciting *group* preferences.
- Group results are used to understand general population preferences and develop guidelines.
- Individual patient preferences assist patient-clinician shared decision-making.

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OA treatment

- NICE OA guidelines (2008) recommend that treatment and care of OA should take into account patients' needs and preferences.
- The NICE OA guidelines (2008) did not recommend a particular method for eliciting patients preference.
- In order to facilitate shared agreements between clinician and patient, it is important that the clinician has a clear understanding of an *individual* patient's preference for OA treatment.

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Study aim

To examine whether predicted preferences derived from individual patients through ACBC match their expressed preferences for pharmaceutical treatment of osteoarthritis.

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Method

- 11 participants who were over 50 years of age and suffering from OA in at least one of their joints were recruited from the Research User Group (RUG) at the Arthritis Research UK Primary Care Centre, Keele University.
- Participants completed a computerised interactive ACBC questionnaire involving 8 attributes selected by the RUG using evidence-based information from published articles about the varying impact and risks of OA medication.
- Data were analysed for each individual patients.
- Patients were presented with the ACBC predicted preferences and were asked if it matches their expressed preferences

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Attributes

- Medication availability
- Frequency
- Route of administration
- Expected benefit
- Risk of addiction
- Risk of stomach side effects
- Risk of kidney and liver side effects
- Risk of heart attacks and strokes

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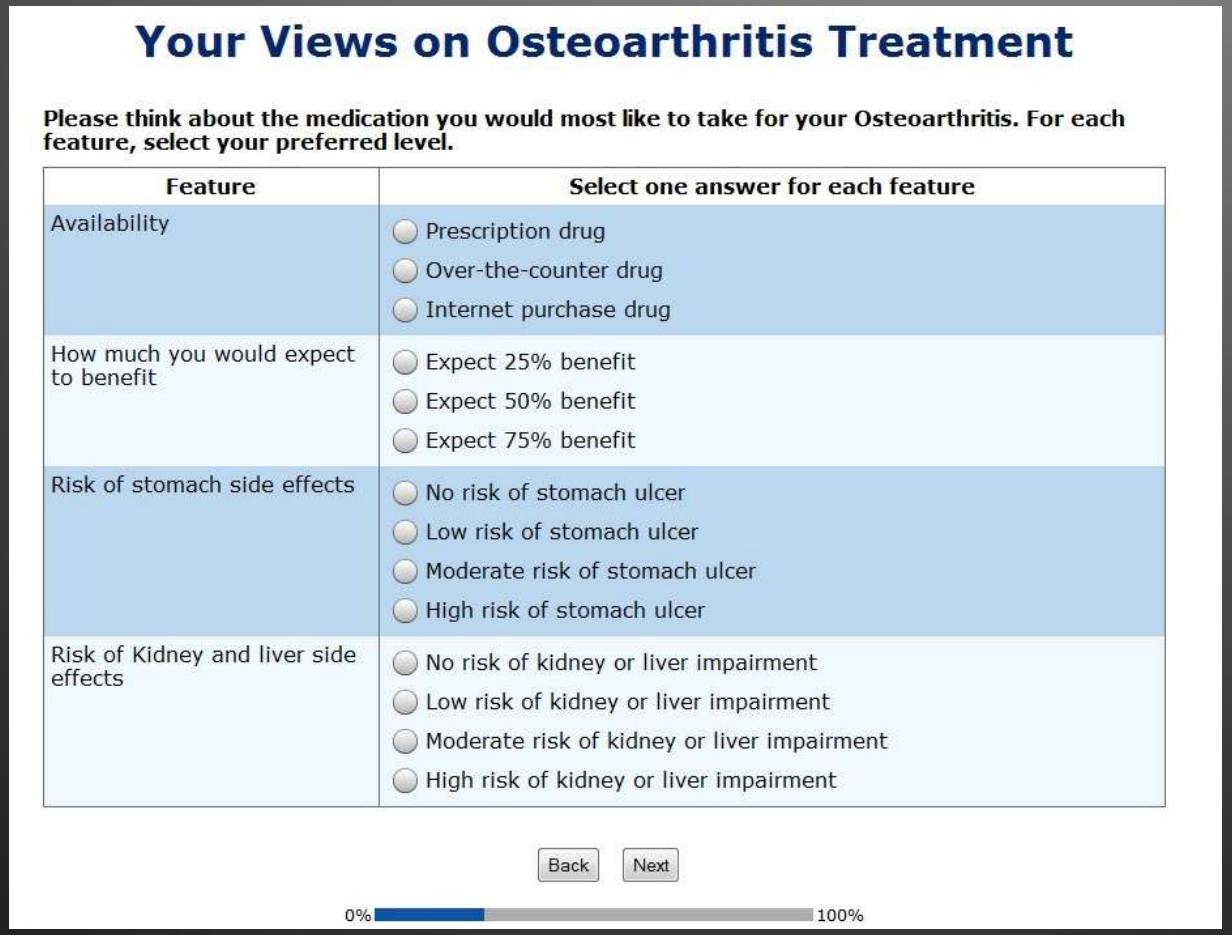
ACBC questionnaire



Your Views on Osteoarthritis Treatment

Please think about the medication you would most like to take for your Osteoarthritis. For each feature, select your preferred level.

Feature	Select one answer for each feature
Availability	○ Prescription drug ○ Over-the-counter drug ○ Internet purchase drug
How much you would expect to benefit	○ Expect 25% benefit ○ Expect 50% benefit ○ Expect 75% benefit
Risk of stomach side effects	○ No risk of stomach ulcer ○ Low risk of stomach ulcer ○ Moderate risk of stomach ulcer ○ High risk of stomach ulcer
Risk of Kidney and liver side effects	○ No risk of kidney or liver impairment ○ Low risk of kidney or liver impairment ○ Moderate risk of kidney or liver impairment ○ High risk of kidney or liver impairment

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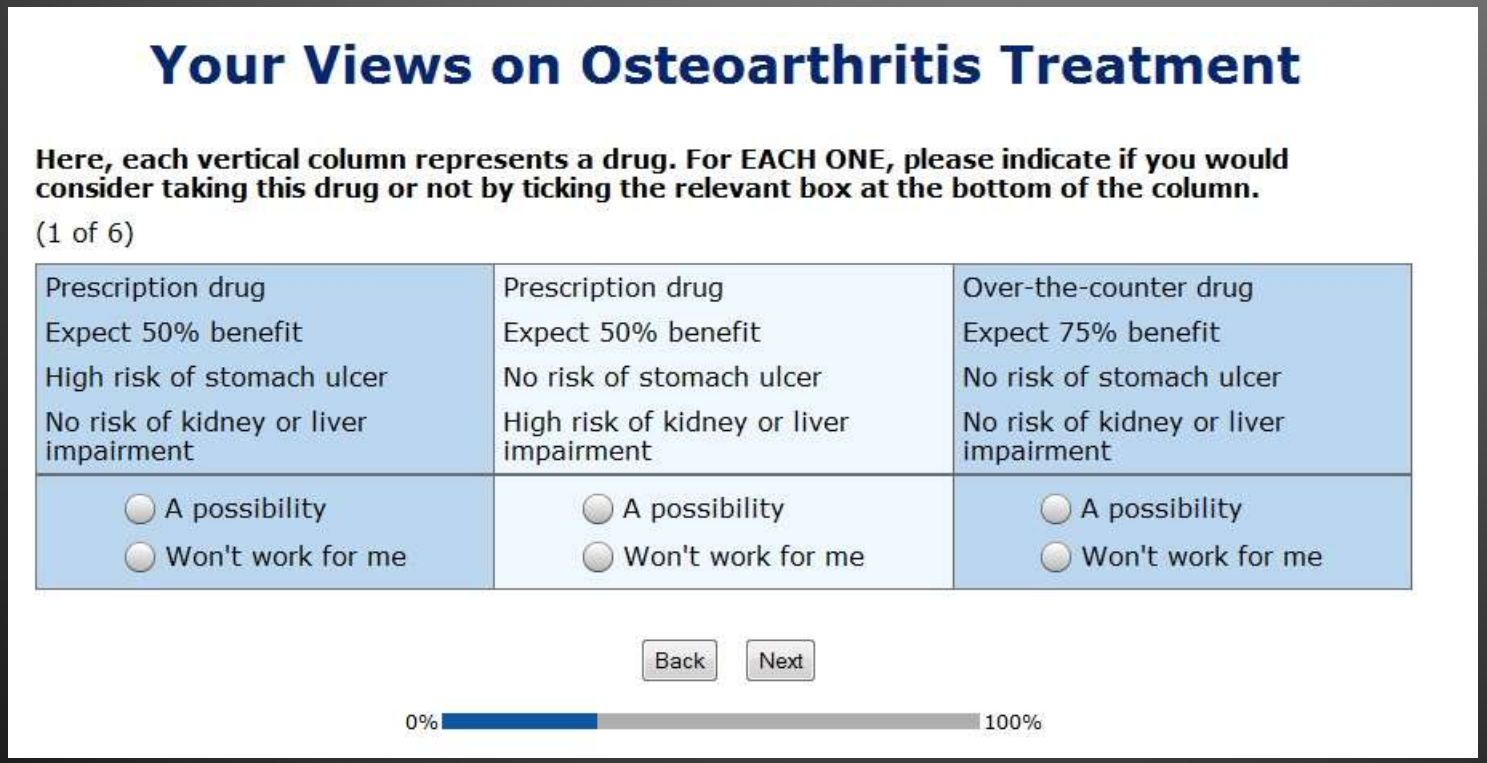
ACBC questionnaire



Your Views on Osteoarthritis Treatment

Here, each vertical column represents a drug. For EACH ONE, please indicate if you would consider taking this drug or not by ticking the relevant box at the bottom of the column.

(1 of 6)

Prescription drug	Prescription drug	Over-the-counter drug
Expect 50% benefit	Expect 50% benefit	Expect 75% benefit
High risk of stomach ulcer	No risk of stomach ulcer	No risk of stomach ulcer
No risk of kidney or liver impairment	High risk of kidney or liver impairment	No risk of kidney or liver impairment
○ A possibility ○ Won't work for me	○ A possibility ○ Won't work for me	○ A possibility ○ Won't work for me

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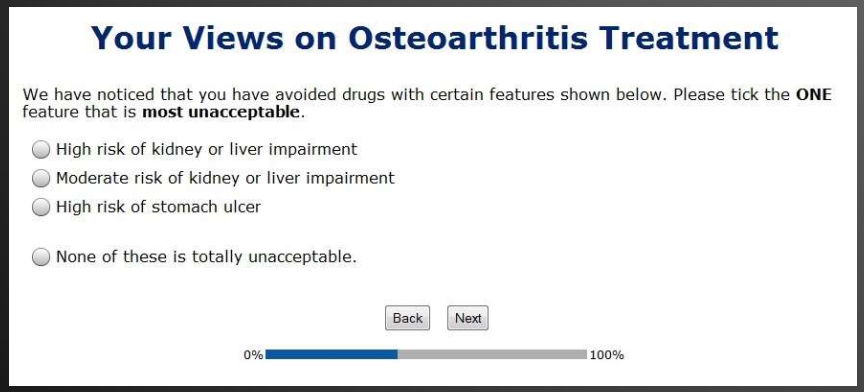
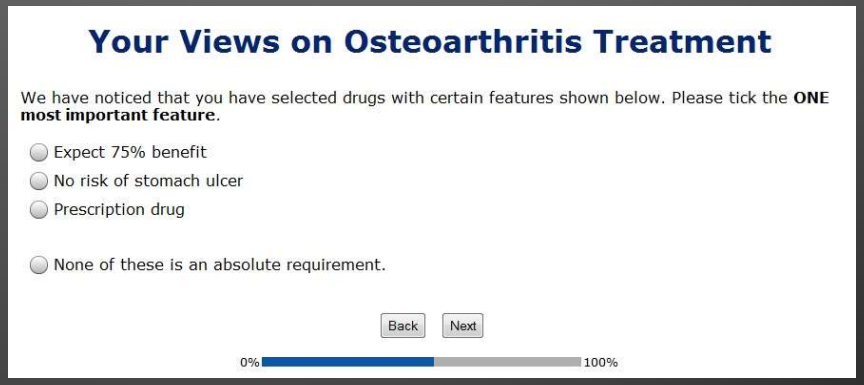
ACBC questionnaire





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ACBC questionnaire

Your Views on Osteoarthritis Treatment

Here again, each vertical column represents a drug. Among these three, please decide which **ONE** is the best option for you? (Features that are the same for each drug are in grey, so you can focus on the features that are different.)

(1 of 4)

Over-the-counter drug Expect 75% benefit	Over-the-counter drug Expect 75% benefit	Over-the-counter drug Expect 75% benefit
No risk of stomach ulcer	No risk of stomach ulcer	Low risk of stomach ulcer
Low risk of kidney or liver impairment	No risk of kidney or liver impairment	No risk of kidney or liver impairment
○	○	○

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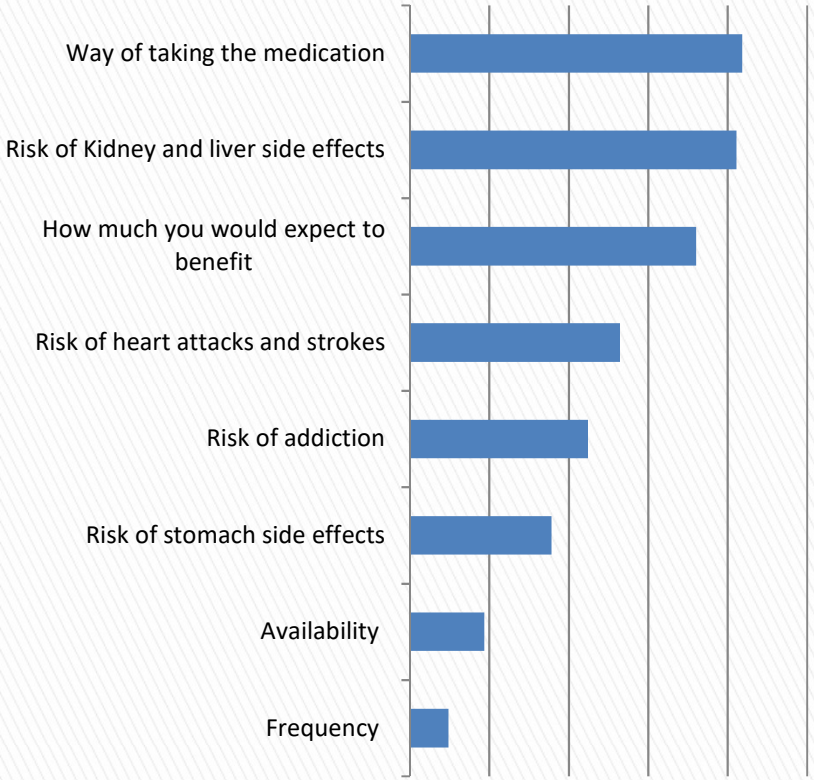
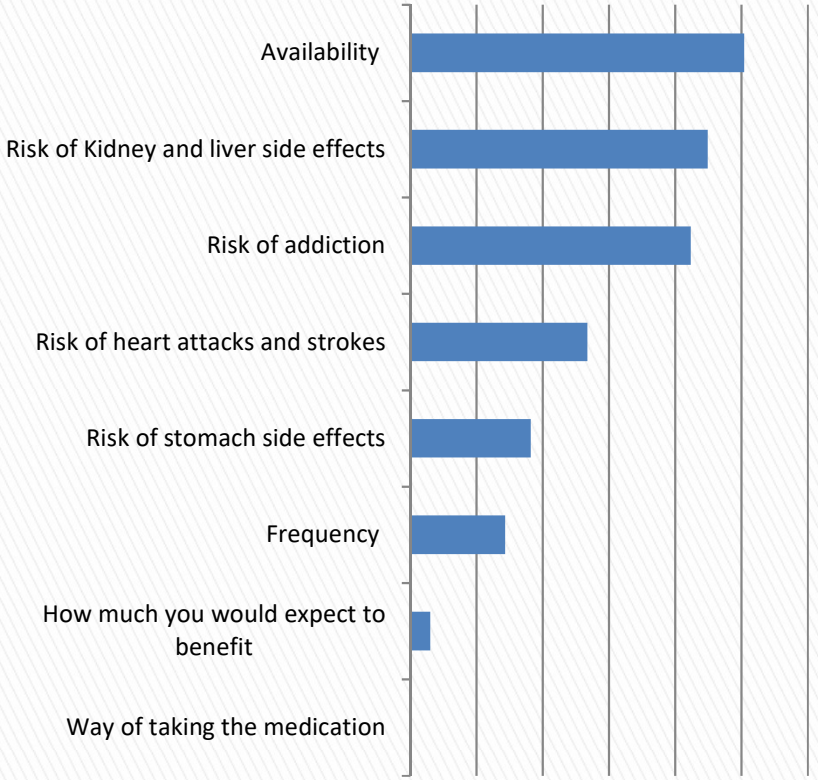
Individual results



Participant 1001



Participant 1003

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Findings

- The results *individually* differed between participants,
- 10 participants completely agreed and one partially agreed that the predicted results matched their preferences.

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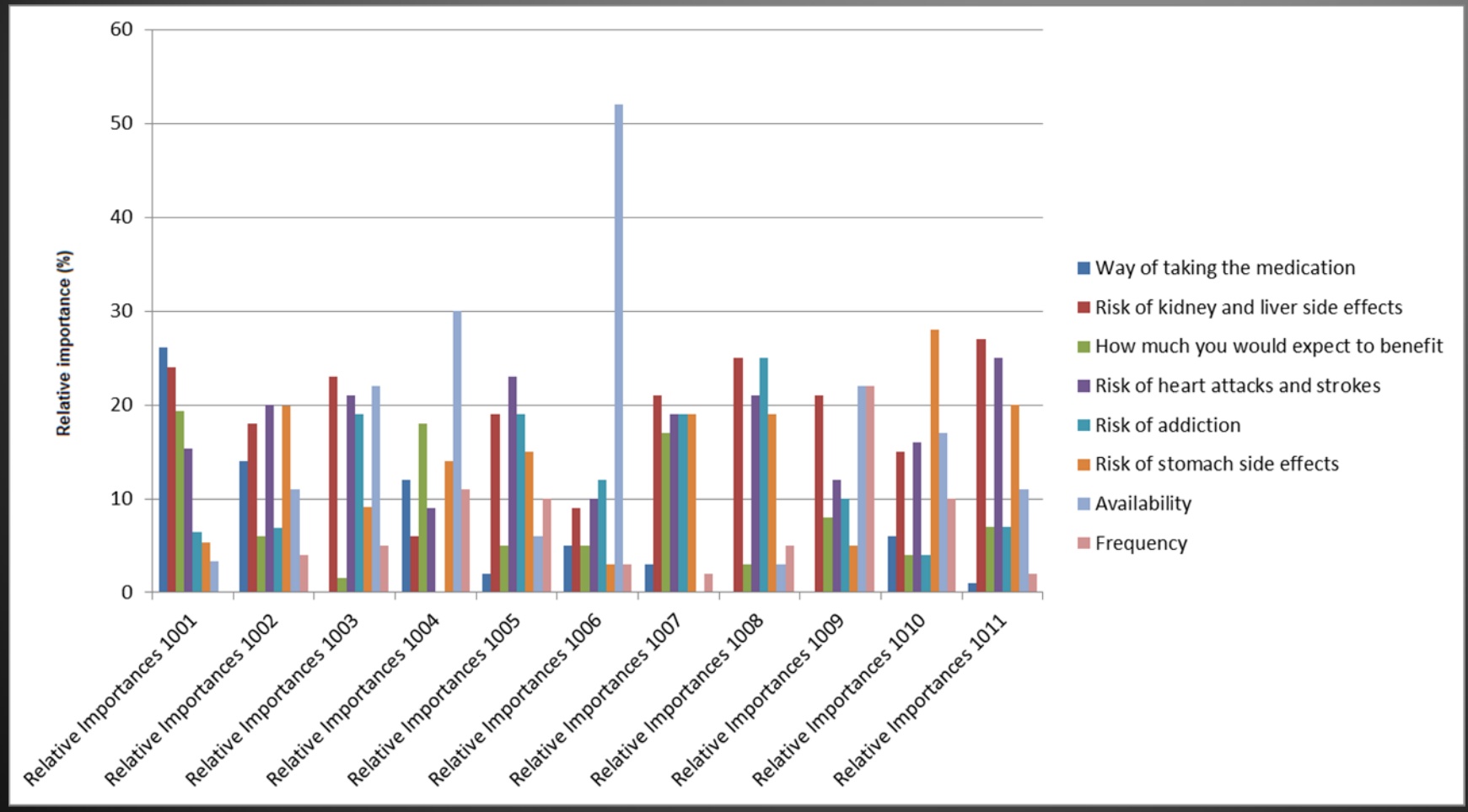

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Conclusion

ACBC is a practical tool that can be used in primary care to analyse individual patient preference prior to consultation, without unduly consuming clinicians' time

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Acknowledgments
This research work would not have been possible without the participation of the Research Users' Group at the Arthritis Research UK Primary Care Centre, Keele University, UK.

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Thank you

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