Review into Bias in Algorithmic Decision-Making

Appendix B: Polling

Centre for
Data Ethics
and Innovation

27/11/2020

Polling Methodology
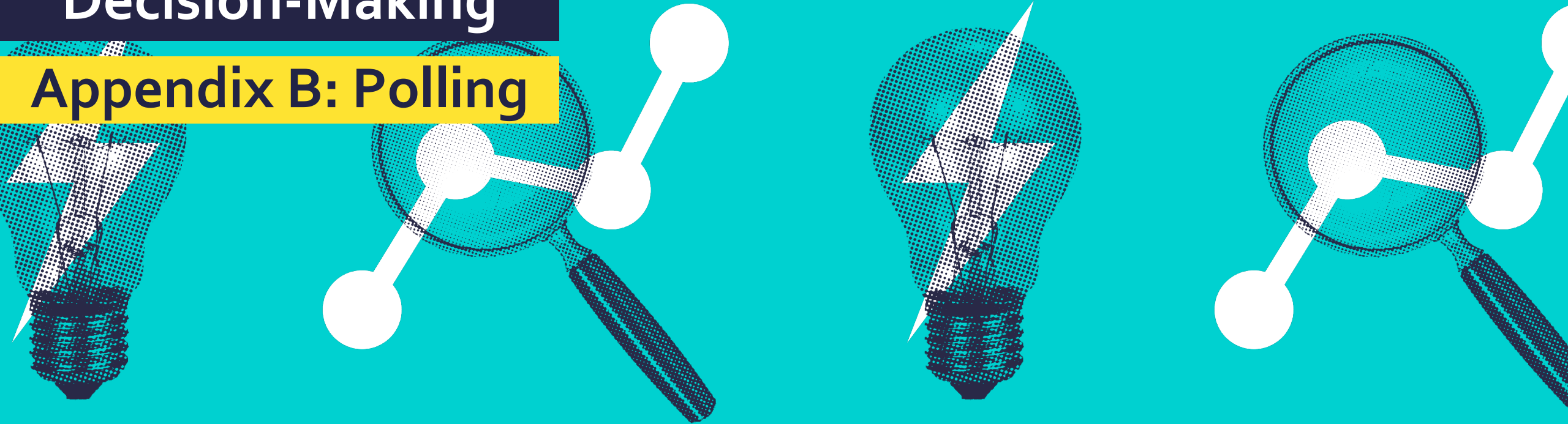
As part of CDEI's ongoing public engagement work, we have commissioned Deltapoll to conduct representative polling on public attitudes. A number of the issues raised in our Bias Review have been informed by two waves of polling: one in late July and another in mid October. Both called for UK respondents over the age of 18, and built up a nationally representative sample of over 2000 individuals. They included nine questions concerning algorithmic bias in the first round, a repeat of six of those questions with two new questions in the second round, and demographic questions in both. Where questions have multiple options in the same category, those options were randomised for each respondent. Questions two and three were only asked if a respondent replied with some awareness to question one.

This document includes a number of plots that summarise and illustrate key results from those two waves.

The full data is available in separate tables, published alongside these slides. Results are considered by Age, Education, Ethnicity, Gender, Generation, Household Income, Region, Social Grade, and Work Status.

An algorithm is a set of instructions designed to perform a specific task. Algorithmic decision-making refers to any decision supported or made by an algorithm. Currently it is rare for decision-making to be fully automated. While sets of instructions have supported human decision-making for a very long time, we are now seeing algorithms used in a much wider range of scenarios to inform decisions made at scale about individuals.

1. Before taking this survey, how aware were you, if at all, of the possibility that algorithmic systems were being used to support decisions about you using your personal data?

2. Which, if any, of the following examples were you aware of where algorithms could be used to support decisions?
- Policing: Using an algorithm to assess an individual's risk of future offending
- Financial Services: Using an algorithm to generate a credit score
- Local government: Using an algorithm to assess the risk that someone might need social care support
- Recruitment: Using an algorithm to shortlist candidates for a job interview
- Something else (Please specify)
- None of the above

3. Thinking about the types of decisions listed in the previous question, do you agree or disagree with the following statement: 'As long as a decision about me is fair and accurate I don't mind whether it is supported by a machine?'
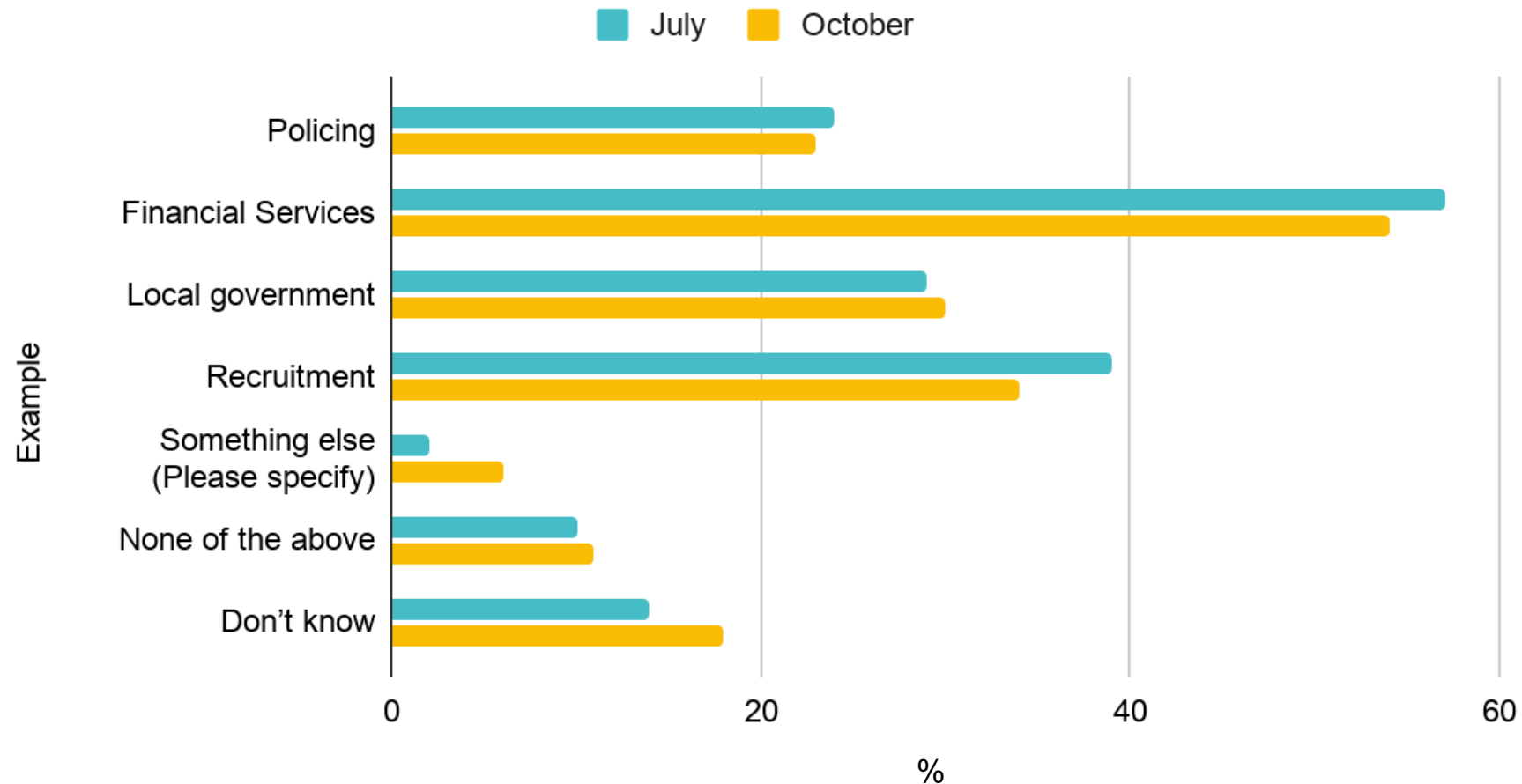
1. Before taking this survey, how aware were you, if at all, of the possibility that algorithmic systems were being used to support decisions about you using your personal data?
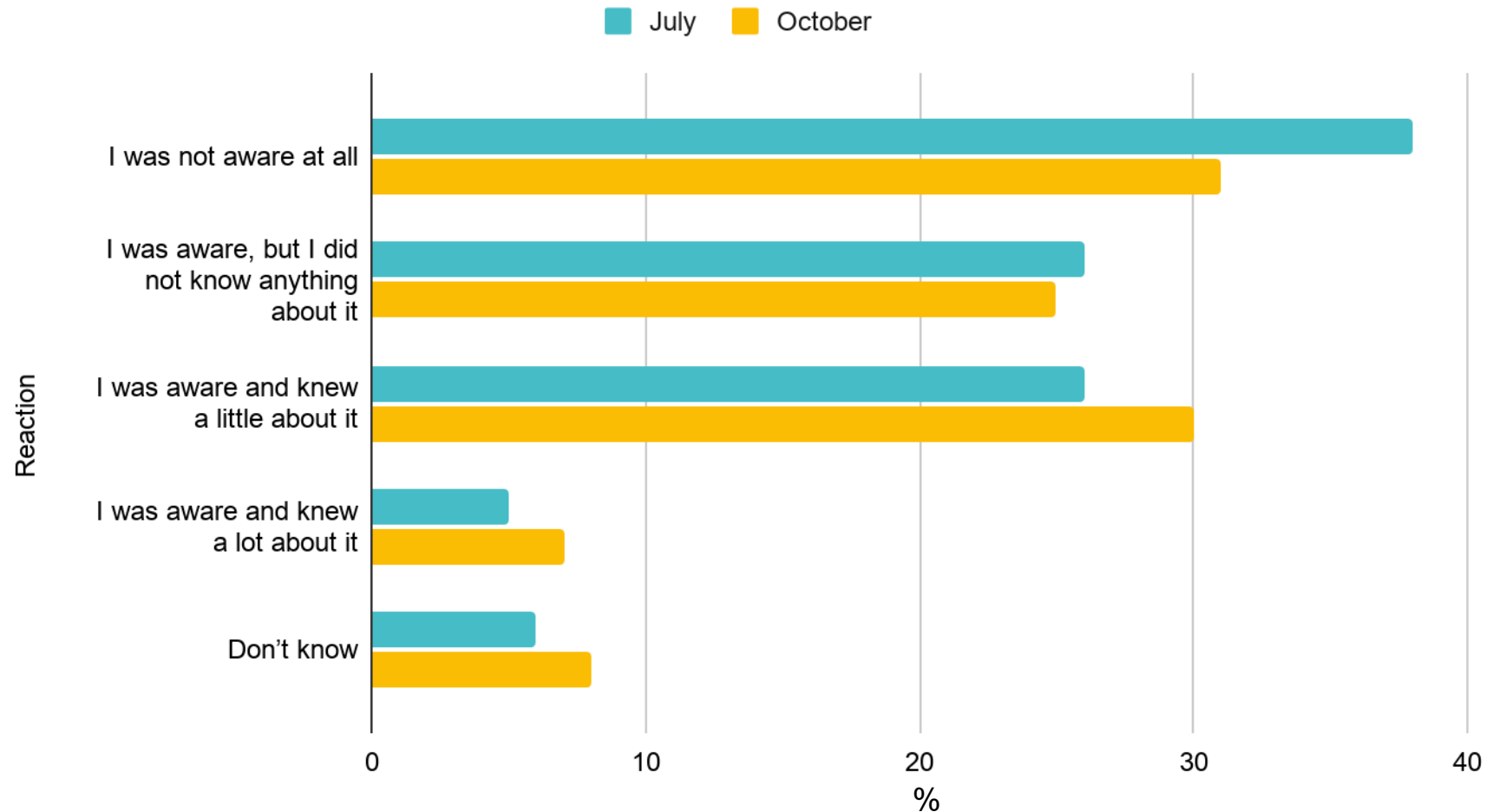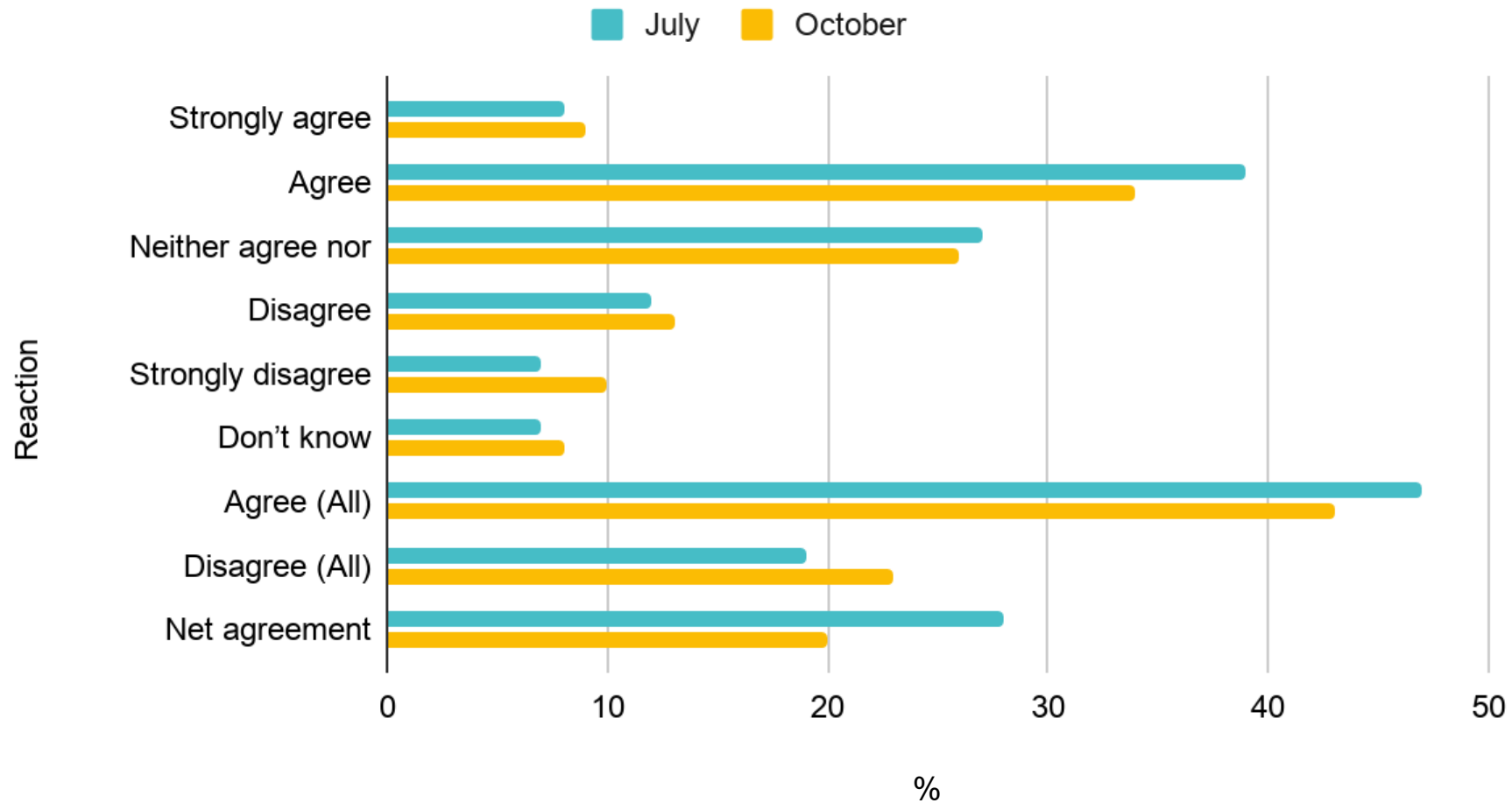
2. Which, if any, of the following examples were you aware of where algorithms could be used to support decisions?

Questions 1-3

3. 'As long as a decision about me is fair and accurate I don't mind whether it is supported by a machine'.

Bias has always existed in society and influences the way humans make decisions. Over time, we have introduced laws and regulations to help protect people from discrimination and make society fairer. However, new technologies introduce new complexities. In the context of this poll, we take bias to mean that the outcome of a decision, supported by an algorithm, is skewed in a way which is unfair.

4. Before taking this survey, how aware were you, if at all, that the decisions made by these systems using your personal data could be biased in some way?

Question 4

4. Before taking this survey, how aware were you, if at all, that the decisions made by these systems using your personal data could be biased in some way?
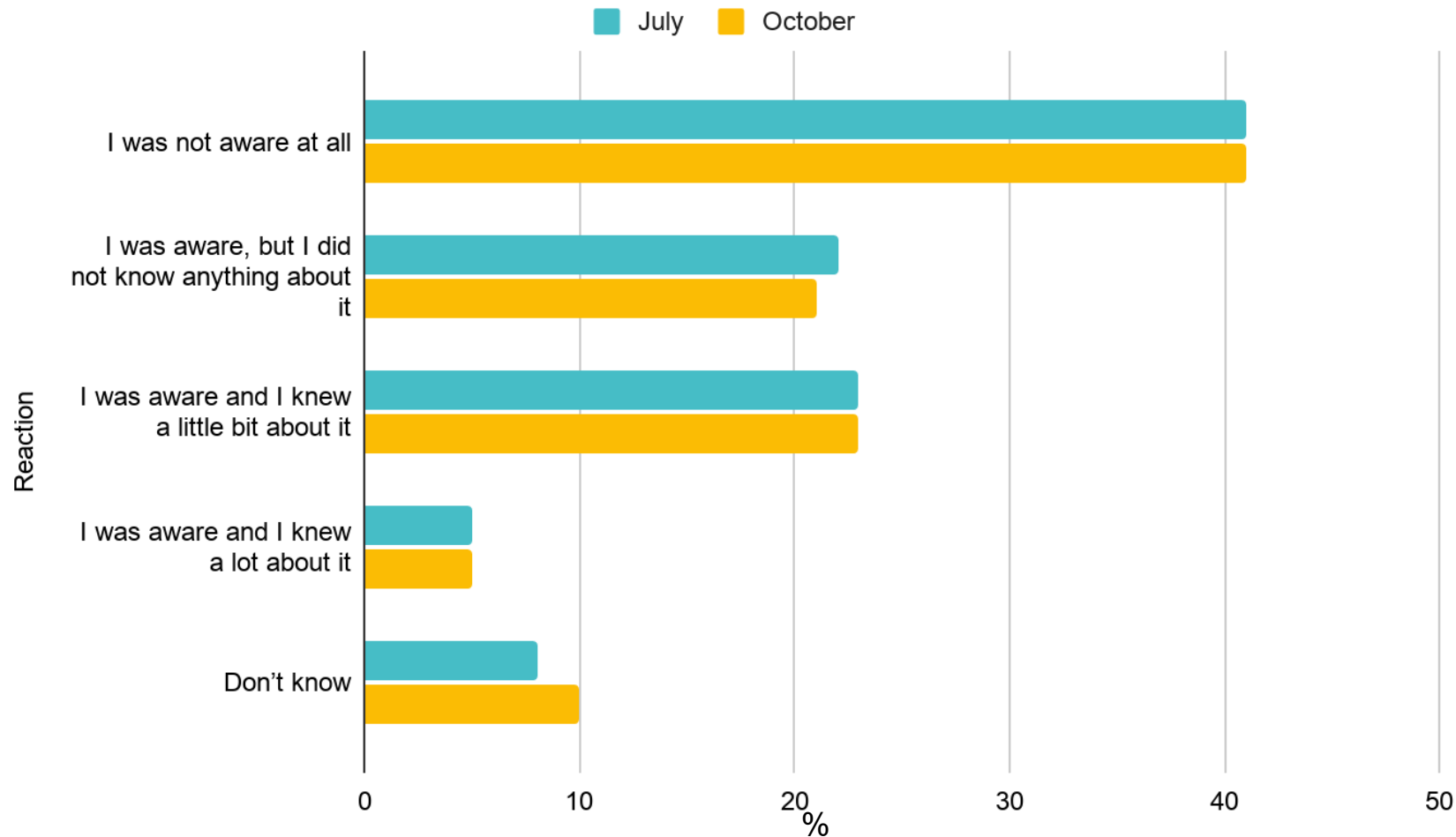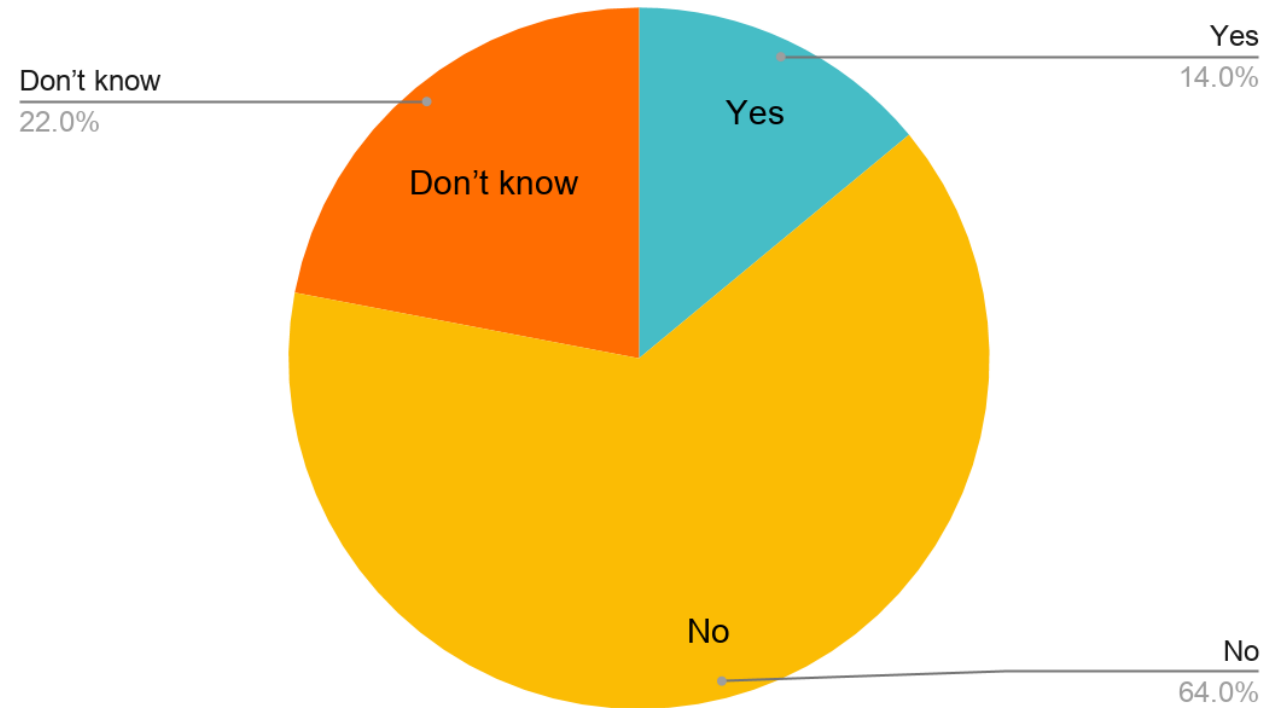
Wave 1 only: There is a risk that algorithms could amplify existing biases in society leading to the outcome of decisions being unfair or discriminatory. Therefore, you might want to know whether an algorithm has supported a decision made about you so that you can challenge the decision if you feel it is unfair.

5. Do you think you would be aware if an algorithmic system had made an automated decision about you in response to a recent job application?

6. If you felt like an algorithmic system had made an automated decision about you in response to a recent job application which you felt was unfair, do you think you would know who to complain to?

7. If you felt you had been unfairly rejected for a job by an automated system and the organisation you were applying to weren't acting on your complaint, who do you think you would go to?
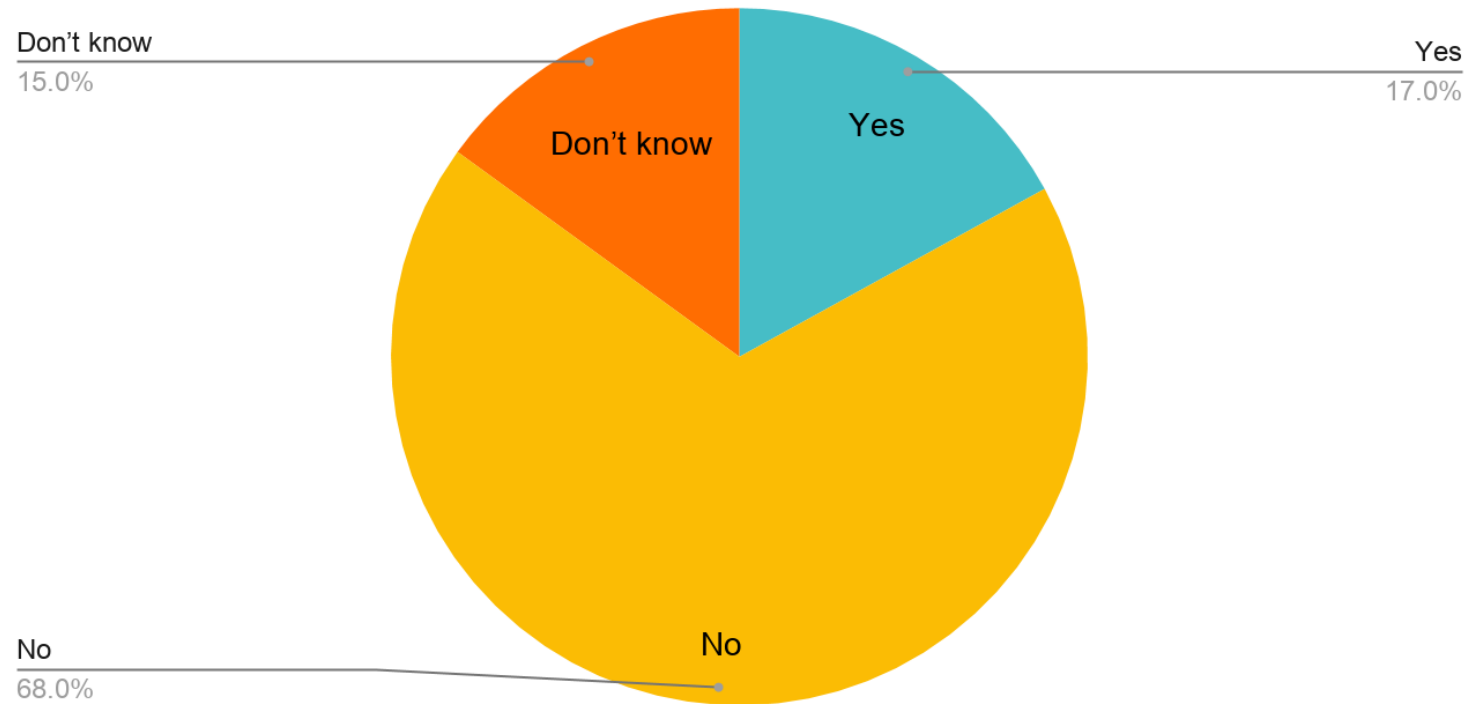
Questions 5-7

5. Do you think you would be aware if an algorithmic system had made an automated decision about you in response to a recent job application?

6. If you felt like an algorithmic system had made an automated decision about you in response to a recent job application which you felt was unfair, do you think you would know who to complain to?

Don't know
15.0%

Yes
17.0%

No
68.0%

7. If you felt you had been unfairly rejected for a job by an automated system and the organisation you were applying to weren't acting on your complaint, who do you think you would go to?
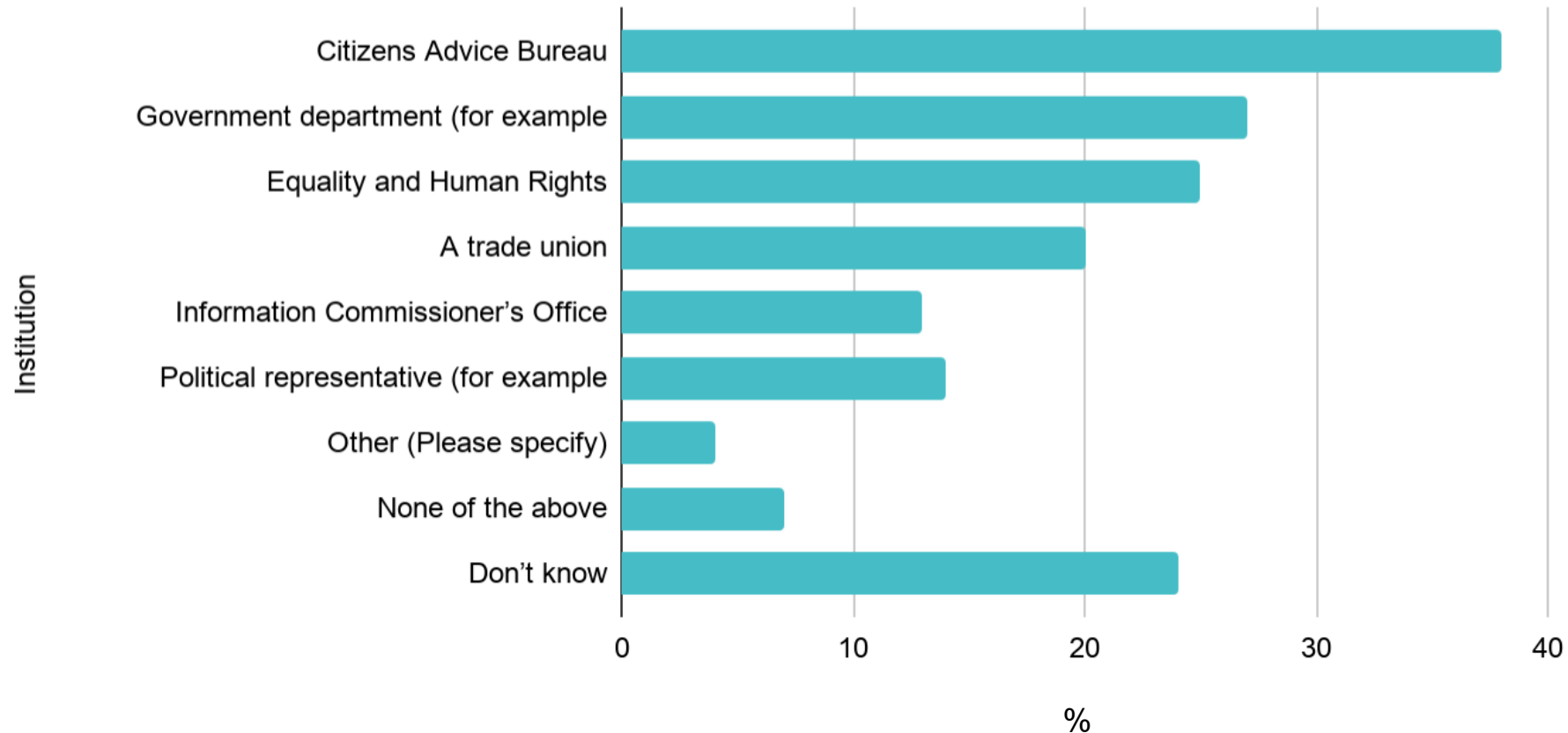
Questions 8-9

It can be difficult for organisations to detect bias in their algorithms. A method that has been suggested for organisations to do this, is to collect data, in a safe way, on the people they are making decisions about, in order to be able to test that their algorithms aren't biased against them.

8. Would you be comfortable if a potential new employer asked for the following information if they said they were collecting it in order to test for and help prevent any unintentional bias in their algorithms?

Organisations have several options for ensuring the decisions made using algorithms are unbiased and fair.
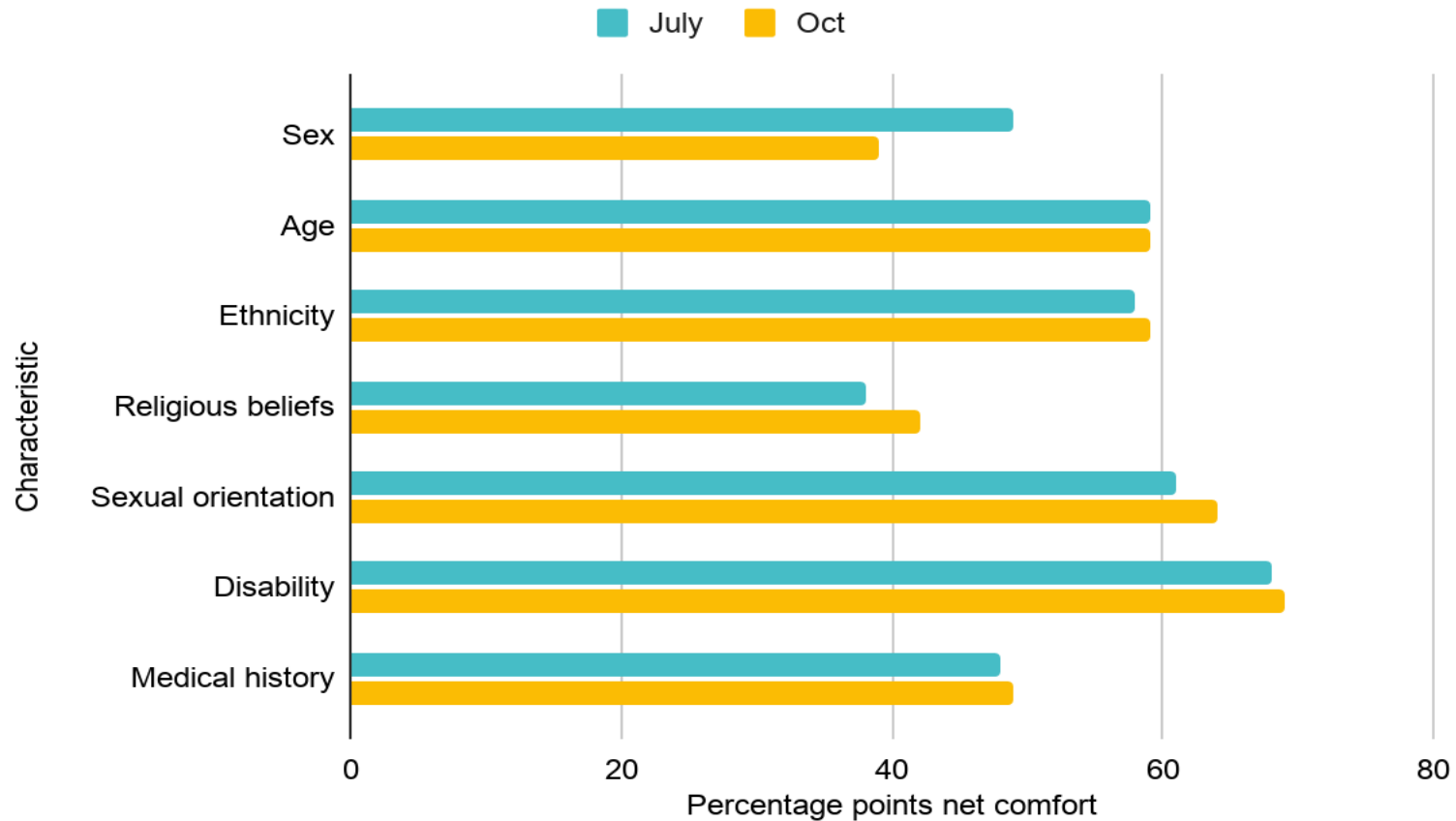
9. If an organisation is using an algorithmic tool to make decisions, what do you think are the most important safeguards that they should put in place (please rank top 3)

- 1. The tool provides an easy to understand explanation of the steps that were undertaken to reach a decision

- 2. Humans have a key role in overseeing the decision-making process, for example reviewing automated decisions and making the final decision

- 3. The organisation minimises the types of personal data that is used by the algorithm

- 4. The organisation reviews the algorithm's decisions to check that they are generally fair or equal across different groups, such as male/female or different races

- 5. The tool provides an easy-to-use option to challenge a decision that is deemed unfair and get it reviewed by a human

- 6. The tool stores personal data for only the shortest amount of time that is necessary

For the results from these questions, and the follow up questions on the next slide, please see the data tables that are published alongside our Bias Review.
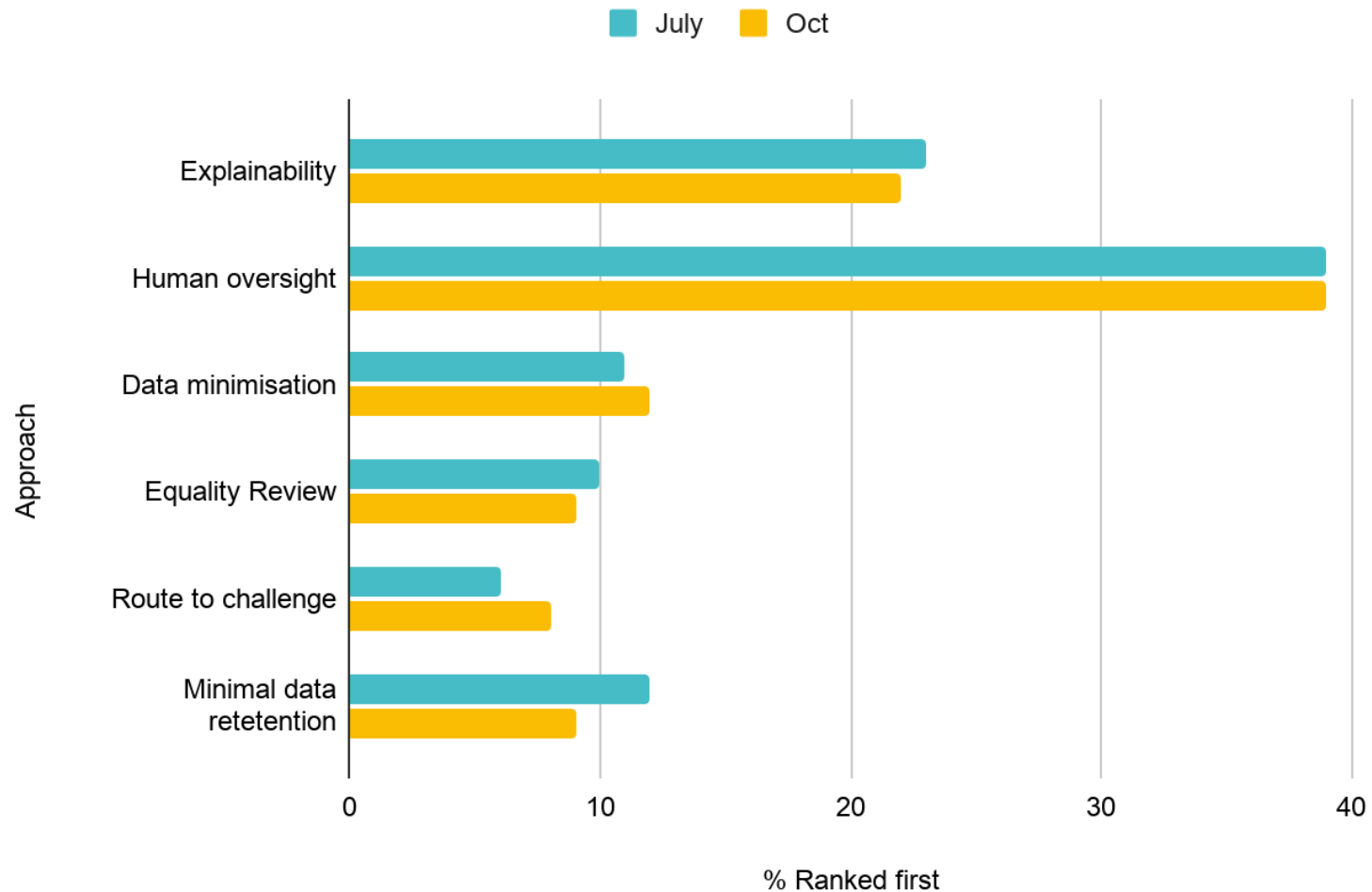
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8. Would you be comfortable if a potential new employer asked for the following information if they said they were collecting it in order to test for and help prevent any unintentional bias in their algorithms?

9. If an organisation is using an algorithmic tool to make decisions, what do you think are the most important safeguards that they should put in place?

Additional questions.

Wave 2 only: 1a. Thinking specifically about yourself, when decisions are being made about you by using algorithms, which personal factors are you most concerned would lead to bias? (Please tick up to four)

- 1. Your age
- 2. Your medical history
- 3. Your disabilities
- 4. Your education and qualifications
- 5. Your credit score and credit history
- 6. Your background
- 7. The place where you live
- 8. Your ethnicity
- 9. Your sex
- 10. Your religious belief
- 11. Your sexual orientation
- 12. Your family
- 13. The job you do
- 14. Whether you are pregnant or not
- 15. Other (Please specify)
- 16. None of the above
- 17. Don't know

Wave 2 only: 1b. And now generally speaking, when decisions are being made about people in Britain by using algorithms, which personal factors are you most concerned would lead to bias? (Please tick up to four)

- 1. A person's age
- 2. A person's medical history
- 3. A person's disabilities
- 4. A person's education and qualifications
- 5. A person's credit score and credit history
- 6. A person's background
- 7. The place where a person lives
- 8. A person's ethnicity
- 9. A person's sex
- 10. A person's religious belief
- 11. A person's sexual orientation
- 12. A person's family
- 13. The job a person does
- 14. Whether a person is pregnant or not
- 15. Other (Please specify)
- 16. None of the above
- 17. Don't know

Additional questions.

1a. Thinking specifically about yourself, when decisions are being made about you by using algorithms, which personal factors are you most concerned would lead to bias?
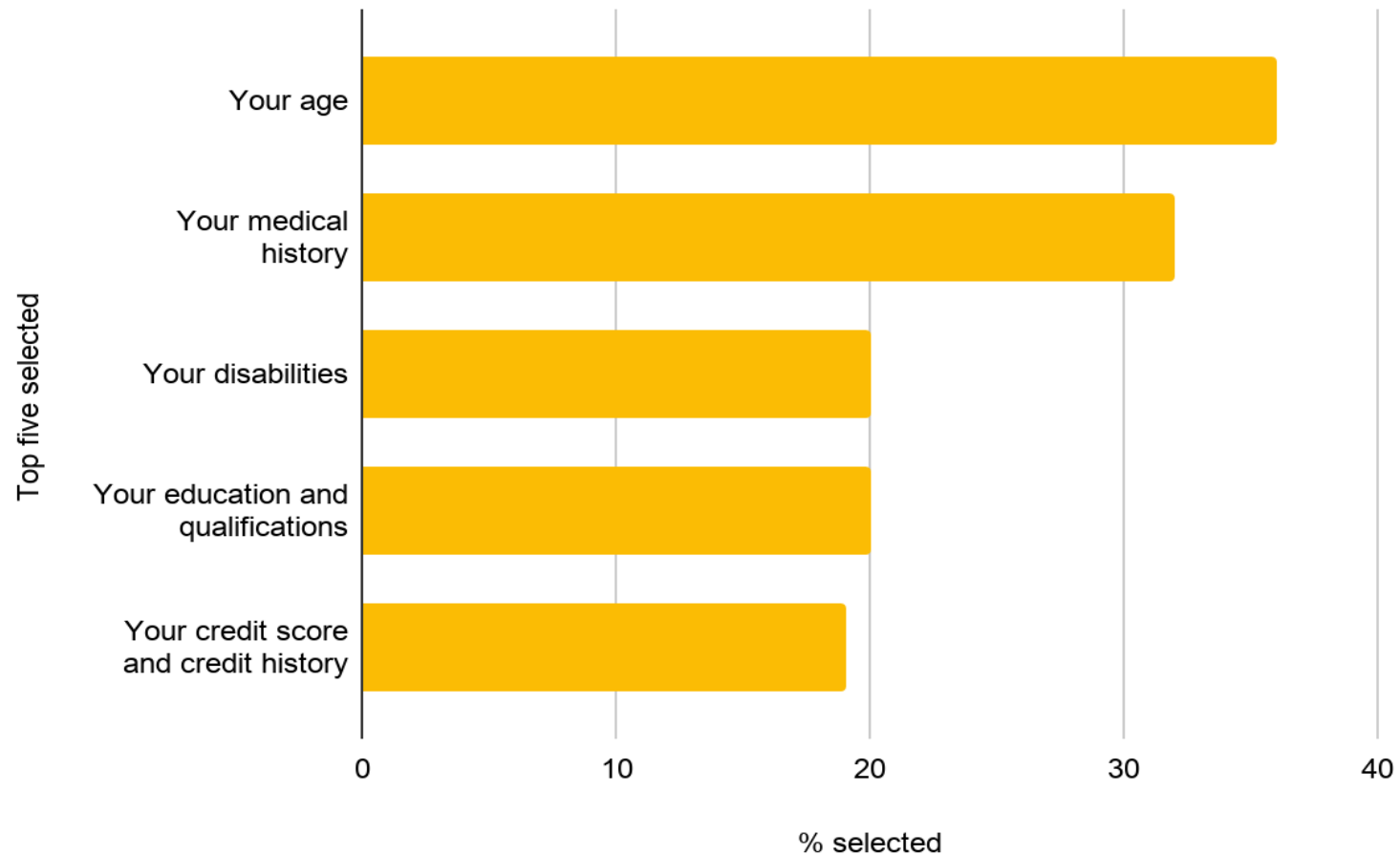
Additional questions.

1b. And now generally speaking, when decisions are being made about people in Britain by using algorithms, which personal factors are you most concerned would lead to bias?
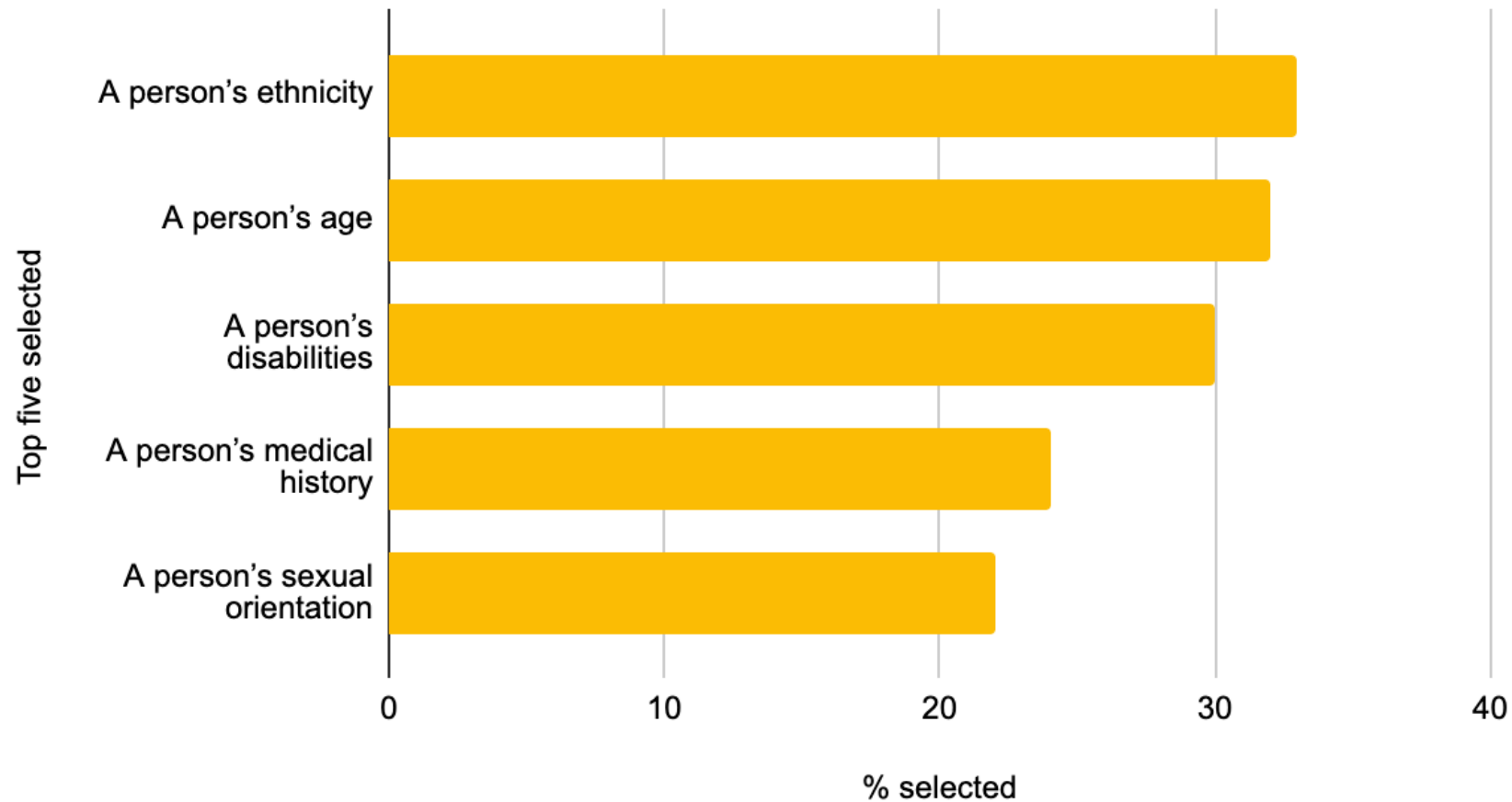
Thank you for reading

Please email comments to:

bias@cdei.gov.uk

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