

# NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

## DIAGNOSTICS ASSESSMENT PROGRAMME

### Equality impact assessment – Guidance development

### Software with artificial intelligence derived algorithms for analysing CT brain scans in people with a suspected acute stroke

#### First Consultation (May 2022)

1. **Have the potential equality issues identified during the scoping process been addressed by the Committee, and, if so, how?**

Potential equality issues were discussed both in the scoping workshop 26 May 2021 and in the assessment subgroup meeting 9 June 2021.

The following were identified as potential equality issues relating to the condition:

- People who have had a stroke may have impaired cognitive function and physical disability that limits activity. Disability is protected characteristic under the Equality Act 2010.

The following were identified as potential equality issues relating to the testing:

- Artificial intelligence algorithms for stroke diagnosis may have lower sensitivity in people over the age of 80 with small vessel disease and calcification of the cerebrovasculature.
- Ability to assess the performance of AI algorithms in different age groups may be driven by the availability of training data in different age groups.
- Another potential equality issue identified was that some people may have limitations in their ability to co-operate with being scanned, but this is likely to impact on both the new technologies and standard care.

The external assessment group did not find any data to investigate the potential equality issue related to older people, in particular over the age of 80, with small vessel disease and calcification of the cerebrovasculature or any other subgroups. The committee's

recommendations for further research on the clinical effectiveness of AI software technologies include subgroup considerations.

**2. Have any other potential equality issues been raised in the diagnostics assessment report, and, if so, how has the Committee addressed these?**

No other potential equality issues were raised in the diagnostics assessment report.

**3. Have any other potential equality issues been identified by the Committee, and, if so, how has the Committee addressed these?**

No other potential equality issues were raised in the diagnostics assessment report.

**4. Do the preliminary recommendations make it more difficult in practice for a specific group to access the technology compared with other groups? If so, what are the barriers to, or difficulties with, access for the specific group?**

No.

**5. Is there potential for the preliminary recommendations to have an adverse impact on people with disabilities because of something that is a consequence of the disability?**

No.

**6. Are there any recommendations or explanations that the Committee could make to remove or alleviate barriers to, or difficulties with, access identified in questions 4 or 5, or otherwise fulfil NICE's obligations to promote equality?**

Not applicable.

**7. Have the Committee's considerations of equality issues been described in the diagnostics consultation document, and, if so, where?**

The committee's considerations of the equality issues have been described in the diagnostics consultation document sections 3.4 (subgroups) and 3.1 and 3.11 (clinical outcomes and health-related quality of life). The committee's research recommendations are described in section 4 of the diagnostics consultation document.

**Approved by Associate Director:** Rebecca Albrow

**Date:** 15 March 2022

## **Second Consultation (September 2023)**

### **1. Have the potential equality issues identified during the scoping process been addressed by the Committee, and, if so, how?**

Potential equality issues were discussed both in the scoping workshop 26 May 2021 and in the assessment subgroup meeting 9 June 2021.

The following were identified as potential equality issues relating to the condition:

- People who have had a stroke may have impaired cognitive function and physical disability that limits activity. Disability is protected characteristic under the Equality Act 2010.

The following were identified as potential equality issues relating to the testing:

- Artificial intelligence algorithms for stroke diagnosis may have lower sensitivity in people over the age of 80 with small vessel disease and calcification of the cerebrovasculature.
- Ability to assess the performance of AI algorithms in different age groups may be driven by the availability of training data in different age groups.
- Another potential equality issue identified was that some people may have limitations in their ability to co-operate with being scanned, but this is likely to impact on both the new technologies and standard care.

The external assessment group did not find any data to investigate the potential equality issue related to older people, in particular over the age of 80, with small vessel disease and calcification of the cerebrovasculature or any other subgroups. The committee's recommendations for further research on the clinical effectiveness of AI software technologies include subgroup considerations.

### **2. Have any other potential equality issues been raised in the diagnostics assessment report, and, if so, how has the Committee addressed these?**

No other potential equality issues were raised in the further assessment (an addendum to the main report) the external assessment group produced.

**3. Have any other potential equality issues been identified by the Committee, and, if so, how has the Committee addressed these?**

No other potential equality issues were identified by the committee.

**4. Do the preliminary recommendations make it more difficult in practice for a specific group to access the technology compared with other groups? If so, what are the barriers to, or difficulties with, access for the specific group?**

No.

**5. Is there potential for the preliminary recommendations to have an adverse impact on people with disabilities because of something that is a consequence of the disability?**

No.

**6. Are there any recommendations or explanations that the Committee could make to remove or alleviate barriers to, or difficulties with, access identified in questions 4 or 5, or otherwise fulfil NICE's obligations to promote equality?**

Not applicable.

**7. Have the Committee's considerations of equality issues been described in the diagnostics consultation document, and, if so, where?**

The committee's considerations of the equality issues have been described in the second diagnostics consultation document sections 3.21 (subgroups), 3.1 (quality of life) and 3.11 (clinical outcomes).

**Approved by Associate Director (name):** Rebecca Albrow

**Date:** 12/09/2023

## **Diagnostics guidance document**

- 1. Have any additional potential equality issues been raised during the consultation, and, if so, how has the Committee addressed these?**

The following was identified as additional potential equality issue relating to the testing:

- AI software technologies may have lower sensitivity in people who have had a previous stroke

The guidance highlights that further studies should report data separately for subgroups when using the technologies may be particularly useful or less effective (including people who have had a previous stroke; section 3.21 of the final guidance).

- 2. If the recommendations have changed after consultation, are there any recommendations that make it more difficult in practice for a specific group to access the technology compared with other groups? If so, what are the barriers to, or difficulties with, access for the specific group?**

No.

- 3. If the recommendations have changed after consultation, is there potential for the preliminary recommendations to have an adverse impact on people with disabilities because of something that is a consequence of the disability?**

No.

- 4. If the recommendations have changed after consultation, are there any recommendations or explanations that the Committee could make to remove or alleviate barriers to, or difficulties with, access identified in questions 2 and 3, or otherwise fulfil NICE's obligations to promote equality?**

Not applicable.

- 5. Have the Committee's considerations of equality issues been described in the diagnostics guidance document, and, if so, where?**

The committee's considerations of the equality issues have been described in the diagnostics guidance document sections 3.21

(subgroups), 3.1 (quality of life) and 3.11 (clinical outcomes) of the final guidance document.

**Approved by Associate Director (name):** Rebecca Albrow

**Date:** 14/11/2023