NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

DIAGNOSTICS ASSESSMENT PROGRAMME

Equality impact assessment – Guidance development

Clopidogrel genotype testing after ischaemic stroke or transient ischaemic attack

Draft guidance (First consultation)

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

- Prevalence of *CYP2C19* loss-of-function alleles vary by family background. Therefore, lack of efficacy from clopidogrel in people with loss-of-function alleles could disproportionately affect ethnic groups with a higher prevalence. The committee considered analyses from the EAG that used a higher prevalence of loss-of-function alleles than used in the base case to represent the prevalence in ethnic groups with higher occurrence.
- Some alleles are more common in some ethnic groups than others. Tests that do not detect all relevant alleles could miss people with specific loss-of-function variants, which could disproportionately affect different ethnic groups based on the prevalence of these alleles. The committee discussed this issue and concluded that the method of testing should prioritise those which detect a wider range of loss-of-function alleles to avoid disadvantaging people with the less common alleles. This is most likely possible with laboratory-based testing. A preference for laboratory testing is expressed in the recommendations and is also discussed in the rationale and in sections 3.8 and 3.13 in the draft guidance. A recommendation was also made that healthcare professionals should take into account that CYP2C19 genotypes may vary between ethnic groups.
- Strokes happen more often in people who are from Black African, Black Caribbean, or have South Asian family backgrounds. Improving antiplatelet therapy would be particularly beneficial in these groups. The draft guidance includes a positive recommendation for *CYP2C19* testing.

- The acceptability and consent for genetic testing may differ according to religious or philosophical beliefs. The committee agreed that consent is an important consideration if introducing testing. Committee discussion is described in sections 3.1 to 3.3 in the draft guidance.
- People who have had a stroke may have impaired cognitive function and physical disability that limits activity. The committee discussed this in the context of consent (see above) and also in the context of location of testing if people are discharged before the test can be done. The committee concluded that sample collection would be able to be done in local centres that are convenient for people who have had stroke to attend, or possibly even in people's homes – see section 3.4 in the draft guidance.

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

No additional concerns were raised in the EAR.

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

No additional concerns 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?

No

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

Yes – sections are specified above.

Approved by Associate Director (name): Rebecca Albrow

Date: 09/05/2023

Draft guidance 2 (second consultation)

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

- Prevalence of *CYP2C19* loss-of-function alleles vary by family background. Therefore, lack of efficacy from clopidogrel in people with loss-of-function alleles could disproportionately affect ethnic groups with a higher prevalence. The committee considered analyses from the EAG that used a higher prevalence of loss-of-function alleles than used in the base case to represent the prevalence in ethnic groups with higher occurrence.
- Some alleles are more common in some ethnic groups than others. The committee considered that tests that only detect the most common loss-of-function alleles may be more likely to introduce inequalities as they would likely disproportionately fail to identify people with loss-of-function CYP2C19 alleles in certain ethnic groups. The committee discussed this issue and concluded that laboratory-based testing was its preferred method

because it has the potential to detect a broader range of loss-of-function alleles and can be adapted more easily to assess other alleles in the future. In the updated draft guidance, laboratory-based testing is recommended for CYP2C19 genotype testing in preference to the point-of-care tests (see recommendation 1.2). When laboratory-based testing is not possible, point-of-care testing is recommended, with a preference for the Genedrive CYP2C19 ID Kit over the Genomadix Cube, because the Genedrive test detects a broader range of alleles than the Genomadix cube. The committee discussion of this is also included in the rationale and in sections 3.8 and 3.16 in the updated draft guidance. A recommendation was also made that when interpreting test results, healthcare professionals should take into account that the prevalence of different CYP2C19 genotypes may vary between ethnic groups.

- Strokes happen more often in people who are from Black African, Black Caribbean, or have South Asian family backgrounds. Improving antiplatelet therapy would be particularly beneficial in these groups. The draft guidance includes a positive recommendation for *CYP2C19* testing.
- The acceptability and consent for genetic testing may differ according to religious or philosophical beliefs. The committee agreed that consent is an important consideration if introducing testing. Committee discussion is described in sections 3.1 to 3.3 in the draft guidance.
- People who have had a stroke may have impaired cognitive function and physical disability that limits activity. The committee discussed this in the context of consent (see above) and also in the context of location of testing if people are discharged before the test can be done. The committee concluded that sample collection would be able to be done in local centres that are convenient for people who have had stroke to attend, or possibly even in people's homes – see section 3.4 in the draft guidance.

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

No other potential equality issues were raised in the addendum (or additional analyses) to the external assessment report.

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

The committee acknowledged that that there are barriers to implementing laboratory-based testing. It commented that If laboratory-based testing is not possible or feasible, or it will take a long time to develop capacity to provide it, then point-of-care tests could be used. It recalled that that this approach may disproportionately fail to identify people with loss-of-function CYP2C19 alleles in certain ethnic groups. However, experts highlighted information from the Association of Molecular Pathology which recommends the *2 and *3 CYP2C19 loss-of-function alleles as the minimum set of loss-of-function alleles to test for. The committee noted that these alleles can be detected by both point-of-care tests and that the *2 allele is the most common loss-of-function allele across all groups. So, if the alternative is no testing, all groups will still benefit from some form of testing. See committee considerations in sections 3.8 and 3.19 of the updated draft guidance.

The committee acknowledged that implementing laboratory-based CYP2C19 genotype testing for everyone who has a stroke or TIA would likely need to be done in a stepwise process. It concluded that testing could potentially be started in the smaller non-minor stroke population before being expanded to the minor stroke and TIA population. This is because testing after a non-minor stroke generated more net monetary benefit than testing after a minor stroke or TIA. The committee considerations of these issues are in sections 3.14, 3.19 and 4 of the updated draft guidance.

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?

No

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

Yes – sections are specified above.

Approved by Associate Director (name): Rebecca Albrow

Date: 24/01/2024

Diagnostics guidance document

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

No issues were raised.

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?

The recommendations have not changed after consultation.

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?

Not applicable.

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 equality issues are described in the diagnostics guidance document in sections 3.1 to 3.3 (acceptability and consent for genetic testing), 3.4 (testing locations for people who may have impaired cognitive function and physical disability following a stroke), 3.8 and 3.21 (loss of function allele frequencies in different ethnic groups and alleles tested for) and sections 3.15 to 3.16 (equality considerations associated with the different tests due to alleles they detect).

Approved by Associate Director (name): Rebecca Albrow

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Date: 14/05/2024