Project scope: genotype testing to detect the m.1555A>G variant in neonates to guide use of aminoglycosides

April 2024

Research question

1. What is the clinical effectiveness, cost effectiveness and safety of aminoglycoside (gentamicin) genotype testing compared with no testing in neonates?

Inclusion criteria

The selection of studies for inclusion in the literature review element of the project will be based on the following criteria:

Population	Neonates who need antibiotic treatment and are being considered for aminoglycosides (most commonly gentamicin)
Intervention/exposure	Genotype testing (for the m.1555A>G mutation/variant in the MT-RNR1 gene)
Comparator	No testing
Outcomes	Hearing loss/deafness Mortality Quality of life Cost effectiveness Safety

Planned activities

SHTG have agreed on the following activities to support an SHTG Assessment on genotype testing to detect the m.1555A>G variant in neonates:

1. A summary of the clinical effectiveness, cost effectiveness and safety evidence.

2. A budget impact assessment on the implementation of genotype testing in neonates in NHSScotland using data from Scotland provided by Public Health Scotland where appropriate.
3. Development of a plain language version of the SHTG Assessment.
4. Engagement with clinical experts through peer review.

End products

At the end of the project, SHTG will publish:

- An SHTG Assessment including a budget impact assessment for NHSScotland.
- A plain language summary of the SHTG Assessment.

Timescales (approximate)

The SHTG Assessment will be published on the SHTG website in September 2024.