

Overcoming challenges with extraction of routine clinical data in Audiology: lessons learned in the FAMOUS Trial so far.

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Background

FAMOUS (Follow-up And Monitoring Of new Users of NHS Hearing Aids) is the first national audiology trial to collect routine baseline clinical data from new adult hearing aid users (n =23,400) in NHS audiology services (n = 36). The multi-centre, cluster randomised design means that all eligible patients are enrolled over a 12-week recruitment period.

Participating audiology clinics use Auditbase, an electronic patient management system, to collect patient data. Auditbase users can build custom reports to extract data, primarily for service assessment and improvement. Custom reports are utilised in FAMOUS to extract data for research for the first time, removing the requirement for site staff to complete a Case Report Form (CRF) for each patient.

Methods

The FAMOUS trial team collaborated with Audidata Ltd to build a custom report that extracts specific data (listed below) required for the trial from the routine data collected in the patient's electronic medical record:

- Demographics (age, sex and ethnicity)
- Hearing assessment (audiogram information, Real Ear Measurement verification)
- Hearing aid prescription (model and manufacturer, date of issue)
- Frequency and format of clinic appointments

The baseline clinical data report was designed on the assumption that NHS audiology clinics use Auditbase similarly, requesting the below parameters to be filled to generate the report:

- Site Name (pre-defined by the FAMOUS trial team)
- Start date (site Green Light date when recruitment began)
- Selection of appointment types that include new hearing assessment appointment

However, during site set-up (Spring 2023-Autumn 2024), the trial team unexpectedly identified that audiology services were using Auditbase differently, according to local requirements. Thus, it was not possible to use a single report for all sites to use in the same way.

Tailoring the Auditbase custom report was an unforeseen challenge in FAMOUS, that required additional resource to overcome technical changes and ensure consistent data collection across all sites. This has impacted the trial budget and timeline. However, modifications have helped to retain the trial design, preventing additional data entry for clinical teams. Facilitating these modifications has also provided the trial team with a wealth of experience and knowledge of Auditbase functionality across UK NHS audiology services. These lessons learned will benefit future NHS audiology research extracting clinical data in this way, and will also identify considerations for other areas of research that plan to collect routine data using a similar method.

Conclusion/ Discussion

Results

Modifications have been made to the main FAMOUS custom report, in collaboration with site Principal Investigators and developers at Audidata Ltd, tailoring the report in line with site-specific requirements. This has caused delays with opening sites to ensure data extraction can be achieved prior to proceeding with Site Green Light.

Currently, 31 clinics are open to recruitment, with six versions of the FAMOUS custom report currently available for sites to choose from.

