

Successful implementation of a national COVID-19 seroprevalence surveillance study in Grampian, Scotland

Josh Newmark, Ewen Miller, Ian Rothnie, Ann Milne, Julie Hawken, Bernie Croal
Department of Clinical Biochemistry, NHS Grampian

BACKGROUND

As part of the NHS-wide response to the COVID-19 pandemic, NHS Grampian answered a call to assist with the Public Health Scotland SARS-CoV-2 seroprevalence enhanced surveillance study.

As one of six participating health boards, NHS Grampian was requested to provide age- and gender-stratified residual sera from primary care for EuroImmune IgG ELISA at the Scottish Microbiology Reference Laboratory (SMiRL) for an initial 16-week period.

Participation in this study, and the COVID-19 pandemic, coincided with a major five-month clinical laboratory refurbishment.

AIM

We highlight our approach in implementing a local laboratory protocol to allow study contribution in challenging circumstances.

METHODS

NHS Grampian developed and introduced laboratory protocol (FD 010 025), specifically related to aspects of specimen selection, aliquoting, labelling and transit, and also secure data transfer and quality control.

The protocol was trialled and amended to reflect changes occurring in response to clinical laboratory operations that were affected during the refurbishment.

Meanwhile, other essential work continued, including validation of in-house SARS-CoV-2 antibody tests on automated analysers.

RESULTS

To date, 1505 specimens have been sent to SMiRL for analysis, representing 1486 unique patients over a 29-week period.

The provision of a steady stream of age- and gender-stratified sera has relied on the expertise of colleagues at all levels—including doctors, clinical and biomedical scientists and biomedical support staff.

Feedback received from Public Health Scotland has been extremely positive and the patients of Grampian are being served by contributing to informing public health policy-making, which has attracted local and national press attention.



In recognition of this work, our dedicated staff have been recognised with an NHS Grampian **ORANGE Award** for outstanding service.

CONCLUSIONS

Implementing robust local protocols and experienced staff can help overcome laboratory-specific obstacles to delivery.

The Public Health Scotland SARS-CoV-2 seroprevalence enhanced surveillance study has been funded to continue due to the prevailing circumstances of COVID-19, and accordingly our local response will continue to adapt accordingly.