



Public Health
England

Protecting and improving the nation's health

PHE COVID-19

Draft contact tracing operating model

Draft not for circulation

23/04/20

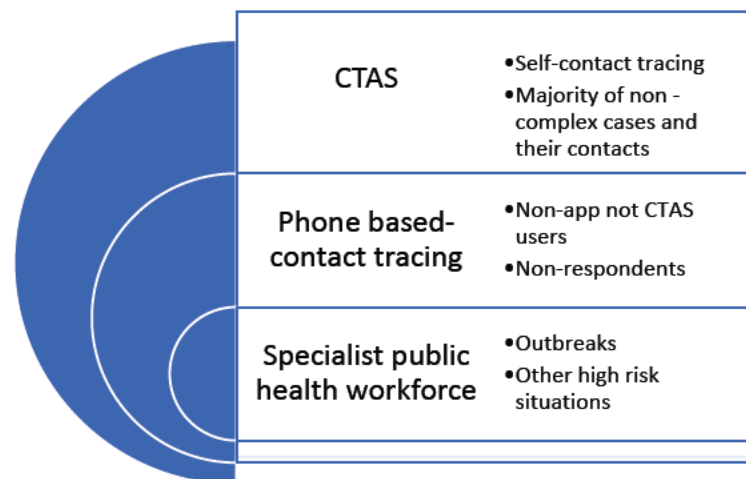
PHE contact tracing and advice system: draft operating model

The Government Contact Tracing and comprises 6 pillars. This document relates only to the PHE-led contact tracing pillar.

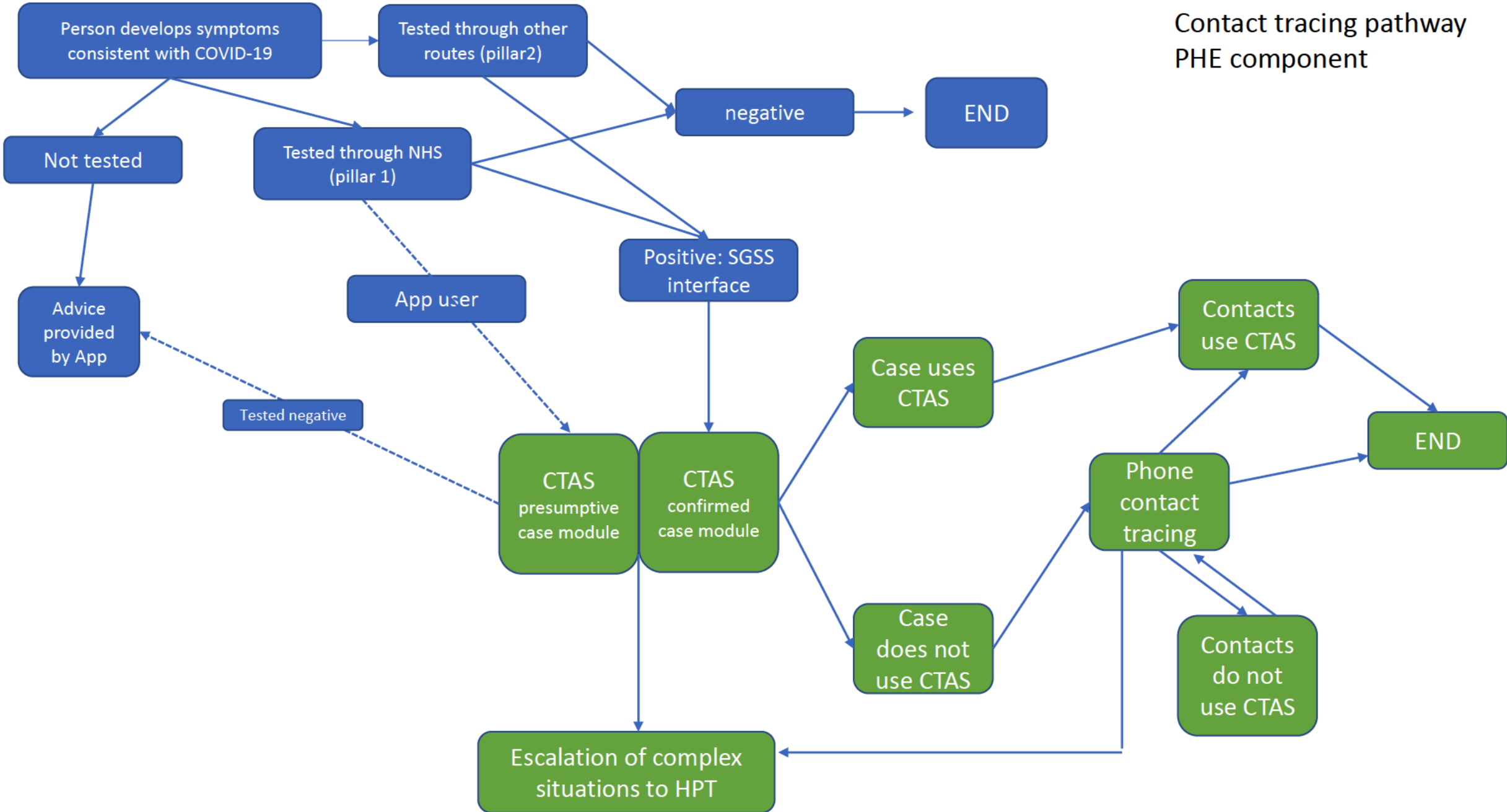
NHSX App	PHE-led contact tracing	Other technologies	Swab testing	Antibody testing	Immunity risk certification
Automated system for rapid symptom reporting, ordering of tests, and issue of tailored and targeted alerts to other App users who have had close contact	A system comprising automated processes through the web-based tool CTAS and phone-based follow-up to contact trace those not identified through the app	Wider tech solutions to enhance accuracy and reach of contact tracing and to support identification and management of hotspots/surges	Widespread availability of rapid swab testing kits to confirm diagnosis of presumptive cases and target contact tracing effectively	To indicate whether individual has been infected and the likely nature of their immunity	Linked to this programme, there is an aim to implement a certification system, linked to decisions on what freedoms should come from evidence of positive antibody test

The PHE contact tracing system and advice service is part of a programme that comprises:

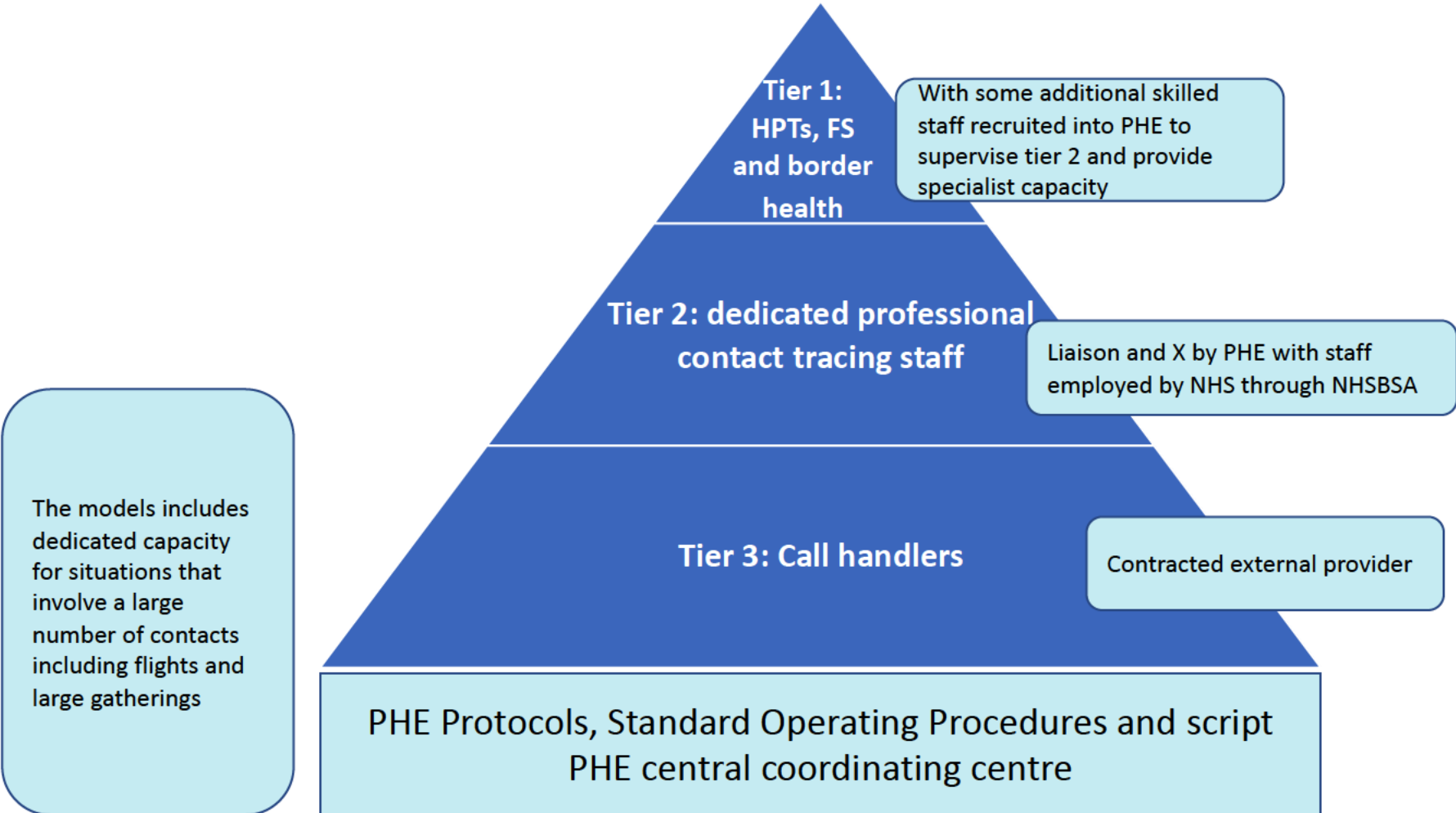
- The PHE component of this programme is an integrated system with:
- A dedicated central administration and coordination team
- The web-based PHE CTAS tool as the core of the system
- Dedicated additional contact tracing service comprising professional staff working from regional units and a call handler force supplied through a commercial contract.
- Local health protection teams (HPTs) and the field service (FS) delivering their usual responsibilities of investigation and control of complex outbreaks and situations
- Support from the IHR national focal point team for international situations



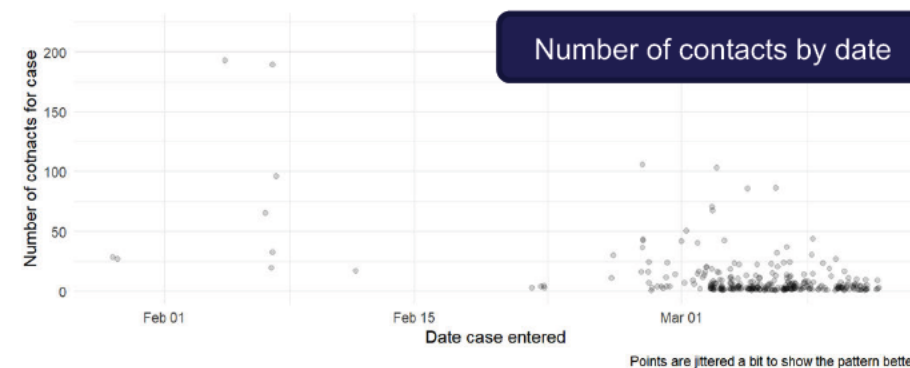
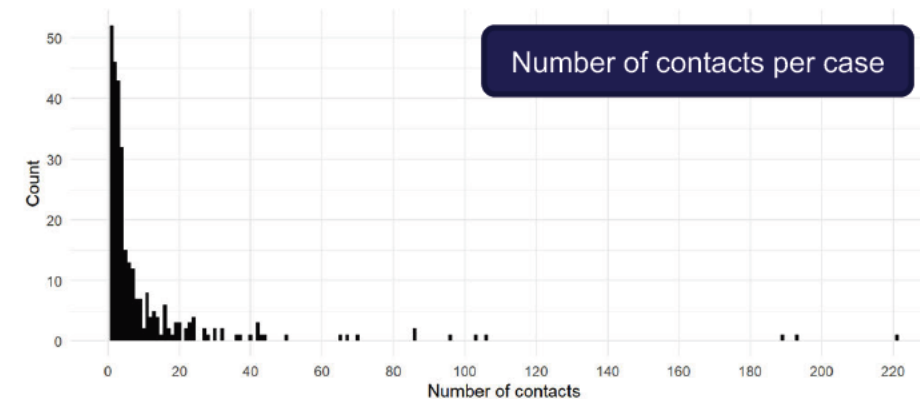
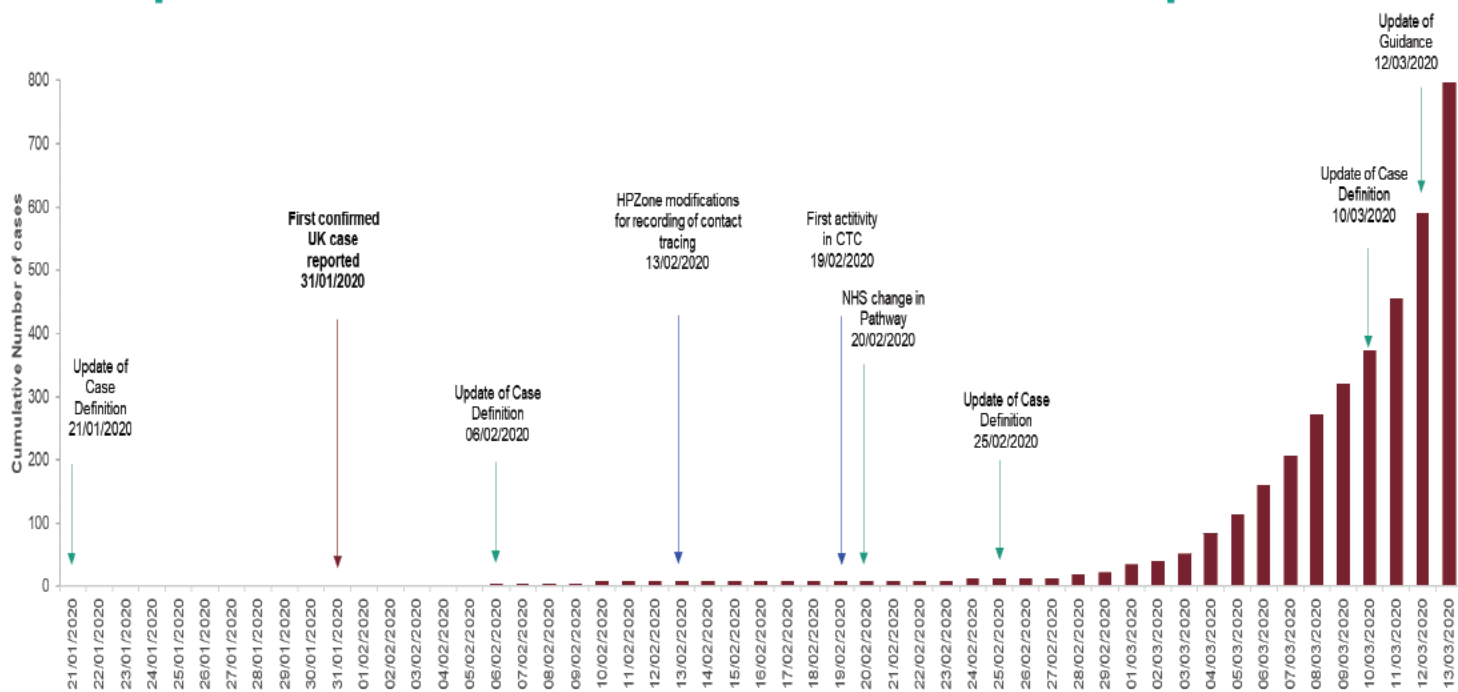
Contact tracing pathway
PHE component



PHE phone-based contact tracing model



Experience from the containment phase



CT activity during the containment phase (this is not immediately translatable to the next phase of the response and should be interpreted with caution)

- 3,494 contacts were identified from 302 confirmed cases. In addition, 127 contacts were identified as a contact of a confirmed case resident outside of England, 449 contacts were traced as part of specialist groups (HCID workers, cruise ships etc) and 624 were identified as returning travellers. The total number of people contacted by PHE as part of contact tracing activities was 5075. PHE were successful in contacting (95.2%) of contacts of confirmed cases.
- At the end of the containment phase, 1,465 contacts had safely completed follow up, 111 contacts had become confirmed cases (3%), and the rest were still under follow up
- Among people invited to register on CTAS, 63% did so. The median time to register was 1 hour 23 minutes (range from 1 minute to 7 days).
- Where data were available (n=302), the median number of contacts per confirmed case in England was 4 (IQR, 2 – 9, min 1, max 221) (excluding HCID unit workers). The median number of contacts excluding flight contacts was 4.0 (IQR 2-8.25, min 1, max 221).
- In total, 121 contacts of England confirmed cases became secondary confirmed cases (3.6% of those successfully contacted). Among 2248 contacts identified as requiring active monitoring and who were successfully contacted, 102 (4.5%) became confirmed cases.

Implementing the model: outstanding policy questions and dependencies

Requirements (see separate paper)

- Agree a revised contact definition and categorisation and public health advice of contacts (PHE proposal in separate paper)
- The model assumes that the PHE system will continue to focus on confirmed cases. There has been a request that access is provided to people awaiting test results to speed up the contact tracing process. This is possible as indicated in slide 3 but action would not be undertaken until a positive test result is received (is this agreed?)
- Confirmation of infectious period. At present PHE guidance is based on date on onset of symptoms. (Should this be expanded to 1 or 2 days before onset?)
- Interface with NHSX app
 - The single pathway is still not clear. PHE is assuming that all confirmed cases will be contact traced by PHE regardless of whether they are app users (“full duplication”) as otherwise we would expect significant losses (case contacts may not be app users, app is anonymous, app user case may now know if their contacts are app users...) (is this agreed?)
 - Consistency of definitions of case contact with the NHSX proximity app. (Is it appropriate to have different definitions and interventions?)
- Role for antibody testing in the contact tracing pathway
- The approach to international travel contacts will need to be considered in the context of Government policy to lift restrictions in this area. This has not been considered in this document.

Dependencies

- Increases in access to diagnostic testing, uptake and changes in these over time. Will asymptomatic people be tested?
- Help seeking behaviour and social behaviours. What changes can we expect in the context of the epidemic and from the impact of NPIs. Will people maintain social distancing? Will they work more from home?
- Uptake of the app and changes over time
- Interface with the proximity app led by NHSX that can provide alerts rapidly to users who have been in close proximity of a case. This app is complementary and helpful in strengthening contact tracing work. It is not known what the uptake will be and the sociological and behavioural issues need to be better understood.