Community Contact Tracers

Pilot Study Report

Training community volunteers to undertake contact tracing for Covid-19:

6th June 2020

Summary of lessons learnt

Volunteers can be trained and supported to undertake effective contact tracing for Covid-19.

Contact tracing for Covid-19 is complex involving hard, detailed work that is undermined by a lack of formal support from local or national government.

Local community links are important because:

- People with Covid-19 and their contacts can be linked in to local support services and resources where necessary
- Where direct contact cannot be made by phone or email, volunteers can drop round with a letter
- A local approach increases cooperation, particularly from marginalised, seldom heard communities and groups, and this approach will increase community resilience.

For contact tracing to work efficiently, it is important that:

- Index cases (people with Covid-19) are identified early in their illness preferably as soon as symptoms develop and before test results are known
- A strong consistent message is received from central government making the case for the importance of contact tracing in order to create a culture of public cooperation
- Local support and back up, possibly including legal enforcement, by statutory environmental health officers

Community Contact Tracers

Background

WHO guidelines for the COVID-19 outbreak recommend that people with Covid-19 are identified, advised to isolate and that their contacts are also traced and advised to quarantine and then followed up to identify new people with the viral illness.

After the initial stage of the outbreak in the UK, National level contact tracing was discontinued on 12th March 2020 (Guardian).

At the time that this Sheffield based pilot was conceived, in early March 2020, no contact tracing was taking place elsewhere in the UK. Restarting contact tracing has now become Government policy and contact tracers are currently being recruited and trained in order to undertake this. The exact nature of this contact tracing is unclear, other than it appears to be planned as a centralised programme (ibid).

There were two motivations for the small group of doctors who started this contact tracing project. They were dismayed that the government had suspended all official attempts to contain the virus using contact tracing - but also a human dimension added strength to their concerns. In mid March two of their friends, Lisa and Tom Heller, developed Covid-19. They became seriously ill, including a spell in Northern General Hospital on oxygen for Lisa. Crucially neither of them were asked about their contacts in the time when they would have been contagious. Their experiences are available in our training files here.

Some Local Authority, NHS and Public Health England staff have the appropriate contact tracing skills but are relatively few in number. Electronic solutions, such as the NHSX contact tracing app may take months to be fully developed and are unlikely to be adequate alone to maintain a low transmission rate (ref. New Statesman)

The workload needed to achieve effective contact tracing will vary with time and will vary from region to region.

Our Sheffield based pilot has established that volunteers could be recruited and trained to undertake contact tracing on a scale to make a significant difference. People with Covid-19 and their contacts are in need of support to help them isolate effectively and to access stretched health care services appropriately. Volunteers are in a position to use their local knowledge and networks to support people with Covid-19 and their contacts to remain effectively isolated and prevent further spread of the virus.

There is the potential advantage that volunteers based in communities may have local knowledge that is useful and can gain the confidence of local people and their contacts in a

way that distant callers working from virtual call centres are not in a position to do. There is little published literature on using volunteers but the US state of Vermont has reported using volunteers for emergency preparedness including in public health emergencies (Matthews 2005).

This Sheffield based "proof of principle" pilot scheme (https://www.communitycontacttracers.com/) was designed to assess the efficacy and feasibility of a community-based volunteer contact tracing programme using minimal resources, remote contact, mixed referral sources, and using symptoms to identify untested index cases.

Aims

To assess the efficacy and feasibility of:

- recruitment, training and retention of community volunteers
- telephone-based interview of index cases to identify contacts
- telephone-based interview of close contacts to advise on effective self-isolation
- follow up quarantined contacts to ensure further new cases are identified and their contacts traced
- support for cases or contacts if symptoms progress
- support contacting NHS 111 and other helping agencies if required
- maintaining volunteers' and users' confidence, confidentiality and satisfaction

Outcome measures

- Numbers of volunteers recruited
- Training duration and volunteer satisfaction with training delivered
- Numbers of cases enrolled, contacts identified, contacts communicated with and given advice
- Time taken by volunteers on each case and contact
- Case, contact and volunteer satisfaction

Methods

Sheffield Community Contact Tracers (SCCT)

A steering group consisting of recently retired GPs, public health physicians and community development workers was established to develop and implement the pilot.

Training materials were developed by members of the core group. All the materials have been continuously updated throughout the pilot phase in response to the fast-changing nature of the pandemic and feedback from the volunteer contact tracers during subsequent support circles. The training manual and all documentation is freely available in the hope that it will be useful as similar initiatives spread to other districts within Sheffield and further afield: **Access here**

Using a Community Development approach

The initial group of SCCT volunteers were picked from the pool of volunteers associated with the Heeley Trust (www.heeleytrust.org) and via word of mouth. Their intimate knowledge of local structures and networks has been vital to the development of the pilot project in Heeley / Meersbrook. The organisational structures required at speed by SCCT also relied heavily on the support of Heeley Trust. They provided the experience of working with volunteers and negotiating the bureaucratic hurdles required for most of the features necessary to set up contact tracing in any local area. This included the structure for recruiting and approving volunteers, purchasing phones for protected volunteer use and giving a sense of legitimacy to the entire venture.

Six volunteers were recruited and trained to protocol. Criteria for recruitment as a volunteer were established.

Training initially consisted of two 2- hour sessions using videoconferencing technology, including breakouts to practice 'difficult conversations'. Because there had been inadequate time to practice these conversations, after the second session it was decided that a third one-hour session would be useful. Total training, therefore, amounted to five hours on average although some volunteers did receive bespoke help with certain additional issues.

Following the completion of training, a brief questionnaire was circulated to all the volunteer contact tracers to ask their views of the efficacy of the training.

Following training, each volunteer was paired with one of the medically qualified members of the steering group, who assessed whether or not they were ready to commence contact tracing, based on an informal assessment of their understanding of the material covered, and their reported confidence in starting. The medically trained person continued to act as a mentor for each volunteer on a one to one basis. A daily hour-long 'support circle' video conference call was instituted for all volunteers in order to provide continuing support and training to the contact tracers and to review the calls the contact tracer had made to each person with Covid-19 and to their contacts. Later in the project the volunteers were largely able to help support each other and the frequency of the support circles diminished.

People with Covid-19 (index cases) were referred by general practitioners in the Heeley / Meersbrook area of Sheffield. The GP was asked to explain to them the nature of the contact tracing pilot and to seek their consent before referring them to the SCCT project.

SCCT volunteers telephoned index cases in order to explain the nature and purpose of contact tracing. Consent was again established, and relevant symptoms recorded. In the absence of microbiological confirmation, the presence of two of a symptom triad consisting of new persistent cough, fever, and loss of taste or smell was taken as confirmation of Covid-19 infection. Details of close contacts of the index case after a date two days prior to first developing symptoms and the nature of that contact, were recorded. Contacts were defined according to the ECDC criteria

Standard proformas for recording gathered information and Information for Consent leaflets in plain English were developed by the core group and used to record all the relevant information on index cases and their contacts. These documents proved important to let the people being contacted and their relatives know about the aims behind the scheme. These documents and all training materials are freely available for other schemes, official or voluntary, to adapt for their own use.

SCCT volunteers then phoned each of the index cases' contacts with an introduction to the SCCT project and their consent for participation was confirmed and recorded. There followed an enquiry about relevant symptoms after which each contact was given advice to strictly self-isolate according to current Government guidelines.

Each contact was also given advice on what to do should they develop symptoms themselves in the future. Index cases and contacts were offered a daily call from the volunteer for assessment, support and advice. If the contact subsequently developed symptoms indicative of Covid-19 infection, volunteers enrolled them as second wave index

cases. Index cases were followed up for 7 days or until symptoms ceased. Contacts were followed up until 14 days after they had been in contact with the index case. Data was returned to a central collection point on the standard forms on days 1, 7 (for cases) and 14 (for contacts).

Results

Six local volunteer contact tracers were recruited and each received 5 hours of initial training which evaluated positively. Although the training was well-received, the volunteers reported that most of the skills and understanding they applied during the contact tracing work were the skills and understanding that they had developed during their professional life in a variety of settings, not just in the healthcare arena.

"If I am being frank I was in the main drawing on a skillset that I already had"

Thirteen people with Covid-19 (index cases) were enrolled in the pilot. Their ages ranged from 38 to 88 with a mean age of 57. Six worked for the NHS or for care services. Index cases were followed up until seven days after the date of first symptoms. An average time of 80 minutes was spent by volunteers on telephoning each index case including the initial interview and follow up contacts. Three of the referrals failed, one was inappropriate, one was dropped because of offensive abusive language and one other withdrew with no reason given. 20% of people who the volunteer attempted to contact by phone or text did respond when a written request explaining the purpose of contact tracing was put through their door.

Fifty-eight contacts of people with Covid-19 were identified during the pilot phase. Nineteen of these had been named by the index cases. They were each given advice regarding self-isolation and were followed, either directly or with information provided by family members, until fourteen days after their latest contact with the index case. One of these contacts became ill during the follow-up period and was enrolled as a new index case and followed up according to protocol. Index cases were unable to or unwilling to give their names and details for thirty-nine of the contacts.

Twenty-nine contacts worked for carer provider agencies and ten were employed in other settings. Employers were phoned or emailed and advised regarding self-isolation for contacts. Some said that they would pass on information to staff but did not give further information to enable formal follow up, others refused to cooperate.

For people being contacted who are currently in employment and physically going to their workplace accepting the label of 'contact' has proved to be especially difficult. The volunteers found that their message to these contacts was not well received for quite obvious reasons. In some instances, the contact disputed whether they should in fact be classed as having been in significant contact with the person who had developed Covid-19. They could not accept the need for disrupting their lives and possibly their livelihoods for 14 days on the chance that they might have been infected. They tended to minimise or reframe the circumstances of the contact that they had with the index case.

Other people who were contacted by the volunteers wanted to continue to go to work out of loyalty to their teammates or to their employers or to the people they looked after. 'Contacts' who work in care settings – in care homes or hospitals – face particular problems in this regard. Although identified as contacts they pressed to avoid self-isolating and some eventually became uncooperative with the SCCT project volunteer. Employers, in care settings or elsewhere, also find the prospect of losing a member, or several members, of their workforce because of the risk of infection hard to deal with. They have to balance the need to keep their institution running against the inevitable disruption that quarantining members of staff would bring. This lack of cooperation with the study was on occasion transmitted by management to the index case and to their contacts.

Case study

The index case and their five contacts all worked for Sheffield Teaching Hospitals and ALL of them cooperated with the volunteer on the first evening. I discussed the situation of all five contacts, including one who was worried about their asthma and one living with two shielding parents, who had planned what to do if she caught C19. They all planned to contact their employer on the day after initial telephone contact. The employer, via silver command, forbade them to participate or cooperate further with the SCCT volunteer. The initial phone conversations raised the contacts' awareness of the implications of the full advice. Although the contacts had been wearing PPE with their patients and were reportedly being careful at home, they appeared not to have been taking sufficient precautions with colleagues during coffee and lunch breaks, or when testing each other! This brought into focus the need for detailed contact tracing as well as consciousness raising

in their Occupational Health and Infection Control departments. The case led to discussions within the Trust.

Volunteer issues

A group of six local volunteers have been undertaking contact tracing for the SCCT pilot project. They have been the core of the project and on whom success or failure has depended.

The role of contact tracer is complex for the reasons outlined above and carries with it a level of responsibility and commitment that was probably not envisaged when the pilot was being set up.

This quote from one of the volunteers illustrates the arguments expressed about complexity

> *" I don't think there is ever enough training to prepare you as the experience is so varied with each call with levels of complexity that you can't really replicate in a role play, the messiness of human life means that there are lots of things to consider that you wouldn't think of"*

If similar community-based contact tracing schemes are to be set up elsewhere the selection of volunteers, their training and ongoing support will vary according to the level of local resources that are available. In all situations, a decent level of support for the contact tracing frontline volunteers, shoe-leather epidemiologists every one of them, will be essential.

During the period of the pilot project, the SCCT volunteers had a 'Support Circle' video call each evening at five pm. Typically each session would last up to one hour and go through each of the volunteers' ongoing work with index cases and their contacts. Support was given during each session by one of the doctors from the steering group. This level of support was necessary during the pilot project because so many new levels of complexity emerged. However, this amount of supervision/ support is almost certainly not sustainable in the longer term and fatigue is an issue.

> *"It's quite an intense experience. And it's quite an intense commitment"*

Experience from the pilot project suggests that organisers of any follow-on projects - especially if they develop into full-on service provision - will need to ensure that volunteers

are able to regulate for themselves the number of people they take on to contact and support. They should be encouraged to take breaks when they are not responsible for contacting or supporting people and generally look after themselves and their family and friends as a priority.

One volunteer commented:

> *'Generally the zoom sessions needed to tread the line between commitment and learning/support. The volunteers all had full lives prior to the project, whether working full or part-time or in retirement, so they needed to balance that aspect with commitment to the project. There was a large commitment of time and effort initially as we all tried to get the pilot off the ground.*
>
> *After a while we needed not just to give ourselves breaks to alleviate the stress of being continuously focused on a 7 day week basis, especially if things weren't going to plan. As the project came to an end and started to change focus there were issues for us regarding what we had signed up to. We needed clarity and honesty (the latter was very important and forthcoming), so we could decide our levels of ongoing commitment'*

Recruiting and using local volunteer contact tracers proved to be enormously helpful when supporting people through this uniquely difficult time. The volunteers' used their knowledge of local conditions and resources to provide person-centred and community centred advice and encouragement. A sense of community and willingness to protect people in their own vicinity has proved to be an important motivation for the volunteers and may help their contacts accept a period of quarantine as an act for the common community good.

There is an ongoing independent evaluation of the experience of the SCCT Volunteers being undertaken by Tim Woolliscroft, a senior researcher at Sheffield Hallam University and Professor Shona Kelly of Sheffield Hallam University. His report is freely available from here on the SCCT website. These key learning points have emerged from the evaluation:

- The value of the project seemed to be as much about providing support to the people contacted (emotional as well as practical e.g. through signposting wider support and advice) as actually getting people to self isolate
- The local connection was valuable - particularly in relation to the support role. Volunteers report that local knowledge helps enable the making of relationships and developing trust as the volunteer and person contacted had shared knowledge of the local area

"you need to build trust and you need to be able to talk to them in a way in which they are willing to offer updated information"

- The local connection was also important for practical reasons such as understanding what wider support and resources exist locally and being able to physically put a note through someone's door if they don't answer the phone (a tactic used by two of the volunteers)
- The involvement of healthcare experts from the steering group is essential (not necessarily by the volunteers, but needed in the wider support /advice structure that volunteers can access)
- Local community groups such as Covid19 Mutual Aid or even apps might help identify index cases earlier (quicker/ earlier referral was repeatedly identified as being needed) - Whilst apps could add value to the volunteer system e.g. by helping to identify people sooner, they cannot replace 'shoe-leather epidemiology because apps cannot establish relationships or provide support
- Doing this properly is very labour intensive, 2-4 index cases per volunteer during this pilot was already a lot of work

"I spent all day, contacting people, writing up notes, it was like a working day, the penny dropped. It was a significant commitment "

Findings

This pilot has demonstrated that it is feasible to train volunteers who had no previous experience of contact tracing to undertake it effectively after a relatively short duration of training. All six volunteers recruited were assessed as being sufficiently well prepared to undertake contact tracing after five hours of training delivered by web-based video conferences Zoom. The training of the volunteers continued via daily support circle meetings and a model of continued training in stages proved to be especially beneficial. Following satisfactory completion of the training, they proved able to have constructive conversations with index cases and identify their contacts. This led to follow-up directly with the contacts of the index case who were telephoned by the volunteer and given relevant advice.

Without formal authority, or the ability to apply any form of sanction, there were limits to the access that contact tracers could establish with contacts of the people with Covid-19 and

to the weight behind the advice that was given. It was helpful to the volunteers to be clear that they were advising (according to govt guidelines) and supporting - not instructing.

As a result of the initial contact some employers were not willing to allow contact tracers access to those of their employees who had been identified as contacts. In some instances after contacts were spoken with and advised to self-isolate and therefore not go to work, they were unwilling to comply with that advice. Without formal authority, our SCCT volunteers were unable to take these conversations further.

We are unaware of any other studies of training volunteer community-based contact tracers for Covid-19 infection under conditions of 'lockdown'. The principal strength of this study is its timeliness in relation to the current pandemic. Its main weaknesses are twofold. First, in the absence of any other 'gold standard' contact tracing service against which the findings could be compared, we cannot be confident about the proportion of actual contacts that each case had which were identified by the volunteer contact tracers. However given that all volunteers had continuing access with a mentor and were able to discuss any concerns or questions they had, it is unlikely that they missed a significant number. Secondly, as it is a small study based in a particular area of Sheffield, Heeley/ Meersbrook, with a strong sense of community and a well established and respected community organisation, findings may not be transferable to all other communities or countries.

Contact tracing for Covid-19 is significantly different and more complex than similar endeavours to contain the spread of tuberculosis, meningococcal disease or sexually transmitted disease. In those diseases, contacts can derive tangible benefit from being identified, in that they are likely to be offered testing and treatment for that disease or advised measures for its prevention. However for contacts of Covid-19 cases, there is currently no offer of testing or treatment but the prospect of self-isolation, including in some cases not going to work, with the financial penalties that entails, for a period of 14 days. During the trial, several people who had been contacts of a person with Covid-19 found it hard to accept the label of 'contact' even though they met the ECDC criteria

Contact tracers working for health or local authorities do carry the authority of their employer and are backed by health protection regulations including the most recent Health Protection (Coronavirus) Regulations 2020

Although this level of authority was not available to the volunteers in our pilot, they did carry a different type of authority based on local recognition and acceptance. In the Heeley / Meersbrook district of Sheffield, where the pilot took place, the Heeley Trust is a community development organisation that is recognised and highly regarded for its work

improving the lives of people living in the area, including support of vulnerable and 'hard to reach' groups. The concept of 'social prescribing' is well established in the area. The volunteers were mainly picked from the pool of volunteers associated with the Trust, and their intimate knowledge of local structures and networks was enormously valuable.

Steering group

The core group who set up the Sheffield Community Contact Tracers initiative happen to be doctors including retired Public Health specialists, Directors of Public Health and GPs. In other areas, it is anticipated that medical input may well be less represented and local schemes in the future will reflect the availability of local resources.

Very quickly the core group in Sheffield recognised the need for the involvement of the local community development and social support organisation (Heeley Trust) and for the recruitment of seriously competent locally grounded people who could offer managerial and administrative support.

One of the advantages of having medical people involved in the core organisation is that they will almost certainly have useful contacts within the statutory services. This was the case in the pilot project when contact with local public health specialists, general practice staff and hospital trust managers facilitated the establishment of the pilot project and possibly conferred it with an element of legitimacy.

Summary of findings and lessons learned

- Despite WHO recommendations our modest, locality-based pilot project in Sheffield appears to be the only contact tracing that has been undertaken in the UK during this early phase of the Covid-19 pandemic. Although the project has not engaged with large numbers of people with Covid-19 and their contacts, there has been a wealth of learning that we hope will be of use to others, including statutory authorities, as they go about the large scale contact tracing work that will be required to control the disease

- Some of the complexity involved in contact tracing for this newly emerging disease will be clear to all who read this report

- Locally based contact tracing groups hoping to set up projects similar to SCCT will be well advised to work in partnership with their established local community development organisations especially if their aim is to offer contact tracing for 'hard to reach' groups in their community

- There needs to be criteria for escalating refusals to participate to someone with authority to engage with the people who meet the criteria as contacts. Neither this programme nor organisations such as Serco or G4S will be likely to have the authority. How far volunteer tracers will persist will be related to their personality and confidence

- It is clear that some employers with contacts on their payroll will not find it easy collaborate – it is important to try and interview reticent employers and find out if this is because of perceived adverse commercial interests or a fear of being in the media or something else

- Tracing is not a job for everyone – the tracers interviewed felt that they were being asked to work at the level of someone employed at Band 6-7. Our volunteers often found themselves drawing on skill sets that they already had gained through previous work-related training

  "For me (the experience) was like a roller coaster, perhaps because we were also developing it, as well as being volunteers.

- As volunteer contact tracers gain in experience they will become increasingly familiar with more and more situations

- Our project has attracted considerable interest in the local, national and international media and more is anticipated with the publication of this report. Our website https://www.communitycontacttracers.com/ has regularly attracted 1,000 visits each day
- Right now the project team is planning to continue to work in the Heeley/ Meersbrook area and also replicate this way of controlling the further spread of Covid-19 in other areas of Sheffield. Interest in this way of working in other places in England has been developing and similar projects are anticipated in Calderdale and some London Boroughs.

This report and the pilot project itself has been created and delivered by Sheffield Community Contact Tracers between the middle of March and the end of May 2020.

The team:

Volunteers

Janet	Judy
Mike	Rhiannon
Roshan	Rowan
Sally	Tim

Admin and management support

Cheryl	Erman
Amber	

Heeley Trust

Andy

Founders

Bing	Ian
Jack	Jeremy
Jillian	Joan
Mike	Paul
Tom	

Evaluation support

Shona

Tim