

## **Contact Tracing Service**

### **Surge Plan**

**June 2021**

#### **Background**

1. Recent work from the modelling group suggests that Northern Ireland could see up to 6000 cases of Covid each day at the peak of a new surge in the late summer. There is, however, considerable uncertainty around the assumptions for modelling and forecasts will continue to be refined over the next few weeks. CTC must therefore plan measures to manage this number of cases – potentially in summer, but also if the peak arrives later in autumn/winter 2021.
2. A preliminary meeting has been held with DoH and a number of initial considerations and assumptions were discussed. This paper sets out resource and other requirements necessary to manage a number of scenarios.

#### **Current Model**

##### **Staffing**

3. CTC is made up of a hybrid model of staffing. There are 117 tracing staff contracted to work full and part time hours. This equates to 71 WTE. Additionally we employ 130 bank staff who do not work set shifts as such but are available to be called on as required. If this pool of bank staff were to undertake three shifts each per week (22.5 hours) we have an additional 78 WTE.
4. Tracing staff are supported by a number of other staff including trainers, team leaders, quality auditors and administrators. 12 WTE staff in this pool are also trained contact tracers. A cohort of medical staff are also based in the Tracing Service. There are currently two Service Managers on site and the service is overseen by a Director and Deputy. A number of analytical and surveillance staff work to support the outcomes of the Service.

## **Remote Working**

5. Remote working is available to 97 tracers although all contracted staff are required to work on site in County Hall for two shifts each week in order to undertake quality monitoring. County Hall can accommodate 80 staff with comfortable tolerances in social distancing measures. This capacity could be expanded whilst retaining appropriate social distancing measures.

## **Support for Acute Response**

6. Case numbers are currently low. This has allowed CTC to support the wider work of the acute response by working on issues including travel and clusters/outbreaks. Previously this work would have been undertaken by the PHA Duty Room which also supports the range of other acute response work in the Agency. The current tracer cohort supporting the work is reasonably low but with restrictions easing and outbreaks and clusters becoming more complex it is likely that we will have to increase our capacity to support this work. Additionally as travel becomes more common place we will have to increase the support for this work. Cruise ships are due to return to Belfast imminently and there may be additional work from this.
7. In September 2020 PHA established an Education Cell to support the management of cases in schools. In order to allow these staff to return to their business as usual it had been planned to migrate this work to CTC in time for next term. Additionally, systems have been developed so that CTC will receive close contact testing data for universities and FE colleges. This will require an additional workstream within CTC.
8. PHA has been requested to either undertake or outsource verification of compliance with isolation requirements for travellers who have arrived in ROI and provided an address in Northern Ireland. This scoping is underway.

## **Call Handling Time**

9. Each case is currently allocated one hour for completion. This allows for:
  - Enhanced tracing (tracing locations back seven days and contacts back 48 hours);

- Seven attempts at calling the index case;
- 3-4 contacts per case (the same as the average of August 2020 when restrictions were not largely in place);
- Making calls to close contacts (an average of three per case).

10. **Under this system we are able to manage 304 cases per day without utilising bank staff.** We are also able to accommodate training, call monitoring and provide support for the wider acute response workstreams. **If we utilised bank staff (assuming they would commit to 22.5 hours each per week) we could manage 639 cases per day under this system.**

11. If all contracted staff also undertook overtime of one additional shift per week (as they largely did in the winter surge) we could manage **699 cases per day** at a rate of one hour per case.

### **Hours of Operation**

12. The Tracing Service currently operates between the hours of 8am to 6pm. As an early step we would revert to 8am to 9pm.

### **Options to Manage Surge**

13. There are two basic options to increase productivity – decrease call handling time; or increase the call handling resource. Each of these options includes a suite of measures that can be adopted – all of which would present opportunities and challenges if adopted.

### **Decreased Call Handling Time**

14. Measures to decrease call handling time include:

- Reverting to text messages only to close contacts;
- Reverting to standard tracing (no enhanced tracing, only requesting locations and contacts going back 48 hours);
- Reducing the number of call attempts for each case.

15. Reverting to text messages returns us to the position we adopted in October 2020. There has been some criticism that this is not the most effective way to inform close contacts of the need to isolate. However, there is no evidence that we are aware of to substantiate this claim. Some close contacts will require a call – for example if a mobile number is not provided.
16. All tables from this point on presume that the majority of close contacts are contacted only by text and that no enhanced acute response work is undertaken (ie tracers only do tracing work and don't support clusters or travel cases). Figures assume a baseline of 177 WTE staff -- based on the WTE of 71 contracted staff **and** utilising bank staff at 22.5 hours per week **and** assuming overtime of 1 shift per week from contracted staff. Figures also include a 20% tolerance for downtime (including leave, breaks, time between calls etc). We are conscious that we cannot mandate overtime or bank shifts and staff may be less inclined to undertake these in summer months and with societal restrictions eased significantly.
17. Reverting to standard tracing has the biggest impact. Call handling time could reasonably be reduced to 20 minutes. Table i) shows the resource required to undertake an increasing volume of cases if call handling time is reduced to 20 minute per case. Under this scenario we could manage approximately 3500 cases each day. To manage 6000 cases each day would require an additional 96 staff.

Table i)

TOTAL NUMBER CASES PER DAY	WTE Required for 20 Min Per Case	WTE Deficit (from assumed WTE of 177)
500	39	
1000	78	-99
2000	117	-60
3000	156	-21
4000	195	18
5000	234	57
6000	273	96

However this approach clearly loses the value added through enhanced tracing.

## Further Enhanced Tracing

18. We have been requested to show the resource required to implement further enhanced tracing – that is asking cases for their locations and/or contacts going back 14 days. This was piloted on a very small scale over the weekend of the May Bank Holiday. Time taken to handle the calls varied from between 25 minutes to go back 14 days to 225 minutes. We have therefore prepared potential call handling times of 60, 90 and 120 minutes. Table ii) below shows the resource required to close cases in these times. With a WTE of 177 we could accommodate a maximum of 500 cases per day at 90 minutes per case. Table iii) shows the deficit in staff for each of the other scenarios. Recruiting to this scale would require an additional cohort of AfC Band 7 team leaders which would be determined depending on the additional headcount and revised team sizes. These tables assume seven attempts to call. Reducing attempts to call would likely be offset by higher numbers of contacts to be collated. Making changes to the Dynamics system to record additional data will also incur a cost although this may be small in the overall scale of the spending required. .

Table ii)	Contact Tracer WTE Required		
TOTAL NUMBER CASES PER DAY	7 Day Enhanced Tracing - 60 mins per case (Enhanced Tracing seven attempts - majority of close contacts via text)	10 Day Enhanced Tracing - 90 mins per case (Enhanced Tracing seven attempts - majority of close contacts via text)	14 Day Enhanced Tracing - 120 mins per case (Enhanced Tracing seven attempts - majority of close contacts via text)
500	117	175	234
1000	234	350	467
1500	351	525	700
2000	468	700	933
2500	585	875	1166
3000	702	1050	1399
3500	819	1225	1632
4000	936	1400	1865
4500	1053	1575	2098
5000	1170	1750	2331
5500	1287	1925	2564
6000	1404	2100	2797
6500	1521	2275	3030

Table iii)

TOTAL NUMBER CASES PER DAY	Contact Tracer WTE Deficit (Based on available WTE of 177)		
	7 Day Enhanced Tracing - 60 mins per case (Enhanced Tracing seven attempts - majority of close contacts via text)	10 Day Enhanced Tracing - 90 mins per case (Enhanced Tracing seven attempts - majority of close contacts via text)	14 Day Enhanced Tracing - 120 mins per case (Enhanced Tracing seven attempts - majority of close contacts via text)
500	-60	-2	57
1000	57	173	290
1500	174	348	523
2000	291	523	756
2500	408	698	989
3000	525	873	1222
3500	642	1048	1455
4000	759	1223	1688
4500	876	1398	1921
5000	993	1573	2154
5500	1110	1748	2387
6000	1227	1923	2620
6500	1344	2098	2853

### Increase Call Handling Resource

19. Measures to increase call handling resource include:

- Use of overtime;
- Recruiting additional staff;
- Outsourcing activity;
- Removing tracer resource from activities such as cluster management and travel cases;
- Not undertaking the schools and university tracing work;
- Only tracing on the basis of a positive PCR test (ie stopping tracing on the basis of a positive LFD test result alone);and
- Increasing use of Digital Self Trace.

20. Tables i), ii) and iii) show the scale of recruitment required to manage cases even at 20 minutes to complete. Overtime is paid at a rate 1.5 times normal rate. There will be an increased cost therefore in relying on overtime for a protracted period. An increased tracer cohort will require an expanded

number of team leaders. It is most likely that these staff would come from the existing pool of tracers, leaving further tracing vacancies to be backfilled.

### **Recruitment Planning**

21. Recruitment on this scale takes significant planning. As great a lead in time as possible is required in order to undertake background checks, interview and make offers. Training will be required on a bigger scale than ever before and we would seek approval to utilise venues such as hotels that can accommodate larger numbers safely.

### **Governance and Oversight**

22. Given the recent interest of the PHA Audit Committee in the staffing levels of the Tracing Service and to ensure clarity on accountability arrangements we would also request that DoH writes to the PHA Chair to set out the direction for increased recruitment (if this is the agreed way forward).

### **Alternative Sources of Staff**

#### **NICS**

23. It may be possible to recruit civil service staff to the role. It should be noted that a contact tracer is paid at AfC Band 6. This is a salary scale of £31,365-£37,810. In NICS terms this would be broadly bottom end SO through to DP scale. There may be issues in asking lower-paid staff to undertake the role. This also applies to re-directing PHA staff not currently on the B6 scale and we did have issues with lower grade staff contesting this in PHA previously.

#### **HSCB/PHA**

24. There is a cohort of 65 PHA/HSCB staff who were trained in contact tracing in the winter surge. However, there were some difficulties in getting these staff on the rota for tracing work given the competing pressures of their own business areas. Whilst a direction could be issued to these and other staff this would require PHA and HSCB to be operating in Business Continuity or

Emergency Planning and will have a consequent impact on the BAU restoration plans.

### **Agency Staffing**

25. We have sought advice from BSO HR as to the potential of recruiting large numbers of agency staff to the roles. This may be more expensive initially, but has the advantage of not requiring timebound contracts. We await advice.

### **Accommodation Needs**

26. A significantly increased headcount will necessitate additional accommodation. Feedback from the last round of recruitment indicated that a significant number of applicants would have preferred a Belfast base. We are currently scoping if there is any vacant HSC accommodation that would be suitable for purpose. This would negate the need to cable any site for HSC network access and would more than likely be cheaper than commercial rent.

### **Commercial Rental**

27. If commercial rental is the only option available, the general acceptable cost is around £20 per square foot. Currently in County Hall we are operating to a covid-safe model of 100 sq foot per workstation. This could be reduced if social distancing is reduced to a still safe, but lower level of 60 sq feet (£1200 per desk). In addition, the cost of networking a building can range from £250k to £500k.

### **Additional PHA Capacity**

28. We are scoping additional capacity within County Hall. Whilst many staff are able to move to remote working after a period of settling in to the service, we would – in the first instance – require mixed teams working together so that new staff could be integrated into existing teams with appropriate support, quality monitoring and mentoring. The need for large office space is therefore likely to be short term, but we do require all tracers to work two days each



week for quality monitoring and ongoing training. It would be essential to maintain this with a greatly increased headcount.

29. We are considering the potential to use existing PHA sites such as Tower Hill and Linenhall Street – if all staff aside from tracers were directed to work from home. This however could be disruptive if Business as Usual is expected from other parts of the organisation.

### **Increased Operating Hours**

30. A much increased headcount would require us to revert to longer opening hours and this would have to be included in any new accommodation.

### **Technology / Kit**

31. Each workstation will require monitors, laptop, telephony, keyboard, mouse etc. Additional licenses for MS Dynamics may be required and every user accrues a cost for support from BSO for the various products on the laptop. Tech and kit costs are to be confirmed. Early indications suggest between £2500 and £6000 per laptop. This includes kit, licenses, BSO support etc.

### **Reducing Support to Other Acute Response Activity**

32. Not undertaking additional surveillance activity will have a relatively small impact in terms of providing additional tracing capacity but a large impact on other parts of the Agency who will have to support this work. If travel increases we will have to put more resource into this workstream. Similarly we are aware of forward plans from all local councils to hold some quite largescale events over summer and autumn. These may increase the prevalence and complexity of clusters and outbreaks even though they are largely outdoors.
33. If the surge is expected in autumn, schools and universities will presumably be running and will require support for case handling. The benefit of removing tracers from these workstreams may not off-set the increased pressure on other parts of the Agency.

## **Not Tracing from Positive LFD Test Result**

34. Positive LFD test results are currently reported in such small volumes that it would have negligible impact on the workload to stop tracing on their receipt. However, if they increased substantially and are not included in the modelling of cases per day we would revisit this decision.

## **Outsourcing**

35. Outsourcing is an option we would prefer not to explore. It would require a change to our entire model of doing business and would need dedicated support for the contractor to deal with queries in real time. Additionally the information governance would be complex to navigate. The quality control would also be difficult. The Dept already manages the contract with NI Direct and will be aware of hourly costs. Other private providers may provide competitive rates but the information and systems governance issues will still be at play.

## **Increased Uptake of Digital Self Trace**

36. Use of Digital Self Trace (DST) is currently very low. However that is not necessarily because people don't want to use it – the Service often makes the call before the person has had a chance to explore the option. Higher case numbers and more effective messaging could increase uptake of DST. If DST was at around 25% (seen regularly during the winter peak) the impact would be as per table iv). If DST was at around 35% (use in winter peaked at 30% on Xmas Day) the impact would be as per table vi).
37. The knock-on effect on the tracer deficit is shown in tables v) and vii). Given that we expect the next surge to occur in the younger population it is not entirely unreasonable to assume that they will be more inclined to complete DST. Work with specialist communication partners such as Big Motive or others may provide some insight in how to increase uptake of the platform and target messaging to this group.

Table iv)			Contact Tracer WTE Required		
TOTAL NUMBER CASES PER DAY	25% DIGITAL SELF TRACE	75% REMAINING	7 Day Enhanced Tracing - 60 mins per case (Enhanced Tracing seven attempts - majority of close contacts via text)	10 Day Enhanced Tracing - 90 mins per case (Enhanced Tracing seven attempts - majority of close contacts via text)	14 Day Enhanced Tracing - 120 mins per case (Enhanced Tracing seven attempts - majority of close contacts via text)
500	125	375	88	131	175
1000	250	750	176	262	350
1500	375	1125	264	393	525
2000	500	1500	352	524	700
2500	625	1875	440	655	875
3000	750	2250	528	786	1050
3500	875	2625	616	917	1225
4000	1000	3000	704	1048	1400
4500	1125	3375	792	1179	1575
5000	1250	3750	880	1310	1750
5500	1375	4125	968	1441	1925
6000	1500	4500	1056	1572	2100
6500	1625	4875	1144	1703	2275

Table v)	Contact Tracer WTE Deficit		
TOTAL NUMBER CASES PER DAY	7 Day Enhanced Tracing - 60 mins per case (Enhanced Tracing seven attempts - majority of close contacts via text)	10 Day Enhanced Tracing - 90 mins per case (Enhanced Tracing seven attempts - majority of close contacts via text)	14 Day Enhanced Tracing - 120 mins per case (Enhanced Tracing seven attempts - majority of close contacts via text)
500	-89	-46	-2
1000	-1	85	173
1500	87	216	348
2000	175	347	523
2500	263	478	698
3000	351	609	873
3500	439	740	1048
4000	527	871	1223
4500	615	1002	1398
5000	703	1133	1573
5500	791	1264	1748
6000	879	1395	1923
6500	967	1526	2098

Table vi)			Contact Tracer WTE Required		
TOTAL NUMBER CASES PER DAY	35% DIGITAL SELF TRACE	65% REMAINING	7 Day Enhanced Tracing - 60 mins per case (Enhanced Tracing seven attempts - majority of close contacts via text)	10 Day Enhanced Tracing - 90 mins per case (Enhanced Tracing seven attempts - majority of close contacts via text)	14 Day Enhanced Tracing - 120 mins per case (Enhanced Tracing seven attempts - majority of close contacts via text)
500	175	325	76	114	151
1000	350	650	152	228	302
1500	525	975	228	342	453
2000	700	1300	304	456	604
2500	875	1625	380	570	755
3000	1050	1950	456	684	906
3500	1225	2275	532	798	1057
4000	1400	2600	608	912	1208
4500	1575	2925	684	1026	1359
5000	1750	3250	760	1140	1510
5500	1925	3575	836	1254	1661
6000	2100	3900	912	1368	1812
6500	2275	4225	988	1482	1963

Table vii)	Contact Tracer WTE Deficit		
TOTAL NUMBER CASES PER DAY	7 Day Enhanced Tracing - 60 mins per case (Enhanced Tracing seven attempts - majority of close contacts via text)	10 Day Enhanced Tracing - 90 mins per case (Enhanced Tracing seven attempts - majority of close contacts via text)	14 Day Enhanced Tracing - 120 mins per case (Enhanced Tracing seven attempts - majority of close contacts via text)
500	-101	-63	-26
1000	-25	51	125
1500	51	165	276
2000	127	279	427
2500	203	393	578
3000	279	507	729
3500	355	621	880
4000	431	735	1031
4500	507	849	1182
5000	583	963	1333
5500	659	1077	1484
6000	735	1191	1635
6500	811	1305	1786

38. If we could increase uptake of DST to 25%, this would reduce the number of tracers required to deal with 6000 cases per day at an average of 60 minutes per case from 1277 to 1056. Increasing uptake to 35% would reduce the number of tracers further to 912.

## Summary

39. The Contact Tracing service is working under different systems and situations now than in the winter surge. Societal restrictions have eased, contacts per case are rising and around 300 schools have expressed an interest in summer schooling. The gradual restoration of travel and other leisure opportunities combined with a level of fatigue may mean that CTC will have difficulty in securing additional hours from bank and contracted staff. Further, if PHA is expected to make a phased return to business as usual it will be difficult to secure internal extra capacity. This could be directed but will have ramifications for the Agency as a whole. Additionally, the Tracing Service has been supporting more complex work which will still require completion (travel, clusters etc) and to retreat from this will place pressure on other parts of the Agency who will have to take on this additional work.

40. Scaling up the service to manage several thousand cases each day will be complex. In summary:

- To further enhance tracing to secure details of locations and contacts going back 14 days will require more time per case; changes made to the Dynamics system and more staff in post;
- There are incremental gains to be made in reducing the number of attempts to call, not tracing from a positive LFT, only texting close contacts. The biggest gains come from reducing case handling time (ie no enhanced tracing);

41. To give an example of potential costs:

- 3000 cases per day at a call handling time of one hour per case with 35% of cases completing DST will require an additional 279 WTE tracers as well as additional team leaders;

- Contact Tracers are AfC Band 6 staff. In salary terms this would be between SO and DP NICS grades. FYE salary and employer costs come to approx. £45k (mid-point B6). 279 additional staff will cost £12.55 million (full year equivalent). Further additional costs would be incurred for team leaders. We may also need additional medical support (to be determined);
- Office space in Belfast is likely to cost at least £20 per sq foot with around 60 sq feet required per workstation – allowing for between 1 and 2 metres of social distancing (£1200 per workstation). 279 workstations at a cost of £1200 is £335k;
- Tech and kit costs are to be confirmed. Early indications suggest between £2500 and £6000 per laptop. This includes kit, licenses, BSO support etc. 279 packages at a mid-point cost of £4k comes to £1.12million;
- **If we were to employ 279 additional tracers for six months there would be a rough cost of £6.6million (half of FYE staff costs, kit & office space). This does not include the cost of the current headcount undertaking additional bank and overtime shifts. It also does not include cabling of offices or additional training, management staff and possibly admin required. The current allocation for CTC is slightly over £5 million for the year.**

42. Other matters to note include:

- We have previously had issues with lower grade staff wanting pay parity in order to work as tracers. This will most likely impact on the availability of other HSCB/PHA staff;
- We would prefer to employ full or part time staff rather than bank in order to ensure availability to work;
- It may be an option to hire via an employment agency. We await HR advice;
- Increasing the headcount by this level will necessitate a second site – potentially only for a very short term;

- Cabling a non-HSC building to use the HSC network can cost between £250k and £500k;
- Outsourcing the operation would require a different model of service delivery. It will include complex information governance and system access requirements as well as procurement. It is likely to be more expensive and may attract adverse attention;
- CTC would not wish to stop the support provided to the wider acute response as this will only place undue pressure on colleagues.

**NR**

Deputy Director of Contact Tracing  
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