



# Smart Containment with Active Learning (SCALE): Testing & Tracing Survey Instrument

Version 1: May 20, 2020

The SCALE operational plan lays out an evidence-responsive COVID-19 response strategy that seeks to minimize disease spread and limit adverse socio-economic impact by targeting response to the current & projected level of prevalence in the smallest feasible geographical units. The immediate need is large-scale testing to establish the level of prevalence in each area. This testing & tracing survey instrument is devised to help implement this. It comprises 7 modules (s-grid identification, respondent identification and testing, travel history, clinical history, pool testing follow-up, confirmed positive case(s) follow-up and contact tracing). This is a living document and will be updated based on learnings.

Smart Containment with Active Learning (SCALE) is a multidisciplinary policy response to COVID-19 that draws on the expertise of researchers and practitioners in public health, infectious diseases, epidemiology, economics, policy and public management, technology and data science as well as business & non-profit leaders. We have assembled a broad coalition of experts from leading institutions. As part of SCALE, we are producing a series of ancillary documents that provide more detail on specific topics.

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***This repository consists of 7 modules.***

**I. TESTING SURVEY:** Module 1, 2, 3, & 4 will be asked from the same respondent at the time of taking the sample for PCR test. This will be done for 10 respondents on each GPS point for a particular area (S Grid number).

Module 1 - ***S Grid Cluster Mapping / Identification***: This section is to keep track of areas covered (S grid and GPS points).

Module 2 - ***Respondent Identification and Testing***: This section contains basic respondent information and where test sample should be taken.

Module 3 - ***Travel History***: This section records basic travel history of the respondent.

Module 4 - ***Clinical History***: This section records clinical history of the respondent.

**II. FOLLOW-UP SURVEYS:** The modules below are 3 different follow-up survey instruments for Pool Testing follow-up (in case the result is positive), a follow-up with individual positive cases & a Contact Tracing questionnaire.

Module 5 - ***Pool Testing Follow-Up***: If for any specific pool, the result comes out positive, then follow-up individual test samples will be taken for each individual that was part of that pool.

Module 6 - ***Confirmed Positive Case(s) Follow-Up***: Here, enumerators will survey people from the pool who tested positive. They will gather information on other people these positive cases have come into contact with.

Module 7 - ***Contact Tracing***: Enumerators will reach out to the contacts provided in Module 6 and survey these contacts using questions here. To get additional data points on traced contacts, Module 3 (Travel History) and Module 4 (Clinical History) are also recommended to be administered.

## SCALE Testing & Tracing Survey Instrument

### Module 1 - S Grid Cluster Mapping / Identification

Input Field Name	Question	Relevance	Option Choices	Notes
S 1	S Grid number (Census block number)			<i>This will be manually entered by referring to the S grid numbers</i>
S 2	Choose one of the following to describe this survey		1. First interview at pin location 2. Tracked contact at PIN location 3. Follow up after someone tested positive	
S 3	Which area is this?	If S 2 = 1		
S 4	Which GPS/ PIN point is this?	If S 2 = 1		<i>This will be manually entered by referring to the GPS point numbers within each S grid</i>
S 5	How many people have you surveyed at this PIN location, including this survey?	If S 2 = 2		

## SCALE Testing & Tracing Survey Instrument

### Module 2 - Respondent Identification and Testing

Input Field Name	Question	Relevance	Option Choices	Notes
RI 0	Identify the person in this Household who has the highest number of contact/physical interaction with other and/or is the most mobile?			
<b>Note for enumerator: Record the following for the identified person</b>				
ID	ID (Auto-generated)			<i>This is a unique in-house generated ID that will be unique for each individual tested/surveyed</i>
RI 1	First Name			
RI 2	Last Name			
RI 3	Gender			
RI 4	DOB			
RI 5	CNIC Type (Self/Guardian)		1. Self 2. Guardian	
RI 6	CNIC			<i>To be entered without dashes or spaces</i>
RI 7	Contact number (Mobile)			<i>To be entered without dashes or spaces</i>
RI 8	Alternate number			<i>To be entered without dashes or spaces</i>
RI 9	District/City			
RI 10	Home Address			
RI 11	Home geolocation			
RI 12	Work Address			
RI 13	Work geolocation			
RI 14	Occupation		1. Health Occupation 2. Self-employed (owns his/her own business) 3. Law Enforcement and armed forces (police, army, etc.) 4. Legal Profession 5. Employed 6. Teacher/Professor 7. Student 8. Unemployed 9. Other	

RI 15	Name of company/org			
R16	During an average day in the last two weeks, how many people have you spoken to for at least 10 minutes?			<i>Write a number here</i>
R17	Over the last two weeks, have you been to any place with more than 10 people (this could include a market, a wedding, or a masjid).		1. Yes 2. No	
<b>Note for enumerator: After recording the above information, conduct the test for pool sample</b>				
PL 01	Pool or Individual Sample		1. Pool 2. Individual	
PL 02	Pooling ID (Auto-generated)	if PL01=1		<i>Unique ID for pooled test sample generated at the backend</i>
PL 03	Test ID (Auto-generated)	if PL01=2		<i>Unique ID for individual test sample generated at the backend</i>
PL 04	Date of sample			<i>Record date</i>
<b>Note: After taking sample, ask the following:</b>				
FU 01	Name of your close friend in this neighborhood?			
FU 02	Name of person1 in this neighborhood with highest contact points/mobility?			
FU 03	Name of person2 in this neighborhood with highest contact points/mobility?			
FU 04	Name of person3 in this neighborhood with highest contact points/mobility?			

## SCALE Testing & Tracing Survey Instrument

### Module 3 - Travel History

Input Field Name	Question	Relevance	Option Choices	Notes
ID	ID (Auto-generated)	Pull from central database		<i>This is a unique in-house generated ID that will be unique for each individual tested/surveyed</i>
TH 01	Travel History in the last 3 weeks		1.Domestic 2.International 3. No travel	<i>Select multiple</i>
TH 02	Which country did you travel to?		1. United Kingdom (UK) 2. United States of America (USA) 3. China 4. United Arab Emirates (UAE) 5. Thailand 6. Turkey 7. Germany 8. Qatar 9. Oman 10. Bahrain 11. Saudi Arabia 12. Other	
TH 03	Did you self-isolate for 14 days when you returned to Pakistan?	PI 6 = 2	1. Yes 2. No	
TH 03	Point of entry into Pakistan	PI 6 = 2	1. Lahore 2. Islamabad 3. Karachi 4. Sialkot 5. Multan 6. Peshawar 7. Quetta 8. Other	
TH 04	Which areas did you visit during domestic travel? (select all that apply)	PI 6 = 1	1. Islamabad 2. Karachi 3. Quetta 4. Peshawar 5. Sukkur 6. Bahawalpur 7. Lahore 8. Faisalabad 9. Gujranwala 10. Gilgit 11. Other	

## SCALE Testing & Tracing Survey Instrument

### Module 4 - Clinical History

Input Field Name	Question	Relevance	Option Choices	Notes
ID	ID (Auto-generated)	Pull from central database		<i>This is a unique in-house generated ID that will be unique for each individual tested/surveyed</i>
CH pec	Do you have any pre-existing conditions?		<ol style="list-style-type: none"> <li>1. Diabetes</li> <li>2. Hyper-tension</li> <li>3. Obesity</li> <li>4. Cancer</li> <li>5. Smoking</li> <li>6. Cardiovascular disease</li> <li>7. Chronic lung disease</li> <li>8. Chronic liver disease</li> <li>9. Chronic renal disease</li> <li>10. Malignancy</li> <li>11. Other</li> </ol>	
CH 1	Symptoms		<ol style="list-style-type: none"> <li>1. Chills</li> <li>2. Vomiting</li> <li>3. Nausea</li> <li>3. Diarrhea</li> <li>4. Headache</li> <li>5. Rash</li> <li>6. Conjunctivitis</li> <li>7. Muscle Ache</li> <li>8. Joint Ache</li> <li>9. Loss of appetite</li> <li>10. Nose bleed</li> <li>11. Fatigue</li> <li>12. Seizures</li> <li>13. Altered Consciousness</li> <li>14. Loss of smell</li> <li>15. Loss of taste</li> <li>16. Fever</li> <li>17. Other neurological signs</li> <li>18. Other symptoms</li> </ol>	
CH 2_num	How many?			
CH 3_num	How many confirmed cases have you been in contact with?			

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### Module 5 - Pool Testing Follow-Up (Only to be done for a positive pool)

Input Field Name	Question	Relevance	Option Choices	Notes
PL 02	Pooling ID (Auto-generated)	Pull from database if PL01=1		
ID	ID (Auto-generated)	Pull from central database		<i>This is a unique in-house generated ID that will be unique for each individual tested/surveyed</i>
<b>Note: After pulling this data, take the sample for testing</b>				
Test ID	Test ID			<i>Unique ID generated at the backend (if, in section 2 'Respondent info and testing' Item PL1 was 'Pool') Otherwise if PL1 was 'individual', then pull data)</i>



## SCALE Testing & Tracing Survey Instrument

### Module 6 - Confirmed Positive Case(s) Follow-Up

Input Field Name	Question	Relevance	Option Choices	Notes
Sample ID	ID (Auto-generated)	Pull from central database, assigned during pool testing follow up (Stage 5)		<i>This is a unique in-house generated ID that will be unique for each individual tested/surveyed</i>
CI 1	How many people have you been in contact with?			<i>Provide hint for enumerator from clinical history questions CH 2_num and Ch 3_num. This is to make sure that the respondent does not understate his number of contacts once he/she knows they are positive</i>
<b>Repeat Group (count = CI 1)</b>				
CI 1_1	First Name of person			
CI 1_1_1	Last Name of person			
CI 1_2	Mobile phone number			
CI 1_3	PTCL phone number			
CI 1_4	City/ Area of infection			
CI 1_5	Work GPS location/ address			
CI 1_6	Home GPS location/ address			

CI 1_7	What was the nature of your contact with this person?		<ol style="list-style-type: none"> <li>1. Shook hands with him/her</li> <li>2. Hugged him/her</li> <li>3. Prolonged interaction (&gt;10 mins) with him/her in an enclosed space (room, mosque, office, etc)</li> <li>4. Prolonged interaction (&gt;10 mins) in an open space (market, park, etc)</li> <li>5. Brief Interaction (&lt;10 mins) with him/her in an enclosed space</li> <li>6. Brief interaction (&lt;10 mins) with him/her in an open space</li> </ol>	
<b>End Group</b>				

## SCALE Testing & Tracing Survey Instrument

### Module 7 - Contact Tracing (from contacts of confirmed positive cases)

Input Field Name	Question	Relevance	Option Choices	Notes
Sample ID	Sample ID	Pull from central database, assigned during pool testing follow up (Stage 5)		<i>This is a unique in-house generated ID that will be unique for each individual tested/surveyed</i>
<b>Contact Information</b>				
RI 1	First Name			<i>You will have some of this information such as first name, last name from the "Follow-up with positive cases." This can be pulled whereas the rest will be recorded. The idea here is to repeat the exercise with these contacts and maintain a central database of all respondents.</i>
RI 2	Last Name			
RI 3	Gender			
RI 4	DOB			
RI 5	CNIC Type (Self/Guardian)			
RI 6	CNIC			
RI 7	Contact number (Mobile)			
RI 8	Alternate number			
RI 9	District/City			
RI 10	Home Address			
RI 11	Home geolocation			
RI 12	Work Address			
RI 13	Work geolocation			
RI 14	Occupation		1. Health Occupation 2. Self-employed (owns his/her own business) 3. Law Enforcement and armed forces (police, army, etc.) 4. Legal Profession 5. Employed 6. Teacher/ Professor 7. Student 8. Unemployed 9. Other	
RI 15	Name of company/ organisation			

CT 1	According to our data [person name] has tested positive for COVID - 19, we know you may have come into contact with the above mentioned person. Please tell us what is your relation to above mentioned person. In what capacity do you know him?		<ol style="list-style-type: none"> <li>1. Immediate Family Member</li> <li>2. Relative</li> <li>3. Neighbour</li> <li>4. Friend</li> <li>5. Colleague</li> <li>6. Other (specify)</li> </ol>	
CT 1_desc	If other, please specify			
CT 2	What was the nature of your contact with [peson name] who has tested positive for COVID-19?		<ol style="list-style-type: none"> <li>1. Close contact (&gt;10 mins) with [person name], who was not wearing face mask</li> <li>2. Close contact (&gt;10 mins) with [person name], who was wearing a face mask</li> <li>3. Close contact (&lt;10 mins) with [person name], who was not wearing a face mask</li> <li>4. Close contact (&lt;10 mins) with [person name], who was wearing a face mask</li> </ol>	
CT 4	How many people (other than the person they are being traced from) do you know who have tested positive for COVID-19?	If CH 3 = No		
CT 5	How many people (who you personally know) do you suspect are postive (showing symptoms)?	If CH 3= yes		
CT 6	How many people have you come into contact with since you met [person the are being traced from]?			

Repeat Group (count = CT 6)				
CT rg 1	Contact Number			
CT rg 2	Alternate Contact Number			
CT rg 3	Home address			
CT rg 4	Work Address			
CT rg 5	Place of work (company, organisation etc.)			
CT rg 6	Geo Location (longitude)			
CT rg 7	Geo Location (latitude)			
End Repeat Group				
CT 7	What preventive measures have you adopted to mitigate the risk of contracting COVID-19? Select all that apply.		<ol style="list-style-type: none"> <li>1. Use of Face Mask</li> <li>2. Handwashing with soap for 20sec</li> <li>3. Use of alcohol based Hand sanitizer</li> <li>4. Social Distancing</li> <li>5. None of the above</li> </ol>	
CT 8	What are the preventive measures taken by your employer for the safety of the staff at the workplace? Select all that apply.		<ol style="list-style-type: none"> <li>1. Use of disinfectant for cleaning</li> <li>2. Provided hand sanitizer</li> <li>3. Raising awareness about preventative measures</li> <li>4. Provided masks</li> <li>5. Provided gloves</li> <li>6. Allowed work from home</li> <li>7. I am not going to the office/my office is closed</li> </ol>	
CT 9	Do you and your colleagues at the workplace follow the preventive measures of personal hygiene and social distancing?		<ol style="list-style-type: none"> <li>1. Do not follow at all</li> <li>2. Do not mostly follow</li> <li>3. Sometimes follow and sometimes don't follow</li> <li>4. Mostly follow</li> <li>5. Strongly follow</li> </ol>	

CT 10	Do you and your family follow the preventive measures of personal hygiene and social distancing?		<ul style="list-style-type: none"> <li>1. Do not follow at all</li> <li>2. Do not mostly follow</li> <li>3. Sometimes follow and sometimes don't follow</li> <li>4. Mostly follow</li> <li>5. Strongly follow</li> </ul>	
CT 11	In the last two weeks how many religious (friday prayers, congregation, etc) or social (marriage, party, etc) gatherings have you attended?		<ul style="list-style-type: none"> <li>1. None</li> <li>2. 1 - 3</li> <li>3. 3 - 10</li> <li>4. More than 10</li> </ul>	
CT 12	In the last two weeks how many religious (friday prayers, congregation, etc) or social (marriage, party, etc) gatherings have you attended?		<ul style="list-style-type: none"> <li>1. Friday Prayers</li> <li>2. Congregation prayers</li> <li>3. Other religious gatherings (Naats, Milaad, Funeral, etc)</li> <li>4. Conferences</li> <li>5. Marriage Ceremony</li> <li>6. Social Gathering (party, dinner, etc)</li> </ul>	
<b>Repeat Roster (all option choices chosen in CT 12)</b>				
CT 13	Area where you attended the event			
CT 14	City where you attended the event			
<b>End Repeat Group</b>				