WHO R&D Blueprint

novel Coronavirus

Perceptions of Healthcare Workers regarding local infection prevention and control procedures for COVID-19: Research protocol

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29 April 2020, Geneva

R&D Blueprint

Powering research to prevent epidemics
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This protocol was developed for the World Health Organisation COVID-19 Research Roadmap as a joint initiative between the social science and infection prevention and control working groups.

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## Protocol summary

<table>
<thead>
<tr>
<th><strong>Perceptions of healthcare workers regarding local infection prevention and control procedures for Covid-19</strong></th>
</tr>
</thead>
</table>
| **Study population** | Primary: health professionals providing direct clinical care to patients in community, hospital, and/ or ambulance emergency response settings. Including, but not limited to medical doctors, nurses, nursing assistants, allied health professionals, students and other roles with direct patient care.  
Secondary population of interest: all other staff involved in running clinical services in community, hospital, and/ or ambulance emergency response settings. Including, but not limited to senior managers, receptionists, other administrative roles, cleaners, porters, janitors and other non-clinical roles. |
| **Study design** | Cross sectional survey |
| **Implementation** | This protocol sets out an approach to guide rapid assessment of healthcare worker views of local infection prevention and control procedures for COVID-19. It is designed to be rapidly adapted at local, regional or national levels, depending on the needs of the user. For example, several options are provided for sampling and for data collection. We recommend that users adapt the protocol in line with what is feasible in their context. All regulatory and administrative approvals need to be obtained by the user, and data should be processed in line with national data protection regulations. The data collection tool may also be refined to ensure contextual appropriateness. |
Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>IPC</td>
<td>Infection prevention and control</td>
</tr>
<tr>
<td>COVID-19</td>
<td>Coronavirus Disease 2019</td>
</tr>
<tr>
<td>PPE</td>
<td>Personal protection equipment</td>
</tr>
<tr>
<td>TDR</td>
<td>Theoretical Domains Framework</td>
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</table>

Background

Healthcare workers play a central role in providing quality healthcare for those affected by COVID-19. To prevent healthcare workers becoming infected and to prevent nosocomial spread of COVID19, a wide range of healthcare services must ensure effective infection, prevention and control procedures are conducted (1). There are significant pressures on healthcare workers in providing care in epidemic conditions. Use of personal protective equipment (PPE) can be burdensome and the risk of infection for this group is high. There is also a risk of stigma due to perceptions that healthcare workers have high risk of spreading infection (2). Research conducted during the SARS epidemic identified how organisational and social factors, including healthcare worker confidence in ability to effectively deliver infection prevention and control measures, were important to protect both physical and psychological health (3).

This protocol details a cross sectional survey to evaluate how prepared healthcare workers consider themselves to be regarding delivery of infection prevention and control procedures in their place of work. Survey methods have been selected as an approach to rapidly capture perceptions among a targeted group of people. Methods should be reported following recommended guidelines, including the limitations of survey methods, and with consideration of the impact of potential bias (sampling, measurement, non-response bias) on research outcomes. (4).

This survey should help public health agencies and healthcare administrators to identify immediate areas of concern that need to be addressed to improve COVID-19 infection prevention and control in healthcare settings at local, regional and/or national levels.

1.1 Aims and objectives

Primary aim: To better understand health care worker perceptions of infection prevention and control procedures to prevent Covid-19 transmission.

Objectives:

1. To evaluate healthcare worker perceptions of their preparedness to ensure effective infection prevention and control of Covid-19 in healthcare settings, and to evaluate healthcare worker’s level of trust in their healthcare organisation.

2. To consider how these factors vary
a. Across age, staff role, and length of clinical experience;
b. Between respondents whose hospital is receiving suspected/confirmed patients and those whose hospitals are not;
c. Between those who have direct experience of treating Covid-19 patients and those who have not.
d. Between countries in different global regions (as appropriate)

Methods

1.2 Study design
Cross-sectional survey: for single or serial use.

1.3 Study population(s)
Primary: health professionals providing direct clinical care to patients in community, hospital, and/or ambulance emergency response settings. Including, but not limited to medical doctors, nurses, nursing assistants, allied health professionals, students and other roles with direct patient care.

Secondary population of interest: all other staff involved in running clinical services in community, hospital, and/or ambulance emergency response settings. Including, but not limited to senior managers, receptionists, other administrative roles, cleaners, porters, janitors and other non-clinical roles.

1.4 Sample selection
Sample selection is guided by contextual factors; including where the survey is being conducted and which facilities the research team has access to and partners with. Broad considerations about sample selection are provided in tables 1 and 2 (5-7).

We anticipate many implementing partners would use non-probability sampling methods such as snowball or convenience sampling. For the purposes of rapid operational decision-making these methods are suitable. However, limitations regarding external validity and generalizability of these methods should be highlighted. Other implementing partners, for example, those with access to a well-defined healthcare worker population (e.g. through a clinical network) may choose probability sampling methods.
Table 1: Sample Selection Methods

<table>
<thead>
<tr>
<th>SAMPLE SELECTION METHOD</th>
<th>DESCRIPTION AND REASONING</th>
<th>PROS</th>
<th>CONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>NON-PROBABILITY, PURPOSIVE SAMPLING (SEE TABLE 2 FOR MORE DETAIL ON SPECIFIC METHODS)</td>
<td>Used when there are specific, predefined groups in mind to access</td>
<td>Can create a sample to meet the needs of the study</td>
<td>Not necessarily representative of population</td>
</tr>
<tr>
<td></td>
<td>Used when there are clear eligibility/inclusion requirements for groups</td>
<td>Can target hard-to-reach populations</td>
<td>Generalizability is typically not possible</td>
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<tr>
<td></td>
<td>Used for situations where researchers need to reach a targeted sample quickly</td>
<td>Flexible for unclear feasibility of sampling during an outbreak</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Used when sampling for proportionality is not the primary concern</td>
<td>Useful for the piloting of instruments and a study protocol</td>
<td></td>
</tr>
<tr>
<td>PROBABILITY, SIMPLE RANDOM SAMPLING</td>
<td>The ideal form of sampling as it yields an unbiased sample that is representative of the population of interest</td>
<td>Yields representative and generalizable findings</td>
<td>This approach takes substantial amounts of time, money, resources, and staff</td>
</tr>
<tr>
<td></td>
<td>Creates a representative list of possible participants which all have equal</td>
<td>The systematic and randomization nature of the approach limits biases</td>
<td>An accurate and complete sampling frame is essential, if</td>
</tr>
<tr>
<td>Sampling Approach</td>
<td>Reasoning</td>
<td>Pros</td>
<td>Cons</td>
</tr>
<tr>
<td>-------------------</td>
<td>---------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
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<tr>
<td>Quota sampling</td>
<td>Researchers divide the population into subgroups (e.g. by healthcare worker role), which have already been outlined by this protocol</td>
<td>Attention to sampling for comparison groups may aid and/or strengthen analysis</td>
<td>It may be difficult to calculate or estimate accurate proportions</td>
</tr>
<tr>
<td></td>
<td>Researchers can obtain health facility human resources records to</td>
<td></td>
<td>This approach may not be possible if the facilities do not have accurate or up to date human resource records</td>
</tr>
<tr>
<td>Method</td>
<td>Estimate the proportion of the population in each group</td>
<td>May be the fastest and least labour-intensive option if it is anticipated that response will be low and recruitment will be difficult</td>
<td>This sampling method opens the study up to selection bias</td>
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<td>----------------------</td>
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</tr>
<tr>
<td>Convenience sampling</td>
<td>Ideal in a situation with unknown sampling feasibility or resources</td>
<td>Convenience sampling aims to recruit participants who are readily available</td>
<td>This approach is often less intrusive than other sampling methods</td>
</tr>
<tr>
<td>Snowball sampling</td>
<td>May be useful since the population of interest is mostly comprised of colleagues</td>
<td>This approach is typically utilized when a full participant list is unavailable</td>
<td>This is a slower recruitment and sampling process</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>This approach relies on contacts within the network of recruited participants</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Respondents may not be willing to recommend other colleagues to contact</td>
</tr>
</tbody>
</table>
1.5 Data collection tool

No previously validated measure of healthcare worker perception has been identified that is suited to this study. As a result, a data collection tool has been developed (appendix A).

Theoretical Domains Framework (TDF), a contemporary framework, which has previously been applied to studying clinicians’ behaviour, informed the development of the tool. The TDF has 14 domains which identify influences on behaviour which affect motivation, capability and opportunity (8). These influences would include aspects such as access to guidelines, materials to deliver effective preventative procedures, healthcare worker perceptions of susceptibility to COVID-19, and trust in organisational readiness to manage spread of COVID-19.

We recommend that the data collection tool is adapted to the context where the study will be implemented, particularly to ensure consistency with recommended IPC guidelines and with availability of PPE. Prior to data collection, the survey should be piloted with a small number of respondents for clarity. Language and wording should be checked.

This study has been designed principally to support actions that can be taken to better prepare or support front-line healthcare workers in delivering infection prevention and control measures when managing COVID-19 patients. Contextual aspects related to country preparedness and to COVID-19 epidemiology will influence the experience of healthcare workers and study findings. Cross sectional surveys will provide a snapshot of healthcare worker perceptions during the time that data are being collected. Together with dates and location of data collection, we recommend therefore that implementing partners document key indicators relevant to context at each wave of data collection (Appendix B). This will also facilitate cross-country comparison at analysis.

1.6 Data collection

We anticipate two primary methods of data collection: an online, self-administered survey, or telephone survey. Implementing partners should specify the approach to data collection that is most suited to their context. Table 3 sets out options for remote data collection.

Strengths and limitations of each of these methods should be considered in the reporting and interpretation of results (see table 3).

An online data collection tool is available on online platforms including the open data kit (https://opendatakit.org/) and REDCap. Links to accessible data collection tools are available.
<table>
<thead>
<tr>
<th>DATA COLLECTION STRATEGY</th>
<th>STRENGTHS</th>
<th>LIMITATIONS</th>
<th>RECOMMENDATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SELF-ADMINISTERED survey (ONLINE OR PAPER BASED)</strong></td>
<td>Respondents can answer on their own time</td>
<td>Possible low response rate, easy to ignore invitation to complete</td>
<td>Connect with a gatekeeper/partner to prepare recipients for the email. This partnership may also aid the response rate</td>
</tr>
<tr>
<td></td>
<td>Less intrusive to a healthcare location/team</td>
<td>Will depend on internet, resources in location of interest</td>
<td></td>
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<tr>
<td></td>
<td>Fewer staff needed on the research team</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Can be done remotely; No need to send teams into areas with COVID-19 infection</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Digital questionnaire can more easily prevent missing data by ensuring that “forced choice” answering is set</td>
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<td></td>
<td>Impersonality helps people report negative events, feelings, or behaviours</td>
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<td></td>
<td>Easier and faster to implement indifferent locations in a standardized, replicable way</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Digital questionnaire may be cheaper and easier than printing options</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Telephone survey:</strong></td>
<td>Can be done remotely; No need to send teams into areas with COVID-19 infection</td>
<td>Possible low response rate, easy to ignore invitation to participate</td>
<td>May be ideal if email option is not possible/ideal and the risk of the research team entering COVID-19 areas is a</td>
</tr>
<tr>
<td></td>
<td>Can quickly go through a list of potential</td>
<td>No way to confirm the respondent’s</td>
<td></td>
</tr>
<tr>
<td>respondents</td>
<td>identity</td>
<td>concern</td>
<td></td>
</tr>
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<td>-------------</td>
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<td></td>
</tr>
<tr>
<td>May improve access for hard to reach populations</td>
<td>Time, effort, and importance for a well-trained research</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Data input and management can be digital</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Possibly less intrusive for healthcare teams / locations</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Possibly fewer staff needed on the research team</td>
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</tbody>
</table>
1.7 Data management and analysis

Implementing partners will manage, process, analyse and store data according to their local or national processes and procedures. These procedures will be reviewed at local or national level to ensure they are sufficient to suitably protect respondent data. We recommend that personally identifiable data are not collected. Data management plans should include information about how data will be stored, including levels of protection, who will have access to the data and when it would be destroyed. In the event that data may need to be transferred, plans should specify how this would happen securely. In countries where data protection legislation exists, protocols should specify that data will be handled in accordance with those policies. For example, data management in the European Union must comply with the General Data Protection Regulation (GDPR).

Descriptive analyses, comparative analyses and regression analyses are all potential approaches, depending on the data collected and refinements of the question(s) being asked.

- **Missing data:** Assess whether data is missing (completely) at random. If so, multiple imputation techniques can be used for missing values.
- **Descriptive analyses:** Tabular summaries can be presented, stratified by contextual factors, if applicable. The number and percentage of responders in each category could summarize categorical data. Continuous variables could be summarized by descriptive statistics, including mean, standard deviation, median, minimum, and maximum.
- **Difference between groups:** Use appropriate statistical tests. These will depend on the number of groups and type of data (i.e. continuous or categorical, (non-)normality). A P value < .05 is generally considered statistically significant.
- **Further multivariable regression analyses** can be performed to explore independent associations between different domains of the TDF and behavioural/social factors, while adjusting for confounding factors. All variables and outcomes should be defined before final analyses.

To investigate possible non-response bias, a response rate should be calculated (if possible). Where possible, baseline characteristics of responders (e.g. age, gender, job role) should be compared to overall baseline characteristics of invited healthcare workers to assess representativeness of the responders to the entire survey sample.

1.8 Ethical considerations

Selected study sites must be engaged early on in the planning process to ensure appropriate permissions are granted by local authorities. Ethical review or waiver procedures should take place in line with national guidelines. All study participants should be provided with information about the purpose of the survey (see appendix xx for recommended text), how their data will be used and their rights with regards to withdrawal from the study. Participants who choose voluntarily to answer the survey will be invited to indicate in a text box that they consent to take part. If data are collected by telephone,
verbal consent should be taken and recorded by the interviewer. Participants who do not consent will exit the survey. Where possible, personally identifiable data should not be collected and all data will be held confidentially. All data will be handled in accordance with national data protection regulations.

**Reporting**

To facilitate comparison across sites and countries, it is recommended that a report be written following data analysis and shared at local, district, national and global levels, as appropriate.

Implementing partners should consider and plan for how research results would be shared with the network(s) and/or institution(s) that contributed to the research.

**References**

Appendix A: Data collection tool v1.0

Introductory text
This survey aims to understand how healthcare professionals feel regarding their preparedness to deliver infection prevention and control (IPC) procedures in healthcare settings during the COVID-19 pandemic.

The information we collect will help improve preparedness to prevent healthcare workers becoming ill and to effectively prevent spread of COVID-19. In this survey, we refer to infection prevention and control procedures that should be adopted when managing patients with suspected or confirmed COVID-19. For reference, relevant [national/ regional/ local]* guidelines can be found here [ADD LINK].

All data will be stored and processed in accordance with national regulations. Approvals for this study have been obtained from [NAME].

If you are willing to take part in this study, please confirm the following: yes/ no
• I understand that my participation is completely voluntary
• I would like to take part in this study

Demographic information

<table>
<thead>
<tr>
<th>Variable</th>
<th>Format options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>Number</td>
</tr>
<tr>
<td>Gender</td>
<td>Standard formats</td>
</tr>
<tr>
<td>Role*</td>
<td>Senior medical doctor, junior medical doctor, nurse, allied health professional, assistant, administrative, non-clinical, other</td>
</tr>
<tr>
<td>Type of healthcare service*</td>
<td>Primary Health Care / Hospital: Medical unit, surgical, intensive care, paediatric, emergency, infectious disease ward, maternity, other / Ambulance</td>
</tr>
<tr>
<td>Screening question: do you provide direct care to patients?</td>
<td>Yes/ no/ not sure</td>
</tr>
<tr>
<td></td>
<td>IF YES, how frequently do you provide direct patient care?</td>
</tr>
<tr>
<td></td>
<td>1) daily 2) more than one day per week, 3) less</td>
</tr>
</tbody>
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COVID-19 Healthcare workers perception IPC study_v1.7

Type of job role* 
Fulltime/ part time/ casual or locum staff/ retired/ student/ other*

Current marital status 
Single (never married)
Living with partner Married /Civil partnership
Separated/ Divorced/ Widowed
Prefer not to say

Number of children living in the home, if any, under the age of 17yrs 
1, 2, 3, 4, 5+ None
Prefer not to say

Do you have caring responsibilities for any adults, including those with disabilities or those over the age of 70 years? 
Yes/ no/ prefer not to say

*Adjust as needed to be country specific

Experience of COVID-19 or previous epidemic
Response options: [yes/ no/ unsure]

1. In a clinical setting, did you personally care for patients with suspected or confirmed infection caused by a novel respiratory pathogen for example, SARS, MERS Co-V, H1N1 (during the 2009 pandemic)?
2. In a clinical setting, did you personally care for patients with suspected or confirmed infection caused by a novel respiratory pathogen for example, SARS (2002), MERS Co-V (2012), H1N1 (2009)?
3. Has a patient with suspected or confirmed COVID-19 attended the hospital in which you work?
4. Have you cared for a patient with suspected or confirmed COVID-19 infections?

IF YES to 4:
5. What type of contact did you have with a suspected/confirmed COVID-19 case?
   A. Close contact: directly caring for a suspected/confirmed patient or being within a 1-2m radius of a suspected/confirmed patient
      i. IF A: Did this contact include an aerosol generating procedure? For example tracheal intubation, non-invasive ventilation, bronchoscopy, cardiopulmonary resuscitation.
   B. Healthcare contact: no direct contact with suspected/confirmed COVID-19 case, but was present on the ward when they were cared for.
   C. Unknown / unsure
What kind of infection prevention procedures did you use during your most recent contact with a suspected/confirmed COVID-19 case?

- Hand hygiene
- N95 respirator (FFP2 or equivalent)
- Other types of medical mask (if yes, which one)
- Fluid-resistant gown
- Disposable apron
- Gloves
- Full body suit
- Eye protection (i.e. goggles or face shield)
- Single use equipment
- No specific equipment
- Other….

Response options: Yes/no/not sure

Questions regarding infection prevention and control procedures for management of patients with suspected or confirmed Covid-19

The following questions relate to your experience of managing patients in the healthcare setting where you work. Please think about your experience over the past week when responding to these questions.

Response options: 7 point Likert scale: strongly disagree, disagree, somewhat disagree, neither agree nor disagree, somewhat agree, agree, strongly agree.

Service demand
1. I am confident that the healthcare service where I work can manage current patient demand related to COVID-19
2. I am confident that the healthcare service where I work can continue to manage patient demand related to COVID-19 over the next 3 months.

Knowledge of recommended infection prevention and control procedures
3. When providing direct medical care to suspected or confirmed COVID-19 cases, excluding during aerosol-generating procedures, which of the following procedures are currently recommended in your country for preventing transmission?

- Hand hygiene
- N95 respirator (FFP2 or equivalent)
- Other types of medical mask (if yes, which one)
- Fluid-resistant gown
- Disposable apron
- Gloves

Response options: Yes/no/not sure
COVID-19 Healthcare workers perception IPC study_v1.7

- Full body suit: Yes/no/not sure
- Eye protection (i.e. goggles or face shield): Yes/no/not sure
- Single use equipment: Yes/no/not sure
- Other: Open txt field

**Skills**

4. I feel I have received **sufficient** training in the infection prevention and control practices specifically for COVID-19.
5. I have received general training for infection, prevention and control procedures for other communicable diseases.
6. I am confident in my ability to correctly don and doff personal protective equipment to prevent transmission of COVID-19 to others and myself.

**Beliefs about capabilities**

6. I am confident that I am able to follow recommended procedures related to personal protective equipment (PPE) for COVID-19 e.g. appropriate use and disposal of gloves, apron and fluid resistant surgical mask.

**Social/professional role**

7. I feel it is my professional responsibility to take all measures necessary to care for COVID-19 patients.

**Beliefs about consequences**

8. I believe that the protective procedures at work are sufficiently effective to prevent the spread of COVID-19 in the health facility where I work.
9. Following the infection prevention and control recommendations will protect me from becoming ill with COVID-19.
10. Following recommended infection, prevention and control procedures adds significant additional strain to my workload.

**Intentions**

11. I intend to always use the recommended personal protective equipment (medical mask, eye protection, gown and gloves) when taking care of patients with suspected or confirmed COVID-19 when I have access to these.

**Environmental context and resources**

12. In the health facility where I work, I have access to clear policies and protocols for everyone to follow related to infection prevention and control procedures for COVID-19.
13. I can easily access personal protective equipment (PPE) in line with standard infection control precautions, for example, gloves, gown, eye protection and medical mask for COVID-19 in the hospital where I work.
14. During my last clinical shift, I had adequate supplies of the following materials:

- Hand alcohol
- Hand soap
- Running water
- N95 respirator (FFP2 or equivalent)
- N95 respirator (FFP1 or equivalent)
- Surgical mask
- Fluid-resistant gown
- Disposable apron
- Gloves
- Full body suit
- Eye protection (i.e. goggles or face shield)

15. In the health facility where I work there are dedicated isolation facilities for patients with suspected COVID-19.

16. The health facility where I work receives good support from national/ regional/ local public health authorities, who provide guidance and training on how to manage COVID-19.

Social Influences

17. Most of my colleagues regularly follow infection, prevention and control measures (for example, regular hand washing, use of personal protective equipment, proper disposal of equipment).

18. It is expected that in my role as a healthcare professional that I will follow infection prevention and control measures.

19. I am encouraged and supported by senior medical/nurse staff to apply recommended infection prevention and control measures.

20. The local community where I currently live day-to-day are generally supportive of healthcare workers.

Emotion

21. I am concerned about the risk to myself of becoming ill with COVID-19.

22. I am concerned about the risk to my family related to COVID-19 as a result of my job role.

23. I am afraid of looking after patients who are ill with COVID-19.

24. I accept that the risk of getting COVID-19 is part of my job.

25. Whether I get infected with COVID-19 is within my control.

WHO Wellbeing 5: Over the last two weeks

Note: these 5 questions are combined in the analysis to create a single “wellbeing” score

Response option for this question: all of the time; most of the time; more than half of the time; less than half of the time; some of the time; at no time):

26. I have felt cheerful and in good spirits
27. I have felt calm and relaxed
28. I have felt active and vigorous
29. I woke up feeling fresh and rested
30. My daily life has been filled with things that interest me

**Trust in health facility (amended from validated measure)**

*Note: these 3 questions are combined in the analysis to create a single “trust” score*

31. The health facility where I work is ready to manage COVID-19
32. The health facility where I work are being honest with staff when managing COVID-19
33. The health facility where I work would act in the best interests of its staff when managing COVID-19

Comments:
Appendix B: Contextual data collected by study team at each round of data collection

The study team should collect the following information for each round of data collection. If the survey is conducted in multiple countries, these data should be captured for each country included in data collection.

Dates of data collection: __/__/__ to __/__/__

WHO transmission scenario:
- Scenario 1. No cases
- Scenario 2. One or more cases, imported or locally detected (Sporadic Cases)
- Scenario 3. Experiencing cases clusters in time, geographic location and/or common exposure (Clusters of cases)
- Scenario 4. Experiencing larger outbreaks of local transmission (Community transmission)

International Health Regulation: State Party Self-Assessment Annual Reporting tool https://extranet.who.int/e-spar#capacity-score

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<thead>
<tr>
<th>Dates of data collection</th>
<th><strong>/</strong>/__ to <strong>/</strong>/__</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country 1</td>
<td></td>
</tr>
<tr>
<td>WHO transmission scenario</td>
<td></td>
</tr>
<tr>
<td>IHR SPAR: all capacities</td>
<td></td>
</tr>
</tbody>
</table>
Appendix C: Participant Invitation example

You have been invited to take part in this research survey. Participation is voluntarily. Before you decide to participate, please read the following information on why this research is being done and what will happen to your responses.

The survey will ask you about your opinions, past experience, and current practices regarding local infection prevention and control procedures for COVID-19.

As the COVID-19 pandemic progresses, there is increasing pressure on healthcare workers on the frontline to provide care in epidemic conditions, across different countries and clinical settings. To identify immediate areas of concern that need to be addressed, we need to understand how healthcare workers’ view their preparedness to deliver effective infection prevention and control procedures in their place of work.

You have been invited to take part in this survey because you are a health professional providing direct clinical care to patients, or a staff member involved in running clinical services, in community, hospital, and/ or ambulance emergency response settings.

It is up to you to decide whether or not to take part. If you do take part, we will ask you to provide consent. You can withdraw your participation and/or information at any time, without giving a reason.

All information will be confidential and securely stored.

Information collected in this survey may be shared in an anonymised form to allow reuse within the research team and other third parties for COVID-19 health service related research only.

For questions, concerns or complaints about any aspect of this study, please contact [DETAILS HERE].