

TECHNICAL FOCUS:

COVID-19 Early Epidemiologic and Clinical investigations for public health response

On WHO website: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/early-investigations>

The recent emergence of COVID-19 means that **understanding of transmission patterns, severity, clinical features and risk factors for infection remains limited**, whether among the general population, for health workers or in household and other “closed” settings.

Studies to assess the epidemiology and clinical characteristics of cases in different settings are therefore critical to furthering our understanding of this virus and associated disease. They will also provide the robust information needed to refine the parameters to feed in forecasting models.

The global public health community recognized the need for **standard investigations and data collection** following outbreaks of highly pathogenic avian influenza subtype H5N1 and during the H1N1 influenza pandemic of 2009. Since 2011, two international and well-represented networks (ISARIC and CONSISE) have been working towards the standardization of clinical, epidemiological and laboratory methods for use in outbreaks.^{1,2} The WHO expert working group on Pandemic Influenza Special Investigations & Studies has developed several standard protocols for influenza. Similar protocols have been developed by WHO in collaboration with technical partners for Middle East Respiratory Syndrome coronavirus.

With the support of expert advisors, WHO has now adapted the influenza and MERS-CoV protocols to help enhance understanding of clinical, epidemiological and virological characteristics of COVID-19.

Several early investigation **master protocols or master forms** are available for countries:

- 1. FFX (First Few X cases and their close contacts) transmission protocol:** identification and tracing of cases and their close contacts in the general population, or restricted to close settings (like households, health care settings, schools).
Contact : earlyinvestigations-2019-nCoV@who.int
FFX is the primary investigation protocol to be initiated upon identification of the initial laboratory-confirmed cases of COVID-19 in a country.



For a more targeted approach on specific groups and more precise estimation of epidemiological parameters, three other investigation protocols are available:

- 2. Households (HH) transmission study protocol.** Contact: earlyinvestigations-2019-nCoV@who.int
- 3. Risk factors assessment for Health Workers (HW) protocol.**
Contact: earlyinvestigations-2019-nCoV@who.int
- 4. Environmental surface sampling of COVID-19 virus.** Contact: earlyinvestigations-2019-nCoV@who.int

¹ ISARIC. International Severe Acute Respiratory and Emerging Infection Consortium (ISARIC). Available at: <https://isaric.tghn.org/>

² CONSISE. Consortium for the Standardization of Influenza Seroepidemiology (CONSISE). Available at: <https://consise.tghn.org/>

5. **Global COVID-19 clinical characterization Case Record form** : a standard approach to collect clinical data of hospitalized patients is necessary to better understand the natural history of disease and describe clinical phenotypes and treatment interventions. Share anonymized clinical data and information related to patients with suspected or confirmed infections on a new clinical data platform.
Contact: EDCARN@who.int for log-in details.

To support country implementation of the 2 first early investigation (FFX, HH) , it is recommended to use the **Go.Data** field electronic tool for case and contacts data collection and management.

The FFX and HH protocol questionnaire templates are available in Go.Data.

Web: www.who.int/godata ,

Contact godata@who.int for more information



These protocols and forms have been designed so that data can be rapidly and systematically collected and shared in a format that facilitates aggregation, tabulation and analysis across different settings globally. We encourage any and all countries and study centres to contribute to this effort regardless of resource availability or patient volume. The ownership of the primary data remains firmly with the individual countries/sites.

Data collected using these investigation protocols will be critical to refine recommendations for case definitions and surveillance, characterize key epidemiological features of COVID-19, help understand spread, severity, spectrum of disease, and impact on the community and to inform guidance for application of countermeasures such as case isolation and contact tracing.

Summary:

Several early investigation **master protocols or master forms** for COVID-19 are available for countries:

| Which early investigations? | For whom ? | Why ? | Generic email address |
|--|---|--|--|
| The First Few COVID-19 X cases and contacts transmission investigation protocol (FFX) | Cases and close contacts in the general population or can be restricted to close settings (like households, health care settings, schools). | Community transmission mainly (or closed settings) | EarlyInvestigations-2019-nCoV@who.int . |
| Households transmission of COVID-19 investigation protocol (HH) | Cases and close contacts in households setting | Households transmission | EarlyInvestigations-2019-nCoV@who.int . |
| Assessment of COVID-19 risk factors among Health workers (HW) protocol | For health workers in a health-care setting in which a confirmed case has received care | Health facilities transmission | EarlyInvestigations-2019-nCoV@who.int . |
| Surface sampling of COVID-19 virus: A practical “how to” protocol for health care and public health professionals | For environmental surfaces | Surface contamination and transmission | EarlyInvestigations-2019-nCoV@who.int . |
| Global COVID-19 Clinical Characterization Case Record Form, and data platform for anonymized COVID-19 clinical data | For hospitalized cases | Clinical characterization | EDCARN@who.int |