NOTES ON CODING OF TRANSMISSION STATUS FOR 46 SUB-SAHARAN AFRICAN COUNTRIES

#COVID_SSA - ASSET GHRU/ KING's GLOBAL HEALTH INSTITUTE

Since the beginning of the pandemic, the WHO has been releasing daily worldwide situation reports, which can be viewed and downloaded from their website.

For individual countries these include a judgment of their current status regarding COVID-19 transmission. This is an important characterization, reflecting on the control or otherwise achieved

Up to the 8th April 2020, WHO used the following classification

- **Imported cases only** indicates locations where all cases have been acquired outside the location of reporting.

- **Local transmission** indicates locations where the source of infection is within the reporting location.

- **Community transmission** is evidenced by the inability to relate confirmed cases through chains of transmission for a large number of cases, or by increasing positive tests through sentinel samples (routine systematic testing of respiratory samples from established laboratories).

Up to the 8th April, no sub-Saharan African country was classified as experiencing community transmission

From the 9th April, the WHO applied a revised classification

- **No cases**: Countries/territories/areas with no confirmed cases (not shown in table)

- **Sporadic cases**: Countries/territories/areas with one or more cases, imported or locally detected

- **Clusters of cases**: Countries/territories/areas experiencing cases, clustered in time, geographic location and/or by common exposures

- **Community transmission**: Countries/area/territories experiencing larger outbreaks of local transmission defined through an assessment of factors including, but not limited to: - Large numbers of cases not linkable to transmission chains - Large numbers of cases from sentinel lab surveillance - Multiple unrelated clusters in several areas of the country/territory/area

Our downloadable transmission status data is available as time series data (one row for each country, for each reporting date, and one column for each indicator variable) in SPSS and Stata formats. The file can be merged with our other time series data using the country code variable (CODE). Data has been extracted from 89 consecutive WHO situation reports to date (27th May 2020), and we aim to update this daily.

In this data set we provide the original WHO classifications in two variables for the periods to which they apply, and then have attempted a synthesis of the classifications via a third working variable into a fourth variable with a single combined classification covering the entire period.

The four variables are

*WHO_early*: The original WHO classification up to and including 8th April
WHO_later: The later WHO classification, from 9th April, other than when ‘sporadic cases’ could be assumed (see below)

WHO_laternoMV: a working variable - the WHO_later variable, with any missing values imputed for the period up to 8th April

WHO_combined: the final synthesised classification with each country coded on each date as either

- 0 – no cases
- 1 – imported cases only
- 2 – localised transmission (sporadic cases)
- 3 – localised transmission (clusters of cases)
- 4 – community transmission

To synthesise the two classifications, we applied the following procedures

- We assumed that all countries coded as ‘imported cases only’ under the original classification (WHO_Early) would have been classified as ‘sporadic cases’ under the new classification, and recoded the WHO_later variable accordingly
- We assumed that countries that were coded as ‘sporadic cases’ under the new classification on 9th April would have also been coded in the same way from first confirmed case to 8th April, and recoded the WHO_later variable accordingly
- For countries which were coded as ‘clusters of cases’ on 9th April, and for which, therefore the transition between ‘sporadic cases’ and ‘clusters of cases had not been documented, we assumed this to have occurred at the midpoint between the onset of localised transmission (WHO_early) and the 9th April. WHO_laternoMV includes these imputed values

To generate the final variable with the combined classification (WHO_combined)

- Countries reporting no cases were coded as 0 ‘no cases’
- Countries reporting imported cases only under WHO_early were coded as 1 ‘imported cases only’
- Other countries classified as sporadic cases in WHO_laternoMV were coded as 2 ‘localised transmission (sporadic cases)
- Countries classified with clusters of cases in WHO_laternoMV were coded as 3 ‘localised transmission (clusters of cases)
- Countries classified with community transmission in WHO_laternoMV were coded as 4 ‘community transmission’

With regard to their classifications WHO notes that

To 8th April “Transmission classification is based on WHO analysis of available official data and may be subject to reclassification as additional data become available”.

From 9th April “Transmission classification is based on a process of country/territory/area self-reporting. Classifications are reviewed on a weekly basis”

Across both classifications it is clarified that countries may be experiencing multiple types of transmission concurrently in different parts of the country that are differently affected. Under these
circumstances, the highest applicable classification is allocated. While in the earlier phases of the outbreak the trajectory will be towards increasingly higher intensity of transmission, countries can be downgraded to a lower level should interruption of transmission be demonstrated.