

## **COVID-19 in the Caribbean region: Indications of the gendered nature of the outbreak**

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### **COVID-19 in the Caribbean region: Indications of gendered nature of the outbreak**

As national governments scramble to contain the novel coronavirus disease 2019 (COVID-19), the Caribbean region has been affected later than other regions including Asia, Europe and Africa. As at 21<sup>st</sup> March 2020, twenty-four countries/territories in the Caribbean region have reported a total of 384 confirmed COVID-19 infections, with most cases being imported from European countries and the United States of America. Table 1 shows six countries/territories in the Caribbean that reported the highest numbers of confirmed cases namely: The Dominican Republic (n=112), Guadeloupe (n=56), Trinidad & Tobago (n=49), Martinique (n=37), Cuba (n=21) and Puerto Rico (n=21).

Experts have emphasized the [importance of collecting and analysing sex dis-aggregated data](#) for understanding the risks of and gender effects of the pandemic. Similarly, [the World Health Organization](#) has also highlighted the value of good quality, disaggregated data for identifying and responding to gender inequalities in health, and for allocating resources to improve people's health and well-being. Yet, [few countries](#) or regions of the world currently include sex-aggregated data in regular reports on the COVID-19 outbreak. To fill this gap in knowledge, we share emerging findings of the gendered nature of COVID-19 in the Caribbean region using data collected from a variety of sources: situation reports disseminated by individual countries/ territories, social media reporting from Ministries of Health and websites of regional health institutions such as [PAHO](#).

Analysis of the results show that sex-disaggregated data reported by countries/territories on numbers of confirmed infections and of deaths from COVID-19 are often incomplete (see Table 1). Where data was available (in 173 of 384 confirmed cases), early indications are that 51.4% of cases (i.e. 89 of 173 confirmed infections) occurred in females whilst 48.6% of cases were in males. Country-level reports neither provided detailed information of the severity of the infection nor the recovery rates from COVID-19 for men or women. Only 8 of 10 COVID-19 related deaths reported by countries/territories were disaggregated by sex, with 75% of them (i.e. 6 of 8 deaths) occurring in women while the remaining 25% of occurred in men. However, all 10 reported deaths occurred in individuals over 60 years of age with underlying conditions such as uncontrolled diabetes and hypertension.

These early findings suggesting that COVID-19 infects and kills more women in the Caribbean seemingly contradicts evidence from Europe and China that COVID-19 infects and kills more men. Data from [Europe](#) showed 57% of people infected and 71% of those who died were male. [Evidence from Wuhan Province of China](#) similarly revealed that 51.4% of individuals infected were male although the proportion of deaths among infected cases was higher in men (2.8% in men compared with 1.7% in women). However [the Gansu Province](#) of China later reported a slight predominance of females following the Chinese New Year festival. A possible reason provided for the sex difference between the two provinces of China is that the labour market in Wuhan was dominated by males, thus increasing their likelihood of coming in contact with the source of the outbreak (i.e. the seafood market), and by extension, the numbers of males with the infection in Wuhan. On the other hand, the outbreak reached Gansu two weeks later than Wuhan (i.e. during the Chinese New Year festival) when both sexes took part in the celebrations.

It is unclear why more females have been affected by COVID-19 at this early phase of the outbreak in the Caribbean region. However, it is important to highlight that the Dominican Republic contributed 75.3% of the 89 females infected by COVID-19 in the region. As this male:female ratio might yet change, our findings should be interpreted with caution as data analysis is based on a small sample of 384 confirmed infections and 10 deaths in the early stages of the pandemic in the Caribbean.

**Table 1. Caribbean countries/territories by confirmed cases of and deaths from COVID-19 as of 21<sup>st</sup> March 2020.**

| Country/Territory              | N <sup>o</sup> of confirmed infections |                        |                          |                                   | Imported from                                          | N <sup>o</sup> of deaths |          |          |
|--------------------------------|----------------------------------------|------------------------|--------------------------|-----------------------------------|--------------------------------------------------------|--------------------------|----------|----------|
|                                | Total                                  | N <sup>o</sup> of Male | N <sup>o</sup> of Female | Total with sex data not available |                                                        | Total                    | Male     | Female   |
| Antigua & Barbuda              | 1                                      | 0                      | 1                        | 0                                 | The UK                                                 | 0                        | 0        | 0        |
| Aruba                          | 5                                      | NA                     | NA                       | 5                                 | USA                                                    | 0                        | 0        | 0        |
| The Bahamas                    | 4                                      | NA                     | 1                        | 3                                 | NA                                                     | 0                        | 0        | 0        |
| Barbados                       | 6                                      | 4                      | 2                        | 0                                 | USA, and a cruise ship in the region                   | 0                        | 0        | 0        |
| Bermuda                        | 2                                      | NA                     | NA                       | 2                                 | UK, USA                                                | 0                        | 0        | 0        |
| Cayman Islands                 | 3                                      | 1                      | NA                       | 2                                 | Italy and from the index case                          | 1                        | 1        | 0        |
| Cuba                           | 21                                     | 7                      | 3                        | 11                                | Spain, France, Italy, Canada and from Guyana           | 1                        | 0        | 0        |
| Curacao                        | 3                                      | 1                      | 1                        | 1                                 | The Netherlands, from index case                       | 1                        | 1        | 0        |
| Dominican Republic             | 112                                    | 45                     | 67                       | 0                                 | Italy, Canada, and through local transmissions         | 3                        | 0        | 1        |
| French Guiana                  | 18                                     | 2                      | NA                       | 16                                | France, and a cruise ship in the region                | 0                        | 0        | 0        |
| Guadeloupe                     | 56                                     | 2                      | 3                        | 51                                | France, and a cruise ship in the region                | 1                        | 0        | 1        |
| Guyana                         | 5                                      | 1                      | 1                        | 3                                 | USA, from the index case                               | 1                        | 0        | 1        |
| Haiti                          | 2                                      | NA                     | NA                       | 2                                 | Not available                                          | 0                        |          |          |
| Jamaica                        | 19                                     | 7                      | 4                        | 8                                 | Malaysia, Portugal, Spain, Trinidad & Tobago, UK, USA  | 1                        | 0        | 1        |
| Martinique                     | 37                                     | 1                      | 2                        | 34                                | France, and from a cruise ship in the region           | 0                        | 0        | 1        |
| Montserrat                     | 1                                      | NA                     | NA                       | 1                                 | From UK                                                | 0                        | 0        | 0        |
| Puerto Rico                    | 21                                     | 8                      | 2                        | 11                                | Not available                                          | 1                        | 0        | 1        |
| Saint Barthelemy               | 3                                      | 1                      | -                        | 2                                 | Under investigation                                    | 0                        | 0        | 0        |
| Saint Lucia                    | 2                                      | NA                     | NA                       | 2                                 | Under investigation                                    | 0                        | 0        | 0        |
| Saint Martin                   | 5                                      | 1                      | 1                        | 3                                 | From St. Barthelemy case                               | 0                        | 0        | 0        |
| Saint Vincent & the Grenadines | 1                                      | 0                      | 1                        | 0                                 | From the UK                                            | 0                        | 0        | 0        |
| Sint Maarten                   | 1                                      | 1                      | 0                        | 0                                 | From the UK                                            | 0                        | 0        | 0        |
| Suriname                       | 1                                      | NA                     | NA                       | 1                                 | 1 from The Netherlands                                 | 0                        | 0        | 0        |
| Trinidad & Tobago              | 49                                     | 2                      | 0                        | 47                                | From Switzerland, and from a cruise ship in Guadeloupe | 0                        | 0        | 0        |
| US Virgin Islands              | 6                                      | NA                     | NA                       | 6                                 | 1 from local transmission                              | 0                        | 0        | 0        |
| <b>Grand Total</b>             | <b>384</b>                             | <b>84 (22%)</b>        | <b>89 (23%)</b>          | <b>211 (55%)</b>                  |                                                        | <b>10</b>                | <b>2</b> | <b>6</b> |

\* NA= Not available.

See Appendix for additional sources of gender dis-aggregated data reported at country/territory level

### Authors' contributions

BE, FP and AO jointly conceived the correspondence and contributed equally to its writing. All authors read and approved the final version of the manuscript.

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We have read and understood the BMJ Group policy on declaration of interests and declare no competing interests.

### Ethics approval and consent to participate

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**APPENDIX:** Supplemental data sources for Table 1, organised by country**General**

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**The Bahamas**

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**Curacao**

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**Cayman Islands**

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**Dominican Republic**

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**French Guyana**

- 8) Thébica M-C. Coronavirus : un septième cas en Guyane, le patient revient d'une croisière à bord du "Costa Magica" Guyane: Franceinfo; [updated 14 March 2020]. Available from: <https://la1ere.francetvinfo.fr/guyane/savanes/kourou/coronavirus-septieme-cas-guyane-patient-revient-croisiere-bord-du-costa-magica-810956.html>.
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### **Guadeloupe**

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