This month sees the addition of three new countries to the Tracker (New Caledonia, Grenada and Brunei Darussalam), meaning that at the time of the September upload, we were tracking the availability of sex-disaggregated data for 204 countries. These countries together account for 99.9% of all COVID-19 confirmed cases and reported deaths globally.

The Tracker looks for sex-disaggregated data along the clinical pathway, which includes testing, vaccinations (at least one dose and fully vaccinated), confirmed cases, confirmed cases among healthcare workers, hospitalisations, ICU admissions and deaths. It also collects sex- and age-disaggregated data on cases, deaths and vaccinations.

As of the September 2021 data upload, 44% of countries tracked provided sex-disaggregated data on cases or deaths globally. There has been a steady decline in the proportion of countries reporting this data over the past year.

Across 204 countries, just 48 (24%) have reported on the sex breakdown of individuals receiving COVID-19 vaccinations (at least one dose). 27 (13%) countries report the sex-breakdown of fully vaccinated individuals.

Women and men have received similar numbers of vaccinations (at least one dose). However this varies across countries, ranging from Barbados where 59% of those vaccinated (at least one dose) are women to 20% in Gabon.

However more women than men globally have been fully vaccinated (52%). This varies across countries, from 56% in Lithuania, Latvia and Estonia to 47% in Gambia. This range has shrunk considerably since June, where the percent of individuals fully vaccinated who were women ranged from 46% to 70%.
Global availability of sex-disaggregated data

Globally, as of mid-September, the sex of roughly 6 in 10 cases and almost 7 in 10 deaths from COVID-19 was known (Figures 1, 2 and 3).

However the sex of over 83 million cases and almost 1.3 million deaths remains unknown globally. These gaps can continue to be filled if countries continue to report this data, and those who have not been reporting consistently or at all begin or resume reporting this data.

Figure 1. Number of Global COVID-19 Cases where the Sex is Known, Jan 2021 - Sept 2021

<table>
<thead>
<tr>
<th>Month</th>
<th>Male Cases</th>
<th>Female Cases</th>
<th>Unknown Sex</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 2021</td>
<td>25,976,188</td>
<td>26,487,276</td>
<td>39,424,160</td>
</tr>
<tr>
<td>June 2021</td>
<td>61,374,672</td>
<td>58,211,752</td>
<td>56,412,280</td>
</tr>
<tr>
<td>September 2021</td>
<td>74,158,240</td>
<td>71,355,616</td>
<td>83,319,552</td>
</tr>
</tbody>
</table>

Figure 2. Number of Global COVID-19 Deaths where the Sex is Known, Jan 2021 - Aug 2021

<table>
<thead>
<tr>
<th>Month</th>
<th>Male Deaths</th>
<th>Female Deaths</th>
<th>Unknown Sex</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 2021</td>
<td>777,033</td>
<td>578,239</td>
<td>633,058</td>
</tr>
<tr>
<td>June 2021</td>
<td>1,612,922</td>
<td>1,227,759</td>
<td>971,336</td>
</tr>
<tr>
<td>September 2021</td>
<td>1,924,045</td>
<td>1,474,490</td>
<td>1,299,037</td>
</tr>
</tbody>
</table>
Globally, the number of countries reporting sex-disaggregated data has been declining since August 2020. The Tracker has gradually increased the number of countries being tracked over time. However, looking across a stable sample of 179 countries tracked since September 2020, we see a decline in the proportion of countries reporting either case or death data by sex each month, down from 58% in September 2020 to 46% in September 2021 (Figure 4).

Until recently, it was very unusual for countries to report on any other indicators if they were not reporting on cases or deaths. However four additional countries reported sex-disaggregated data for vaccinations but not on cases or deaths in the past month.

**Figure 4. Proportion of countries reporting either case or death data by sex. Sep 2020 - Sep 2021, across a stable sample of 179 countries tracked since September 2020.**
**Gaps in the availability of nationally-reported sex-disaggregated data on COVID-19**

At the time of this upload, across the 10 countries with the highest number of confirmed cases globally, there are four countries with notable gaps in the availability of sex-disaggregated data (Table 1).

Russia has never reported any sex disaggregated data on cases or deaths. India last updated their sex-disaggregated case data by sex in May 2021 and sex-disaggregated death data in May 2020. We have not been able to locate sex-disaggregated data for either cases or deaths for Turkey since October 2020. We have not been able to obtain sex disaggregated case data for Brazil since December 2020. We have not been able to locate sex disaggregated data for cases or deaths for Iran since March 2020.

Table 1. Availability of Sex-Disaggregated Data within the Past Month amongst Countries with the Highest COVID-19 Caseload as of this Update, Sep 2021

*Date indicates the last month where sex-disaggregated data was located for that country.*

<table>
<thead>
<tr>
<th>Country</th>
<th>Cases</th>
<th>Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>Sept 2021</td>
<td>Sept 2021</td>
</tr>
<tr>
<td>India</td>
<td>May 2021</td>
<td>May 2020</td>
</tr>
<tr>
<td>Brazil</td>
<td>Dec 2020</td>
<td>Sept 2021</td>
</tr>
<tr>
<td>The United Kingdom</td>
<td>Sept 2021</td>
<td>Sept 2021</td>
</tr>
<tr>
<td>Russia</td>
<td>Never</td>
<td>Never</td>
</tr>
<tr>
<td>Turkey</td>
<td>Oct 2020</td>
<td>Oct 2020</td>
</tr>
<tr>
<td>France</td>
<td>Sept 2021</td>
<td>Sept 2021</td>
</tr>
<tr>
<td>Iran</td>
<td>March 2020</td>
<td>March 2020</td>
</tr>
<tr>
<td>Argentina</td>
<td>Reporting</td>
<td>Reporting</td>
</tr>
<tr>
<td>Colombia</td>
<td>Reporting</td>
<td>Reporting</td>
</tr>
</tbody>
</table>

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1 According to the World Health Organization, [https://covid19.who.int/](https://covid19.who.int/)

2 Data for the United Kingdom is reported separately for England, Northern Ireland, Scotland and Wales in the COVID-19 Sex-Disaggregated Data Tracker. All are currently reporting sex-disaggregated data on cases and deaths.
Availability of sex-disaggregated data along the clinical pathway

Countries report sex-disaggregated data inconsistently and incompletely across all key indicators. A notably smaller proportion of countries reported sex-disaggregated data in the past month than have ever reported such data over the course of the pandemic (Figure 5).

In the past month, 42% (86) of the 204 countries being tracked reported sex-disaggregated case data and 31% (64) reported sex-disaggregated death data, reflecting a continued decline from June and May 2021. Fifty-four countries that previously reported case data by sex have not updated their data in over a month and 33 of these countries have not updated their sex-disaggregated data in 2021. Forty-five countries that previously reported death data by sex have not updated their data in over a month and 19 of these countries have not updated sex-disaggregated data in 2021.

Figure 5. Number of Countries Reporting Sex-Disaggregated Data by Indicator, Ever and in the Past Month, across 204 Countries as of September 2021

The full list of countries reporting on each variable and the corresponding data can be found here.
Global gender differences along the COVID-19 clinical pathway

Figure 6 shows the distribution of testing, confirmed cases, hospitalisations, ICU admissions and deaths in men and women across all available global data. This distribution varies along the pathway, with more women than men getting tested for COVID-19, and men and women accounting for similar numbers of vaccinations (at least one dose) and confirmed cases. The gender gap grows further along the pathway, with men accounting for a higher proportion of hospitalisations (54%), ICU admissions (64%) and deaths (57%).

Globally, these proportions have remained fairly stable over time. Proportions vary widely by country, but for individual countries these proportions are also largely consistent through time. Country-data on each of these variables can be explored here.

Figure 6. Gender differences along the COVID-19 clinical pathway, September 2021
Gender differences in COVID-19 vaccination distribution

Globally, 48 countries have reported on the sex breakdown of individuals receiving COVID-19 vaccinations. Nine of those countries had not updated their data in the past month.

Amongst those reporting, women and men have received similar numbers of vaccinations. This was consistent with findings from our earlier updates. However this varies across countries, ranging from Barbados where 59% of vaccinated (at least one dose) are women to Gabon where women comprise 20% of individuals with at least one dose (Figure 7). Just two countries (India and Austria) report vaccinations among non-binary people.

Figure 7. Vaccine Distribution, at least one dose, by Sex, September 2021
Of the 48 countries reporting vaccination data, 27 provide data on individuals who are fully vaccinated, in most cases individuals who have received two doses. More women than men have been fully vaccinated; 52% of fully vaccinated individuals for whom there is sex data were women. The proportion of fully vaccinated individuals who are female varies across these 25 countries, spanning 56% in Lithuania, Latvia and Estonia to 47% in Gambia (Figure 8). This range has shrunk considerably since June, where the percent of individuals fully vaccinated who were women ranged from 46% to 70%.

Figure 8. Vaccine Distribution, fully vaccinated/two doses, by Sex, September 2021

Dose definitions

'At least one dose' refers to individuals who have received at least one dose of a COVID-19 vaccine. This includes individuals who have received one dose of a two dose vaccine as well as individuals who have received a single dose vaccine. Fully vaccinated refers to individuals who have received all doses of required of their vaccine. This includes individuals who have received two doses of a two dose vaccine and individuals who have received a single dose of a single dose vaccine. Fully vaccinated individuals are counted in both 'at least one dose' and 'fully vaccinated'.
Gender differences in COVID-19 vaccination coverage

Vaccination coverage varied between the sexes across countries. Vaccination coverage (at least one dose) (see Figure 9) was higher among women in 31 of 48 countries, and equal in another eight countries. Vaccination coverage for fully vaccinated individuals (see Figure 10) was also higher in women across 22 of the 28 countries reporting data on full vaccination by sex (coverage was nearly equal in the remaining six though slightly higher for men). Given the variation in the age groups vaccinations are being distributed to across countries, we look at coverage for the total population (all age groups) for comparability.

Figure 9. Vaccine Population Coverage, at Least One Dose, by Sex, September 2021
Figure 10. Vaccine Population Coverage, Fully Vaccinated, by Sex, September 2021

Vaccination coverage

- Female (fully vaccinated/2 dose)
- Male (fully vaccinated/2 dose)
Gender differences in vaccinations by age and sex

Twenty-one countries provide data by age and sex which allows for further analysis of gender disparities in vaccination, particularly given the age-specific roll-out of vaccines in many locations. Many of the countries reporting vaccination data by age and sex have attained high levels of coverage and in most cases coverage dose not differ by more than a few percentage points between men and women in particular age groups, though there are some notable exceptions, such as Lithuania and Denmark where men in the oldest age groups have substantially higher coverage of at least one dose, and Chile where in the oldest age group women have much higher coverage of at least one dose (Figure 11). Similarly, full vaccination coverage is similar for men and women in most cases. Lithuania, Slovakia and Liechtenstein all see higher coverage among men than women at the oldest ages, while Wales and Lithuania see higher coverage among women at the younger ages.

Figure 11. Vaccination Coverage, at Least One Dose and fully vaccinated, by Age and Sex as of September
About the COVID-19 Sex-Disaggregated Data Tracker

The COVID-19 Sex-Disaggregated Data Tracker is the world’s largest database of sex-disaggregated data on COVID-19 health outcomes. The Tracker currently collects sex-disaggregated data on vaccinations, testing, confirmed cases (including among health workers), hospitalisations, ICU admissions and deaths, as well as by age for selected indicators. It is also tracking the availability of data disaggregated by other social and demographic characteristics as well as data on pre-existing comorbidities. Data is collected directly from official national sources, including ministry of health websites, national statistics sites, death registers and government social media accounts. The Tracker is updated every month.

About the Sex, Gender and COVID-19 Project

The Sex, Gender and COVID-19 Project is a partnership of Global Health 50/50, the International Center for Research on Women and the African Population and Health Research Center. Together, these partners are investigating the roles sex and gender are playing in the outbreak, building the evidence base of what works to tackle gender disparities in COVID-19 health outcomes, and advocating for effective gender-responsive approaches to COVID-19.

Learn more about sex, gender and COVID-19 and explore the Sex-Disaggregated Data Tracker here: https://globalhealth5050.org/the-sex-gender-and-covid-19-project/

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Sylvia Muyingo, smuyingo@aphrc.org

If you are aware of countries that are reporting data that we have not been able to locate or collect, we would be grateful if you could make us aware by emailing us at info@globalhealth5050.org and sharing a link to where the data can be found.

Engage with us:  @Globalhltth5050  @APHRC  @ICRW