GENDERED HEALTH ANALYSIS COVID-19 IN THE AMERICAS





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TABLE OF CONTENTS

Acknowledgments	V
Summary	VI
Introduction	1
Objectives of the Report	2
Methodological Considerations	2
Conceptual Framework	4
1. COVID-19 and the Situation in Latin America and the Caribbean	7
1.1 Gender Considerations	7
1.2 Social and Economic Impact	8
2. Gender as a Key Determinant of Health during	
the Pandemic	15
2.1 What the Literature Says about Sex/Gender and COVID-19	15
2.2 Epidemiological Situation	16
2.3 Situation of Health Workers	19
2.4 Analysis of Gender Inequalities in Health Care	21
3 Case Studies	22
4 Selected Health Topics	29
5. Conclusions	41
6. Recommendations	44
References	46





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Summary

At the end of 2020, the Region of the Americas became the epicenter of the COVID-19 pandemic, with the highest number of cases and deaths reported worldwide.

Besides the catastrophic effects on health systems and individual health, the negative social and economic impact of the COVID-19 pandemic is thought to be unprecedented. The Pan American Health Organization (PAHO) and its Member States have demonstrated their capacity to face the challenges brought about by the pandemic.

One of the biggest concerns relates to the direct consequences (morbidity and mortality) of the virus on defined populations. The results of measures to mitigate the spread of the virus and the spillover effect on socioeconomic conditions are also of concern.

This complex scenario is compounded by the particular situation of Latin America, the most unequal region on the planet in terms of wealth distribution. This asymmetry is manifested in income inequality and in health and quality-of-life indicators, both among countries and internally.

One aspect that has received little attention throughout the pandemic concerns the gender approach and its implications in this context. Gender is known to be an important determinant of health, but when it comes to analyzing the differential consequences of the pandemic, the gender perspective does not appear in the examination of the pandemic's direct and indirect effects as prominently as it does in other fields of study. Referring to gender equality in health necessarily entails guaranteeing equal opportunities for achieving the best possible standard of health and quality of life, and equal access to health, regardless of socioeconomic status, place of residence, or the cultural group to which a person belongs. But the right to health also includes the freedom to participate in making informed, autonomous decisions related to health and to one's own body.

This report aims to generate a body of knowledge to recognize, understand, and position the issue of gender and health in the context of the current pandemic.

The absence of sex-disaggregated statistics that reflect the life experience of women and girls makes many gender inequalities invisible. In the context of COVID-19, accurate sex-disaggregated information on incidence, hospitalization and diagnostic tests, mortality, occupation, and living conditions is needed to understand the behavior of the disease and its possible effects. This report examines the situation related to these variables of interest.

Against this backdrop, and given the complexity of the subject, understanding the relationship between gender and health during the COVID-19 pandemic in the Region of the Americas requires multiple methodological approaches to build a solid body of knowledge.

This report has used mixed methods, consisting of a documentary review (reports, research, programmatic responses, resolutions and regulatory frameworks,



and health service guidelines) and the epidemiological analysis of information provided by PAHO's line listing system, based on regular reporting by the countries.¹ Case studies were selected from the general data for analysis of demographic, clinical, and health system response information. In addition, systematic reviews were conducted to answer three specific questions relating to gender and health. Finally, several key informants were interviewed (selected according to institutional affiliation, professional profile, and territorial diversity) to gather information based on a qualitative reading of the events.

The report first presents a characterization of the economic impact of COVID-19 from a gender perspective and its impact on poverty, inequality, the labor market, income gaps, women's allocation of care time, and social protection policy responses to mitigate the effects of the pandemic.

Based on the analysis of gender inequalities in health care and associated factors, we can see that the COVID-19 statistics pose difficulties for estimating the magnitude of the disease and its causes and consequences, both in the Region and in the rest of the world. Records are also contradictory regarding the incidence of COVID-19 by sex. In some countries, such as Brazil, Chile, Colombia, Ecuador, and Peru, the incidence of COVID-19 cases is higher in men; in others, such as Mexico, it is more frequent in certain groups of women; and sometimes, as in Argentina, there are similar rates in both sexes. Because it is an infectious disease, variability between countries in the frequency of cases reported by sex may indicate an underreporting of cases related to the process of information gathering and processing, or even to problems in the diagnostic process.

It has not been possible to find systematic information from each country on the evolution of differences according to sex and gender inequality related to clinical presentation (signs and symptoms) in the course of COVID-19, or on the concomitant circumstances that aggravate COVID-19; nor about the diagnostic and therapeutic services received according to sex or its relationship with the deaths that occurred.

The variance analysis by sex in the case studies presented here reveals gender inequalities that manifest themselves during the course of the disease and in health care. It aims to provide an overview of COVID-19 in the three selected case studies (Argentina, Brazil, and Mexico), whose institutional records provide sufficient information from which to examine the situation of COVID-19 from the perspective of the interaction between sex and gender.

The situation of health workers is particularly relevant when considering the high proportion of women represented in this labor market.

Some selected health problems show the differential impact on access to health services, incidence of mental health problems, gender-based violence in the home, the population with HIV and sexually transmitted infections (STIs), an increase in discriminatory practices against the LGBTQ+ community,



and restricted access to services for people with disabilities during the pandemic.

The systematic reviews summarize the best available evidence from Latin America and the Caribbean on three specific questions: (Q1) gender and its association with the risk of SARS-CoV-2 infection; (Q2) gender and COVID-19 prognosis; and (Q3) the potential moderating role of gender on the effectiveness of interventions to prevent or treat the disease. For this component, a highly sensitive search was performed in different publication databases and the reference lists of the studies selected in late December 2020. The main findings are described in these pages. For Q1, four cross-sectional analytical studies were identified. which showed a positive and significant association between male gender and risk of infection. For Q2, 26 cohort studies were included, generally retrospective, based mainly on the national registries of Brazil and Mexico. In most cases, a moderate magnitude association (ORa≈1.5) was observed between male gender and an increased risk of death, hospitalization, intensive care unit (ICU) admission, and need for invasive mechanical ventilation (IMV). For Q3, we did not identify any eligible studies to answer this question. Research in Latin America and the Caribbean confirms international findings of a higher likelihood of infection and worsening disease in men with respect to SARS-CoV-2. The explanation for both associations is not yet clear.

As part of the characterization of the measures taken by the health sector and others to confront

the pandemic, key actors were identified and interviewed in order to learn about the main difficulties and challenges faced by countries in the Region in terms of including and mainstreaming a gender perspective in the crisis response.

These actors include international organizations, feminist movements, and government officials who have an impact on both the positioning and monitoring of gender issues on the public agenda. All agreed on the importance of women's participation in decision-making spaces and in the organization and leadership of community responses.

The qualitative analysis of the interviews reflects a diagnostic assessment of the measures taken by the countries, both to guarantee access to essential health services and to respond to the economic crisis, increase in violence, and mental health impacts caused by social distancing, with a view to recognizing successes and shortcomings in terms of gender mainstreaming in the responses. The need for countries to include an intersectional perspective in their responses, taking account of preexisting inequalities in terms of social class, ethnicity, nationality, and sexual diversity, among other social determinants, has been assessed in order to design more effective and relevant solutions for different situations.

The report closes with several conclusions and recommendations that address different lines of action in these areas:

• **Data and evidence:** It is recommended to integrate demographic and social variables that make it possible to characterize the information through binary stratification according to sex and to analyze it according to different types of intersectionality. Studies investigating the reasons for the differential behavior of the pandemic according to gender should also be encouraged, as well as the analysis of biases

linked to the entire diagnosis-care process and possible associated biases.

• **Responses in plans and policies:** There is a clear need to broaden the reading of the problems associated with the current pandemic and to mainstream gender in all stages of the formulation of policies, plans, and strategies.





Introduction

At the end of 2020, the Region of the Americas became the epicenter of the COVID-19 pandemic, with the highest number of cases and deaths reported worldwide. The social and economic damage from the COVID-19 pandemic in the short, medium, and long term, and at the local, national, and global levels, is thought to be unprecedented. However, this situation presents an opportunity to improve the capacity of countries to respond to a health crisis (1). PAHO and its Member States have demonstrated the capacity to meet the challenges that the pandemic has brought about.

One of the biggest concerns relates to the direct consequences (morbidity and mortality) of the virus on defined populations, but the spillover effect from the social and economic implications of measures to mitigate the spread of the virus is also of concern. Undoubtedly, the impact of the pandemic varies according to the quality of policy responses, the responses of health systems and services, universality of access, quality of care, and the effectiveness of interventions. This complex scenario is compounded by the particular situation of Latin America, the most unequal region on the planet in terms of wealth distribution. This asymmetry is manifested in income inequality and in health and quality of life indicators, both among countries and internally.

One aspect that has received little attention throughout the pandemic concerns the gender approach and its implications in this context. Gender is known to be a structural determinant of health (2), but when it comes to analyzing the differential impacts of the pandemic, the gender perspective does not appear in the examination of the pandemic's direct and indirect effects as prominently as it does in other fields of study.

The COVID-19 pandemic has caused profound changes in the social dynamics of the Region, and these changes are closely related to the behavior of the virus and the response capacity of the countries. In broad terms, there is a multiplier effect on the preexisting economic, social, and health inequities in Latin America and the Caribbean. Although the concepts of sex and gender are related, they have different dimensions. Sex is linked to the biological dimension, while gender is a psychosocial aspect linked to how identities are configured and power relations between men and women are established. Gender becomes key when recognizing and analyzing the differential effects of the pandemic on men and women, according to the issues addressed. All this interacts with other determinants of health (intersectionality) that are intertwined in the various political and territorial contexts throughout the life course to generate very dissimilar living conditions, which will determine the differential effects of the pandemic.

This document is an initiative of PAHO and a group of professional experts from the Region and from other backgrounds. It seeks to investigate the relationships between the gender dimension and other derivations of health responses and consequences in their different socioeconomic contexts. The paucity of countries reporting information by sex for both epidemiological and clinical parameters limits the possibility of identifying gender inequalities in the context of COVID-19, as well as intersectional analyses with other dimensions, such as socioeconomic status and the exposure of certain groups to ethnic discrimination.

The sex and gender (binary) perspective adopted in the study, especially in terms of quantitative data, is relevant because of its focus on biological sex in terms of epidemiological impact, and gender in terms of the other relationships between gender and the effects of COVID-19.

Objectives of the Report

- Deepen knowledge on gender inequalities in health in the face of the COVID-19 pandemic in the Americas.
- Present recommendations for improving national responses from a gender equality approach.

Methodological Considerations

Given the importance and complexity of analyzing the gender perspective in health in the pandemic, this report includes a combination of methodological and research approaches, drawing on available data and research, and generating new information and research based on primary sources.

The following techniques and sources of information were used:

Document review. We reexamined administrative records (documents, reports) and evaluated responses to the pandemic including resolutions, programs, regulations, guidelines, and policies developed by the countries from a gender perspective, with access to existing monitoring systems. The indirect or syndemic consequences of the pandemic were analyzed in relation to the circumstances of men and women in aspects related to productive life, labor market participation, educational situation, emerging problems, and care policies. The available documentary base has been used as a scientific reference to develop the contents.

Epidemiological analysis. The regional data-particularly on infections, deaths, and most affected groups—were analyzed based on PAHO's line listing, using population-based information from the different countries disaggregated by sex, age, and selected populations (health personnel). Argentina, Brazil, and Mexico were selected for further analysis of country-specific data.² The scope of this study was determined by the diversity and variability of the information collected in each country. Besides sex, age, number of cases, and deaths from COVID-19. information on the clinical expression of the disease (signs and symptoms) has been made available in Brazil. In Argentina, information has been available on the typology of COVID-19 cases (confirmed and suspected) and the time elapsed between the onset of symptoms and diagnosis, and between diagnosis and death. Finally, in Mexico, the information available covers the typology of COVID-19 cases (confirmed and suspected), the diagnosis of pneumonia, comorbidity, and risk factors (smoking, high-risk contacts with diagnosed SARS-CoV-2 cases). In all three countries, diagnostic and therapeutic efforts in COVID-19 health care have served as a proxy for gender bias in care: hospitalization, IMV, and ICU admission. Basic descriptive studies and bivariate and trivariate stratified analyses have been performed, with comparison of proportions by sex (X2) and comparison

² In the case of Brazil, the analysis was developed through two sources of information from the Ministry of Health: The Influenza Syndrome Surveillance System for mild to moderate suspected cases of COVID-19, and the Severe Acute Respiratory Syndrome Surveillance System. For Argentina, the case registry of the National Department of Epidemiology and Health Situation Analysis (Dirección Nacional de Epidemiología y Análisis de Situación de Salud) was used. In the case of Mexico, the database prepared by the Ministry of Health and the Department of Epidemiology was consulted. of means (Student's t-test). A sex-based analysis was performed to compare the distribution of the variables of interest between men and women. Given the difference in the magnitude of COVID-19 cases and deaths by sex, the stratified analyses also include a column analysis of the variables of interest in both sexes before the comparison between men and women.

Systematic review. In keeping with international standards of methodological quality and reporting (PRISMA), a very sensitive search of primary studies published in Scielo, LitCovid, LOVE (Epistemonikos), COVID-19+ (McMaster PLUS), COVID-evidence, EPPI Centre, the Virtual Health Library (VHL) of PAHO, The Global Research Database, and Google Scholar, as well as in the reference lists of the selected studies, was carried out until 16 December 2020. The search yielded 1.481 records, with the sum of all sources used. Titles and abstracts were reviewed to eliminate duplicates, and publications were discarded for subject matter or design reasons. This provided a list of potentially eligible articles for each objective of the review. We then examined the full texts of this list and made a final selection of the studies that met the inclusion criteria of the review. We selected only analytical studies that had adjusted results and observed the minimum requirements for comparability and quality of analysis. Where relevant and possible, we prepared a narrative summary and performed meta-analysis.

Interviews with key informants. Key actors were identified in the design, implementation, and monitoring of gender-sensitive public policies in the Latin American and Caribbean Region. We contacted officials from the public sector and international and regional organizations, representatives of civil society organizations, and academics. The interviews, conducted virtually, were recorded and transcribed for later coding and analysis. The coding was done using Atlas ti 9.0 software, and three topics of interest were raised: the role of women in responses to the pandemic, gender mainstreaming in the measures, and the intersectional approach in analysis and decisions.



Conceptual Framework

The consequences of crises are never gender-neutral, and COVID-19 is no exception. This report reveals some of the differential effects of COVID-19 on men and women throughout the life course, in different social, cultural, economic, and geographical contexts, to provide a gender-sensitive reading of the regional state of affairs.

As we move through the pandemic, many uncertainties remain due to the lack of knowledge, information, and evidence related to the direct effects of the virus and those specific to the syndemic (3). The latter refer to how conditions cluster within social contexts, according to deep-seated patterns of inequality on which COVID-19 has had an amplifying effect. The aggregation of diseases resulting from the syndemic phenomenon in a context of social and economic disparity exacerbates the adverse effects of each disease separately. For this reason, COVID-19 is not only a pandemic but also a syndemic, and therefore requires comprehensive and diversified response approaches.

COVID-19 has generated a phenomenon of unforeseen consequences on a global scale. Measures to curb its spread keep population groups in states of variable confinement and, with this, have reconfigured work spaces and models. About 94% of the world's workers live in countries with some type of workplace restriction (1). The global economy is expected to contract by 5% in 2023.

The closure of the educational systems caused a real phenomenon of "forced migration" of children. It is

estimated that some 1.8 billion children and adolescents have stopped attending school in person, which has had a greater impact on low-income households. The consequences on the health of children and adolescents are related to neurocognitive, emotional, and developmental issues, and to the emergence of associated mental health problems resulting from these changes in social dynamics.

The effects of the pandemic have been widespread and, for women and girls, conditions have worsened across the board. Women are losing their livelihoods more rapidly because they work in the most hard-hit economic sectors. According to a report by the United Nations Entity for Gender Equality and the Empowerment of Women (UN Women) and the United Nations Development Programme (UNDP), some 435 million women and girls live on less than US\$ 1.90 per day, including 47 million people who have fallen into poverty because of COVID-19 (2).

In the Americas, SARS-CoV-2 hit every country in 2020, infecting over 35 million people and causing some 850,000 deaths. It is the hardest-hit (Americas) in a region with marked economic and health inequalities (1). These figures obviously increased over time, and today the Region remains the most affected in terms of reported cases and deaths.

The absence of sex-disaggregated statistics that reflect the life experience of women and girls makes many gender inequalities invisible. In the context of COVID-19, accurate sex-disaggregated information on incidence, hospitalization and diagnostic tests, mortality, occupation, and living conditions is needed to understand the behavior of the disease



and its possible effects. This report examines the situation relative to these variables of interest. It is not only essential to analyze the available information, but it is also necessary to identify the existing information gaps in order to propose strategies to broaden the understanding of the problems and guide strategic decision-making, with the aim of mitigating the consequences of the pandemic from a gender equality perspective. To fully understand why disparities exist and to be able to address their root causes, we need to explore how cultural values, expectations, and beliefs are associated with the construction of gender identity and gender relations. The conceptual framework suggests the need to adopt an intersectional approach that reveals how different social and structural determinants, as well as identity ascriptions, combine to generate different forms of discrimination and inequality in certain population groups.

The **life course approach** is also necessary (4, 5), which in terms of consistent health policies must be based on three essential attributes: (1) early action; (2) linkage to critical and sensitive transitions and periods of life; and (3) society-wide understanding and implementation.

This report is based on the logic set out in Figure 1.



Figure 1. Gender perspective in the characterization of the COVID-19 pandemic

The emergency caused by COVID-19 can be explained by different hypotheses. One of them alludes to a sort of disruption of the ecological balance in the relationship between the virus and its usual animal carriers, and the spread to humans. From then on, the territorial expansion of the pandemic was a derivation of the epidemiological peculiarity of the causal agent. In each context, the relationship between the various determinants of health (including gender) expresses the differential behavior of the pandemic in each territory and influences the direct and indirect effects. Finally, response modalities have been conditioned by the interrelationship of political and institutional factors, in addition to the capacities of the countries.

Referring to gender equality in health necessarily entails guaranteeing equal opportunities for achieving the best possible level in terms of health and quality of life, and equal access to health, regardless of socioeconomic status, place of residence, or the cultural group to which a person belongs. But the right to health also includes the freedom to participate and autonomy in making informed decisions related to health and to one's own body. It is well known that these conditions are not fully in place in the Region and. worryingly, more their precariousness has been exacerbated by the current pandemic.





L COVID-19 AND THE SITUATION IN LATIN AMERICA AND THE CARIBBEAN

1.1 GENDER CONSIDERATIONS

An overview of the multidimensional effects of the pandemic and the effects of COVID-19, from a gender perspective in Latin America and the Caribbean, starts with acknowledging that the impact and depth of the crisis are different for women and men. With this pandemic, it is vitally important to recognize the differential effects as an input for public policy decision-making. The impact on health is also the combined result of sex-differentiated (biologically determined) effects and gender determinants, for which a gender analysis is required.

The gender approach is essential to highlighting that women, men, and people with other gender identities have differential needs, perceptions, expectations, and life situations based on a social order built on a hierarchical and unequal cis-hetero-normative matrix, linked to the symbolic constructions of sexual differences and an institutionalized system of social practices.

This system defines traditional forms of masculinity and femininity, which reflect a socially and culturally accepted "binary ideal" as the only model of emotional and sexual bonds underpinning intimate, family, and social relationships, generating exclusion and discrimination. The gender approach is enriched with an approach to sexual diversity that conceptualizes gender identity as a construction process depends on that each person's self-perception and not on social categorization based on anatomical-physiological characteristics.

As noted in General Recommendation No. 28 of the Committee on the Elimination of All Forms of Discrimination against Women (CEDAW) (6), the gender and diversity perspective is based on a conception of gender that encompasses the socially constructed identities, roles, and attributes of women and men and the social and cultural meaning that society attributes to these differences. This makes gender an indispensable analytical, ethical, and political category, since, as noted at the 1995 Fourth World Conference on Women in Beijing, there are no gender-neutral public policies; they all have different effects and impacts on the experiences of women, men, and people with other sex or gender identities, according to their circumstances.

According to UN Women, "Gender inequalities and discrimination filter through every issue, whether a new pandemic or longstanding conflicts, deep-seated disparities in income or a lack of political voice." And the COVID-19 pandemic, specifically, has highlighted "the many broken systems in our world, where those who are most vulnerable—whether through age, poverty, race and/or gender—become exponentially more so" (7).

A diagnostic assessment based on integrated approaches makes it possible to identify and understand the differential situations experienced by women, men, and people with other gender identities during the COVID-19 pandemic. It also allows us to analyze how health measures and the economic crisis resulting from the pandemic have affected the lives of women, men, and LGBTQ+ people. A review of the records documenting the pandemic response measures taken by the different countries reveals difficulties in accessing information compiled from a gender equality perspective. As noted by WHO, "new data on COVID-19 are also generally incomplete, unreliable, and rarely disaggregated by sex and age" (8). Data from UN Women indicate that the absence of vital statistics on the lives of women, girls, and LGBTQ+ people means that gender inequalities remain invisible, limiting, for example, the monitoring of the SDGs: "Only 12 of the 53 gender-specific indicators have data regularly produced. And 6 of the 17 goals lack gender-specific indicators altogether" (9).

1.2 SOCIAL AND ECONOMIC IMPACT

The consequences of COVID-19 have meant a decrease in women's autonomy. The concept of autonomy, defined by the Gender Equality Observatory of the Economic Commission for Latin America and the Caribbean (ECLAC) as "people's capacity to take free and informed decisions about their lives, enabling them to be and act in accordance with their own aspirations and desires, given a historical context that makes those possible," (10) is a necessary condition for women to act as full subjects of development. The ECLAC Gender Equality Observatory states: "To achieve a greater autonomy, different issues must be addressed, including freeing women from the exclusive responsibility of reproductive tasks and care, which implies ensuring the exercise of reproductive rights; ending gender violence and taking all necessary actions for women to participate in decision-making in equal conditions" (10). Based on this definition, three types of autonomy are identified: physical autonomy, economic autonomy, and autonomy in decision-making:

Physical autonomy: addresses social issues related to women's reproductive rights and gender-based violence.

Economic autonomy: is explained as women's capacity to generate income and personal financial resources, based on access to paid work under conditions of equality with men. It takes account of time use, and of women's contribution to the economy.

Decision-making autonomy: refers to women's involvement in decision-making at various levels of the different branches of government, and as reflected in measures designed to promote women's full participation under conditions of equality.

As seen throughout this report, these types of autonomy are affected to some extent in relation to access to health. With physical autonomy, the impact is expressed in the inability to access services due to the pandemic. This may be attributable to mitigation measures and to a lack of continuity in programs and service provision. Economic autonomy is influenced by the reduction of resources as a result of workplace shutdowns and the increasing poverty that keeps people from having sufficient economic resources to meet the costs of health care. As for autonomy in health-related decision-making processes, it may be hindered by diminished spaces for participation because of confinement measures.

A comprehensive analysis of economic and social impacts calls for a framework such as the one described above. The pandemic has affected all forms of autonomy, as well as the necessary conditions for their exercise, around the world and in the countries of the Latin American and Caribbean Region.

POVERTY AND GENDER INEQUALITIES

According to ECLAC, despite the efforts that countries have been making since the 2000s, the persistence of poverty continues to be one of the critical obstacles to meeting the 2030 Agenda and achieving sustainable and inclusive development (11).

Poverty is intertwined with other multiple factors and gives rise to situations of vulnerability, social risk, and social inequality. Gender and ethnic/racial inequalities, as well as inequalities related to territorial status or geography and to the different stages of people's life course, are some of the structural factors underlying this disparity. It is reflected in gaps in access to resources, health, education, decent work, and social protection, i.e., gaps that prevent access to and the exercise of human, social, and cultural rights.

According to data from ECLAC's Gender Equality Observatory, in 2019 (10), on average, 29.4% of women in Latin America and the Caribbean had no income of their own, compared to 10.7% of men. This means that almost one-third of women in the Region are subordinated to other income earners—generally men—for their subsistence, which makes them vulnerable and dependent, and curtails their economic autonomy.

Most agencies of the United Nations system concur in warning that the pandemic—which is still ongoing—and the associated confinement measures have had significant social and economic effects on the well-being of individuals and families in Latin America and the Caribbean and have most severely affected the poorest and most vulnerable sectors, including women. This is also partly explained by the fact that pandemic containment measures had more profound effects on the informal labor market and in sectors where women workers are concentrated, including social services, wholesale and retail trade, business services, and transportation, warehousing, and communications. These four sectors account for 78% of the Region's employed women, and women represent over 60% of the workforce in the hotel and food service sectors (9). The situation of women is not homogeneous and it is aggravated by other factors; consider, for example, the case of rural Indigenous women.

According to ECLAC Special Report No. 3, The Social Challenge in Times of COVID-19 (12) (May 2020), poverty and extreme poverty are expected to increase in all countries of the Region. Consistent with this increase, inequality would also be exacerbated in all the countries of the Region (See Table 1).

Table 1. Projected change in the Gini Index, without considering the effect of measures announced to mitigate the impact of COVID-19, in 17 Latin American countries, 2020

Between 0.5% and 1.4%	Guatemala Honduras Panama Dominican Republic
Between 1.5% and 2.9%	Bolivia (Plurinational State of) Chile Colombia Costa Rica El Salvador Nicaragua Peru
3.0% or more	Argentina Brazil Ecuador Mexico Uruguay

Notes: based on data from the Economic Commission for Latin America and the Caribbean. Special Report No. 3 above The Social Challenge in Times of COVID-19. Santiago, Chile: ECLAC; 2020.

All this will take place in a context in which, according to the World Bank, the economic slowdown intensified by the pandemic—is likely to hit the poorest especially hard, leading to less inclusive growth, in a clear reversal of earlier trends (13).

The World Health Organization (WHO) has said: "Poverty is the single largest determinant of health, and ill health is an obstacle to social and economic development. Poorer people live shorter lives and have poorer health than affluent people. This disparity has drawn attention to the remarkable sensitivity of health to the social environment." The COVID-19 pandemic has brought about a progressive deterioration in living conditions and has led to increasing levels of poverty and exclusion, particularly in Latin America and the Caribbean.

WOMEN'S EMPLOYMENT STATUS AND INCOME GAPS

Addressing this dimension requires a general characterization of the effects of the pandemic on economic activity, the labor market, and the incomes of individuals and families. From there, we can identify and measure these effects on the income and employment status of women and other vulnerable groups. This dimension is related to the concept of economic autonomy.

The regional unemployment rate is expected to increase by 5.4 percentage points to 13.5% (44.1 million people). This is about 18 million more people compared to 2019 figures (14). Informal labor, which is already prevalent in the Region, is also expected to increase. ECLAC and the International Labour Organization (ILO) indicate that the percentage of informal workers among the employed in 16 countries in Latin America and the Caribbean reached 51% in 2019. The tourism sector, one of the most hard-hit by the pandemic in Latin America and the Caribbean, has the highest proportion of women in the labor force, with an average near 70% (15).

The gender gap was already a persistent phenomenon in Latin America and the Caribbean before the pandemic. According to ECLAC and the ILO, before the COVID-19 emergency, women earned on average 17% (15) less than men. ECLAC points out that gender inequalities cut across the social structure, since the wage gap is seen regardless of the stratum to which men and women belong: women are always paid less. In the low-, middle-, and high-income strata, the remuneration of women's salaried work is equivalent to 75%, 80%, and 70%, respectively, in relation to the remuneration of men's salaried work (16).

Labor informality and instability are also widespread in Latin American and the Caribbean. In 2018, only 47.4% of employed persons contributed to the pension system, and over 20% were living in poverty. Women, young people, Indigenous people, people of African descent, and migrants are overrepresented among informal workers (12).

The reduction in employment in proportional terms was also greater for women than for men (18.1% compared to 15.1%, respectively), perhaps due to their increased presence in sectors strongly affected by the health crisis (domestic service, restaurants and hotels, commerce). The destruction of salaried domestic jobs (mainly for women), with households as employers, was the occupational category that showed the largest relative decrease in the last two years (15). (See Figure 2).



Figure 2. Year-on-year change (in percentage points) in the number of employed and unemployed persons in the labor force, by sex, Latin America and the Caribbean, second quarter of 2020



Notes: preliminary data for the following 12 countries: Argentina, Bolivia (Plurinational State of), Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, Mexico, Paraguay, Peru, and Uruguay.

Source: Economic Commission for Latin America and the Caribbean and International Labour Organization. Employment trends in an unprecedented crisis: policy challenges. Employment situation in Latin America and the Caribbean No. 23 (LC/TS.2020/128). Santiago, Chile: ECLAC; 2020.

Educational level also seems to have had an impact on the situation, since the loss of employment in the Region was generally greater for people with lower levels of formal schooling than for those with higher education; this could be explained, in part, by the strong association between low educational level and labor informality. People with a higher level of education are involved in activities that have faced less contraction, and they can more easily adapt to teleworking. "This inequality of access to the telework option has serious distributive consequences, since the ability to perform this type of work is closely correlated with internet access, which in turn is determined by the level of household income" (17).

WOMEN'S CARE TASKS AND TIME USES

Conditions before the pandemic already reflected the imbalance in the equation between reproductive and productive work between men and women, to the detriment of the latter. Time use surveys showed that women were spending twice and sometimes three times as many hours on caregiving as men. Caregiving tasks, which disproportionately burden women and often limit their participation in labor markets, have caused them to experience the pandemic differently and possibly worse than men (18). This is one of the key factors limiting women's progress.

According to the ILO, "Women are responsible for 80 per cent of domestic tasks, which limits their effective labour force participation" (17). The ILO has also noted that "Throughout the world, women are the main paid and unpaid caregivers, as are girls in socially disadvantaged groups." UN Women asserts that "women's unpaid work often includes the cost of care that sustains families, supports economies, and fills gaps in social services, but is rarely officially recognized as work." In turn, "the pandemic has highlighted the fact that unpaid work has actually been a social safety net for the world and has made it possible for others to go out and earn a productive income, while hindering growth opportunities and employment opportunities for those women who bear the burden of care" (19).



Figure 3. Time spent on paid and unpaid work, by sex, Latin America

Source: Gender Equality Observatory, Economic Commission for Latin America and the Caribbean. Autonomies [Internet]. Santiago, Chile: ECLAC; n.d.

In the run-up to the health crisis, women spent a third of their time on unpaid domestic and care work. Paid domestic work represents only 11.4% of working women, and 72.8% of all people employed in the health sector are women. The data indicate that in the Region there is an association between care, poverty, inequality, instability, and exclusion, which the pandemic crisis has amplified (20).

SOCIAL PROTECTION POLICIES

As described above, the COVID-19 pandemic made it harder for the population in general, and for the poor and vulnerable sectors of the population in particular, to meet their basic needs. This occurred in a region where investment levels in social protection policies for women and other vulnerable populations increased from the 2000s onwards, but then stagnated and remained low compared to developed countries (11).

Women have been more negatively affected by the pandemic given the deterioration of their living conditions due to access barriers to the labor market, the increase in unpaid informal work in relation to men, the fact that they receive lower wages for the same work, the increased burden of caregiving tasks, restrictions caused by pandemic mitigation measures (confinement, social distancing), and domestic violence. All these circumstances obviously affect the levels of health achieved. The United Nations Development Programme's (UNDP) COVID-19 Global Gender Response Tracker has documented nearly 177 government initiatives in 29 countries aimed at addressing violence against women during the pandemic. Most focus on strengthening care services (64%) and carrying out awareness campaigns (23%).

Confinement measures to prevent or reduce coronavirus infections led to the shutdown of economic activities, with negative effects on the incomes of large segments of the population. The hardest hit were those whose income comes from the informal labor market (street vending, domestic service, self-employed activities, etc.), with no social security coverage. Governments had to implement measures to guarantee some form of income, food security, and access to basic services for a large swath of the population (Table 2).

Table 2. Social protection measures to address COVID-19, Latin America and the Caribbean



Notes: *cash transfers refer to transfers for individuals and households in situations of poverty and vulnerability and include informal workers.

Source: Economic Commission for Latin America and the Caribbean. Special Report COVID-19 No. 3, The Social Challenge in Times of COVID-19. Santiago, Chile: ECLAC; 2020.

The speed and magnitude of the social protection responses required by the pandemic undoubtedly created tensions and revealed dissimilar situations among the countries. This was apparent in terms of the management of information systems and interoperability mechanisms needed to organize the rollout of these social assistance measures during the COVID-19 crisis.

Figure 4. Social protection measures for the population living in poverty and vulnerable to the effects of COVID-19, by type of measure, 29 Latin American and Caribbean countries, as of 24 April 2020 (number of measures and percentage distribution)



Notes: the countries considered are Antigua and Barbuda, Argentina, Bahamas, Barbados, Belize, Bolivia (Plurinational State of), Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Panama, Paraguay, Peru, Saint Lucia, Saint Vincent and the Grenadines, Trinidad and Tobago, Uruguay, and Venezuela (Bolivarian Republic of).

Source: adapted from Economic Commission for Latin America and the Caribbean. Special Report No. 1 on COVID-19, Latin America and the Caribbean and the COVID-19 pandemic: Economic and social effects. Santiago, Chile: ECLAC; 2020.

For low-income populations, although the governments of the Region implemented support measures, the duration of the pandemic and the magnitude of the ensuing crisis made this aid insufficient. This led many people to resume their informal activities as part of a gradual opening or despite the restrictions still in place (Figure 4 above).

The COVID-19 Global Gender Response Tracker monitors government responses to the pandemic throughout the world and highlights those that have included a gender perspective. The tool captures two types of government responses: women's participation in COVID-19 working groups and national policy measures adopted by governments. From there, it analyzes which of the policy measures address women's economic and social security, including unpaid care work, the labor market, and violence against women. The tracker can provide guidance for policymakers and evidence for advocates to ensure a gender-sensitive policy response to COVID-19. The information provided includes the number of countries and territories reporting at least one gender-sensitive indicator by group according to income levels, gender-sensitive measures based on the Human Development Index (HDI), fragility status, etc.





2 GENDER AS A KEY DETERMINANT OF HEALTH DURING THE PANDEMIC

2.1 WHAT THE LITERATURE SAYS ABOUT SEX/GENDER AND COVID-19

The scientific literature and ongoing protocols as of November 2020 provided a wealth of information but were unclear as to the true association between sex or other gender factors and the risk of becoming infected or dying from SARS-CoV-2 in Latin America and the Caribbean.

Therefore, we systematically reviewed analytical studies with three research questions focused on understanding the relationship between sex or other gender factors and the risk of becoming infected, getting sick, or dying from SARS-CoV-2 specific to the Region, and on having more robust materials to make recommendations based on better evidence. We first conducted an exploratory review of the type of studies available. Based on the results, we produced high quality evidence through a systematic review of the literature, including meta-analysis, which allowed us to draw valid conclusions to guide decision-making in programs and policies, and to inform the remaining gaps in research.

The systematic review focused on the following goals: (1) to evaluate the association between sex or other gender factors, and the risk of COVID-19

Figure 5. Risk of death from COVID-19, by sex

infection; (2) to determine the likelihood of serious illness or death; and (3) to assess whether sex or other gender factors moderate the effect of interventions for the prevention and treatment of COVID-19 in Latin America and the Caribbean.

Regarding the *risk of* SARS-CoV-2 *infection*, four studies (21-24) were quite heterogeneous, showing statistically significant results and indicating a higher risk in men.

To assess the prognosis of SARS-CoV-2, we included 26 cohort studies, based mainly on the national registries of Mexico and Brazil; most detected an association of moderate magnitude with an adjusted odds ratio around 1.5 ($ORa \approx 1.5$) between male gender and an increased risk of death (Figure 5), hospitalization (Figure 6), intensive care unit (ICU) admission, and need for IMV. When studies were carried out using the same national registry, only one of them was selected. The combined reported results of the studies (expressed in ORa and confidence intervals), represented by the diamonds in Figures 5 and 6, are shown below as an example.

ORa	95% CI	n
1.29	0.79-2.09	785
1.28	1.24-1.33	69,334
0.55	0.16-0.83	254
1.55	1.35-1.76	9,807
1.32	1.10-1.60	80,180
	1.29 1.28 0.55 1.55	1.290.79-2.091.281.24-1.330.550.16-0.831.551.35-1.76



^aAraujo M, Ossandón P, Abarca AM, Menjiba AM, Muñoz AM. [Prognosis of patients with COVID-19 admitted to a tertiary center in Chile: A cohort study]. Medwave. 17 November 2020; 20(10):e8066. doi: 10.5867/medwave.2020.10.8066. Available at: https://www.medwave.cl/link.cgi/Medwave/Estudios/Investigacion/8066.act.

^bDe Souza FSH, Hojo-Souza NS, Batista BD de O, Silva CM da, Guidoni DL. On the Analysis of Mortality Risk Factors for Hospitalized COVID-19 Patients: a Data-driven Study Using the Major Brazilian Database. medRxiv. 25 September 2020; 2020.09.24.20200766. doi: https://doi.org/10.1101/2020.09.24.20200766. Available at: https://www.medrxiv.org/content/10.1101/2020.09.24.20200766v1.full.pdf.

Notes: measure of effect: adjusted odds ratio (ORa) 1.32 (95% Cl 1.10-1.60); heterogeneity analysis: Q 24.61 Sig. 0.000 I² 74.3%.

A sensitivity analysis was performed for which the study by Heberto et al. (25) was excluded, considering the possibility that an error had occurred

HOSPITALIZATION (25)

Six measures of effect were collected for this outcome, four expressed as ORa (21, 26-28) and two by adjusted relative risk (RRa) (29, 30). All but one

Figure 6. Risk of hospitalization for COVID-19, by sex

	ORa	95% CI	n
Giannouchos (21)	1.75	1.62-1.90	89,756
Soares (27)	1.43	1.25-1.65	10,713
Zuñiga (28)	1.72	1.21-2.44	877
Overall (random- effects model)	1.62	1.38-1.90	101,346

Women Notes: measure of effect: ORa 1.62 (95% CI 1.38-1.90); heterogeneity analysis: Q 6.33 Sig. 0.04 I² 68.4%.

ICU ADMISSION

Three measures of effect were obtained (31-33) and all have shown increased risk in men.

IMV INDICATION

For this outcome, there were four studies that provided results (25, 31, 34, 35): three were small in size and showed non-significant results. The only larger study (31) again showed increased risk in men.

Regarding the third objective, we found no studies involving interaction analyses to assess the potential role of sex as a moderator of the effect of COVID-19 interventions.

As relevant results, the analytical literature from Latin America and the Caribbean confirms that there is an association between male biological sex and severity and death from SARS-CoV-2, a relationship that is also independent of age and comorbidities.

2.2 EPIDEMIOLOGICAL SITUAT

PAHO has implemented COVID-19 surveillance since the first case was detected in the Region of the Americas on 21 January 2020. This epidemiological surveillance activity has made it possible to monitor epidemiological trends and the behavior of COVID-19, assess the impact of the pandemic on health systems, detect and contain outbreaks in vulnerable populations, and guide the implementation of control measures.

Men

As part of PAHO's surveillance efforts, the COVID-19 case report form collects key demographic, clinical, and epidemiological information about cases. These data are used to better understand the virus and its impact on health outcomes.

When the epicenter of COVID-19 shifted from Europe to the Americas in May 2020, the pandemic accelerated in the Region, amplified existing health inequalities, and exposed fissures in the health system linked to socioeconomic inequities that disproportionately affect disadvantaged groups. Gender, a key determinant of health, has emerged as a driver of health outcomes for both men and women during the pandemic (1).

The gender dimension of disease outbreaks and differing health outcomes include both the physical mechanism (sex-based biological factors underlying the host immune response) and socially constructed components (social, behavioral, and lifestyle factors). The coronavirus pandemic is no exception when it comes to gender differences in their association with disease susceptibility and severity. Achieving a response to the pandemic that integrates a gender-sensitive approach while considering social, economic, environmental, geographic, ethnic, and cultural factors requires a deeper understanding of

5

when selecting the reference category during the analysis, which did not substantially modify the observed heterogeneity (I²).

(29; RRa = 1.02 NS) show increased risk of hospitalization in men (ORa ranging from 1.43 to 1.75). Here, three studies were included in the meta-analysis. how the disease affects individuals, groups, and populations in general.

The association between clinical severe characteristics and outcomes related to age, gender. and underlying health conditions is well documented. A meta-analysis of existing data found that men may have a higher risk of severe SARS-CoV-2 infection and that 50% more men than women are hospitalized. In considering the greater likelihood of males to have manifestations more severe of COVID-19. differences between female and male biological pathways for fighting off viruses have been examined. Women's immune response tends to be more effective and adaptive to viruses, which plays a role in their having less severe cases of COVID-19. Although the specific case fatality rate for children and young adults is low, children are at risk of developing serious complications related to COVID-19.

The Region of the Americas has a total population of 1.02 billion people, 51% of whom are women (36). From the beginning of the COVID-19 pandemic to 31 January 2021, the Region had recorded 45.6 million cases and 1.1 million deaths. The report from the ministries of health of 26 countries in the Americas contains information on the sex and age of 20 million affected persons (43% of all reported cases), with the distribution shown in Figure 7.

Figure 7. COVID-19 cases and deaths by sex and age group compared with the baseline population in 26 countries and territories of the Region of the Americas



Source: Pan American Health Organization. Sex-disaggregated health outcomes related to the COVID-19 pandemic in the Region of the Americas. January 2020 to January 2021. Washington, D.C.: PAHO; 2021.

According to the data, in the Region of the Americas, there are no significant differences by sex in the absolute number of cases, with 49.9% of cases reported in women. There is a small increase in the proportion of COVID-19 diagnoses in men in older age groups (Table 3). Men account for 52% of reported cases between the ages of 60 and 69, but the percentage decreases to 46.9% of cases for those aged 70 years and older. However, if comparable absolute numbers of cases in women and men are

considered, there is a higher incidence rate among men in older age groups. There is a larger reference population of older women due to their longer life expectancy compared to older men. The incidence of COVID-19 cases among men aged 60 to 69 years and over 70 years is 17.05 per 1,000 population and 18.72 per 1,000 population, respectively. For the 60-to 69-year age group, men have 3.16 cases per 1,000 population more than women.

Table 3. Percentage of total cases and case rates per 1,000 population stratified by age and sex

Age group	Men (%)	Women (%)	Incidence in men (per 1,000 population)	Incidence in women (per 1,000 population)
0-9 years	53.4	46.6	4.77	4.34
10-19 years	49.3	50.7	9.06	9.66
20-29 years	49.1	50.9	25.28	26.74
30-39 years	50.4	49.6	30.54	29.83
40-49 years	50.0	50.0	29.61	28.54
50-59 years	50.2	49.8	27.17	25.59
60-69 years	52.0	48.0	23.10	19.21
Over 70 years	47.5	52.5	24.97	21.03
General total	50.0	50.0	21.16	20.60

Source: Pan American Health Organization. Sex-disaggregated health outcomes related to the COVID-19 pandemic in the Region of the Americas. January 2020 to January 2021. Washington, D.C.: PAHO; 2021.

The difference between sexes is even more pronounced when considering the health outcome relative to COVID-19. Of the 1.1 million deaths reported in the Region during this study, sex and age distribution was available for 511,000 (48%) of the deaths in 23 countries. Of these cases, 60% were men. For the population over 70, the mortality rate per 10,000 is 50.69 for men compared to 31.59 for women. Men aged 40 to 69 years have twice the risk of death compared to women in the same age group.

Although COVID-19 cases and deaths are generally reported in older populations, a rare but associated complication was observed among children in May

Multisystem inflammatory 2020. syndrome (MIDS-C) presents in children with symptoms similar to Kawasaki disease and can lead to multiple organ failure and shock. In the Region of the Americas, 17 countries and territories reported 2,922 confirmed cases of MIDS-C and 81 deaths (3%) as of the end of January 2021. There is no significant difference between the rate of MIDS-C in boys versus girls. When the data for this period are considered, 56% of the cases reported in the Region were among boys and 59% of the deaths were among girls. At this time, it is unclear whether sex affects MIDS-C infection rates in children.

2.3 SITUATION OF HEALTH WORKERS

The implications of the pandemic show the increased risk that women have taken on, associated with their roles on the front lines of health care and social services. The main labor sectors confronting this virus are highly feminized. Women occupy roles that often expose them to risks that affect their lives, as well as their health and that of their families; they also shoulder greater physical and emotional costs because of extended and strenuous working hours away from their homes (*37*).

Health workers have been central players and political subjects in this health emergency, and this has been one of the greatest challenges they are likely to face in their lives. Unlike the rest of the population, which has been able to reduce the risk of infection through confinement measures and limited mobility, the level of coronavirus transmission has posed dangers in all spaces in which health personnel have had to move, such as health centers, especially hospitals, and social health centers, especially those providing care for the elderly; or their own social environment. The effect of living in this high-risk environment, coupled with the lack of personal and material resources for their personal protection, has had a huge impact in terms of physical and psychological health problems. COVID-19 is already recognized in many countries of the world as an occupational disease, and in those where it is not, it should be. Despite these circumstances, however, not everything is negative. A review published in PLoS One shows that, although health care workers are highly vulnerable because they are on the front line, the risk of death is significantly lower for this population group than for workers in other non-health care settings, for reasons not fully identified (38).

In Latin America, the income of women working in the health sector is 25% lower than that of men in the same sector (7). This results in a marked difference between women and men in access to labor rights such as sick leave, coverage for accidents or occupational illnesses, and access to social security. Compared to their male colleagues, female health care workers work more overtime on average, are more vulnerable to workplace violence, are more exposed to potentially infectious agents, and have less access to protective equipment for their work. The COVID-19 pandemic has also highlighted the capacity and resilience of most countries' health systems, which have a high percentage of female workers, as well as their potential for preparedness and response to health emergencies. The rapid spread of coronavirus-associated infections underscores the urgent need for a strong, stable, and well-paid health workforce as an integral part of an effective and resilient health system. At the same time, the pandemic has led to the closure of schools and other caregiving spaces. This has increased the amount of time families spend on these unpaid tasks, which historically have fallen mainly on women. The situation is aggravated by the fact that a very high percentage of female health care workers are heads of households with children and adolescents.

The pressure on health professionals is not gender-neutral. Globally, 70% of frontline health care workers are women. In the Region of the Americas, 86% of nursing staff, who must have particularly close contact with patients, are female (39). Similar trends are seen in care work around the world, with most of this work being performed by women and girls from socially disadvantaged groups, such as migrants working in the informal economy (40). Using appropriate personal protective equipment (PPE) can significantly reduce the rates of health care workers contracting COVID-19. However, factors such as stress, inadequate training, and staffing shortages in some units should also be considered.

The groups of health professions or specialties interested in the impact of COVID-19 on the physical health of their members are varied. Besides nursing or dental staff, there are anesthesiologists, intensive care providers, and radiology and pediatric technicians who perceive or experience an increased risk of infection during the care of patients with COVID-19 (41-44). ICU nurses are at great risk when caring for patients with COVID-19 pneumonia, which results in overlapping somatic disorders (45). As of 31 January 2021, reports from the ministries of health included over 1.3 million cases among health workers in the Americas. Over 6,000 health workers died due to COVID-19. Women account for 72% of cases among health professionals. The difference by sex is more marked in the 40- to 59-year age groups, where 74% of the population is female (Figure 8).





Source: Pan American Health Organization. Sex-disaggregated health outcomes related to the COVID-19 pandemic in the Region of the Americas. January 2020 to January 2021. Washington, D.C.: PAHO; 2021.

The use of PPE throughout the hours of exposure to the risk of infection under stressful work dynamics linked to presenteeism and rotating shifts is associated with mental health problems (44, 46, 47). This is a key factor that has not been resolved with the necessary efficiency (elimination of infection) and effectiveness (no side effects). Health personnel have felt the pressure of working with PPE and protective materials inadequate for the risk involved in their care activities. Pressure injuries are highly prevalent among health care personnel wearing PPE in their fight against COVID-19, with the following risk factors: being male, sweating, level 3 masks, and longer wear time in the case of comprehensive preventive interventions (48). Women are more likely than men to have problems with poorly fitting FFP3 respirators (39). These experiences during the pandemic demonstrate the need not only for adequate stocks of PPE for those working in high-risk occupations, but also the need to address systemic discrimination in order to protect health care workers. This responsibility lies with the health institutions and public agencies that can influence the manufacture of PPE, with the authority conferred by their purchasing power.

During the COVID-19 pandemic, health professionals have also been participating in clinical trials to improve non-specific protection, such as the one conducted on BCG vaccine (40), and in the first vaccination campaigns during the first month of the vaccine rollout, since these workers are part of the priority group, composed mostly of women (49).

In addition, due to the risk of infection for themselves and their family members or others close to them, as well as the work and emotional overload involved in being on the front line of the response, the mental health of health workers has been more seriously affected than that of the general population. Several studies show that being a woman has been a predictive factor of anxious and depressive symptoms, insomnia, or burnout syndrome (50-52).

One issue of basic relevance to female staff is access to menstrual products. This issue, which was obscured during the pandemic, has deepened the inequalities affecting menstruating women who found it difficult to acquire personal hygiene products. For women working in the health sector, not only was physical access to health products ignored, but the time, facilities, and resources needed to manage menstrual health were also not considered, particularly for frontline workers who must use PPE at all times.

According to the Inter-American Task Force on Women's Leadership of the Organization of American States (OAS), women have the right to participate fully and exercise their leadership in all spheres of life, including the economic, social, political, technological, and cultural spheres.³ Their participation and greater diversity in decision-making spaces and leadership have a positive impact on productivity, innovation, legitimacy, and responsiveness. Despite the progress made in the Region in terms of women's participation, underrepresentation in leadership and decision-making remains a constant (31.6% in parliaments; 28.5% in ministerial cabinets; 32.1% in the supreme court; 15.5% in municipal mayor's offices; and 8.5% on company boards of directors).

2.4 ANALYSIS OF GENDER Inequalities in health care

As of mid-February 2021, of 192 countries with information on confirmed COVID-19 cases and deaths reported, only half-18 of them in Latin America-had provided any sex-disaggregated data, according to Global Health 50/50. A lack of information by sex can often obscure gender inequalities. To date, sex-specific information is available for approximately 7 out of 10 cases and 8 out of 10 deaths worldwide. The records are contradictory regarding the prevalence of COVID-19 by sex (53-55). Global Health 50/50 indicates that in some countries-including Brazil, Chile, Colombia, Ecuador, and Peru-prevalence is higher in men, while in others-for example, South Korea, France, and Mexico-it is more frequent in women; in a third group-Argentina and Spain-prevalence is similar for both sexes.

As COVID-19 is an infectious disease, the variability in the frequency of cases reported by sex by country suggests the possibility of underreporting. In other words, the frequency of COVID-19 cases recorded in both sexes may be influenced by a methodological artifact in collecting and processing the information or by problems in the diagnostic process (56). Caution should be exercised with absolute cross-sectional figures in an epidemic, since the evolution of case or death trends usually explains more than the absolute cross-sectional figures that are more readily available. Global Health 50/50 provides trend information by country and exposes the tortuous and changing evolution of cases and deaths in Latin America and the Caribbean. It is neither easy nor systematic to obtain information on this evolution in terms of differences by sex with respect to clinical presentation over the course of the disease or in terms of aggravating concomitant pathologies; nor is it easy to obtain information on gender inequalities in diagnostic and therapeutic efforts or in relation to the deaths that occur. Institutional resources may not be available to update these data on a daily basis, and each country has limited capacity to identify potential patients, which influences the availability of information. It has been found that comprehensive information for men and women rarely is kept in the databases of the ministries of health. This means that, while there is an abundance of published results from basic science and even clinical research on COVID-19, the lack of systematic information by sex and from a gender perspective poses a challenge for epidemiological studies with an interest in gender inequalities in relation to this disease. In this report, and with respect to the databases analyzed, we note that the institutional records do not provide information disaggregated by sex. This may be due to what has been called the "tyranny of the urgent," as with the lack of data on how to measure severity, usually used as a criterion for hospitalization. There is general agreement that COVID-19 deaths are more frequent in men than in women (57). Various arguments have been advanced regarding immunological sex differences or gender inequalities in terms of greater exposure of men than women to tobacco smoking or even greater comorbidity in some than in others (53). However, as long as most studies lack sex-stratified data, caution is warranted in making early assumptions about sex differences and gender inequalities in mortality (58-61).

PERSISTENT GENDER INEQUALITIES

Studies of gender bias in health care and the evidence-based medicine paradigm share the hypothesis that there are empirical inaccuracies in medical practice. Gender bias is defined as the difference in the medical treatment of men and women, the impact of which can be positive, negative, or neutral for their health (62). Gender biases in health care can occur in both diagnostic and therapeutic treatment. Misdiagnosis bias or diagnostic error can also influence therapeutic effort (63).

There is scientific evidence indicating that diagnoses are much more delayed in women than in men in at least 700 diseases (64), which undoubtedly influences disease progression, disability, quality of life, and even preventable deaths. On gender biases in delay of diagnosis from the onset of COVID-19 symptoms, a longer delay (>6 days) in women than in men with symptomatic COVID-19 has been observed in Japan (1.58 [0.942-2.66]) (65). In addition, according to UN Women, a COVID-19 study conducted in the first months of lockdown in some countries in Asia and the Pacific found that women faced greater difficulties in accessing medical care and were more likely than men to experience longer wait times to see a doctor.⁴

Many diseases are expressed differently in men and women. Failing to consider this gives rise to gender bias in care to the detriment of women. With COVID-19, we have precisely the conditions to indicate that signs and symptoms, including the well-known acute myocardial infarction, among other health problems, present differently according to sex (66). COVID-19 was initially described as a disease of clinical presentation with involvement of the respiratory tract, but as the months went by, the involvement of different organs was recognized. Multisystem inflammatory syndrome (14), according to the Cochrane Foundation, presents with individual signs and symptoms with very poor diagnostic properties: "Neither the absence nor the presence of signs or symptoms are sufficiently accurate to consider or rule out the disease" (67).

The highly non-specific clinical presentation of SARS-CoV-2 infection is a major problem, compounded by the fact that it does not always affect the bodies of men and women in the same way, which may contribute to inequalities in access to care, help-seeking behaviors, and individual use of the care system. The progression of COVID-19 to pneumonia is more frequent in men, but digestive, dermatological, and neurological problems resulting in anosmia and ageusia are more common in women (*68*).

One of the health care strategies to help prevent gender bias in health care is to consider the prevalence of diseases by sex, since a condition is better recognized in the sex that is more frequently affected, and there are more difficulties recognizing it in the sex that is less frequently affected. The pathophysiological differences between women and men, severity and comorbidity according to sex, and age, should also be taken into account. Once the influence of these parameters has been ruled out, if the diagnostic treatment of one sex differs from that of the other for the same need, we can hypothesize that there is a gender bias in health care decision-making.

There are several possible explanations for gender bias in health care that are applicable to COVID-19. To diagnose most diseases, only **anamnesis and a physical examination** are required, in which case personal and professional knowledge, attitude, and experience can lead to the misinterpretation of signs and symptoms. It has been demonstrated that the **same clinical sign or symptom** can be **interpreted differently** depending on whether it occurs in a man or a woman. It has also been found that the documentation of signs and symptoms in the medical record does not always coincide with what patients report, and this is due to the influence of medical schools that teach what the scientific literature shows according to sex (69). Lack of knowledge in the case of COVID-19 may also be a cause of potential gender inequalities in health care.

During the early months of the pandemic, hospitals were the main or the only place where testing for SARS-CoV-2 diagnosis could be routinely performed. However, the pressure of health care and the shortage of diagnostic tests made access to such tests difficult for all the people who needed them. Given that the criterion for hospitalization was severity, assessed mainly in terms of pneumonia, and that pneumonia occurred more frequently in men, it is likely that this led to more men than women being hospitalized; as a result, more men than women were diagnosed with COVID-19. From there, the hypothesis of an underreporting of COVID-19 cases in women, which may be correlated with a lower number of confirmed deaths due to COVID-19 in this population group, remains to be verified.





B CASE STUDIES

The analysis of differences by sex in COVID-19 can reveal possible gender inequalities occurring in the course of the disease and its treatment in the health care system. Below are the COVID-19 case studies from Argentina, Brazil, and Mexico, whose institutional records provide sufficient information to examine the COVID-19 situation from the perspective of the interaction between sex and gender. These case studies do not address the above issues but focus on the direct effects of COVID-19 in terms of cases and access to care.

COVID-19 IN BRAZIL

CASES AND DEATHS IN BRAZIL

23

At the end of December 2020, based on the recording of mild to moderate COVID-19 cases in Brazil, there were 5,770,032 positive cases (50.9% in women compared to 49.1% in men) and 39,650 deaths (0.81% of all male deaths and 0.56% of all female deaths), which means that women accounted for 41.7% and men for 58.3% of all deaths from this cause.⁵

The records of severe COVID-19 cases contained information on 610,614 cases (44.3% women vs. 55.7%

men), with 82,183 deaths in women (30.38% of all women with severe COVID-19) and 111,204 deaths in men (34.77% of all men with severe COVID-19), with women accounting for 42.5% and men for 57.5% of all recorded deaths.

CLINICAL PRESENTATION OF COVID-19 In Men and Women in Brazil: Signs and Symptoms

Differences in the clinical presentation of COVID-19 in men and women are also evident in Brazil in the recording of both mild to moderate and severe cases (p < 0.001). Variations can also be seen according to severity, since women more frequently have mild to moderate signs and symptoms, while in cases of severe COVID-19 the greatest magnitude of signs and symptoms is observed in men (Tables 4 and 5). This difference in clinical presentation according to sex, and its effect on diagnostic delay and the formation of diagnostic misclassification bias toward women-present in a myriad of pathologies-raises the question of the extent to which the varied clinical presentation of COVID-19 in women versus men undermines early detection in women, which could prevent chronicity, side effects, and even preventable deaths.

Symptoms	Wo	omen	Mei	n	OR [CI]
Symptoms	n	Percentage	n	Percentage	
Asymptomatic*	1,629,246	49.5	1,659,153	50.5	0.96 [0.96-0.96]
Cough*	5,368,870	54.7	4,439,635	45.3	1.46 [1.46-1.46]
Fever*	3,921,649	51.7	3,668,701	48.3	1.15 [1.14-1.15]
Sore throat*	3,885,442	58.7	2,729,345	41.3	2.02 [2.02-2.02]
Runny nose*	877,877	55.5	702,971	44.5	1.56 [1.55-1.56]
Shortness of breath or breathing difficulties*	1,888,993	56.5	1,453,175	43.5	1.69 [1.68-1.69]
Headache*	1,475,894	61.0	943,650	39.0	2.45 [2.44-2.46]
Altered sense of smell*	177,144	55.3	142,972	44.7	1.53 [1.52-1.55]
Altered sense of taste*	292,710	57.7	214,439	42.3	1.86 [1.85-1.88]
Other symptoms*	6,344,691	51.8	5,902.729	48.2	1.15 [1.15-1.16]

Table 4. Clinical presentation of mild to moderate COVID-19 in Brazil, by sex, 2020

Notes: based on data from the Brazilian Ministry of Health; *significant p-value at < 0.001; OR [95% CI] calculated for women and men.

Source: Brazilian Ministry of Health. Influenza Syndrome Surveillance System for mild to moderate suspected cases of COVID-19. Brasilia: Brazilian Ministry of Health; 2020.

⁵ This section is based on data from the Brazilian Ministry of Health: https://antigo.saude.gov.br/.

Symptoms	Wo	omen	Men	ı	OR [CI]
Symptoms	Number	Percentage	Number	Percentage	
Fever*	220,674	58.7	155,372	41.3	2.02 [2-2.04]
Cough*	240,591	56.6	184,316	43.4	1.7 [1.69-1.72]
Sore throat*	59,535	54.5	49,791	45.5	1.43 [1.41-1.46]
Shortness of breath or breathing difficulties*	2,66,717	56.2	208,260	43.8	1.65 [1.63-1.66]
O ₂ saturation < 95%	193,861	56.8	147,501	43.2	1.73 [1.71-1.75]
Diarrhea*	42,451	51.5	39,975	48.5	1.13 [1.11-1.15]
Vomiting*	22,825	47.5	25,242	52.5	0.82 [0.8-0.84]
Abdominal pain*	9,672	50.9	9,328	49.1	1.07 [1.03-1.12]
Fatigue*	39,293	55.3	31,762	44.7	1.53 [1.5-1.56]
Loss of smell*	19,456	53.4	17,008	46.6	1.31 [1.28-1.35]
Loss of taste*	19,595	53.6	16,978	46.4	1.33 [1.3-1.37]

Table 5. Clinical presentation of severe COVID-19 in Brazil, by sex, 2020

Notes: based on data from the Brazilian Ministry of Health; *significant p-value at < 0.001; OR [95% CI] calculated for women and men.

Source: Brazilian Ministry of Health. Influenza Syndrome Surveillance System for mild to moderate suspected cases of COVID-19. Brazilia: Brazilian Ministry of Health; 2020.

DIAGNOSTIC AND THERAPEUTIC TREATMENT IN MEN And women with severe covid-19 in Brazil

Access, use, and quality of health care are classic determinants of health inequalities. The COVID-19 registry in Brazil provides enough information to identify differences by sex in several indicators, such as hospitalization, chest X-rays, ICU admission, and assisted ventilation support. Because gender inequalities are sometimes hidden underneath sex differences, we have taken the opportunity to identify the existence of gender inequalities in COVID-19-related health care in order to improve professional practices.

The WHO definition of a probable case of COVID-19 indicates a patient who meets the clinical criteria for fever and cough, or acute onset of any three or more of the following signs or symptoms: fever, cough, general weakness/fatigue, headache, myalgia, sore throat, coryza, dyspnea, anorexia/nausea/vomiting, diarrhea, or altered mental status. Unfortunately, most can be easily mistaken for symptoms of other pathologies, as was the case especially at the beginning of the pandemic. In addition, WHO considers it to be a probable case when a suspect case with chest imaging shows findings suggestive of COVID-19 disease, a clinical sign that, together with fever and oxygen saturation <95%, triggers a therapeutic emergency and increases the likelihood of hospitalization. Recent onset of anosmia or ageusia in the absence of any other identified cause is now also included, as are asymptomatic cases. The varied clinical presentation of COVID-19 poses a challenge to the health care provider, who must decide on the diagnostic and therapeutic course, such as hospitalization, IMV, or admission to an ICU.

GENDER INEQUALITIES IN HEALTH CARE AND THEIR RELATIONSHIP TO MORTALITY IN BRAZIL

The higher COVID-19 hospitalization rate for men than for women is due to a worse prognosis for men than for women in terms of mortality (70). However, another potential explanation may be that more women die without having the opportunity to be hospitalized, as seen in the database of the Spanish Ministry of Health.⁶ Among the 28,444 patients who died of COVID-19 in hospitals between January and May 2020, more men (59.7%) than women (41.28%) died of COVID-19 in these facilities. Meanwhile, in nursing homes for the elderly, there were more deaths from COVID-19 in women (64.74%) than in men (35.24%), among the 13,746 cases of death from this cause; this is to be expected, given that women are more likely to live in such places because of their longer life expectancy. What is unexpected is the number of people that the health system failed to care for, since out of every 100 women who died of COVID-19 in nursing homes for the elderly, 33 were reported in the "suspected" COVID-19 category, a figure almost twice as high as that for men (18%).

Table 6 shows the differences by sex in ICU admissions in Brazil, as well as the use of IMV. These therapies are more frequent in men than in women, despite the unquestionable seriousness of the cases, given that these were people who later died from COVID-19 (p < 0.001).

Multiple factors prompt the admission of a patient to the ICU, as well as the prescription of assisted ventilation; admission also depends on the individual patient and available health care equipment, but how this is managed depends on the competence of the human resources responsible for the care provided.

Symptoms	Men (n=111,204) F (Percentage)	Women (n=82,183) F (Percentage)	OR [CI]
Hospitalization	102,838 (96.6)	75,886 (96.5)	1.03 [0.98-1.08]
ICU admission*	58,987 (64)	41,764 (61.8)	1.1 [1.08-1.12]
Assisted ventilation*			
Yes, invasive	43,977 (48.6)	30,912 (46.5)	1.09 [1.07-1.11]
Yes, noninvasive	35,230 (39.0)	27,484 (41.3)	0.91 [0.89-0.93]
No	11,239 (12.4)	8,112 (12.2)	1.02 [0.99-1.05]

Table 6. Extent of therapeutic effort according to total deaths in men and in women from severe COVID-19, Brazil, 2020

Notes: based on data from the Brazilian Ministry of Health; *significant p-value at < 0.001; OR [95% CI] calculated for women and men. ICU: intensive care unit.

Source: Brazilian Ministry of Health. Influenza Syndrome Surveillance System for mild to moderate suspected cases of COVID-19. Brasilia: Brazilian Ministry of Health; 2020.

COVID-19 IN ARGENTINA

COVID-19 CASES AND DEATHS In Argentina, by Age

25

At the end of December 2020, Argentina had 4,713,201 cases in its registry, including confirmed, discarded, unclassified, and suspected cases (51.4% women and 48.6% men). Confirmed cases reached 1,672,058 (81.25% and 82.21% of the total number of cases in women and men, respectively), a figure that indicated 50% of cases in each sex; and suspected cases numbered 373,862 (18.75% and 17.79% of the total number of cases in women and men, respectively), that is, 51.6% women and 48.4% men in the total number of COVID-19 cases.⁷

In Argentina, more men than women die from COVID-19. At that time, 52,888 deaths were recorded (43.2% women and 56.8% men), with a case fatality rate of 2.22% and 2.95% in women and men, respectively.

In those over age 80, the incidence of death due to COVID-19 in women is higher than in men (57.4% women and 42.6% men). However, considering that there are fewer men in this age group, these data yield a death rate of 183.8 per 100,000 inhabitants for men and 119.4 per 100,000 inhabitants for women. In any case, 42% of all deaths due to COVID-19 in women and 23.75% in men occurred in those over 80 (p < 0.001).

DIAGNOSTIC DELAY IN COVID-19 Cases in Argentina, by sex

One indicator of gender bias in health care is diagnostic delay from the onset of symptoms. In Latin

America and the Caribbean, it is frequently argued that some women delay seeking health care because of family responsibilities. This is likely to occur, but other important factors may influence diagnostic delay, such as women's agency and empowerment to demand health care in the context of their role as women; other reasons involve the health sector itself.

Studies on diagnostic delay from a gender perspective indicate that this phenomenon occurs in multiple diseases, due to differences in clinical presentation according to sex, as mentioned earlier. This reduces diagnostic suspicion until the disease is established (64). COVID-19 is also expressed in different versions of clinical presentation, from the most common respiratory condition (more frequent in men) to digestive and neurological problems (more common in women), which should be considered when working to reduce diagnostic delay (68, 71).

In Argentina, there are differences in the diagnostic delay of confirmed COVID-19 with respect to the date of symptom onset. The 457,876 women affected have a slightly higher mean number of days of diagnostic delay than the 455,970 men affected, a statistically significant figure (Meanwomen: 6.07 days vs. MeanMen: 5.81 days, p < 0.001). In addition, once the diagnosis is made, COVID-19 mortality after diagnosis is earlier in women than in men (Meanwomen: 11.51 days vs. MeanMen: 12.33 days, p < 0.001), which may, among other reasons, be related to diagnostic delay and the resulting level of severity reached at the time of diagnosis.

⁷ Available at:

https://www.argentina.gob.ar/salud/coronavirus-COVID-19?utm_source=search&utm_medium=cpc&utm_campaign=coronavirus&utm_term=grants&utm_content=n acional&gclid=EAIaIQobChMInfG8gO_D7wIVTPvICh3DCwTXEAAYASAAEgKL0PD_BwE.
Figure 9. Time of diagnosis from symptom onset and time from diagnosis to death, Argentina, by sex, 2020



Notes: based on data from the National Department of Epidemiology and Health Situation Analysis of Argentina; average in days.

THERAPEUTIC EFFORT AND DEATHS IN ARGENTINA

As of December 2020, the peak of its severity in Argentina, 30,015 men and 22,873 women had died from COVID-19. Of these people, more men (26.4%) than women (21.3%) were admitted to the ICU, relative to the total number of patients of each sex (p < 0.001). The frequency of mechanical ventilation in those who died from COVID-19 was also lower in women (12.8%) than in men (17.6%) of the total number of COVID-19 deaths (p < 0.001). Given that these are patient deaths and, therefore,

severity is assumed in both sexes, these data indicate a potential gender bias in health care.

Analysis of both indicators by age and sex shows a similar pattern in the two types of therapeutic efforts: of the total number of women who died from COVID-19, the youngest women and, in particular, those over 80 years of age were admitted to the ICU and received mechanical ventilation more frequently than men in the same circumstances. In contrast, more young adult men and older men received this type of therapeutic effort with respect to the other sex in the other age strata (p < 0.001) (Table 7).

Table 7. Cases requiring intensive care and mechanical ventilation and resulting in death, by sex, Argentina, 2020

Patients		N	/omen	N	/len	OR [CI]	
		n	Percentage	n	Percentage	OK [CI]	
	<30	133	2.7	151	1.9	1.43 [1.13-1.81]	
ICU*	31-60	1,017	20.8	2,116	26.7	0.72 [0.66-0.79]	
	61-80	2,429	49.8	4,463	56.3	0.77 [0.72-0.83]	
	≥81	1,299	26.6	1,203	15.2	2.02 [1.85-2.21]	
Mechanical ventilation*	<30	97	3.3	118	2.2	1.52 [1.16-1.99]	
	31-60	756	25.1	1,598	30.3	0.8 [0.73-0.89]	
	61-80	1,521	52.1	2,993	56.8	0.83 [0.76-0.91]	
	≥81	546	18.7	564	10.7	1.92 [1.69-2.18]	

Notes: based on data from the National Department of Epidemiology and Health Situation Analysis of Argentina; * significant p-value at < 0.001; OR [95% CI] calculated for women and men. ICU: intensive care unit.

It is clear that advanced age is a highly influential factor in the deaths of women in Argentina; women die more often from COVID-19 in this age group. In the other age groups, except for the youngest, COVID-19 is also the biggest cause of mortality in men, leading to an earlier attempt at greater therapeutic effort. Therefore, with the available data, no gender bias in health care is observed; age emerges as a substantial factor in the performance of therapeutic effort in one sex relative to the other.

COVID-19 IN MEXICO

The gender perspective includes the consideration of other determinants of health inequalities besides sex. In the case of Mexico, its COVID-19 case registry allows for an analysis of the intersections of sex and gender differences with the ethnic dimension.⁸

FREQUENCY OF COVID-19 CASES IN MEXICO, BY SEX AND ETHNICITY

At the end of December 2020, the Mexican registry had studied 3,531,289 people (51.8% women and 48.2% men). A total of 33,673 people (49.3% women and 50.7% men) are identified as Indigenous.

The 1,324,873 confirmed cases of COVID-19 (49.5% female and 50.5% male) and 316,063 suspected cases (50.5% female and 49.5% male) were considered for this study.

There have been 130,030 confirmed cases in the Indigenous population, with a higher prevalence among

men (55% of the total number of cases). Suspected cases numbered 4,428 (49.1% women and 50.9% men).

DIAGNOSTIC EFFORT IN MEXICO, By Sex and Ethnicity

There were 1,273 Indigenous women under 30, with a high frequency of confirmed cases (52.8%)--a magnitude that exceeds that of the rest of the age groups, where incidence was less than 45%. The other vulnerable group is Indigenous men over 60, with a confirmed case frequency of 59%.

There is a noteworthy finding related to diagnostic effort, in both women and men, according to self-identified ethnicity. This finding emerges from the comparison between sexes of confirmed and suspected cases of COVID-19 in the Indigenous population and in the rest of Mexico's population. Table 8 shows that the identification of confirmed cases is lower in Indigenous women (72.9%) than in non-Indigenous women (80.44%) (p < 0.001). Something similar is observed in men, but on a smaller scale, since confirmed COVID-19 among non-Indigenous men was 81.03% and 76.09% among Indigenous men. This means that in the Indigenous population COVID-19 cases remain at the suspected level more frequently than in the rest of the population (COVID-19: 7.54% less identified in Indigenous women and 4.94% less identified in Indigenous men). This is a gender and ethnicity bias that demonstrates the relevance of considering intersectionality as part of the gender perspective.

Women					Men					
Non-Indigenous Indigenous				Cases	Non-Indigenous		Indigenous			
n	%	n	%	OR [CI]		n	%	n	%	OR [CI]
656,979	80.4	5,860	72.9	1.52 [1.45-1.6]	Confirmed*	667,894	81.0	7,170	76.1	1.34 [1.28-1.4]
159,734	19.6	2,175	19.6	0.66 [1.45-1.6]	Suspected*	156,329	19.0	2,253	23.9	0.75 [0.71-0.78]

Table 8. COVID-19 cases, by sex and diagnostic typology, Mexico, 2020

Notes: based on data from the Ministry of Health and Department of Epidemiology of Mexico; *significant *p*-value at < 0.001; OR [95% CI] calculated for Indigenous and non-Indigenous persons.

⁸ This section is based on data from the Ministry of Health, Government of Mexico: https://www.gob.mx/salud.

DEATHS IN MEN AND WOMEN IN MEXICO, AND GENDER AND ETHNIC INEQUALITIES

The number of deaths in both sexes without COVID-19 being confirmed (i.e., cases that, at the time of death, were in the diagnostic category of suspected COVID-19) accounted for a high proportion of the total number of women (10.7%) and of the total number of men (11.01%) with this pathology.

The magnitude of deaths is consistent with the scientific literature, as it is higher in men (62.89%) than in women (37.11%), with 171,527 deaths. However, by age strata, more women than men die from confirmed COVID-19 in the youngest and oldest age groups (p < 0.001). In cases of suspected COVID-19, women die more often than men starting at age 61 (p < 0.001).

Since the beginning of the pandemic, 2,547 Indigenous people have died (61.9% men and 38.1% women). Information on deaths by age strata in the total number of women and men with COVID-19, respectively, is relevant in this population. Compared to the other age groups, the number of deaths in Indigenous women under 30 with COVID-19 is very high, which is consistent with the higher frequency of cases in Indigenous women (6.8% of all women with COVID-19). The figure is higher than 3.5% in the case of Indigenous men (p < 0.001) and also with respect to the non-Indigenous population of the same age (2.2% of the total number of deaths among people with COVID-19 in both sexes).

DIFFERENCES IN EXPOSURE TO RISK Factors in Mexico, by sex and by Gender Inequality

Risk factors are distributed between sexes, and it can be seen that comorbidity and smoking are more frequent in men, and that exposure to patients diagnosed with SARS-CoV-2 is more common in women.

The range of smoking habits varied from 2.6% in Indigenous women, to 5.8% in non-Indigenous women, and 8.9% in Indigenous men, to 11.1% in non-Indigenous men. This affects 5% of women with confirmed COVID-19, and twice as many men (10%).

Another source of risk exposure is contact with patients diagnosed with SARS-CoV-2, which by the end of 2020 totaled 612,922 people in Mexico. This frequency of contacts is higher in women (53.1%) than in men (48.7%) (p < 0.001) of all ages. In the

Indigenous population, the gender gap in terms of exposure to people with COVID-19 is somewhat smaller, although the figures follow the same trend. Of the 12,092 Indigenous people in contact with sick people, 51.3% were women and 48.7% were men (p < 0.001). In this community, of the total number of contacts with SARS-CoV-2 patients (6,405 women and 5,887 men), most were young women and adult women, with more frequent contact than men, probably in their classic role as caregivers.

Comorbidity is another risk factor that, in confirmed cases, varies significantly by sex and ethnicity. In the Indigenous population. women have more comorbidities, as they present with both hypertension and obesity. Chronic obstructive pulmonary disease (COPD) and asthma are also more common. Due to their relevance to COVID-19, it should be noted that the outcomes of these respiratory illnesses are consistent with the published scientific evidence, although some of the asthma diagnoses made by spirometry would become COPD (72). This gender bias due to diagnostic misclassification would decrease the diagnosis of asthma and increase that of COPD. In the non-Indigenous population, obesity and asthma continue to be more common in women, while diabetes, cardiovascular disease, and kidney failure are more common in men.

DIFFERENCES BY SEX, SEVERITY DUE TO Gender inequalities in therapeutic EFFORT, and deaths from covid-19 In Mexico

Table 9 shows that the medical recommendation for intubation and admission to an ICU in the non-Indigenous population has been more frequent in men than in women with confirmed and suspected COVID-19 so severe that it resulted in death.



	Women confirm COVID	ned	Men confir COVII	med	
Need	n	%	n	%	OR [CI]
Hospitalization**	39,026	90.0	67,302	89.5	0.95 [0.91-0.98]
Intubation required*	11,381	29.3	20,927	31.3	1.1 [1.07-1.13]
ICU admission required*	3,902	10.1	7,551	11.3	1.13 [1.09-1.18]
	Women with suspected COVID-19		Men suspe COVI	cted	
Need	n	%	n	%	OR [CI]
Hospitalization	4,747	91.6	8,522	90.7	0.89 [0.79-1.01]
Intubation required*	1,171	24.9	2,352	27.9	1.17 [1.08-1.27]
ICU admission required**	386	8.2	822	9.7	1.2 [1.06-1.36]

Table 9. Intubation and intensive care needs in COVID-19 cases with pneumonia resulting in death in Mexico, by sex, 2020

Notes: based on data from the Ministry of Health and Department of Epidemiology of Mexico; *significant *p*-value at < 0.001; **significant *p*-value at < 0.05; OR [95% CI] calculated for women and men.

Greater therapeutic effort depends on a variety of factors related to the patients' health status, comorbidity, the status of the disease itself, and existing resources, as well as professional knowledge and decision-making. Future research may confirm or rule out the gender biases detected in diagnostic effort according to sex and ethnicity, and in therapeutic effort according to sex.



4 SELECTED HEALTH TOPICS

ACCESS TO HEALTH SERVICES

Certain pre-COVID-19 studies conducted in the Region show perceived barriers to access among women. Figure 10 presents aggregate (national level) and disaggregated (wealth quintile levels) percentages of women aged 15 to 49 who reported having a major problem accessing health care when sick (73). This indicator was available for eight countries in the Demographic and Health Surveys (DHS) related to the perception of access barriers, although some country-specific variations in the types of barriers were included. For example, 87.3% of Haitian women in the poorest quintile reported "getting money for treatment" as a serious barrier to accessing care, while 76.3% of Bolivian women in the same quintile reported distance to the health facility as a significant problem. Where information is comparable across countries (Bolivia, Nicaragua, and Peru), at least 83.9% of women reported at least one major problem in accessing care when they are sick (with a higher rate of 95.0% among women in the poorest wealth quintile compared to 72.0% among women in the richest quintile). (See Figure 10).

Figure 10. Women reporting major problems accessing medical care when sick (countries with a Demographic and Health Survey)

Wealth quintiles

				wealth	quintiles	5			
	1st (poorest) quintile								
		ANY OF The specified Problems	CONCERN Not finding Female Provider	DISTANCE To health Facility	GETTING Money For Treatment	GETTING Permission To go for Treatment	HAVING To take Transport	KNOWING Where To go for Treatment	NOT Wantng To go Alone
BOLIVIA	2003	•••	•••	•••	• • •	•••	•••	•••	•••
	2008	•••	•••	•••	• • •	•••	•••	•••	•••
DOMINICAN	2007	•••		••••	•••	-	•••		a •
REPUBLIC	2013	•••				•			•
GUATEMALA	2015	•••		•••	• • •	••			
GUYANA	2009	•••	•	•••	••••	-	•••		
HAITI	2000	•••	•	•••	•••	•	•••	a •	•••
	2006	•••	•••	•••	•••		•••		•••
	2012	•••		•••	•••	•			
	2016	•••		•••	•••	•			
HONDURAS	2005	•••	•••	•••	•••	•••	•••	•••	•••
	2011	•••		•••	•••				••
NICARAGUA	2001	•••		••••	•••	•	•••	••	•••
PERU	2000	•••	•••	••••	•••	••	••••	•••	•••
	2004	•••	•••	••••	•••	•	••••	•••	•••
	2007	•••	•••	••••	•••	•	•••	•••	••
	2009	•••	•••	•••	• • •	•	•••	•••	
	2010	•••	•••	•••	•••	•	•••	•••	•••
	2011	•••	•••	•••	•••	•	•••	•••	•••
	2012	•••	•••	•••	• • •	•		•	•••
		0 50 100	0 50 100	0 50 100	0 50 100	0 50 100	0 50 100	0 50 100	0 50 100
		Percentage (%)	Percentage (%)	Percentage (%)	Percentage (%)	Percentage (%)	Percentage (%)	Percentage (%)	Percentage (%)



It. is essential to consider the particular characteristics of the unmet need for contraception in the Latin American and Caribbean Region. The COVID-19 pandemic has raised the number of women with unmet needs for modern contraceptive methods in the Region to 32,560,000 in an optimistic scenario and to 39,849,000 in a pessimistic scenario (74). This means an increase in the percentage of unmet needs for modern contraceptive methods of 14.5% and 17.7%, respectively. This underscores the unfeasibility of achieving SDG 3.7 (zero unmet need for family planning by 2030). This would represent a 20- to 30-year setback, resulting in 1.7 million unplanned pregnancies, nearly 800,000 abortions, 2,900 maternal deaths, and nearly 39,000 infant deaths (75).

TEEN PREGNANCY

Pre-pandemic data show that adolescent fertility is a major public health and social problem in Latin America and the Caribbean: the teen pregnancy rate is still high (60.7 per 1,000 adolescents, second only to Africa worldwide). This is far higher than expected based on total fertility, and the vast majority of these pregnancies are unintended. Nearly 2 out of every 10 adolescents in the Region are mothers and, given the enormous social inequality of early fertility, this figure is disproportionately higher among adolescents with lower income and education levels and those who are Indigenous or of African descent. It has been estimated that 28% of sexually active adolescents aged 15 to 19 in Latin America and the Caribbean were using a modern contraceptive method in 2019, and that 1,958,000 young women aged 15 to 19 in Latin America and the Caribbean had an unmet need for modern contraception in 2019.

It was anticipated that the COVID-19 pandemic and the measures taken to contain it could lead to an increase in teen pregnancy and that this could represent a five-year setback in the reduction of the specific adolescent fertility rate in Latin America and the Caribbean (76).

PREGNANCY AND RISK OF MATERNAL DEATH

The effects of COVID-19 during pregnancy are still being studied, although pregnant women seem to present more complicated cases and require intensive care more frequently than non-pregnant women of reproductive age. Preexisting comorbidities, advanced maternal age, and a high body mass index seem to play a role in an increased risk of severe COVID-19. In the Region of the Americas, 150,167 cases of COVID-19 during pregnancy were reported, including 836 deaths. The maternal mortality rate associated with COVID-19 ranges from 0.04% (Chile) to 6.25% (Bahamas) (77). Available data for Mexico reveal that almost half of the maternal deaths occurred during the third trimester and 33.6% occurred postpartum. Of the pregnant women who died in Mexico, 30.9% had been intubated and 34% had been in an ICU (78).

In the 23 Latin American and Caribbean countries included in the LiST impact assessment methodology, 1,210 excess maternal deaths were calculated for a one-year period as a result of the pandemic response, with a 5% reduction in coverage; 2,430 with a 15% reduction, and 7,981 with a 25% reduction (79).

MENTAL HEALTH

Changes in social life due to COVID-19 affected people's mental health differentially according to gender, ethnicity, and other social determinants such as age and economic status. In turn, access to mental health services was influenced by the reorganization of the sector to respond to COVID-19 patient hospitalizations, which reduced outpatient care and limited access to such services. Several publications, mainly cross-sectional studies based on standardized surveys and questionnaires, show that mental health problems manifested more frequently and more intensely in women than in men (80-88). Being young, being female, and having low levels of income and education, coupled with long periods of social distancing, are also factors that can be linked to more severe psychiatric symptoms (89).

Since the emergence of the pandemic, nonbinary and transgender people, women, and individuals with preexisting mental or physical health conditions had elevated symptoms of depression or anxiety (90). In women, negative economic impacts, combined with increased caregiving tasks and exposure to violence because of social isolation, are conditions detrimental to mental health (91). Young people make up another population group particularly affected by the pandemic. According to a United Nations Children's Fund (UNICEF) study, 27% of participants reported anxiety and 15% reported depression in the past seven days. Forty-three percent of adolescent girls and young women between the ages of 13 and 29 reported that their perceptions of the future have been adversely affected, while only 31% of males reported being similarly affected (92). Gender identity is also a factor to be considered in this population, as young people and people with nonbinary identities are more exposed to discrimination and have less social support than cisgender youth, which is reflected in greater mental health and substance abuse problems.

The HEalth caRe wOrkErS (HEROES) initiative (93), developed by the University of Chile with the collaboration of PAHO, reveals preliminary information in its first stage for nine Latin American countries:⁹

- The mean number of depressive symptoms (assessed by the PHQ-9) was higher among women compared to men (6.75 and 5.51). Women also presented a higher level of emotional distress (assessed through the GHQ-12) (14.2 and 12.99) and reported a higher frequency of suicidal ideation (9.9 and 7.8) than men.
- 2 On average, women indicated more often than men that PPE was "very insufficient" (12.0% and 10.4%) or "somewhat insufficient" (33.7% and 30.9%).
- 3 Women also reported feeling more worried than men about infecting their loved ones (72.2% and 66.5%) or becoming infected themselves (38.0% and 32.0%).
 - Women reported feeling more stigmatized than men (14.5% and 12.9%).

GENDER-BASED VIOLENCE

Obtaining information on this problem was not an easy task before the pandemic, since data were based on the percentage of women who filed a complaint (it is estimated that 10% of women worldwide reported violence and that less than 40% of women who experienced some type of violence sought help). However, during the first months of the pandemic, hotlines around the world saw an increase of 30% to 40% in the number of calls (Argentina, Australia, Cyprus, France, and Singapore) (94). This is consistent with projections made by WHO and UNICEF for the period from 2020 to 2030, which suggest that the consequences of the COVID-19 pandemic could reduce progress toward ending gender-based violence by one-third and result in an additional 13 million child marriages that would not otherwise have occurred (95).

Sexual harassment and other forms of violence against women continued to occur on public thoroughfares, in public spaces, and on the internet. In some countries, the resources earmarked for responding to violence against women were reallocated to address COVID-19 care needs. The United Nations High Commissioner for Refugees (UNHCR) indicates that refugee and displaced women were also exposed to a greater risk of gender-based violence than before COVID-19: Mexico's National Institute of Women has taken strong institutional action to respond to the increase in consultations and other types of demands associated with gender-based violence (96). Colombia's minister of health reported an increase of nearly 40% in incidents of gender-based violence affecting the Venezuelan population in Colombia between January and September 2020, compared to the same period of the previous year.

Pre-pandemic data show the magnitude of the challenge considering the escalation of the problem during the current crisis. In addition, risk factors for violence are increasing (data on risk factors such as stress, alcohol abuse, economic impact of the pandemic, etc., could be cited). The confinement or restrictive measures that the governments of the Region have taken to address the health risk and flatten the transmission curve have created isolating conditions for family groups and for women, girls, and adolescents, which has become a threat to their safety. These factors produced a "perfect storm," as women and girls are more at risk if they remain at home with their abusers and are less likely to be able to seek help.



HIV AND OTHER SEXUALLY TRANSMITTED INFECTIONS

There are about 6.65 million people on antiretroviral treatment worldwide, and social distancing has reduced access to routine HIV testing. This poses a challenge to meeting the first 90-90-90 target of the Joint United Nations Programme on HIV/AIDS (UNAIDS) at the global level: 90% of all people living with HIV know their HIV status by 2020 (97). This lack of access was also perceived among LGBTQ+ groups in Latin America and the Caribbean. For example, in Mexico, over 40% reported not being able to access their care provider; in Brazil, over 75% reported that they could not get their medication remotely (98).

Countries have been developing new contingency plans across service delivery platforms, including community and mobile outreach units. One example of such plans is the distribution of a large supply of antiretroviral drugs, which facilitates access to treatment; another is telemedicine, whether online or by telephone, messaging, etc., implemented to ensure continuous and remote care, so as to avoid the need to access an overburdened health system exposed to COVID-19 (PAHO key actions). The risk factors associated with COVID-19 and its progression to severe disease or death have been mainly advanced age, male sex, diabetes mellitus, obesity, arterial hypertension, and heart disease, among others. Because of their immunosuppressed status, it was expected that people living with HIV would also present a greater susceptibility to infection or a poor clinical course, but so far, the results are inconclusive (99) (PAHO key actions).

A systematic review identified 23 articles (mostly descriptive) with data on 164 adults with HIV infection and SARS-CoV-2. The vast majority were men (120 to 142; 84.5%), often with one or more comorbidities. Of those patients, 15 required intensive treatment and 16 died. For each group, respectively, three patients had underlying comorbidities. We conclude that it remains unclear whether HIV infection may influence SARS-CoV-2 infection and the disease course, but caution is suggested, particularly for men living with HIV (PLWHIV) who may be at increased risk for a severe course of COVID-19 (100).

One primary study showed that women living with HIV suffer from greater stress and greater impairment in all domains, including adherence to treatment for this condition (101).

Finally, sex workers should also be considered a risk group because of the nature of this work, especially since they are the most marginalized members of society. Precautionary measures, including physical distance, have led to the interruption of direct sex work around the world, possibly making this group one of the hardest hit by pandemic containment measures. The situation is more serious for sex workers who are homeless or have migrated illegally and face greater problems in receiving financial support or accessing health services. Without adequate resources from the State or civil society, many sex workers are forced to return to work to earn income (102), in conditions that could facilitate HIV infection even more than in a non-pandemic context.

THE HEALTH OF THE LGBTQ+ COMMUNITY DURING THE PANDEMIC

Although data are lacking or insufficient for the LGBTQ+ community, it is thought that restrictions on movement and transportation have affected the continuity of therapies and medical treatments, or have prevented them, especially in the transgender population. When there is a need for isolation because of COVID-19, there are no physical spaces where privacy and conditions of protection and nondiscrimination are guaranteed (103).

The emergence of COVID-19 led to a wide range of response measures; the one that most affected the lives of transgender people was mandatory quarantine with the imposition of severe restrictions on movement. This measure was implemented in many countries, and in some it led to very complex situations in terms of rights violations; for some people, a discrepancy between their appearance and their identification card could lead to fines or community work for being out on days that were not allowed. This resulted in acts of discrimination, mistreatment, and violence by police, among others.

While the LGTBQ+ population is not at increased risk of contracting the COVID-19 virus, they face restrictions in accessing services and assistance programs such as food aid. Besides the situation described above, social stigma plays a role as an access barrier. This is exacerbated by the pandemic and the lack of medical supplies in impoverished health services and the redistribution of scarce resources to other areas, all in the context of the general impoverishment of the entire Region (104).

ACCESS TO HEALTH FOR PERSONS WITH DISABILITIES

Difficulties in accessing essential services significantly affect people with disabilities. A recent study on the disruption in access to health services for persons with disabilities in different regions of the world shows 31% disruption in access in Latin America and the Caribbean (105).

In examining this situation during the COVID-19 pandemic in the Region of the Americas, we can see that persons with disabilities have diverse characteristics and that the discrimination they experience is multifarious and increases according to gender, age, place of residence, socioeconomic status, ethnicity, race, and immigration status. In the gathering of information on persons with disabilities, the gender focus was on the response to domestic violence (106, 107).

As detailed in the section on socioeconomic determinants, the economic conditions brought about by the pandemic have led many families with members with disabilities to cut back on expenses associated with therapeutic services and educational support they had used before. These support tasks, previously performed by others, now fall on family members, particularly women, increasing the gender gaps related to unpaid domestic and care work.

4.1 RESPONSES FROM THE HEALTH SECTOR AND OTHER SECTORS

CHARACTERIZATION OF RESPONSES

The responses of health systems during the pandemic continue to depend on different determinants such as socioeconomic status (see chapter on socioeconomic determinants); the response capacity of the health system (investment, infrastructure, human resources, primary care network, public health measures such as COVID-19 vaccination); community involvement through different mechanisms (communication, education, participation); and intersectoral measures (responses from the education system, security, transportation, sanitation, and others).

The gender dimension does not emerge as a key component of the different State responses in contexts where the biggest challenges are the health consequences (morbidity and mortality) and the prevention of health system collapse.

Due to the complexity of the (still ongoing) situation and the multiplicity and diversity of country responses, it is very difficult to systematize response modalities; it is even more difficult if the gender perspective is considered as a guiding principle. Some of these responses focus on health systems (108) without considering other dimensions that go beyond the sector. As for the health system, the available evidence shows that the gender dimension has not been relevant in the planning of the different responses.

An analysis of the more than 879 measures adopted by the countries (109) allows us to summarize a few highlights and organize the measures into four categories: (1) public health measures (awareness campaigns, testing, monitoring, use of protective gear, etc.); (2) social distancing measures (closure of schools and shops, etc.); (3) measures to restrict movement (travel limitations, forced quarantine, border closures, visa restrictions, etc.); and (4) social and economic measures (protection provisions, economic support, unemployment insurance, price controls, food aid, etc.).



ACCESS TO ESSENTIAL SERVICES

Between May and September 2020, WHO conducted a rapid assessment of the continuity of essential health services during the COVID-19 pandemic. This survey was intended to obtain initial information on the impact of the pandemic on a set of 25 tracer health services across the life course. The findings would be used to better understand the perceived extent of disruptions in all services, the reasons for those disruptions, and how governments addressed and implemented mitigation strategies to maintain the delivery of essential health services. The survey was organized into three sections: (1) policies and plans; (2) maintenance of essential health services; and (3) priorities and technical assistance needs.

The 25 tracer health services selected throughout the life course were: (1) family planning and contraception; (2) prenatal care; (3) institutionalized childbirth; (4) routine immunization (health facilities); (5) routine immunization (outreach); (6) pediatric care services; (7) management of moderate and severe malnutrition; (8) detection and control of outbreaks (non-COVID-19); (9) continuation of established treatments with antiretroviral drugs; (10) tuberculosis case detection and treatment; (11) diagnosis and treatment of malaria; (12) implementation of planned insecticide-treated net (ITN) campaigns; (13) implementation of planned indoor residual spraying (IRS) campaigns; (14) implementation of seasonal malaria chemoprophylaxis; (15) diagnosis and treatment of noncommunicable diseases (NCDs); (16) treatment of mental health conditions; (17) diagnosis and treatment of cancer; (18) dental services; (19) rehabilitation services; (20) palliative care; (21) 24-hour emergency room/unit services; (22) emergency hemotherapy services; (23) intensive care services for hospitalized patients; (24) emergency surgery; and (25) others. In all, 129 responses were received from key informants in the ministries of health of countries or territories in all WHO regions. Response rates were: world (61%), Southeast Asia (91%), Western Pacific (69%); Africa (64%); Europe (64%); Eastern Mediterranean (59%); and the Americas (47%).

The lower response rate in the Americas could be explained by the critical situation in the Region. However, 24 countries responded to the online survey with data collected between 12 August and 29 September 2020. Of the 24 countries in Latin America and the Caribbean that responded, 20 (83%) had a national package of essential health services defined before the COVID-19 pandemic; 20 (83%) identified a core set of essential health services to be maintained during the COVID-19 pandemic, and 16 (67%) have allocated additional government funding to ensure essential health services (110).

In most of the countries surveyed, the impact on health service delivery was rated as "partial disruption." Among the 25 tracer health services across the life course, those most frequently reported as partially or severely disrupted were dental services (78%) and rehabilitation services (63%). Similarly, the percentage of countries reporting partial or severe interruptions in routine immunization, family planning and contraception, pediatric services, prenatal care, and malnutrition care ranged from 40% to 50%, with similar effects on the diagnosis and treatment of chronic noncommunicable diseases and cancer, and even greater impact on some communicable disease services. In emergency and intensive care services, the reported incidence was about 10%.

The main causes of service interruption were the decrease in outpatient and inpatient patient volume; the lockdown, which made it difficult to access health facilities; and the deployment of personnel to provide COVID-19-related services (111).

The gender dimension was not analyzed in the characterization of access barriers and causes of the disruption of health services. Indirectly, assumptions could be made depending on the type of services involved (reproductive health, perinatal health, among others), but this does not exclude the need to investigate the gender dimension associated with the issue under study.

Regarding violence against women during the pandemic, the different governments carried out campaigns and designed innovative strategies to make it easier for women to seek help, identifying pharmacies and supermarkets as safe spaces in which to seek help, because they were essential services that remained open during lockdown. Asking for a "19-mask" or "red mask" was the code to activate the care protocol. Besides telephone or WhatsApp support, some countries used platforms such as Skype or Zoom to provide advice and support. These strategies for adapting care, assistance, and support services also faced limitations because cell phones are often controlled by the partners of women victims of violence, and due to the low levels of digital literacy among women living in poverty in the Region.

COVID-19 VACCINATION

The arrival of COVID-19 vaccines is yet another emerging issue that has come with this pandemic. Also of interest is the availability of information on gender biases associated with vaccine development, differences in immune responses between men and women, and possible disparities in distribution and access mechanisms. The speed of COVID-19 vaccine development and distribution must consider the social and political dynamics in which the vaccine is administered, at the heart of which is women's work and safety.

Vaccine delivery and facilitation is disproportionately subject to women's unpaid work. Vaccine uptake depends in part on essential care tasks, including women's free labor within the household, which affects women's economic and personal security, while also exposing them to risk. This effort to gain practical access to vaccines will add to the already abusive burden placed on women during the pandemic. Women in caregiving roles may have to give up time otherwise devoted to paid work or education, and incur out-of-pocket expenses related to travel and other costs of accessing vaccines for those in their care, which could require multiple trips, depending on each country's vaccination strategies. This is likely to be particularly true for women with unstable employment and those living in poverty or in rural areas (112).

The immunization response involves a complex strategic rollout, which considers access to and availability of vaccines based on population requirements, the relationship between States and the pharmaceutical industry, and the asymmetrical distribution of resources according to each country's financial capacity. This is a true scenario of immunological inequity, which adds to the existing inequities already described in this report. PAHO provides up-to-date vaccination information for all countries in the Region (113).

PUBLIC POLICY RESPONSES

Public policy responses included these initiatives: (1) strengthening social protection programs aimed at the population already experiencing poverty (generally conditional income transfer programs or economic subsidies), either by expanding coverage (more beneficiaries) or by increasing the amount of economic subsidies provided; (2) creating new social programs; (3) food reinforcement programs, through

economic subsidies to be used exclusively for the purchase of food; (4) programs to support the payment of wages to persons employed in economic or productive activities incapacitated by the pandemic, and subsidies for self-employed persons; (5) exemption from the payment of fees or arrears for non-payment of basic utilities (water, electricity, gas, and even cell phone plans, among others); (6) providing items needed to prevent transmission (masks, water, alcohol gel, etc.); (7) suspending tax payments or lowering tax rates; and (8) price controls or the establishment of maximum prices for essential mass consumption products (food, hygiene).

All these and other government responses were intended to mitigate the social and economic effects of the pandemic. Each had different characteristics according to the particularities of each country's populations, and the degree of development and consolidation of the available databases and information, in order to deploy aid and containment mechanisms in a short period of time.

In relation to gender policies, as mentioned above, public policy resources and actions during the pandemic focused on violence against women, mainly in the domestic sphere (114).

Social protection strategies were and continue to be essential as part of governments' responses to the socioeconomic effects of COVID-19, but they should be redesigned based on a gender, diversity, and intersectionality approach, recognizing the differential effects and providing more effective and relevant solutions.



PERSPECTIVE ON RELEVANT ISSUES DURING THE PANDEMIC

RESULTS OF INTERVIEWS WITH KEY INFORMANTS

GENDER MAINSTREAMING IN COVID-19 RESPONSES

Regarding the experiences and challenges of gender mainstreaming in the context of the pandemic, the people interviewed as key informants for this study agree that a country's capacity to incorporate the gender approach into its COVID-19 response depends on the varying degrees to which gender mainstreaming has been institutionalized through public policies. Among the main conditioning factors and limitations for incorporating the gender approach into government responses to COVID-19, they mentioned: the multidimensional nature of the pandemic; insufficient human and financial resources: the lack of adequate information for decision-making and in some local contexts; and the weakening of State secularism and the advance of fundamentalist sectors opposed to implementing inclusive policies to expand rights. These limitations are consistent with the findings of PAHO studies on gender mainstreaming (115) and are consistent in many respects with the progress report on the implementation of gender equality policies presented at the session of the WHO Regional Committee for the Americas held in September 2020 (116). The interviewees identified different processes of continuity and disruption in the countries' efforts to mainstream a gender perspective in public policies. Countries whose governments had a strong institutional framework for gender policies quickly incorporated and gave continuity to policies oriented toward gender equality and equity, while those with more conservative governments tended to focus their response on epidemiological criteria and urgency. Several interviews highlighted the fundamental role of regional and international organizations from the beginning of the pandemic in ensuring the continuity of gender mainstreaming processes and alerting governments to the importance of incorporating gender into the responses developed to address the pandemic (117).¹⁰

Organized feminist groups are also mentioned as important actors that helped support the gender

agenda and integrate it into the response to the emergency, and that often succeeded in asserting the gender perspective in the measures taken. In the words of Nadine Gasman, one of the key informants: "The issues that are on the agenda and that have been addressed in terms of policies and programs of the feminist agenda were out in the streets."

These groups have worked collaboratively since the beginning of the pandemic with national women's ministries and agencies, analyzing the social distancing and lockdown policies and how this particularly affects women and the LGBTQ+ community.

ROLE OF WOMEN IN THE PANDEMIC Response

Women's representation and participation in decision-making spaces (gender-balanced cabinets, Ministry of Women's Affairs in the Crisis Committee, etc.) have been identified by key informants as a central factor for the incorporation of a gender approach in crisis responses. The combination of social protection measures with care policies has been a feature of the response in countries where women are more included in decision-making spaces, as opposed to responses that have focused on the economy from a neoliberal perspective.

Women have also played an important role in leading community responses to the pandemic. As UN Women's regional advisor on Peace and Security, Alma Pérez, pointed out, the social fabric built by women was affected during the pandemic by an excess of care tasks and the responsibility they had to assume to secure medicines, food, and water for their homes, which meant that many had to set aside the community actions they traditionally led. Pérez said: "We should have made much more effort to give women a voice in response spaces, because they proved to be much more efficient." She also pointed out that in most countries of the Region the responses prioritized health or economic considerations; but if they had also prioritized social issues and the prevention of conflicts arising from the increase in inequalities, women would have played an essential role in leading these responses to favor the adoption and sustainability of both health measures and social security policies, through trusted community mechanisms.

¹⁰ Several key informants were aware of the document *Key Considerations for Integrating Gender Equality into Health Emergency and Disaster Response:* COVID-19, published by PAHO, which provides recommendations to States to ensure that the measures they implement take account of the intersectional dimension of gender issues. The ECLAC Gender Equality Observatory was another tool developed to support countries in tracking and monitoring the medium- and long-term effects of the COVID-19 crisis.

In contexts of social isolation, the organization of women's groups and the support of the community networks they have built have been critical in ensuring food security for those most exposed to conditions of vulnerability. One example of this are the *ollas populares* (communal kitchens), which Bertha Pineda Restrepo, from the Andean Health Organization (ORAS) in Peru, describes as "meaningful creative experiences of women." Besides guaranteeing food in a humanitarian crisis, these are experiences that promote "solidarity, teamwork, the coordination of efforts, and the building of relationships of reciprocity, solidarity, and support."

Women have been at the forefront in managing local strategies for self-care and care, and in the transmission and preservation of popular knowledge about health. This was a key aspect of essential care in rural and Indigenous communities and in working-class neighborhoods and, according to Andrés Cuyul, of the Universidad de la Frontera (Chile), this is an aspect that should have been better recognized and strengthened, instead of prioritizing "a national and local deployment of strategies based on a risk approach, without paying attention to autogenous, health-protecting processes" in each community.

Women have also been at the forefront in the area of health specifically, accounting for nearly 70% of the sector. On this point, some informants highlighted that the pandemic helped to make health workers and other caregivers more visible and contributed to their recognition by governments. However, they also pointed out the constraints on addressing the specific needs of women in the health sector, due to preexisting gender gaps both in the sector and in the domestic sphere. In recognition of the role of women on the front lines of the fight against the pandemic, the Inter-American Task Force on Women's Leadership called on governments and decision-makers to consider the equal inclusion of women at all levels of decision-making in the response to this crisis. The Task Force has pointed out that thousands of women are leading social and feminist organizations and serving as neighborhood leaders, directing and mobilizing the territorial response throughout the Region with scarce resources, while fulfilling the role of the State where the latter is absent.

GENDER-SENSITIVE MEASURES

The interviewees agreed that one of the first measures taken by most of the governments in the Region that incorporated a gender perspective was to recognize, at the onset of the pandemic, the risk that social distancing and restrictions on movement posed to women in situations of violence. According to the COVID-19 Observatory in Latin America and the Caribbean, of the 266 gender-sensitive measures taken by governments in the Region during 2020, 177 were related to gender-based violence. Most countries in the Region recognized that services for victims of violence were essential and they developed policies to increase and strengthen shelters and develop strategies to channel complaints from victims of domestic or intrafamily violence confined with their abusers. Beyond these measures, the Director of Gender of the Ministry of Public Health and Social Welfare of Paraguay, Claudia Sanabia, noted the inability of States and international organizations to take a comprehensive approach to a foreseeable increase in violence in the context of social isolation, and pointed out "a big gap in how we respond to violence prevention not only during a lockdown, but also in the new way of life that has arisen from confinement."

In the area of health, the interviewees highlighted as a gender-sensitive measure the fact that countries recognized sexual and reproductive health services as essential services at an early stage, and that they directed their efforts to ensure the accessibility and continuity of services during the pandemic. However, "although sexual and reproductive health services have remained a priority, this does not mean that people visit or use them, because everyone is afraid to go to health care facilities," said Nadine Gasman of UN Women. Sandra Castañeda, of the Latin American and Caribbean Women's Health Network (LACWHN), added that "the hospital system does not have the capacity to handle issues other than the pandemic." Both interviewees are also concerned about the disruption in the contraceptive supply chain and predict an increase in unintended pregnancies.



Most also noted that women's mental health was key to health responses to the pandemic to the extent that States recognized the specific impact of movement restrictions and the exponential increase in caregiving tasks during lockdown on women's mental health, and how these effects manifested themselves in demands for care in the health care system. As Sandra Castañeda described it: "A second front line is the home, because it is assumed that in order to avoid having to go to the health system, containment and prevention should be done at home; so, everyone went home, the entire education system was at a standstill, and all the children and adolescents in the education system went home and are now almost exclusively the responsibility of women." She adds that, although there are no figures, "it is logical to assume an increase in women's mental health problems, an increase in stress."

Regarding social security measures, several interviewees agreed that although some countries responded early on to the economic downturn caused by the pandemic, this response focused on the dynamics of the labor market and ignored the preexisting gap between men and women; it does not consider that most women work in the informal labor sector and it has failed to address the increase in caregiving and unpaid work that most women have faced due to the lockdowns and isolation measures.

Alma Pérez asserts that, among the countries in the Region, "42 took social protection and labor market measures, but of these measures—which according to our observatory numbered 339—only 22% were gender-sensitive; that is, only 22% strengthened women's economic security and addressed the issue of domestic work."

Finally, specifically regarding care policies, most of the people interviewed noted that this is one of the main gaps in terms of strategies to address COVID-19. Beyond a few isolated measures, countries showed many limitations in terms of addressing this issue comprehensively. In some interviews, this was highlighted as an opportunity to shed light on and reflect on co-responsibility in caregiving tasks and to problematize the traditional roles of men and women in reproductive tasks. Gary Barker of MenEngage, PROMUNDO, Brazil, said: "Most men are doing more than they did before; there is still inequality, but men have changed something, they have started to do something." Barker insists on involving men in the design of social protection policies, so they participate more in caregiving tasks, because if the measure is aimed at the mother, "it also perpetuates the idea that men are irresponsible."

INTERSECTIONALITY

As Alma Pérez stated in the interview, "the impact of COVID-19 has been to raise curtains and let us see the gaps." Intersectional analysis allows us to study the complex and simultaneous way gender and other determinants are interrelated and to understand the countries' response efforts. Barker spoke of "the ignorance of privilege" to indicate that the strategies for dealing with the pandemic, the measures prioritized to mitigate the spread of the virus, and the forms and channels of communication chosen to disseminate them do not fit the context or recognize the unequal needs of gender, class, and race.

According to some people interviewed, slogans such as "stay at home" and "wash your hands," are intended for adult, white, urban, middle-class audiences, who have jobs and the ability to maintain them remotely, who have access to clean water and can obtain food and other essential services without leaving their homes, and who can understand the messages. By underestimating preexisting material and symbolic inequalities, these strategies may widen the gaps, and may condition the population's access to protective measures during the pandemic.

Most of the measures taken failed to consider the economic activities of rural communities and Indigenous peoples, who depend on agricultural production and community exchanges and cannot easily sustain themselves in isolation. By not considering ethnicity and health and the ethnophagic inclusion of native peoples, there is a risk of limiting the recognition and appreciation of community relational logic, which could serve to protect health, not only by strengthening community support networks, but also through knowledge and practices of self-care. Once again, it is worth highlighting the role of women as leading figures in the promotion and support of community networks, and in the care and maintenance of household tasks.

Another intersection of inequality is the digital divide, which is due both to limited access to internet service and technological devices, and to the lack of skills needed to adapt to teleworking, tele-education, and other virtual activities. In isolation, these inequalities deepened and excluded many families in rural communities, Indigenous peoples, and working-class sectors that were unable to adapt to the virtual mode. "We were being made part of the problem," reflected Andrés Cuyul, from the Universidad de la Frontera in Chile, referring to the "new normal" for children's education, which was instituted while children and their families were under increasing stress as they attempted to meet expectations in a deeply unequal situation.

This digital divide is not the same for women and men. Women's access has been even more limited, as their economic autonomy was severely affected by the crisis. In addition, as Bertha Pineda Restrepo remarked in her interview, during the pandemic, when it has come to redistributing the overload of domestic chores resulting from the movement restrictions and the absence of classes, "men have taken on a little more responsibility (...) because this issue of education, tele-education-and this is another gender thing-involves greater competencies, because not only do you have to watch the class, but you have to print (...) and let's be honest, let's face it: it has been demonstrated that men have acquired more technological skills than women in many places."

The situation of migrants, mainly women and girls, is a source of intersecting risks and vulnerabilities for people confined outside their countries and for those who cannot leave their countries to seek help or refuge beyond their borders as they used to.

The interviewees agreed that, when countries incorporate the gender dimension into their strategies, they do so mainly through a binary (male-female) lens, but rarely consider sexual diversity in their analyses. This was mentioned above and highlights the issue of dual discrimination because the health system, by not recognizing sex and gender diversity and its particular needs, cannot guarantee effective and timelv access to comprehensive health care in a pandemic. For example, social isolation measures directly affected the transgender community whose survival depends largely on prostitution. There are also some notable examples of collective organization, mainly in Uruguay, where trans people organized community

kitchens and food collections to supply the community in general and their own group in particular.

Regarding children and adolescents. the interviewees recognized the differential effect of isolation at this point in the life course, which affects the socialization process, especially in younger Finally, a concern noted by the children. interviewees has to do with the sexual and reproductive health of adolescents, since sexual and reproductive health services were restricted during the pandemic, and many countries lacked campaigns aimed at adolescents to ensure the continuity of services considered essential.





5 CONCLUSIONS

This report reveals several examples of gender inequality brought about by the COVID-19 pandemic, and others that predate the pandemic, which have been exacerbated. The methodology of the analysis allowed us to combine multiple sources of quantitative and qualitative information to reach a firm conclusion: the pandemic has affected men and women differently. We further conclude that the pandemic has had a disproportionate impact on women, contributing to greater gender inequality in health, which threatens their development and well-being.

The study allowed us to thoroughly examine data and information that was available but previously unanalyzed. From there, we can affirm the critical need to go into greater depth to understand gender inequalities, their determinants, and their impacts. This is a real opportunity to urgently influence national and regional responses to the pandemic with more explicit elements of gender equality.

Below are the report's specific findings in terms of data and evidence, and plan and policy responses.

DATA AND EVIDENCE

During a pandemic, more than in any other public health situation, information systems play a critical role in managing the necessary data and information at the speed the situation requires. The COVID-19 pandemic has drawn attention to the production of information and its use in decision-making (118).

The implementation of PAHO line listing has revealed limitations and deficiencies related to the gender dimension in the information coming from the countries, since not all countries process and submit the same information. This results in great heterogeneity within the overall database if the gender dimension has not been considered as an attribute or dimension to characterize and track the pandemic at the territorial level. Finally, this study reveals the existence of information gaps resulting from the way in which countries develop their own information systems.

The importance of gender mainstreaming in emergency and health disaster response is acknowledged, but there are often failures in activating a timely gender approach to emergency and disaster response. The gender perspective should be positioned within a framework of intersectionality in the response to COVID-19, bolstered by additional research and analysis. For example, in Mexico, young Indigenous women have been identified as a vulnerable group, due to the high incidence of confirmed cases of COVID-19 and a higher death rate than other age groups.

Scientific advisors and advisory bodies have gained unprecedented visibility. Science quickly mitigated the infodemic (119); however, there are still gaps in the research on gender and COVID-19 in Latin America and the Caribbean. The inequalities that existed before the pandemic were exacerbated during the pandemic and continue to be exacerbated today (120).

Cases of COVID-19 are more common in men. In countries whose records provide information on level of severity, similar numbers of mild to moderate COVID-19 are reported in both sexes, but severe COVID-19 is more common in men than in women.

According to the scientific literature, deaths from COVID-19 are more common in men than in women, at all levels of severity. However, attention should be

paid to the different life stages, as in some countries more women than men die from COVID-19 in older age groups.

The clinical presentation of COVID-19 in women usually involves mild to moderate signs and symptoms, whereas severe clinical presentation is more common in men. Specifically, respiratory problems are frequent in both sexes, but more so in men, as are hospital and ICU admissions. Awareness of the other forms of clinical presentation of COVID-19 beyond respiratory manifestations can contribute to the early detection of a severe and avoidable progression.

This is confirmed by the systematic review, which showed that, despite wide heterogeneity in the results of the studies, male sex consistently constitutes a negative prognostic factor in all the outcomes evaluated. However, the association of gender-related sociocultural particularities in Latin America and the Caribbean should be analyzed to gain greater clarity on risks and vulnerabilities. Because there are few studies available in each category, we cannot assess whether this increased risk varies according to the quality of the studies, the population analvzed (general versus hospitalized infected patients), or other variables of interest. Unfortunately, the records on which the studies are based are primarily focused on assessing the prognosis of patients with COVID-19 and do not address the possible determinants of infection. Men's elevated risk has been attributed mainly to sociocultural and occupational factors, roles, and lifestyles, although possible biological explanations related to a lower susceptibility in women for immunological reasons have also been suggested (53).

Women have been at the center of the response (care, involvement, and leadership). The pandemic has highlighted the fact that women perform more caregiving tasks (paid and unpaid) than men, and account for the majority of health care workers. Both situations place women in areas where the risk of SARS-CoV-2 infection is highest. There are also more women who, due to their longer life expectancy, reside in centers or homes for the elderly, where there have been more COVID-19 cases and deaths. Meanwhile, there is a lack of information on trans people and people with nonbinary gender identities.

As of 31 January 2021, reports from ministries of health counted over 1.3 million cases among health workers in the Americas. Over 6,000 health workers have died due to COVID-19. Women account for 72% of cases among health workers.

Gender bias in the pandemic: The frequency of high-risk contacts with SARS-CoV-2 patients is higher in women than in men, which holds true in all age groups, probably reflecting the classic role of women as caregivers.

In the patients who died, there were significant differences by sex in terms of the need for intubation and admission to the ICU, which was greater in men than in women. This may be due in part to COVID-19 cases involving pneumonia, which report significantly higher frequency of intubation and ICU admissions for males than for females. This may indicate a gender bias in the therapeutic effort.



In the Indigenous population, COVID-19 cases fall under the "suspected" criterion more often than in the rest of the Mexican population, and more often in women than in men. This may be an indicator of a dual gender bias, namely that of being a woman and being an Indigenous woman.

Health personnel: The challenges to science and to professional health care practice have been many and manifold in the COVID-19 pandemic.

We were unable to demonstrate through the systematic review whether sex or gender is a moderator of the effect of COVID-19 interventions, due to the lack of experimental studies. One plausible explanation could be that on the largest global experimental study registry platform (ClinicalTrials.gov), as of June 2020 only 416 (16.7%) of the 2,484 registered SARS-CoV-2 or COVID-19 trials mentioned sex or gender as a recruitment criterion and only 103 (4.1%) refer to sex or gender in the description of the analysis plan. None of the 11 clinical trials published in scientific journals in June 2020 reported results disaggregated by sex (119). Not surprisingly, the phenomenon is replicated in the studies coming out of Latin America and the Caribbean, as evidenced by the results.

PLAN AND POLICY RESPONSES

Countries whose governments had a strong institutional framework for gender policies quickly incorporated policies aimed at gender equality and equity, and provided for their continuity, while those with more conservative governments focused their response on the basis of epidemiological criteria and urgency. Responses in terms of COVID-19 plans and policies in the Region have varied depending on the country, the behavior of the pandemic, and the existence or absence of mechanisms and resources to guide these responses. The temporality of the decision-making processes was closely linked to the responses in terms of plans and policies. The gender dimension emerged mainly in highly visible situations (as in the case of violence), while in other cases it remained invisible, either because it was not considered important or due to lack of information.

States have recognized from the outset that sexual and reproductive health services are essential services and have directed their efforts to ensuring the accessibility and continuity of services during the pandemic, especially for groups identified as being exposed to greater vulnerability. Similarly, women's mental health has been key to health responses to the pandemic, inasmuch as countries recognized the specific impact of movement restrictions and the exponential increase in caregiving tasks during lockdown on women's mental health, and how these effects manifested themselves in demands for care in the health care system.

6 RECOMMENDATIONS

The current scenario demands effective gender mainstreaming in the production of information to understand and address the implications of COVID-19 in all its complexity.

A comprehensive analysis of the differential impact of the pandemic should make it possible to transform the inequalities that fuel health risks for men, women, and LGBTQ+ people throughout the life course.

Below are recommendations for the Region, based on the data in this report. Some are readily achievable, but others will require major adjustments to national health emergency response mechanisms. These pages have reaffirmed that the processes of gender mainstreaming are heterogeneous in State policies, in health, and other fields. This is where all countries can accelerate the achievement of their goal of gender equality and sustainable development on the road to a world without pandemics.

PLANS AND POLICIES

Political institutions now face challenges that require intersectoral and intersectional responses, from a gender perspective, to address problems such as the development of the professional public health sector (to prevent epidemics through early detection and the isolation of infected persons) and of primary health care (to avoid pressure on hospital services). This also requires that political institutions effectively promote democratic and participatory responses with citizens who know that they have rights, but also duties; who are committed and responsible; and who collaborate in developing a stronger and more sustainable health system (16). • Given the complexity of the pandemic, gender mainstreaming in the pandemic response is essential, as is accountability to help understand and address barriers to the effective and quality implementation of health interventions aimed at preventing and controlling COVID-19 among diverse groups of men and women.¹¹

• A comprehensive care system should be implemented to respond to the overload of paid and unpaid work for women; it should also support women in the health and care services system, who are more exposed to COVID-19.

• Diverse groups of women and LGBTQ+ people should be incorporated into decision-making spaces and protocol development and implementation; mechanisms should also be created to demand gender parity in the task forces created to address the pandemic crisis and recovery.

• We must incorporate the gender perspective and call for the construction of new masculinities in the design of care policies that appeal to co-responsibility in domestic tasks, which have increased during the pandemic.

• The gender perspective should also be introduced in social protection policies that traditionally target women, and this space should be opened up to men with a view to their responsibility for the care and education of children.

¹¹ According to the information presented in this report, areas requiring further investigation include how health measures and the economic crisis affected the lives of women and LGBTIQ+ people, the impact of social isolation on the increase in violence against girls and women, the risks of STIs, especially among sex workers, the criteria for reallocating resources earmarked for COVID-19 care, and access to mental health, sexual and reproductive health, and prenatal care services.

• Measures should be taken to protect mental health and to continue strengthening policies for access to sexual and reproductive health and the prevention and treatment of gender-based violence.

• States should build the capacity of health systems (inputs, resources) to maintain continuity of health service delivery for both COVID-19 and non-COVID-19 cases and consider the differential impact of delivery on diverse groups of women, men, children, and people with diverse gender identities.

DATA AND EVIDENCE

• As a basic premise, information systems should disaggregate and analyze data by sex, age, and at least two additional dimensions of inequality (socioeconomic strata, ethnic/racial status, territoriality, and factors such as disability or immigration status, among others), in order to adequately understand and explain the gender dynamics surrounding COVID-19.

• Information systems should modify their statistical categories of "gender," always considered as a binary category, and advance in its redefinition based on an inclusive approach to diversity.

• For the COVID-19 pandemic in particular, sex-specific surveillance with a gender analysis should include transmission rates, diagnostic practices, progression of the health and disease process, and therapeutic effort.

• Achieving a high quality standard of information requires the integration of an intersectional perspective that allows for a situational analysis of the different population groups, in order to take actions that include these groups and ensure equity in the response to COVID-19 and post-pandemic recovery.

• Specific information on access to sexual and reproductive health services, gender violence, adolescent pregnancy, and mental health should be monitored, among other relevant topics. Further studies are recommended on discrepancies in the severity and mortality rates of COVID-19 between men and women and associated factors, and on the differing levels of exposure of men and women to COVID-19 and the resurgence of family-based care, which make it necessary to focus on women's health needs. Prospective population-based studies are needed to characterize combinations of signs and symptoms to assess the syndromic presentation of COVID-19 from a sex and gender perspective.

• Analytical studies that control for the different variables involved are required to prevent methodological biases.

• Research should be conducted on whether there is gender bias in the provision of health care to patients in equal need, and on how barriers related to gender norms and roles may affect access to health services.



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COVID-19 has had catastrophic effects on health systems and on the health of people in the Region of the Americas, especially women and girls, whose conditions have worsened in all respects.

The greatest concerns focus on the direct consequences of the virus (morbidity and mortality) in specific populations and on the results of measures aimed at mitigating the spread of the virus, with indirect impacts on socioeconomic conditions.

In this complex scenario, the gender approach has not received due attention during the pandemic. Gender is one of the structural determinants of health, but it does not appear in analyses of the direct and indirect effects of the pandemic, despite being essential in the recognition and analysis of the differential impacts on men and women and their interaction with the different determinants of health.

This report—an initiative of the Pan American Health Organization—aims to generate knowledge in order to recognize, understand, and position the issue of gender and health in the context of the pandemic, and to understand the behavior of the disease and its possible impacts. The report offers a series of conclusions and recommendations on data, evidence, plans, and policy responses.





