ASSESING GENDER GAPS FROM VITAL STATISTICS

Indicators for Measuring Health Inequity

January 2025

IMPLEMENTACIÓN
E INNOVACIÓN EN
POLÍTICAS DE SALUD

INSTITUTO DE EFECTIVIDAD
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INTRODUCTION

Measuring health inequities is essential to identify significant gaps and guide the creation of public policies that promote equity. In this context, incorporating a gender perspective in the design and analysis of health indicators is crucial to assess not only the biological differences between women and men but also the inequities derived from socially constructed roles and behaviors. These factors influence health perception, risks exposure, and access to and use of healthcare services in diverse ways.

The analysis of health data from a gender perspective allows for the visibility of avoidable and unjust inequities arising from unequal opportunities and resources between women and men. This disparity is reflected in indicators such as mortality rates, life expectancy at birth, and healthy life expectancy, whose disaggregation allows for the identification of differences stemming from unequal living conditions and access to healthcare services. To monitor these inequities, health indicators must clearly highlight those differences that can be remedied through changes in policies, programs, and public health practices. (OPS, 2016) .

This document aims to describe the literature review conducted to identify specific indicators for measuring gender-based mortality inequities. Based on the findings, considering data availability and the concept of inequity, a list of proposed indicators to identify these gaps is presented at the end of the report.

This document is developed within the framework of a project focused on analyzing historical mortality data and creating an interactive dashboard for visualizing mortality indicators designed to monitor gender gaps in health from a gender perspective in Argentina.

CONCEPTUAL FRAMEWORK

HEALTH INEQUITY AND INEQUITY

The Pan American Health Organization (PAHO/OPS) defines health inequities as unfair and avoidable differences in the distribution of resources, rights, or disease burdens among different social groups. While health inequity encompasses all variations in health status, inequity specifically refers to those differences that are considered unnecessary, avoidable, and unfair (OPS, 2004). It is important to highlight that health inequities manifest as observable differences between social groups within a population, making them measurable. As such, these inequities serve as an indirect means of assessing health inequity (OPS, 2016).

GENDER

The concept of gender is defined as a sociopolitical, historical, and dynamic process through which societies construct and assign meanings to what is considered masculine or feminine. These meanings, which can be understood as social mandates, attribute a differentiated set of physical, psychological, emotional characteristics, as well as roles, behaviors, and specific opportunities to women and men. In this way, unlike sex, which refers to the biological differences between women and men, gender relates to the roles, behaviors, and expectations that societies associate with each. (OPS, 2004; Organización Mundial de la Salud, n.d.).

In most societies, the mandates regarding what is considered masculine and feminine, although vary and evolve over time, deeply structure the political, social, economic, and cultural dimensions. Additionally, they significantly influence processes related to care and reproduction of life. This often leads to unequal access to resources and opportunities between men and women, resulting in gender inequities. Thus, the concept of gender not only includes the stereotypes associated with femininity and masculinity but also the practices, social relationships, and power structures that perpetuate this unequal distribution (ONU Mujeres, 2020; OPS, 2004; Organización Mundial de la Salud, n.d.; Universidad Autónoma de Madrid, 2023).

Although health statistical data is often disaggregated by sex, interpreting this information from a gender perspective is crucial to understanding the inequities that arise from social constructions surrounding the roles and behaviors assigned to women and men. These gender roles, which influence both labor opportunities and the distribution of caregiving tasks, affect health in a differentiated manner and are reflected in mortality and morbidity indicators. While statistics show that women tend to outlive men and exhibit lower mortality rates at all ages, as well as a lower burden of disability-adjusted life years (DALYs), (Organización Mundial de la Salud, n.d.), this does not necessarily mean that women enjoy better health. Additionally, lower mortality among women has not been a constant over time, nor is it the case for all countries, age groups, and socioeconomic status (OPS, 2004).

> *Gender equity in health does not mean equal mortality or morbidity rates for both sexes. It means the absence of avoidable differences between women and men in opportunities to survive and enjoy health, and in the likelihood of not suffering from illness, disability, or premature death from preventable causes.* (OPS, 2004)

In this sense, incorporating gender as a fundamental analytical variable in research allows for a detailed examination of the differences between men and women within the studied population. The omission or superficial treatment of gender issues may lead to incomplete, unrepresentative, and potentially biased results. (International Development Research Centre, 2019). For this reason, analyzing specific mortality indicators from a gender perspective allows for the identification and visibility of underlying inequities, providing key information to develop health policies that effectively address these structural inequities.

INTERSECTIONALITY

A key aspect when addressing gender differences in health is considering the intersectionality approach. This approach highlights how, in social reality, gender intersects with other concepts such as race, ethnicity, religion, nationality, migration status, social class, age, disability or functional diversity, sexual orientation, and gender expression or identity, among others. All these factors are integrated in a complex manner, often at multiple levels simultaneously. (Universidad Autónoma de Madrid, 2023). In this regard, although gender constitutes a central category for analyzing health inequities, it is essential to also consider the social factors that influence health and mortality. These factors not only have their own impact but also interact dynamically with gender differences.

MORTALITY

Mortality information is an essential tool for characterizing the health status of a population and designing policies that address its health needs. Health was defined in 1946 by the World Health Organization (WHO) as "a state of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity."(OMS, 2024). Although this concept remains relevant, health and disease are now considered dynamic processes, linked not only to the individual's inherent characteristics but also to environmental factors and the way in which the society is organized, such as access to care and services, educational opportunities, unmet basic needs, among others (OPS, 2017). All these factors must be considered when assessing the impact of determinants on mortality. Moreover, while mortality statistics present the issue of using mortality as an approximation of health (as it represents the final stage of the health-disease process) its wide availability makes it frequently used to describe the health of populations (OPS, 2017). Thus, the analysis of mortality provides key information about living conditions and access to quality medical services, being particularly useful for making decisions that improve accessibility and quality of healthcare. (OPS, 2017).

Along with births and migrations, mortality is one of the three central components of demographic dynamics, helping to explain changes in the size and composition of populations. From an epidemiological perspective, low mortality levels tend to occur in aging populations, characterized by a lower burden of infectious diseases and an increase in the prevalence of non-communicable diseases (NCDs) (OPS, 2017). This relationship illustrates the link between demographic and epidemiological transitions: the initial decline in mortality primarily affects infectious diseases, benefiting younger population groups where such infections are more common and severe. As more individuals survive childhood, the duration of exposure to risk factors associated with chronic diseases and injuries increases, thereby elevating their relative contribution to mortality (Frenk et al., 1991). Indeed, the global rise in mortality from non-communicable diseases (NCDs) is largely driven by population aging (OPS, n.d.).

There is a wide variety of indicators for measuring mortality. Below are the most commonly used, along with a description of their applications.

The **crude mortality rate** is defined as the number of deaths occurring in a specific population during a given period, usually one year, divided by the total population and multiplied by 1,000 or 100,000 to express the rate on a common basis. This indicator provides an overview of mortality in a population and allows for comparisons over time or between different regions or countries.

The **age-specific mortality rate** refers to mortality calculated for specific subgroups of a population, such as age groups, sex, or specific causes of death. These rates allow for the observation of mortality within a particular segment, which is useful for designing targeted interventions.

Age-standardized mortality rates allow for mortality comparisons between populations with different age and sex structures. They are calculated by applying the structure of a reference (standard) population to the mortality rates observed in each age group of the study population. Standardization eliminates the effect of age composition, enabling fair comparisons between populations that differ in structure. Age-standardized mortality rates can be calculated using direct or indirect methods.

The direct method involves first calculating the age-adjusted mortality rates for the populations to be compared. Then, a population is selected as the standard, and the specific rates of the populations being compared are applied to this standard. It is evaluated whether the differences are maintained with the same age structure. Regarding the indirect method, it is an alternative when the size of each group is very small, for example, when analyzing smaller geographic areas, in which case the data would be subject to large variations due to the simple increase or decrease of a few deaths. (OPS, 2017). For the calculation, first, the actual observed deaths in the population of the smaller area are obtained, classified by age groups. Then, the age-specific mortality rates observed in the total population, which serves as the reference, are calculated. Based on these rates, the expected deaths for each age group in the smaller area population are determined by applying the mortality rates for each age group of the population to the age structure of the total population. Subsequently, the total number of expected deaths in the smaller area population is calculated. Finally, the age-standardized mortality ratio is obtained by dividing the number of observed deaths in the smaller area population by the total number of expected deaths in that population, assuming it had the same mortality structure as the total population.

The **Maternal Mortality Ratio (MMR)** is a specific indicator of mortality associated with maternity. It is defined as the number of maternal deaths (deaths of women during pregnancy, childbirth, or the postpartum period due to pregnancy-related causes) per 100,000 live births. This indicator is crucial for assessing the quality of maternal health services and equity in access to them.

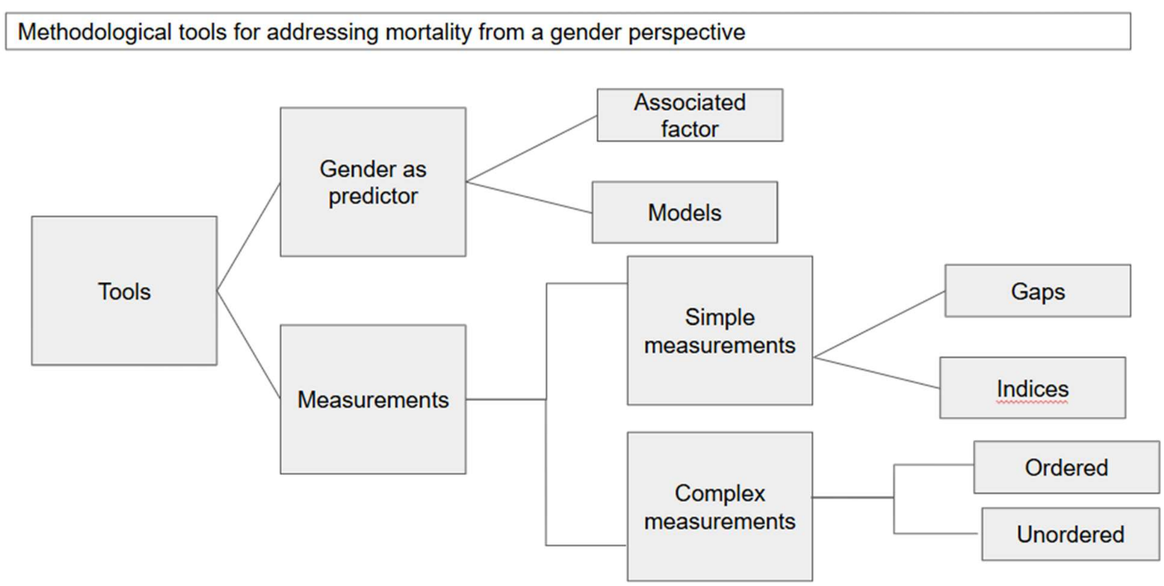
Life expectancy is the average number of years a person is expected to live if they were subject to the age-specific mortality rates observed during a specific period. This indicator summarizes mortality across all ages and serves as a general measure of the health and well-being of a population. Life expectancy can be calculated at birth or for specific ages.

Attributable mortality refers to the number of deaths that can be attributed to a specific risk factor, such as tobacco use, physical inactivity, or exposure to pollutants. This indicator helps identify avoidable causes of death, providing a basis for public health interventions aimed at reducing exposure to risk factors and promoting a healthy lifestyle.

MEASUREMENT OF MORTALITY INEQUITY

The methodological approaches or tools used to measure mortality inequiety from a gender perspective can be classified into two groups. The first considers gender as a predictor of mortality, integrating it into statistical models such as regressions or evaluating its association through statistical coefficients. This approach allows for the analysis of gender as an associated factor and its influence on health. The second approach focuses on the measurements themselves, calculating typical values of a mortality indicator for each gender category. These measurements can be further subdivided into simple and complex. Simple measurements, such as differences or ratios, are useful for making comparisons between two groups. On the other hand, complex measurements allow for the analysis of differences between more groups and are further divided into those that analyze inequities in groups with a natural ordering (such as socioeconomic status) and those that work with unordered groups. (OPS, 2016).

Figure 1. Methodological tools for addressing mortality from a gender perspective



Source: Own elaboration.

GENDER AS A PREDICTOR OF MORTALITY INEQUITY

As a result of the bibliographic search [1], several scientific articles were found that identify gender as a variable to be considered in the differential analysis of mortality.

In some studies, (Corral Martín et al., 2010; Rosella et al., 2016; Santomaso, 2021; Taslem Mourosi et al., 2022) gender, often approximated through the sex variable, is used as a segmentation tool to examine differences in mortality indicators. These analyses apply statistical tools such as confidence intervals and significance tests, based on a probabilistic model, to assess whether the differences in mortality indicators by gender are statistically significant. In other cases, gender is considered as the explanatory variable or one of the explanatory variables in regression models aimed at describing mortality patterns (Feraldi & Zarulli, 2022; Gao et al., 2019; Lv et al., 2024; Meuli et al., 2023; Yang et al., 2024).

A variant of these models is found when studying geographic aggregates, which corresponds to a type of epidemiological study design known as ecological. Among these cases, a study conducted in Spain stands out, analyzing the effect of gender equality on mortality from NCDs through an analysis that measures the association between the probability of death from NCDs and the Gender Inequity Index (GII) in the world during the years 2000, 2015, and 2019 (Carpio-Arias et al., 2024).

What is interesting about the article is the use of the GII, which is developed by the United Nations Development Programme (UNDP) and reflects the potential loss in human development due to gender inequity across three dimensions: reproductive health, measured through indicators such as maternal mortality rate and adolescent fertility rate; empowerment, which includes educational level (years of schooling) and the proportion of women in parliamentary positions; and the labor market, comparing rates between men and women. The result varies between 0, obtained when men and women have identical outcomes across all three dimensions, and 1 when men and women have greater disparities in all three dimensions.

[1] The search primarily used PubMed as the main database. The keywords used were: “mortality" AND ("inequity" OR "inequality" OR "disparities" OR "social determinants") AND "gender disparities" AND "English"[Language]) AND 2018:2024[pdat]. This resulted in 152 articles. A search in Spanish was also conducted: "indicadores de mortalidad" OR "mortalidad" AND ("desigualdad" OR "inequidad" OR "determinantes sociales") AND ("género" OR "diferencias de género") AND ("Spanish"[lang]). This yielded only 1 article.

QUANTIFICATION OF INEQUITY IN MORTALITY INDICATORS

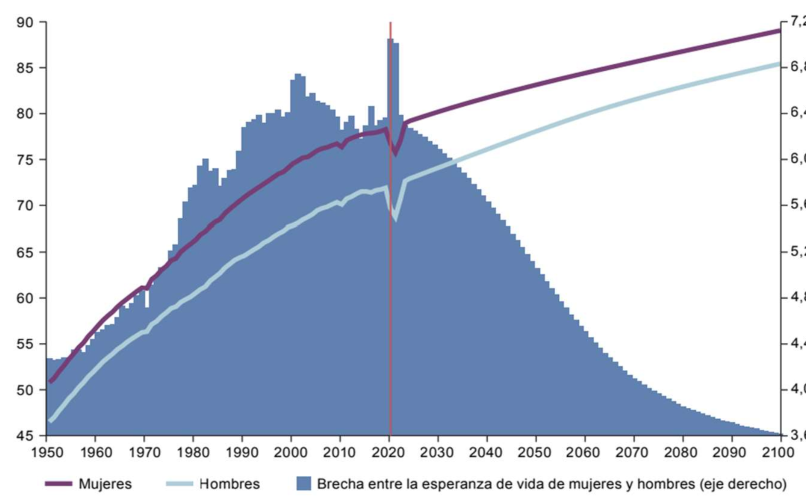
To analyze gender differences in mortality, various measurements can be employed depending on the characteristics of the stratification groups, that is, the dimensions of inequity chosen for analysis. One way to classify them is by distinguishing simple inequity metrics or measurements that establish health comparisons between two groups, and complex measurements that use data from all groups to assess inequity (OPS, 2016).

Simple Measurements of Inequity

Gender inequity measurement can be analyzed through the calculation of gaps, that is, by making simple comparisons between two groups. To quantify such a comparison, it is possible to calculate the absolute difference (the average value of a health indicator in one group minus the average value in the other group) and/or the ratio (the average value in one group divided by the average in the other) (OPS, 2016).

The **absolute difference** allows for evaluating the magnitude of the gap between population groups, while the ratio or quotient assesses the relative disparity between the groups. The measurement of life expectancy at birth by sex and the calculation of the gap between men and women represent an example of calculating the absolute difference (Figure 2).

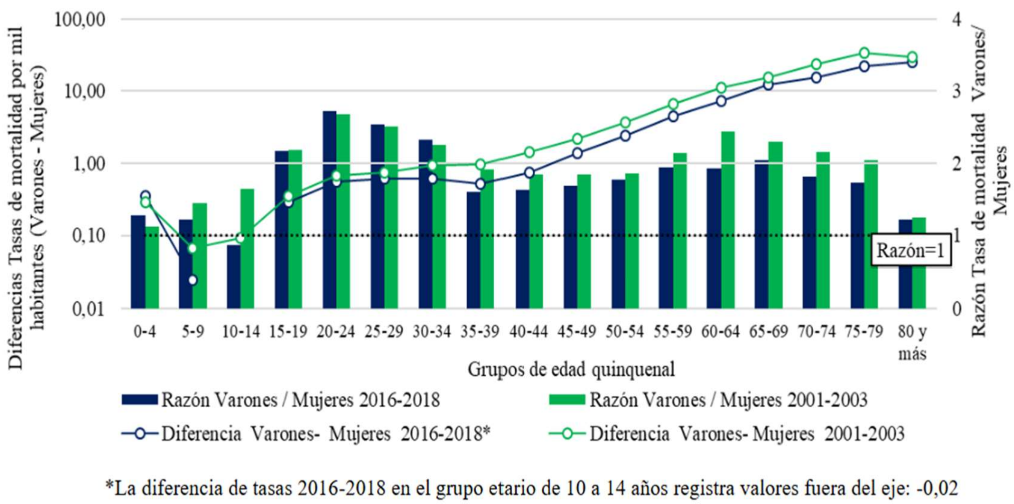
Figure 2. Latin America and the Caribbean: life expectancy at birth by sex, and the gap between the estimated and projected life expectancy at birth for women and men by year, 1950-2100 (in years).



Fuente: Centro Latinoamericano y Caribeño de Demografía (CELADE)-División de Población de la Comisión Económica para América Latina y el Caribe (CEPAL), revisión 2022 y Naciones Unidas, *World Population Prospects*, 2022 [en línea] https://population.un.org/wpp/.

As for ratios, they are useful for evaluating changes in gender-based mortality over time, as well as in the risk of dying, and for comparing mortality rates by specific causes (see example in Figure 3). Specifically, the latter can provide hypotheses about certain disease patterns. (OPS, 2004).

Figure 3. Difference and ratios of age-specific mortality rates per thousand inhabitants for men and women. CABA. Period 2001-2003 and 2016-2018.



Source: (Santomaso, 2021)

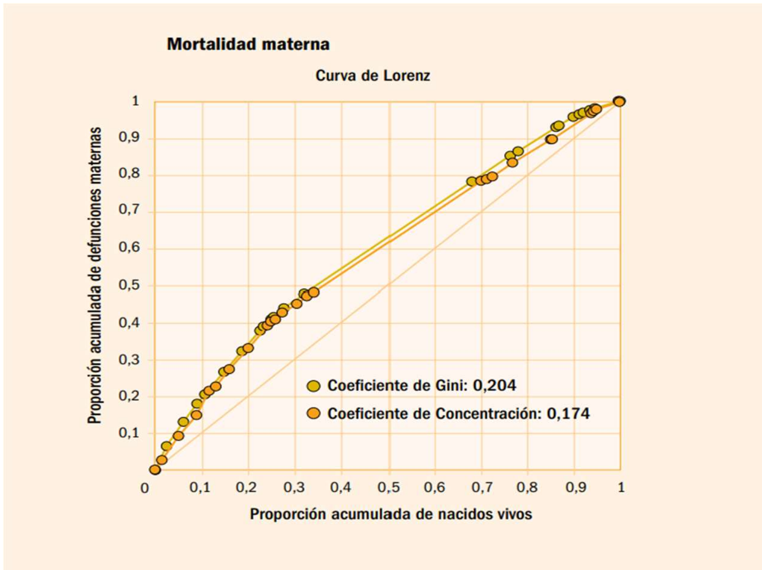
All of these measures have the advantage of being easy to calculate and interpret. However, they have limitations, such as the inability to compare more than two groups simultaneously and the lack of consideration of the compared groups size. (OPS, 2016).

Complex Measurements of Inequity

Complex measurements allow for comparing more than two groups simultaneously and considering their size. They are based on mathematical indices that evaluate health distributions against segmentation variables such as income, education, and occupation. They can be classified into two types: those that measure inequity in groups with a natural ordering and those in groups that do not require such an ordering.

The first group includes the concentration index, the **Gini index, and the Lorenz Curve** as a graphical representation of the degree of concentration. These measures are useful for assessing inequity in health conditions according to variables that have an order, such as income level or educational level. These indices capture the unequal distribution of resources or health conditions based on this order. A common strength of both metrics is that their calculation includes weighting according to the population size in each group, which allows for generating a single number that describes inequity among all groups, considering population size (OPS, 2016). An example of the application of these metrics for maternal mortality in Argentina can be seen in Figure 4.

Figure 4. Lorenz Curve, Gini Coefficient, and Concentration Index of Maternal Mortality. Year 2021.



Source: Ministry of Health of Argentina and PAHO 2003.

Regarding the second group, when stratifying or segmentation variables do not have an intrinsic hierarchy, the absolute mean difference is a useful metric for absolute inequity, while the Theil index is a useful metric for relative inequity. These indices measure disparity between categories without an order, reflecting how a health condition is distributed across independent categories. The absolute mean difference from the overall mean is the difference between the mean of each group and the overall mean, indicating the average inequity between subgroups. The Theil Index, on the other hand, measures inequity in a distribution by evaluating how much each group deviates from the average, being particularly useful for comparing inequity across subgroups (OPS, 2016).

In turn, the **Population Attributable Risk (PAR)** is a measure of absolute inequity that shows the possible improvement if all groups had the same rate as the reference group (OPS, 2016). For example, a study conducted in the Province of Buenos Aires, Argentina, calculated the mortality attributable to tobacco use, resulting in the finding that 34.4% of deaths from cardiovascular diseases, 68% of deaths from cancer, and 40% of deaths from respiratory causes were attributable to smoking. The study concluded that it is necessary to further strengthen measures to reduce tobacco exposure (Bolzán et al., 2023).

SEGMENTATION VARIABLES

Stratifying or segmentation variables allow for the visibility of health inequities that are often not perceived in the analysis of national averages. Factors such as socioeconomic status, place of residence, and educational level have shown differences in the mortality analysis.

The level of mortality has been shown to vary according to the socioeconomic status of the population. Preston (1975) demonstrated that these inequities are linked to the socioeconomic development level of countries. His analysis revealed a strong correlation between the logarithm of national per capita income and life expectancy at birth. Based on this relationship, several authors have analyzed the causes of this association, indicating that it is not only the income of a population that improves health, but that income must be translated into better education, nutrition, housing, sanitation, and greater demand for services (Sen, 1999; Soares, 2007; Wilkinson, 2007). Moreover, a significant part of the reduction in mortality is due to structural factors that are not directly related to economic development, among which interventions targeting specific diseases and education stand out (Soares, 2007).

In the case of Argentina, the association between socioeconomic status and mortality level can be observed by analyzing the relationship between life expectancy at birth (LEB) by jurisdiction and the proportion of the population with Unsatisfied Basic Needs (UBN). Grushka (Carlos Grushka, 2014) analyzes this relationship using census data from 1980 to 2010 and finds that each percentage point of UBN is associated with a decrease in LEB of between 0.12 and 0.16 years (2014).

In relation to differences according to educational level, studies such as *Effects of education on adult mortality: a global systematic review and meta-analysis* have shown a clear association between educational level and mortality risk (IHME-CHAIN Collaborators, 2024). A low educational level is identified as a risk factor for adult mortality, even after controlling for variables such as age, sex, and marital status. On average, an adult with 12 years of schooling has a 24.5% lower risk of mortality compared to an adult with no education. Furthermore, each additional year of schooling is associated with a 1.9% average reduction in mortality risk. This protective effect of higher education on mortality is consistent across all age groups, sexes, periods, birth cohorts, and Sociodemographic Index levels, and does not diminish at higher educational levels. This relationship has also been studied in Argentina, where educational level shows an inverse relationship with adult mortality rates, and this association is further verified by introducing other variables such as age, gender, and geographical region (Manzelli, 2014).

Another aspect that has shown differences in mortality levels is the place of residence. One example is the classic study by John Snow published in 1855, on cholera deaths in London in the mid-19th century (OPS, 2017). Analyzing cholera deaths from 1848-49, Snow observed that the districts in southern London recorded the highest number of cases and the highest mortality rates. This was because the residents of that area obtained water from the Thames River at a downstream point, where it was highly contaminated, unlike those living in other parts of the city, who accessed cleaner water upstream (Cerda L & Valdivia C, 2007). More recent studies have linked mortality with place of residence and access to healthcare. In England and Wales, considerable differences were found in mortality rates due to diseases whose lethality is largely preventable with proper medical intervention. These differences persisted even after adjusting for social factors (Charlton et al., 1983). Furthermore, health differences between geographic areas are strongly correlated with the socioeconomic characteristics of the population residing in those areas. The greater the social and economic deprivation in an area, the higher the general mortality rates and specific rates for many causes of death (Borrell et al., 2008).

This intersection between place of residence and social inequity when studying mortality has been investigated in Argentina. In some cases, through a special analysis via the development of Mortality Reports (Loria, n.d.; Macías et al., 2017; Ministerio de Salud y Ambiente de la Nación & Universidad Nacional de Lanús, 2005). This visualization tool provides useful information to guide decision-makers at various levels and generate causal hypotheses regarding the potential relationship with the distribution of risk factors and health determinants, such as lifestyle, socioeconomic status, accessibility, quality, and outcomes in healthcare services (Macías et al., 2017).

In other cases, differences in age-standardized premature death rates were analyzed at the departmental level. While a linear gradient was observed between early death and socioeconomic status across all provinces and regions, the slope of inequity between the components of socioeconomic status varied at the departmental level. While throughout Argentina, the absolute difference in the age-standardized premature death rate between the extreme components of socioeconomic status was 10 deaths per 10,000 people per year, in the city of Buenos Aires, this difference was 61 deaths. The southern communes of Buenos Aires City were the areas with the highest social and health inequity in Argentina (Macchia et al., 2015).

The mother sociodemographic conditions play a central role in infants and maternal mortality. Among them, the mother's age and parity order stand out as relevant factors, as well as the mother marital status, as it reflects the family context and social support in which motherhood develops, factors that directly influence the health and well-being of both the mother and the child. Massa, in her work on socioeconomic differentials in infant mortality in the Luján district, finds that affiliation, understood as the legal relationship between the child and the parents union, shows an association with infant mortality, with higher mortality observed among children born outside of a legally recognized union (Massa, 1992).

Another important aspect is the educational level, which acts as a protective factor in infant mortality, especially the mother's enrollment in secondary school (Tafani et al., 2013). On the other hand, poverty and lack of access to services such as clean water, sewage, and housing made of adequate materials have shown differences regarding infant mortality (Abriata & Fandiño, 2010; Juliana Z. et al., 2015; Marcos, 2008).

DATA SOURCES

In Argentina, the primary source for analyzing mortality is the Vital Statistics, compiled from the Death Statistical Reports (IED by its initials in Spanish). The country has a consolidated Civil Registry and Vital Statistics system. On the official website of the Directorate of Statistics and Health Information of the Ministry of Health of the Nation (DEIS-MSAL by its initials in Spanish), publications with mortality information since 1980 are available (*Dirección de Estadísticas e Información de la Salud*, 2024).

The Vital Statistics System in Argentina is based on a paper format, where professionals certifying deaths complete the statistical information about the deceased person and their death, and eventually, the circumstances in which it occurred if it was due to an external cause. The IEDs include both event-related information (such as the date of death and registration, the place where it occurred, the cause of death, among others) and characteristics of the deceased (such as age, sex, the facility where the death occurred, highest educational level attained, occupation and economic activity, and social security coverage). The IED data is entered into the information systems and managed by the Provincial Health Statistics Offices (OPES by its initials in Spanish), which collect and periodically send the data to DEIS-MSAL. The latter integrates and centralizes the databases from the different jurisdictions once a year. Death data is available with disaggregation up to the departmental level.

The United Nations Statistics Division (UNSTATS) considers Argentina as a country with a high level of coverage for its Vital Statistics, with the latest estimates ranging from 90% to 99% for births and more than 90% for deaths (United Nations Statistics Division, n.d.). Beyond this and considering that the statistical registration of vital events is developed alongside their civil/legal registration, it is estimated that nearly 100% of events are registered with a good level of timeliness.

While Argentina has a high level of coverage for the registration of vital events, it faces the challenge of improving the quality of death cause certification. Although in recent years an acceptable level of deaths with "ill-defined" causes according to the International Classification of Diseases (ICD-10) has been observed, concerns have been raised about the high percentage of deaths attributed to causes classified as "not useful causes of death" (Luque et al., n.d.). Another aspect related to the quality of information is the lack of definition regarding intent in a significant portion of deaths from external causes (Santoro, 2020). Both issues represent a challenge for mortality analysis in general and for this specific project.

It is important to highlight two aspects of Vital Statistics that may be relevant when ensuring the sustainability of historical series analyses:

- ✓ Vital Statistics use a standardized classification of causes of death for statistical purposes. In Argentina, the ICD-10 is currently used; however, the WHO has already released the 11th version of the classification, which will be implemented in the coming years in Argentina and other countries around the world. When this occurs, the classification and grouping methods of causes of death used until now will need to be reviewed in order to continue the series adapted to the new classification.

- ✓ Argentina has made progress in designing and prototyping an electronic death registration system, which includes both the reformulation of some content and the discontinuation of others, as well as the addition of new content. In this regard, the impact of these changes on the historical series will need to be evaluated after their implementation.

In addition to mortality data, it is essential to have information on the population disaggregated by sex and age to calculate indicators, such as specific rates. In this regard, Argentina has the National Censuses of Population, Households, and Housing conducted in 2001, 2010, and 2022. The censuses provide data for the specific years in which they are conducted. However, to work with annualized information, it is necessary to rely on population projections, which are developed after each census and estimate the population by sex and age for the intercensal years.

Regarding population projections, there are several issues that need to be taken into account. On one hand, it should be considered that, in general, between one census and another, some assumptions made to create the population projections may become outdated and therefore show differences between the projected and observed components demographic dynamics behavior. For this reason, after each population census, population estimates and the corresponding retroprojection are made based on the new information collected. This allows for a population series by sex, age, and province that is consistent over time (Arretx, 1989).

On the other hand, in the case of the 2010 census round, the retroprojection was not made, and a discontinuity was detected between the projected values from 2001 to 2010 and the values observed in the census. A similar situation occurred between the 2010 and 2022 census. In this case, although population projections have not yet been published and therefore neither have retroprojections, demographic dynamics analysis has shown some discrepancies. During the intercensal period, especially from 2016 onward, there was a significant decline in fertility rates; however, the fertility behavior assumptions used in the 2013 INDEC projections did not account for this drop. This led to an overestimation of the population of children, especially those under 5 years old.

Finally, regarding segmentation variables, some of them are not included in vital records. However, they can be supplemented with census data to conduct analyses using ecological approaches.

SELECTION OF INDICATORS

Regarding the selection of indicators, priority should be given to those that accurately reflect gender inequities related to mortality, especially in conditions that are preventable or treatable using available technologies at the time of analysis in the country. It is essential that these indicators also allow for the identification of avoidable gaps in access to healthcare, the evaluation of inequities associated with socioeconomic and geographical factors, and the analysis of the influence of social determinants on the health of women and men.

Another relevant aspect is that the selected indicators should be easy to interpret so that they can be used not only by health specialists but also by decision-makers and other key stakeholders.

Additionally, it is crucial that the information is up-to-date, as data loses its utility if the time between its collection and publication is too long. This ensures that the indicators can support informed and timely decisions in the public policies planning and evaluation.

Below, a pre-selection of indicators is proposed that could be integrated into an interactive mortality visualization dashboard for monitoring gender gaps in health. The final selection of the indicators will be made after processing and analyzing the data, also considering the quality and integrity of the available information.

For each indicator, its definition, relevance, required data and sources for its calculation, and disaggregation will be detailed. Once the indicators are established, it will be necessary to define which measurements can be used to analyze inequities, considering the proposed segmentation variables for each indicator.

Table 1. Pre-selection of Indicators for the Analysis of Gender Differential Mortality.

https://docs.google.com/spreadsheets/d/1-ogJxKnQjJopNYJeErTROvY86_6AOdKe/edit?usp=sharing&ouid=110170617093747299045&rtpof=true&sd=true

CONCLUSIONS

This report explored various indicators and methodological approaches to measure gender inequities in mortality, highlighting their relevance for visualizing and addressing avoidable health gaps. This process included a comprehensive scientific literature review, key indicators identification, and the evaluation of their utility in different contexts, as well as levels of disaggregation and segmentation variables. Additionally, the characteristics of the available data sources and their limitations for calculating these indicators were considered.

Based on this analysis, a preliminary list of indicators was proposed that could be integrated into an interactive dashboard to monitor gender gaps in health. While this list represents a significant step forward, it will be consolidated following the processing and detailed analysis of the available data, considering their quality and completeness.

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