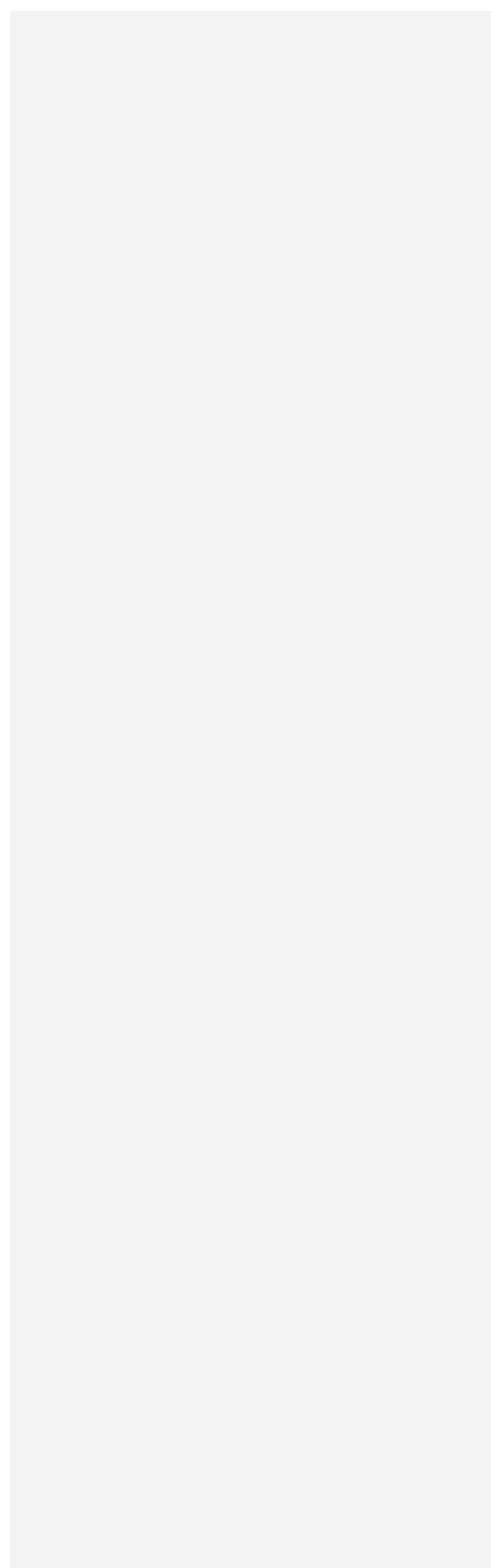


Strengthening administrative data systems for better gender statistics: Improving development data for women and children

Working draft – November 2020

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BEYOND NSOS AND LINE MINISTRIES.**



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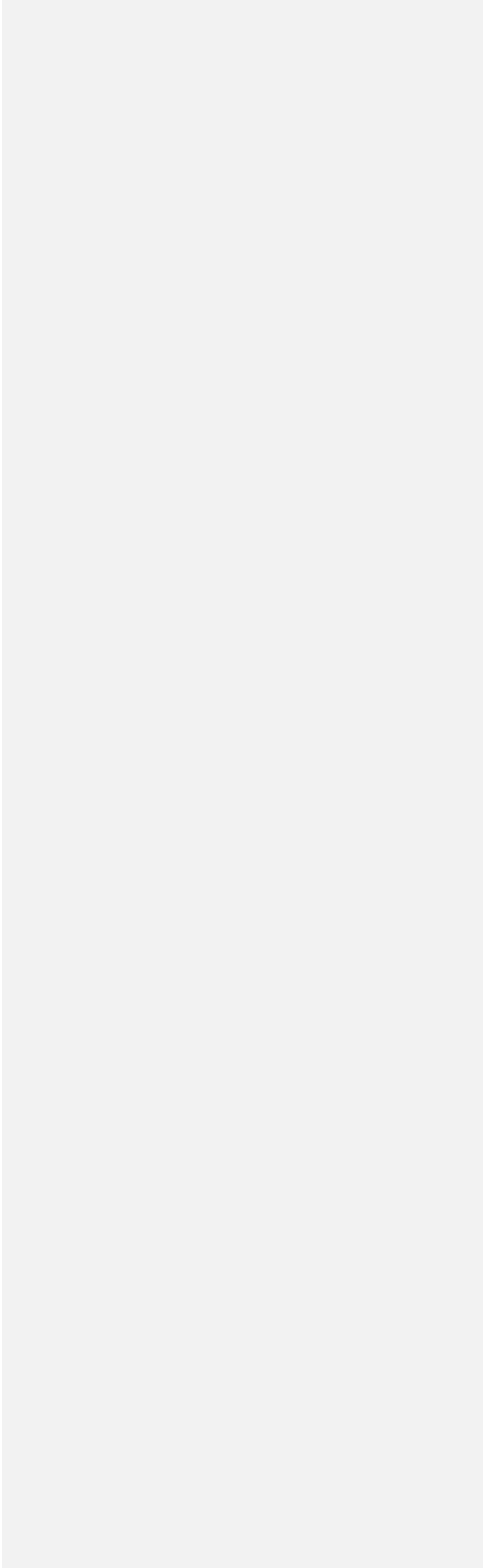
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Introduction

Aims and audience of this document

Administrative data systems are an important source of information on gender equality for reporting against international commitments, and for national and subnational planning, policy, and monitoring. There is also substantive and growing interest globally in encouraging the greater use of administrative data to fill key gender data gaps and needs (1-3), including, for example, gender-responsive measures of learning outcomes (4); indicators on sexual and reproductive health (5); and accurate sex-disaggregated data on conflict-related mortality and morbidity (6). Such data are needed for furthering both our understanding of gender disparities in outcomes for children and the impact of gender inequality on the well-being of children. The Covid-19 pandemic has also highlighted the importance of up to date and reliable data disaggregated by sex and other characteristics in order to understand how both the primary and secondary impacts of a humanitarian crisis (including case numbers and disease severity, as well access to services, loss of income, educational impact, etc.) may impact girls and boys differently.

Despite growing interest in administrative systems as a source of gender data, there is limited guidance on what is needed to strengthen the collection, availability, quality and use of such data in producing gender statistics across a broad range of sectors relevant to women and children.

This guidance is intended to support government National Statistical Offices (NSOs), line ministries, and agencies responsible for national gender policy, along with their partners, to both benchmark their performance and identify key priorities for strengthening the availability and quality of administrative data for gender statistics. It is not intended to provide a comprehensive review of all issues related to improving administrative data systems, focusing instead on those areas that will yield improved gender data for women and children.

The document comprises four parts and two country case studies, along with a supplementary Annotated Resource Guide that provides an overview of key resources identified as part of the literature review.¹

- **Part one: Data needs, opportunities and challenges** briefly outlines the importance of gender statistics and current gender data gaps, and provides an overview of the potential to improve available gender data from administrative sources.
- **Part two: Benchmarking the gender components of a mature administrative data landscape** builds upon UNICEF's Administrative Data Maturity Model (ADaMM) to examine the components of the national administrative data landscape that are essential to support high quality administrative data on gender, illustrated by country examples and best practices. A short self-assessment tool is included at the end of the section.
- **Part three: Challenges and barriers to the effective use of administrative data in gender statistics** discusses the constraints that have been identified in the literature review and consultative process with gender statisticians and line ministries as playing a critical role in limiting the availability, quality and use of administrative data as a source of gender data, and subsequently data landscape maturity.

¹ Available at <https://data.unicef.org/resources/strengthening-administrative-data-systems-to-close-gender-data-gaps/>

- **Part four: Pathway to better gender data** outlines next steps and entry points that countries may wish to consider for strengthening their administrative data systems, including investments in administrative data systems generally, gender specific investments, and key sectoral considerations.

How this guidance was developed

This guidance was developed by UNICEF with support from the Advisory Group on Strengthening Administrative Data Systems to Close Gender Data Gaps of the Inter-Agency and Expert Group on Gender Statistics (IAEG-GS).² Members of the Advisory Group include self-nominated NSOs and regional and international agencies, with UNICEF acting as Secretariat.³ The guidance is informed by: 1) a literature review conducted between July and September 2019; 2) a short survey of countries represented in the Advisory Group on challenges and best practices in using administrative data for producing gender statistics; 3) country case studies; and 4) technical expertise of the Advisory Group.

² The coordinating body of the United Nations Global Gender Statistics Programme comprising national statistical systems and international agencies, the IAEG-GS is mandated by the UN Statistical Commission to examine emerging and unaddressed key gender issues and related data gaps with the aim of developing proposals on how to fill those gaps.

³ IAEG-GS Advisory Group members are Brazil, Canada, Ghana, India, Jordan, Morocco, Uganda, Zimbabwe, ECA, ECLAC, ESCAP, ILO, OECD, UNFPA, UNICEF, UNODC, UNSD, UN Women and World Bank.

Part one: Data needs, opportunities, and challenges

Gender statistics and the gender data gap

Gender data, and the gender statistics they produce, reflect the differences and inequalities in the situation between women and men, and girls and boys (7). They include both:

- sex-disaggregated data (individual and tabular data that are collected, analysed and presented by sex); and
- data that are not disaggregated by sex but that reflect the specific status, needs, opportunities and contributions made by women and girls in society (8), such as the adolescent birth rate or levels of violence against women and girls.

Gender data are used to monitor progress towards gender equality, and so are interdisciplinary in nature, cutting across all areas of statistics – including health, education, and employment among others (9).

The 2030 Sustainable Development Goal (SDG) Agenda explicitly recognizes the critical role of gender data in monitoring progress toward 12 of the 17 SDGs: including Goal 5 on Gender Equality and the Empowerment of Women and Girls (10, 11). Despite this, there remains a global paucity of data on issues particularly relevant to women and girls (12), with significant gaps in gender data vis-à-vis availability, granularity, timeliness and adherence to international standards (13) (14). Persistent sectoral gaps include:

- gender-relevant indicators on poverty and economic opportunities (9),
- meaningful measures of learning outcomes (4), and
- gendered differences in mortality and morbidity (8).

The source and nature of gender data gaps also varies across the Sustainable Development Goals (15). In some areas, such as the environment, there is a lack of data as gender-responsive measures are still in development (16). In others, where the approach to collecting gender data is established, gaps can arise due to a lack of prioritisation, resources, or capacity in producing gender statistics. Overall, this has contributed to a situation in which data for approximately two-thirds of the 54 gender-relevant SDG indicators are limited or non-existent (14, 17).

When data do exist, they are not always tabulated by sex, or made available in user-friendly formats to allow for meaningful gender analysis (18, 19). This limited granularity restricts the amount of disaggregated data available about women and girls from various disadvantaged groups (10, 20). Existing data collection tools have also been criticised for leaving gaps in measurement (18, 21), meaning that issues unique or critical to girls and women are often poorly reflected in national statistics. Data on contraceptive use, as measured through many household surveys for example, are usually only collected on girls and women who are married or in a union and those of reproductive age (15–49 years) – neglecting the experiences of girls and women not married or in a union, and the experiences of younger adolescents and older women (17).

The timeliness and frequency of gender data are pressing issues: in 2017, only 24 percent of the data available internationally for producing gender-related indicators were from 2010 or later (19), with many countries relying on data collection mechanisms that are ad-hoc or done as one-off exercises (8). Between 2000 and 2012, for example, only five percent of nationally representative surveys collected information by sex on average hours spent on unpaid domestic work, with the majority of countries only collecting time-use data once or twice over the past few decades (22). The lack of international standards, or lack of adherence

to existing standards, also remains a notable challenge, particularly concerning internationally-comparable measures of learning outcomes (4), mental health and the utilisation of health services by women and girls (5), among others. This is particularly problematic for topics that are sensitive, or occur in sensitive contexts, including measures of gender-based violence and the impact of conflict on women and girls (23).

While gender-relevant data are needed to monitor progress towards international goals, actually achieving these goals requires governments to deliver basic services including health, education, and water and sanitation (24). As such, there is also growing recognition of the need for disaggregated and timely data at national and subnational levels to generate knowledge for policy and decision-making (24, 25). At the national level, summary indicators on country priorities are needed to measure progress and help hold governments accountable (26), and to support strategic planning and resource allocation (27). Timely and granular disaggregated data are also needed to guide planning and service provision at the local level (11), with national statistics often hiding entrenched inequalities and obscuring important patterns. This granular data helps to understand who is being left behind or excluded from services, and why (28), along with providing the locally-relevant and actionable data needed to implement gender-responsive services and programs at the subnational level (24).

However, the production of locally specific data is often deprioritised in part due to demands to produce data needed by development partners at the international level (29), and this has contributed to significant gender data gaps at the national level. The 2017 Global Advocates Survey, found 91 percent of respondents agreed that collecting data on issues that affect girls and women was not prioritised in their country, and 85 percent agreed that government data on gender equality was somewhat or mostly incomplete (30). The weak policy, legal, and financial environment to produce gender statistics, along with technical challenges within NSOs to produce gender statistics, and limited capacity on the part of users to analyse the data and inform gender-relevant policies, are common reasons as to the poor state of gender statistics at national and sub-national levels (31). Further, given the reliance on surveys for many gender statistics, and an overreliance on international donors to conduct such surveys, national data collection and publication schedules for many gender-specific indicators are unknown and their future continuity is uncertain (14).

Administrative data for gender statistics

Administrative data refer to data collected through the routine delivery of a service; rather than a targeted, one-off data collection such as a survey. The collection of data for statistical purposes is not the primary reason that the system exists: rather, data are collected as an integral part of the routine management of client interactions, supply, planning and delivery of a product or service across a defined population (usually national or a large sub-national area) (2, 32, 33). Characteristics of administrative data include:⁴

- Collection is done as part of the management or delivery of a service, rather than being primarily a statistical collection procedure.

⁴ Characteristics have been adapted from the Administrative Data Maturity Model (ADaMM) for children (UNICEF 2020). More information is available at <https://data.unicef.org/wp-content/uploads/2020/03/Using-administrative-data-for-children.pdf>

- Data are collected on an ongoing basis either through a permanent or long-term system as services are delivered. This may be supplemented by ‘catch-up’ campaigns in some instances, such as what occurs in civil registration systems where late births are registered into the system as an ‘add-on’ component to the routine registration of births as they occur.
- Administrative data systems support large-scale service delivery and are generally not considered to include small or localized systems built to collect and manage data at a single site, unless these systems feed into a larger connected system.
- Administrative data are collated (either as aggregate data or as individual records) from local sites or facilities to larger regional or provincial level centers and up to a national (or large sub-national) level. Collection sites may include several different types of service delivery points (such as in a health information system where data is collated from community health workers, laboratories, and secondary or tertiary care facilities among others).
- Administrative data are generally collated upwards through the system from a base unit of an individual person or event, grouped by location; although this data may be aggregated at any point within the system (from the initial collection point upwards) as it is passed up through the different levels of the system.

Administrative data are therefore defined by *how* the data are collected and structured, with administrative data systems stretching from the local level to nationally collated (and internationally reported) data.

While the increased demand for gender statistics has placed unparalleled demands on data producers and generated substantial statistical challenges, it presents significant opportunities to strengthen the capacity of data systems globally (2). The ‘data revolution’ called for by the UN Secretary-General as part of the Post-2015 Development Agenda (34) has also created a drive to better utilise existing data sources, with particular emphasis on administrative data. Strengthening administrative data is also useful beyond measurement, with associated benefits of institutional strengthening and improved service delivery (35), such as the ability to track childhood health, development, and learning outcomes over time through effective and integrated health and education information management systems.

Sectoral, or line, ministries often have statistical, planning, and/or monitoring departments that collect, compile, and disseminate substantial amounts of gender-relevant information, or have the potential to do so. There are multiple administrative data systems that could provide data for monitoring gender equality, with core systems for children outlined in **Box 1** (27). Data from administrative systems also have several characteristics that make them particularly useful for monitoring gender equality, as described below.

- **Readily available and pre-existing source of information.** The data revolution highlighted the importance of doing more with existing data sources, with the greater use of data from different sources leading to more effective evidence-based decision-making (8). Almost every country globally has some system of administrative data collection, and statistically mature countries such as Denmark, Finland, Sweden, and the Netherlands show the potential of using administrative data for generating a broad range of gender-relevant statistics on income, education, violence, and family and household characteristics, among others (1, 35).
- **Continuous nature.** Although there may be delays associated with compilation and analysis (particularly for paper-based systems), data are collected and updated on an ongoing basis (36). This is particularly important for decision-makers and planners who need up to date or “real-time” data

to make daily decisions on services and programs that have a direct impact on the rights and opportunities of women and girls (2, 37). For example, countries such as Kenya, Pakistan and Nigeria have implemented real-time digital administrative data systems to track school attendance, recognize patterns, and identify at-risk children, particularly young girls, in order to provide additional support and incentives to keep them in-school (38-40).

- **Ability to provide longitudinal data needed for tracking trends over time.** Given their continuous nature, administrative systems are able to provide data over extended periods of time, allowing for a needed long-term perspective to monitoring changes in gender equality (41, 42). Countries with mature civil registration and vital statistics systems, for example, can show trends over several years for key outcome measures such as maternal mortality and life expectancy at birth, highlighting persistent issues as well as the impact of effective national policies and programs aimed at reducing gender inequalities.
- **Potential for granular disaggregated data at the local level.** Administrative data systems primarily collect data at the individual level, and are increasingly disaggregating their records by sex and other characteristics, enabling intersectional gender analyses to better understand the multiple inequalities faced by the most marginalized women and children (18). The structure of the data also allows for analysis at the local level that may not be possible with national sample-based surveys due to uncertainty or potential for identification created by small numbers in local datasets once these are disaggregated geographically.
- **Ability to provide regular updates on those accessing services and the types of services being accessed** (43, 44). By default, administrative data can also indicate characteristics of those *not* accessing services, though it cannot explain why or the extent of unmet need. As such, administrative data systems can play a critical role in transforming international and national gender strategies into subnational policies and priorities, while providing the evidence needed to monitor implementation (31). For example, policy and court records may play an important role in addressing persistent data gaps on violence against girls and women, by providing insights into the utilization of services and system response through measures such as the number of incidents reported, persons charged, complaints filed, and civil injunctions or restraining orders issued (18).
- **Inclusivity.** With their large population coverage, often related to essential or “in-demand” services, administrative data systems have the advantage of including information on groups of people who are least likely to take part in traditional research, or those excluded from sampling frames (36). A notable example is the relative lack of information from household surveys on the health and nutrition of adolescent girls (aged below 15).
- **Capacity for data linkage.** The use of unique identifiers, or other highly granular data to identify individuals within an administrative data system, also creates opportunities for direct or indirect (probabilistic) data linkage, within an appropriate data privacy and protection framework. When combined with other sources of data, such as those from censuses and surveys, this allows for a more comprehensive understanding of the lives of women and girls. In Canada for example, graduate earnings (as measured through tax-file returns) have been used to demonstrate long-term learning outcomes for higher-education providers, while also offering an important insight into wage gaps (45).

Box 1. Core administrative data systems for children

While core systems may vary from country to country, they are likely to include at least the following:

- **Civil registration and vital statistics (CRVS) systems.** The system that registers vital events to provide legal recognition of the event (usually in the form of a registration certificate), including births, deaths, marriages, and adoptions. Data related to gender may include sex-disaggregated birth and death registrations, differentials in cause of death patterns, and specific indicators such as age at marriage.
- **National identity (ID) system.** Provides a centralized process for creating and managing legal identity documents or credentials such as an ID card or registration of a biometric trait, which facilitates individual interaction with government agencies and other entities. Gender-relevant data may include the number of formal ID documents issued by sex, and information on potential gender-related barriers, such as the need for the presence of male family members during the application process for women and girls.
- **Community health information systems.** Records key interactions with health services (typically excluding those interactions that occur in a hospital setting), such as vital events and cause of death information known to the health system, key maternal and child health information, immunization records, notifiable disease events (disease surveillance), and well-child visits. These may exist as separate registers (MCNH, HIV, TB, Disease Surveillance, Cancer, Immunization, etc.) or as a combined system. Data related to gender are likely to include sex differentials in patterns of morbidity and mortality, service access, and specific indicators including fertility rates.
- **Hospital management information systems (HMIS).** While a hospital system is likely to include a range of data that is held and managed at the facility level, it should be possible to collate and interrogate hospital records across the health system on admissions by type and length of stay, outcome or separation data, deaths by cause, and outpatient services, hospital acquired infections, amongst others. Data related to gender are likely to include sex differentials in patterns of morbidity and mortality, and specific indicators including maternal mortality. Cost of care data may also be important in some settings.
- **Education management information systems (EMIS).** Collect data on children enrolled in school. This is likely to include information related to students such as attendance, passing grades and results on key competency tests (such as literacy or numeracy evaluations), special needs and other information, as well as details such as class size, facilities, and teacher numbers and qualifications. Gender-relevant data may include differentials in enrolments and learning outcomes by sex, and specific indicators including access to gender-responsive facilities and infrastructure, and access to education on sexual and reproductive health.
- **Child protection information management systems.** Essentially a case management system for children and families known to authorities as being at risk or vulnerable for specific reasons, who are being followed up due to specific trauma or violence, or who are otherwise of interest or requiring specific support.
- **Social welfare and payment systems.** Usually structured as case management systems to support families and individuals who require or are eligible for additional government support – either by way of support services, or cash payments, or both. Gender-relevant data may include the number of mothers with newborns receiving cash maternity benefits.

Other systems may also be considered as core systems depending on country context. For example, a country with high HIV prevalence may consider that a HIV register (either as part of a community health system or as a stand-alone system) may be essential, in the same way a country with a high prevalence of malnutrition may also prioritize a nutrition register as a core system. Some other systems that may be considered as 'core' for children include:

- **Nutrition registers**
- **Population registers**
- Systems for tracking **children in early childhood education**, or older children and young people enrolled in **vocational or tertiary education**
- Data on **children in alternative (out of home) care**
- **Police information management systems**
- **Coronial or inquest data systems**
- **Court records**
- **Prison/ detention records.**

Part two: Gender data in a mature administrative data landscape - what does good practice look like?

A mature administrative data landscape is able to deliver critical information that national governments and ministries need in order to monitor development progress; and to effectively prioritise, improve, and manage service delivery across key sectors. This, by necessity, includes a clear understanding of how girls and women, men and boys (and those who do not identify as either sex) are faring in relation to key issues (health, education, etc.) and ability to access services, and relative to each other and to established development targets.

Much of the infrastructure, governance, and other conditions required to support a mature administrative data landscape are not unique to a specific sector or system, but rather may be common (such as clear data standards, roles and responsibilities, documented processes), or cross-sectoral (underlying IT infrastructure, data protection legislation, data coordination, etc.). In response to the growing demand for a cross-sectoral approach to administrative data and the improvement of administrative data systems, UNICEF is developing an Administrative Data Maturity Model (ADaMM) for children (46)⁵. The model provides a framework for benchmarking the national administrative data landscape, and prioritising areas for action to improve data quality, availability, and use. It recognises that system development is not linear, particularly in this era of rapidly changing technology, access, and data ownership; and that countries investing in systems today are likely to take a very different path in system design and implementation than those that have come before and may 'leapfrog' many of the steps that more developed countries went through in order to reach system maturity through the use of newer technologies and innovative approaches⁶. Mature systems are those that effectively meet data needs, no matter the development choices and structures that underpin these.

The model assesses maturity *across* administrative systems and thus is particularly relevant for defining a gender-responsive administrative data landscape given the cross-sectoral nature of gender statistics. It provides a lens for thinking about opportunities that would benefit the administrative data landscape, and by extension gender statistics, more broadly. The approach also places administrative data as part of a broader national data landscape – recognizing the importance of integrating multiple data sources to validate data quality, address data gaps, and meet national data requirements.

The UNICEF model defines maturity across 20 outcome statements that define what national administrative data systems (in the social sector) should be able to deliver for children, the community, and as part of the national statistical system. These expected outcomes, defined across 20 outcome statements, include

⁵ The model was built as a collaboration across sectors through UNICEF, managed through the Administrative Data Task Team. This included a series of brainstorming sessions, structured workshops and discussions, and online discussion forums – drawing on the expertise of sectoral specialists, innovation and information technology colleagues, and regional and country PME specialists. Field testing was conducted in Namibia in September 2019, along with a series of consultations with country partners in several regions. Results of this testing were used to refine the initial concept and structure. The model will be released as a working document for public access by end of 2020, with further refinement anticipated based on ongoing testing and use.

⁶ For example, systems that use paper-based reporting processes may skip directly past more traditional approaches to scaling-up digital reporting first at regional and district levels by placing technology (such as mobile phones, contactless biometrics, etcetera) directly in the hands of community workers and individuals while broader infrastructure goes largely undeveloped.

examples such as “administrative data are integrated as part of a broader national statistical system” and “systems are able to ‘flex’ to changing community needs”. The model also outlines six levels of system maturity, with maturity level three regarded as the ‘functional’ or minimal level that all countries should be aiming for, while the higher levels build towards an ideal or ‘fully mature’ system that may be more aspirational.

Beyond simply improving administrative data generally, a gender perspective is critical in 12 of the outcome statements as below (Box 2).

| Box 2. Defining a mature gender-responsive national administrative data landscape | |
|--|--|
| Maturity level | Outcome statement |
| 1 Formation | Core administrative data systems for children exist at the national level, with national coverage |
| 2 Foundational | Administrative data are integrated as part of a broader national statistical system |
| | Systems create and recognise a legal identity for every child from birth, including provisions for those whose birth was either un-registered or who enter the territory and are unable to provide a legally recognised identity |
| | Data required to support the realisation and protection of children’s rights under international conventions and development commitments are produced and available |
| | National administrative data systems provide timely data for national planning and accountability |
| 3 Functional | Systems are inclusive; effectively monitoring that ‘no child is left behind’, as well as providing the data needed for systems to effectively address disparities where they exist |
| | Data are actively used in national (and subnational) planning, monitoring and evaluation |
| | Data are used to identify local needs, and to inform and improve local services and programmes |
| 4 Flexibility & form | Admin data specifically addresses key disaster preparedness and planning needs (at national and broad sub-national level) |
| | Cross-sectoral collaboration supports a holistic approach to data for planning, innovation, and service provision |
| 5 Engagement | Data are used to generate broader ‘public good’, contributing to research and knowledge generation on topics of benefit to the community |
| 6 Integration | Administrative data can be integrated effectively with other data sources in decision making processes |
| | Supports a holistic approach to services and care to support better outcomes through coordination across programs, locations, and sectors |

The implications of these outcomes from a gender perspective are described in detail below.

Core administrative data systems for children exist at national level

For gender data this means:

- **Core systems for children (those that are important for gender statistics in the national context) exist, are functional, and have national coverage geographically.**

As outlined previously (Box 1), there are several administrative systems that provide (or could provide) data relevant to supporting gender-equitable development outcomes for children, ranging from systems of civil registration, to health and education management information systems, and specialised registers on nutrition, social welfare and court records. At a minimum, these systems should be able to provide sex-disaggregated data on key aspects of child development, which is shared with the NSO. Countries should prioritise administrative data systems based on national development priorities and opportunities to improve data collection through the structures established to deliver services, however particular emphasis should be placed on foundational systems that support inclusion (such as civil registration for the provision of identity and health), and where data is less frequently available through other sources – if these systems either do not exist or do not have national coverage.

Education management information systems for inclusive and equitable education

An effective education management information system (EMIS) refers to a range of tools used to gather, process, and interpret large amounts of data in a systematic way. While basic systems can generally provide data on educational metrics including enrolment, attendance, and grade completion by sex; more advanced systems may be able to answer a wide range of questions by education stakeholders on issues such as:

- **Management and administration**, including financial transactions and human resourcing.
- **Learning outcomes** (in systems where data is collected at individual level).
- **Planning**, to ensure that the education sector is meeting its obligations in providing education for all children and understanding who is being left behind.
- **Policy formation** on educational outcomes to assess how learners and schools are progressing towards objectives as set out in national education plans (47).

The EMIS launched in Ghana in 1997 for example, uses the annual school census as its primary data collection tool, which provides data on several metrics including enrolment, teachers, textbooks, infrastructure, and finances for all public schools in the country (48). The system is supported by national legislation that allows the Ministry of Education to use EMIS data for statistical purposes, including routine reporting to UNESCO and other regional and international partners (49). While much of the data in the system is disaggregated by sex, recent investments in supporting marginalised populations, including girls, are looking to expand the current set of gender-relevant indicators (which include enrolments and teachers by sex) to include metrics such as completion and drop-out rates, subject enrolment, and exam results by sex (50).

Administrative data are integrated as part of a broader national statistical system

For gender data this means:

- **Administrative data are seen as a valuable source of national data on topics related to gender, alongside other sources, such as census or surveys.**
- **A national agency has a clear legal mandate to produce and publish official statistics on gender**
- **The publication and sharing of gender-related data across ministries is supported by formalised cooperation between the NSO and relevant line ministries (51, 52).**

While legal and regulatory frameworks to assign responsibility and support data sharing are a necessary condition, they are not sufficient on their own. There also needs to be broader awareness and acceptance of the need to use multiple data sources for monitoring gender equality effectively (53). Almost every country globally has some system of administrative data collection, and statistically mature countries such as Denmark, Finland, Sweden and the Netherlands show the potential of administrative data for generating gender-relevant statistics on income, education, violence, and family and household characteristics, among others (1, 35). Administrative data sources should be prioritised for indicators or data that are required frequently, given the continuous nature of the collection, and reflected in a national data plan or strategy.

Reporting on Canada's Gender Results Framework using administrative data

Introduced in 2018, the Gender Results Framework (GRF) represents the Government of Canada's vision for gender equality. It is a whole-of-government tool designed to define what is needed to achieve gender equality, determine how progress will be measured, and track progress. The GRF also ensures that gender is considered in relation to other intersecting identity factors and has legal authority through the Canadian Gender Budgeting Act, which ensures federal government's budgetary and financial management decision-making processes consider gender equality and diversity.

Within the Framework, six key areas that require change have been prioritised, and progress on performance indicators is routinely monitored and made available online. Data to support the GRF come from existing data collection mechanisms and reporting sources, including surveys, administrative records, monitoring networks, and other forms of open data. Statistics Canada has been using non-survey data in official statistics for around 100 years, with many programmes using administrative data from government agencies and private sector organizations, which are then integrated into official statistics to meet statistical and research requirements. Administrative data are used to complement and replace surveys (or components of surveys) and are both an economical method and one that reduces the burden on respondents. Statistics Canada plays an important role in housing data collected from various surveys and administrative systems, ensuring that the national statistical landscape draws on all sources of gender data available, including administrative data systems.

Source: Administrative data systems and gender statistics: Canada country case study (45)

Systems create and recognise a legal identity for every child from birth

For gender data this means:

- there must be a functional civil registration system with complete (or near complete) registration of all births for boys and girls, including the issuance of a birth certificate
- there must also be accessible and equitable pathways to legal identity that specifically address population groups that may face barriers to registration.

Legal identity through civil registration is essential for the recognition of a child's rights, and as a foundation for inclusion and access to services such as healthcare, education, and social protection. This focus on inclusion, and recognition as an individual with rights is foundational to equality. Civil registration and vital statistics (CRVS) systems are also important for up to date and timely population data to guide planning for service provision.

Ensuring that girls and women have a recognised legal identity also means they are less likely to be affected by under-age or forced marriage and human trafficking (3). While gender parity in birth registration has been achieved in practically all countries with available data, gender inequalities still exist in some settings. For example, girls born into polygamous families in Africa are significantly less likely to be registered (54). The inter-generational effects of gender inequality on birth registration also remain a noticeable barrier, with women often facing cultural, financial, and legal barriers to registering their children, particularly as a single parent (11). Such barriers result in disparities in birth registration among children of different social, economic, and cultural backgrounds (55). Children born in conflict-related humanitarian settings also face particular challenges in having their births registered, especially when legal procedures require the presence of their father as part of the registration process (56).

Utilising administrative systems to improve birth registration in Brazil

While overall birth registration completeness in Brazil increased by almost 20 percentage points between 1995 and 2007, due to persistent challenges at the subnational level, particularly those of difficult geographic access to civil registration, many of the country's 27 states were recording completeness levels lower than the national average. To improve this, the National Programme for the Promotion of Birth Registration was implemented in 2001, which placed outreach units of the civil registrar within maternity wards in states with the lowest levels of birth registration. In 2006, after a review of the system, a new online birth registration system linked to the health system was rolled-out, which involved three stages. The third and final stage, introduced in 2008, provides an online system within each maternity ward, where health staff can enter birth data directly into the system, which is shared with civil registration. This has removed the need for actual civil registration offices within maternity wards, while improving access to birth registration services.

Source: UNICEF good practices in integrating birth registration into health systems (57)

Data required to support the realisation and protection of children’s rights are produced and available

For gender data this means:

- **Administrative data systems provide reliable and routinely available data as part of a national statistics system - on both specific indicators for gender related issues and sex- disaggregated data for reporting against international frameworks (including the SDGs, CRC, CEDAW and BPfA).**

The ability of countries to report against international frameworks is an important indicator of system maturity. This includes frameworks such as the Convention on the Rights of the Child (CRC), which stipulates that governments shall respect and ensure the rights set forth in the Convention to each child irrespective of the child’s or parents’ sex, and the Beijing Platform for Action, which calls upon States to disaggregate data across sectors in order to undertake analyses of the situation of girls.

Administrative systems are also an important source of data for filling gender data gaps in the SDGs (10, 58), with significant amounts of data already existing, but not being effectively used (5, 59). In 2019, UN Women (2) identified 34 gender-specific SDG indicators that could be sourced from administrative data systems,⁷ and of these, nine are also child-relevant (60) (**Box 3**).⁸ Supportive administrative data systems should be able to report on these child- and gender-relevant SDG indicators in order to assess gender disparities in children’s well-being as well as how gender equality influences the wellbeing of both girls and boys.

| Box 3. Child- and gender-relevant SDG indicators potentially sourced from administrative data systems | |
|---|-------------------------|
| SDG indicator | Preferred source |
| 1.3.1(b). Proportion of population covered by social protection floors/systems, by sex, distinguishing children, un-employed persons, older persons, persons with disabilities, pregnant women, newborns, work-injury victims and the poor and the vulnerable | Admin or other |
| 3.1.1. Maternal mortality ratio per 1,000 live births | Admin or other |
| 3.1.2. Proportion of births attended by skilled health personnel | Admin or other |
| 3.7.2. Adolescent birth rate (aged 10-14 years; aged 15-19 years) per 1,000 women in that age group | Admin or other |
| 3.8.1. Coverage of essential health services (defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, newborn and child health, infectious diseases, non-communicable diseases and service capacity and access, among the general and the most disadvantaged population) | Admin and other |

⁷ As defined by UN Women there are 54 gender-specific SDG indicators that: 1) explicitly call for disaggregation by sex; or 2) specify women or girls as the targeted population; or 3) refer to gender equality as the underlying objective of the target.

⁸ As defined by UNICEF, there are 35 SDG indicators that most directly concern the lives of children (child-specific).

| | |
|---|-----------------|
| 4.1.1. Proportion of children and young people (a) in grades 2/3; (b) at the end of primary; and (c) at the end of lower secondary achieving at least a minimum proficiency level in (i) reading and (ii) mathematics, by sex | Admin or other |
| 4.2.2. Participation rate in organized learning (one year before the official primary entry age), by sex | Admin and other |
| 16.1.1. Number of victims of intentional homicide per 100,000 population, by sex and age | Admin only |
| 16.1.2. Conflict-related deaths per 100,000 population, by sex, age, and cause | Admin or other |

Admin = administrative data system

Source: *Advancing administrative sources of data for monitoring gender-specific Sustainable Development Goals in Africa (2)*

Using administrative data to report on gender equality in Albania

In 2011 Albania published its 'Harmonised indicators on gender equality and the status of women in Albania'; a consolidated tool for monitoring the Government of Albania's commitments to gender equality and women's rights. The document is the result of a two-year effort led by the Inter-Ministerial Working Group on Monitoring Gender Equality in Albania (IMWG), which included participants from the Ministry of Labour, Social Affairs and Equal Opportunities, Institute of Statistics (INSTAT), line ministries, relevant government agencies, NGOs, academics, and international organizations including UN Women, UNFPA and the UN Joint Programme on Gender.

In developing the document, the Working Group analysed all national and international commitments on gender and the data needed to monitor them. Further, the harmonised indicators include key standards and norms put forward by the European Union pertaining to gender equality. The document outlines 220 core indicators across eight 'fields' for reporting on gender equality that are to be collected by line ministries responsible for implementation of national and international obligations regarding gender equality. In adopting the harmonised indicators, INSTAT and the IMWG identified primary and secondary sources of data, with data from administrative systems prioritised as primary sources where possible. Designation of source by primary or secondary was done by experts, who reviewed both regularity and reliability of data to ensure appropriate and comparable standards of measurement throughout the indicators.

Overall, the harmonised indicators are expected to serve as a basic manual for collecting data, assessing gender equality and the status of women in Albania, and developing proposals to further improve them in areas such as women's participation in decision-making, education, employment, defence, social welfare, health, the media, and domestic violence.

Source: *Harmonised indicators on gender equality and the status of women in Albania (61)*

National administrative systems provide timely data for national planning and accountability

For gender data this means:

- **Reliable and timely gender data from administrative sources are not limited to indicators required for reporting against international commitments, but also includes data required for monitoring gender equality as identified by national policy frameworks and the localisation of gender-relevant SDG indicators, as well as the data required to support national services and systems in the achievement of these development goals.**

National policy frameworks are the main driver for the production and use of gender statistics, as they shape the need for data based on priority issues, goals and targets that countries have established for their economic, social, and environmental development (10). As well as national planning mechanisms that identify key indicators for monitoring gender equality and the administrative data requirements for measuring these, such systems should be able to provide timely data on priority indicators adopted by sectors (62). Mature systems are those that can support line ministries in both defining the gender-relevant data they need and linking them with national planning and policy cycles to ensure accountability. Metadata and collection processes and issues should be routinely shared with national and international agencies in line with reporting commitments, to ensure that administrative data are fully integrated in monitoring and evaluation processes.

Ensuring national accountability for gender equality in Morocco

The Governmental Plan for Equality 2012-2016 (ICRAM) defines Morocco's overall approach to promoting equality and integrating women's rights in public policies and development programs. It is based on the founding principles of the Constitution of 2011, which aspire to build new social relationships between women and men, ensuring fair and equal participation in the design and monitoring of policies and development programs and fair and equal sharing of benefits and profits from such participation.

The ICRAM includes eight thematic areas and 24 objectives, which have been translated into 156 actions with quantitative and qualitative indicators for monitoring progress. Actions have been divided between the departments and ministries responsible for implementation, with a Ministerial Commission for the Coordination, Monitoring and Evaluation established to assist departments and ministries with implementation and ensure the legislative and organisational provisions are in place. An Interministerial Technical Committee was also established and designated as permanent focal points in charge of collecting all data necessary to monitor implementation of the ICRAM.

A sophisticated information system was established to monitor implementation of commitments relating to each ministry through:

- The translation of each strategic action into a roadmap to determine the levels and turnaround time for each ministry
- The appointment of a manager for the preparation of roadmaps for each ministry
- The integration of roadmaps in the information system with a view to determine the level of implementation and the obstacles encountered.

In this respect, the Government of Morocco has developed several tools to support the integration of gender equality into government programs and initiatives among line ministries, including the adaptation of gender-specific indicators for national and subnational planning and accountability.

Source: Government Plan for Equality in Respect of the Year 2012-2016 (63)

Given concerns over the quality of data sourced from administrative systems, mature systems also require established processes for assessing the quality of administrative data, with clear recommendations on when and how such data can be used in the production of gender statistics. The Australian Bureau of Statistics (ABS), Australia's official statistical agency, for example, developed a policy on 'Quality management of statistical outputs produced from administrative data',⁹ which focusses on principles and best practices to assist in the management and acquisition of administrative data. The policy defines major uses of administrative data for statistical purposes in the country, and quality management techniques that are important in the production of statistics. These include a series of questions statistical agencies can use when assessing a potential administrative data source, including its institutional environment, relevance, timeliness, accuracy, coherence, interpretability, and accessibility.

⁹ Available at:
<https://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/1522.0Main+Features1Mar%202011?OpenDocument>

Systems are inclusive, effectively monitoring that ‘no child is left behind’

For gender data this means:

- Development indicators are available by sex, so that data are able to reflect the different challenges faced by boys and girls; but also
- Data are sufficiently disaggregated to allow gender differentials related to rights or key development outcomes to be routinely probed by other population characteristics (ethnicity, location, poverty quintile etc.) to effectively monitor that women and girls from vulnerable groups are not left behind.

As data are most relevant within countries to support targeted policy initiatives and hold governments to account on national priorities and commitments (64), an inclusive system is one that can provide timely data on national priorities and relevant SDG indicators, disaggregated by (at a minimum) sex, age, and disability status. Recent research into measuring health inequalities in the context of the SDGs has also highlighted how different dimensions of inequality require different measures to be prioritised, with for example, no difference in immunisation coverage between girls and boys; but clear differences in coverage based on maternal education level (65).

The availability of administrative systems to disaggregate data by sex at national and subnational levels is the bare minimum requirement for generating most gender statistics (34). Further, as gender-based deprivations are likely to be compounded by deprivations based on other demographic characteristics, disaggregation by multiple characteristics (age, ethnicity, disability, location, etc.) is critically important to ensure policymakers understand who is being left behind, and determine what services and resources they require (66-69). Data disaggregated by sex and disability status, for example, are essential for understanding the greater risks women and girls with disabilities face vis-à-vis limited access to healthcare, intimate partner violence, and sexual abuse among others (70). While data linkage at the individual record level substantially increases the analytical capacity of countries to investigate gender issues across topics, key cross-analyses may be facilitated through aggregate data collections with appropriate design and planning.

Moving forward, the ability of systems to capture gender-diverse populations will be of increasing importance. Statistics Canada, for example, has developed new standards on sex and gender variables and classifications, as well as offering a non-binary gender option using the ‘X’ identifier when collecting information in certain administrative systems. While data will continue to be collected on sex, this new policy direction will allow for a better understanding of gender issues by providing a two-step process for collecting data on sex and gender; particularly important for increasing data availability on gender-based violence, for which the experiences of people identifying as non-binary are currently missed (45).

Country example:

Country that is using admin data for gender-relevant reporting that is disaggregated by multiple characteristics

Commented [NR1]: Advisory Group members: if you have a country example please either send through the relevant documents and we can write it up, or provide a short paragraph here

The example does not have to be related to the SDGs.

Data are actively used in national (and subnational) planning, monitoring, and evaluation

For gender data this means

- Gender data from administrative systems are available and actively used by decisions makers at the national and subnational levels, both within the ministry in which they are collected and cross-sectorally.
- There is evidence in planning and results documents that data is used to drive decision making.

Critical to this is the development of a results-orientated strategic plan to achieve gender equality, which is endorsed by senior leadership, and developed through broad consultation with government and non-governmental stakeholders. Strategies at the national and subnational levels should also have measurable goals and indicators linked to high-level outcome targets to achieve gender equality, with a defined set of responsibilities, timelines, action plans and monitoring mechanisms to achieve identified priorities (62).

Coordination within and across sectors, as noted earlier in the key characteristics, is also critical to ensuring that data are used.

Developing knowledge on violence against women and girls by collecting police and justice crime data

The Swedish National Council for Crime Prevention ('the council') produces Sweden's official crime statistics. The council is an agency under the Ministry of Justice and a centre for research and development within the judicial system. The council primarily works to reduce crime and improve levels of safety in society by producing data and disseminating knowledge on crime and crime prevention work. Statistical production is one of the main tasks of the council and the data are the main source and reference when it comes to crime statistics. The council works closely with delivering authorities to ensure this, and they collect and compile almost all data registered in their databases.

Based on the data, the council also evaluates reforms, conducts research to develop new knowledge and provides support to local crime prevention work. The results are a basis for decision-makers within the judicial system, the parliament, and the government. Swedish legislation has gone through major changes in recent years to strengthen the protection of women and girls exposed to violence based on data provided by the council. Legislation concerning sexual offences has, for example, been extended and more acts are now included in rape crime. Legislation has also become gender neutral.

Source: Administrative data collection on violence against women: Good practices (1)

Data are used to identify local needs, and to inform and improve local services and programmes

For gender data this means:

- **Data from administrative data systems, including basic analysis by gender, must be available and understood by local services (within the department or ministry in which the data is collected, and for broad issues – cross-sectorally by local government).**

A critical challenge in many administrative data systems, is that collation, analysis and reporting are often done more centrally within the system; with data either not available to local users or substantially delayed. This may be further compounded when looking at data across sectors (such as for local budgeting or prioritisation), or when local capacity to analyse and interpret data (particularly if presented in raw form) is limited.

As decision-makers undertake daily decisions that have a direct impact on the rights and opportunities of women and girls (37), they need regular and up-to-date information, such as that produced through the systems used to manage day-to-day operations and service delivery in critical sectors like health and education (2, 36). In turn, a locally responsive system is one that can disseminate locally relevant gender data in formats that are easily understood and timely (51, 62). Such a system is also one that can provide regular updates on those accessing services and the types of services being accessed (43, 44). By default, the data can also indicate characteristics of those *not* accessing services, though it cannot explain why or the extent of unmet need. Regarding the persistent data gaps around violence against women and girls for example, police and court records from mature gender-responsive administrative systems can provide insights into the utilisation of services and overall response to the problem by reporting on measures such as the number of incidents reported, persons charged, complaints filed, and civil injunctions or restraining orders issued (18).

A system that can identify and respond to local needs is also one where staff within local facilities, subnational units, and local government structures have sufficient capacity to collect gender-relevant data, analyse the data to facilitate an understanding of gender differences and the drivers or consequences of those differences, and present gender statistics in powerful ways for decision-makers (51, 71). Mature systems are also supported by adequate capacity at the national level, whereby decision-makers understand the importance and relevance of gender statistics, and effectively use the data in developing and monitoring gender-responsive local policies and programs.

Building capacity in gender statistics: from development to ongoing implementation

With support from the United Nations Economic and Social Commission for Western Asia (ESCWA), Morocco undertook a two-year training program targeting key stakeholders including the Ministry of Violence, women's machinery, statistical departments, and academia. A questionnaire on capacity was conducted within each region to outline common challenges and good practices vis-à-vis the production of gender statistics sourced from administrative systems. This information was used as the basis to develop the country's training program on gender statistics.

Source: Morocco IAE-GS Advisory Group key informant interview

Statistics Canada provides specialized technical assistance on gender statistics. Using their Gender Results Framework as a guide to help highlight gender equality issues, a training programme was developed to help organizations find gender-relevant data within Statistics Canada's website, both to help keep the data relevant and ensure organizations have access to up-to-date statistics. Training is tailored to each organization, so that staff can understand how to find the statistics, and to understand why it is important to them.

Source: Administrative data systems and gender statistics: Canada country case study (45)

Administrative data specifically addresses key disaster preparedness and planning needs (at national and broad sub-national level)

For gender data this means:

- **Administrative data sources used in planning and preparedness include capacity to report by sex, in order to effectively monitor the differential effects of the disaster and subsequent recovery on women and men and girls and boys against a known baseline.**

While much of the data in disaster planning, response and recovery comes from sources other than administrative data systems, a functional administrative data landscape should be able to provide a range of useful data for planning including population, population demographics and distribution, existing issues and concerns in the community that may be exacerbated by a disaster, vaccination rates, etc. Disasters may create a range of specific issues that affect men and women, boys and girls differently – including issues of safety when displaced or in temporary shelter, unaccompanied minors, access to post-event support services and payments, loss of income and subsequent issues, health care services required and accessible, and sanitation services/ access. Having gender specialists engaged in this planning, through structures such as a national disaster committee, is essential to ensure that authorities have the best possible information to ensure that potential concerns are considered and can be monitored.

Country example:

Country that is using admin data for monitoring differential effects of disaster and recovery, by sex

Commented [NR2]: Advisory Group members: if you have a country example, perhaps Covid-related, please either send through the relevant documents and we can write it up, or provide a short paragraph here

The example does not have to be related to the SDGs.

Cross-sectoral collaboration supports a holistic approach to data for planning, innovation, and service provision

For gender data this means:

- Recognition of the importance of data sharing and communication between sectors, including relevant ministries (such as Department of Women's or Family affairs or similar) that may be secondary data users and not be engaged in data collection themselves; and
- A culture of collaboration around administrative and gender data issues, including analytical capacity building, data standards, technology reviews, and quality control.

National data standards and formats to support data sharing within and between systems help to support a cross-sectoral approach by ensuring that data variables are recorded consistently across systems and by ensuring that data are transferred between systems and agencies in formats that allow for statistical use. As such, a collaborative system is one that has a national data strategy and legal framework that supports the use of national data standards and routine data collection (52), and one that has an effective coordination mechanism between line ministries, the NSO, and department or agency responsible for the promotion of gender equality and women's and girls' rights more broadly (51). Collaborative systems are also ones where the roles and responsibilities for monitoring gender equality are clearly defined through effective leadership and coordination (62).

Building cross-sectoral collaboration and partnerships

The success of Canada's approach to using administrative data is due in part to the strong national coordination mechanisms established between Statistics Canada and key partners including Women and Gender Equality, the Department of Finance, and provincial ministries such as health and education. National coordination is supported by a strong partnership approach fostered by Statistics Canada to facilitate data sharing and to ensure data quality. Part of this work includes ensuring that data custodians, as producers of the data, can see the 'value-add' in investing in their administrative systems. For example, understanding the value of having data by sex and/or gender offers organization in terms of monitoring a policy or programme. This partnership approach is critically important, because even with legislation that mandates the sharing of data, sharing is not always guaranteed and nor is its quality.

Source: Administrative data systems and gender statistics: Canada country case study (45)

Data are used to generate broader ‘public good’ for the community

For gender data this means:

- **Data are available (with appropriate data protection and privacy measures) for research and knowledge generation of topics of benefit to the community.**

Making de-identified data on gender readily available to interested parties and researchers, in accordance with appropriate data protection, privacy and consent; along with information on the quality of the data, is a critical first step in making the data a “public good” and encouraging a culture of critical research, community discussion, and engagement to support development. Developing system capacity to link and anonymize data records across multiple sectors for legitimate research purposes is equally important, along with the implementation of clear legal frameworks and procedures for assessing research proposals and requests for data. Research findings and data releases should be shared with the public and made readily accessible to the community from which the data was drawn, ensuring that communities are actively engaged with the data that relates to them, and trust that the data represents their interests.

Innovative uses of the Danish police administrative data system

The Danish police collect nationwide, comprehensive data on all offences reported to police. Data are recorded by a unique case number that indicates the given police office, the reported criminal offence with reference to the national penal code, and the individual case number. Data registration includes both the individual personal number of the alleged perpetrator and that of the reported victim. The police administrative system (Polsas), in operation since 2001, regulates uniform data registration and updating of the central criminal statistics in Statistics Denmark.

Statistics Denmark regularly publishes an overview on trends in specific criminal offences and on the profile of alleged offenders and of victims in crimes reported to police. The Research Unit of the Ministry of Justice publishes results of specific analyses based on the criminal statistics. Researchers may gain access to encrypted data and draw up a specific data set based on linkages with the various registers in Statistics Denmark. Specific legislation regulates data access and linkage for research purposes.

Source: Administrative data collection on violence against women: Good practices (1)

Administrative data can be integrated effectively with other data sources in decision making processes

For gender data this means:

- **Data from administrative sources can be effectively combined with data from other sources (such as a census, surveys, big data, needs assessment or qualitative data) to analyse important issues related to gender; and**
- **Critical data needs, including those which require integration of data sources, are identified in appropriate strategic documents and supported by clear processes and allocation of responsibilities.**

Beyond simply making data from different sources available centrally as part of a national statistics system, this higher level of maturity recognises the value that is added by using data from multiple sources to interrogate, understand and monitor development issues from a nuanced perspective. This does not necessarily mean that data needs to be directly linked, rather that data sets are not considered in isolation. This requires a national statistics strategy or equivalent that is operationalized and linked to national planning processes, compatible data standards, and analytical capacity. It also requires appropriate governance and legal frameworks to ensure clear responsibility and appropriate data protection.

The degree of digitisation of an administrative system also has an impact on their likely level of integration with other sectoral and statistical systems, and this is particularly important for gender statistics, given the need for disaggregation by sex at the unit-record level. Digital systems, when based on national metadata standards to ensure consistency, increase the utility of administrative records for statistical purposes by increasing the amount of data available for gender analyses (8), improving the timeliness of data, and facilitating data access and usability.

Country example: Digitization

Country that has digital admin systems or is moving towards (particularly those that are child-specific, health, education, etc) – Morocco, Ghana, others?

Commented [NR3]: Advisory Group members: if you have a country example please either send through the relevant documents and we can write it up, or provide a short paragraph here

Given the difficulties in ensuring full coverage and completeness of data from administrative systems, a mature integrated system is also one that includes small area markers (such as a postcode) or individual identifiers to allow cross-linkage with survey data (64), to help identify women and girls who are not being reached through routine administrative systems (72). A recent pilot project in Tanzania, for example, was able to prospectively link data from the health and demographic surveillance system to health facility records, allowing for real-time identification of patients while generating a rich source of directly observed data on access to and utilisation of health facility services at a subnational level (73).

Using administrative systems to assess the impact and sustainability of Rwanda’s land tenure regularization program for women and girls

Given the significant impact land ownership has on the autonomy of women, and intergenerational benefits to children when limitations on ownership through inheritance or systems of marriage and divorce are addressed, Rwanda introduced the Land Administration and Information System (LAIS) in 2005. The LAIS provides real-time data on registered land transactions, including land ownership by sex, and can quantify and manage issues at a high level of disaggregation. A recent review of data from the LAIS, for example, demonstrated the gender-responsive nature of the regularization program, with 25 percent of women registered as sole-owners (compared with 14 percent of males) and 61 percent as co-owners.

There has also been work to link administrative data with data from household surveys to better understand the levels and determinants of informality in land ownership. Using data from the LAIS linked with data from a 2015 household survey, for example, issues such as a lack of information on the need to register land and the relatively high cost of registration, were identified as key issues in why a substantial share of land transfers remained informal, providing the needed evidence for the development of effective and gender-responsive local policies and programs.

Source: Using Administrative Data to Assess the Impact and Sustainability of Rwanda’s Land Tenure Regularization (74)

Supports a holistic approach to services and care

For gender data this means:

- Access to services and care, including programs to improve access for women and girls or to address specific issues, are supported by strong coordination across programs, locations, and sectors.
- Effective case management services, particularly for welfare or child protection cases, are supported by systems where case managers have access to all the relevant data they need to improve outcomes through holistic care, while rights are protected through strong data privacy and protection.
- Data systems support continuity of care and services for children and families on the move as they change location within a country, by making appropriate records to local providers in their current location.

Collecting data at the unit-record level allows for disaggregation by multiple characteristics (18), and, when appropriate data sharing standards and formats are in place, allows for administrative data to be used in a variety of statistical ways, including direct tabulation and indirect estimation (27). More importantly, when data sharing between relevant local services is supported and active, it facilitates the oversight of multiple services and programs on gender equality by policymakers, while enabling data to ‘follow’ women and girls as they move between services and systems (75).

Strengthened service provision through Ireland’s online database on gender-based violence

There is growing recognition of the need to have timely, accurate and comprehensive data available to develop policy and to commission services relating to domestic, sexual and gender-based violence in Ireland. The Rape Crisis Network Ireland (RCNI) database is a secure online database that allows authorised non-statutory sexual violence services in Ireland to record anonymised information on the specific needs and use of services by individual service users. The data allows the individual services and the RCNI to generate a wide range of reports about the use of services at a local and national level, and the characteristics and situation of service users in relation to sexual violence. The system offers a unique data source as almost two thirds of this data relates to non-reported cases of sexual violence.

Source: Administrative data collection on violence against women: Good practices (1)

Self-assessment check

The following self-assessment tool presents a simple “self-check” for countries to benchmark key aspects of their administrative data landscape through a gender lens, by considering how well each of the statements reflect the administrative data landscape in their own country. Where possible, countries are encouraged to include a diverse group of interested stakeholders, including representatives from the NSO, gender ministry/department/agency, and representatives from key line ministries that are responsible for core administrative data systems.

Box 4. Self-check: Cross-sectoral administrative data landscape maturity for gender data.

| Maturity level | Describing a mature admin landscape through a “gender lens” | This statement applies to the administrative data landscape in my country | | | Comments (note why you believe this describes your national situation- including noting sectors or systems that may be exceptions) |
|-------------------|--|---|-------------------------------|--|--|
| | | Very well | Mostly – with some exceptions | To a limited extent – but there are substantive gaps | |
| 1 Formation | <ul style="list-style-type: none"> Core systems for children (those that are important for gender statistics in the national context) exist, are functional, and have national coverage geographically. | | | | |
| 2 Foundational | <ul style="list-style-type: none"> Administrative data is seen as a valuable source of national data on topics related to gender, alongside other sources, such as census or surveys. A national agency has a clear legal mandate to produce and publish official statistics on gender The publication and sharing of gender-related data across ministries is supported by formalised cooperation between the NSO and relevant line ministries | | | | |
| | <ul style="list-style-type: none"> there must be a functional civil registration system with complete (or near complete) registration of all births for boys and girls, including the issuance of a birth certificate there must also be accessible and equitable pathways to legal identity that specifically address population groups that may face barriers to registration. | | | | |
| | <ul style="list-style-type: none"> Administrative data systems provide reliable and routinely available data, as part of a national statistics system - on both specific indicators for gender related issues and disaggregated data - for reporting against international frameworks (including the SDGs and CRC). | | | | |

| | | | | | | |
|----------------------------|---|--|--|--|--|--|
| | <ul style="list-style-type: none"> Reliable and timely gender data from administrative sources are not limited to indicators required for reporting against international commitments, but also includes data required for monitoring gender equality as identified by national policy frameworks and the localisation of gender-relevant SDG indicators, as well as the data required to support national services and systems in the achievement of these development goals. | | | | | |
| | <ul style="list-style-type: none"> Development indicators are available by sex, so that data is able to reflect the different challenges faced by boys and girls; but also Data is sufficiently disaggregated to allow gender differentials related to rights or key development outcomes to be routinely probed by other population characteristics (ethnicity, location, poverty quintile etc.) to effectively monitor that women and girls from vulnerable groups are not left behind. | | | | | |
| 3 Functional | <ul style="list-style-type: none"> Gender data from administrative systems are available and actively used by decisions makers at the national and subnational levels, both within the ministry in which they are collected and cross-sectorally. There is evidence in planning and results documents that data is used to drive decision making. | | | | | |
| | <ul style="list-style-type: none"> Data from administrative data systems, including basic analysis by gender, must be available and understood by local services (within the department or ministry in which the data is collected, and for broad issues – cross-sectorally by local government). | | | | | |
| | <ul style="list-style-type: none"> Administrative data sources used in planning and preparedness include capacity to report by gender, in order to effectively monitor the differential effects of the disaster and subsequent recovery by gender against a known baseline. | | | | | |
| 4 Flexibility & form | <ul style="list-style-type: none"> Recognition of the importance of data sharing and communication between sectors, including relevant ministries (such as Department of Women’s or Family affairs or similar) that may be secondary data users and not be engaged in data collection themselves; and A culture of collaboration around administrative and gender data issues, including analytical capacity building, data standards, technology reviews, and quality control. | | | | | |
| 5 Engagement | <ul style="list-style-type: none"> Data are available (with appropriate data protection and privacy measures) for research and knowledge generation of topics of benefit to the community. | | | | | |

| | | | | | | |
|------------------|---|--|--|--|--|--|
| 6 Integration | <ul style="list-style-type: none"> • Data from administrative sources can be effectively combined with data from other sources (such as a census, surveys, big data, needs assessment or qualitative data) to analyse important issues related to gender; and • Critical data needs, including those which require integration of data sources, are identified in appropriate strategic documents and supported by clear processes and allocation of responsibilities. | | | | | |
| | <ul style="list-style-type: none"> • Access to services and care, including programs to improve access for women and girls or to address specific issues, are supported by strong coordination across programs, locations, and sectors. • Effective case management services, particularly for welfare or child protection cases, are supported by systems where case managers have access to all the relevant data they need to improve outcomes through holistic care, while rights are protected through strong data privacy and protection. • Data systems support continuity of care and services for children and families on the move as they change location within a country, by making appropriate records to local providers in their current location. | | | | | |

Although maturity will vary by sector, the intent of the tool above is to provide an overall benchmark across sectors - reflecting the cross-sectoral nature of gender data. Data landscape maturity is largely cumulative in this sense – so although some sectors and systems may score more highly (and have more statements that you would consider true), the maturity level should be considered as the last category for which stakeholders were able to answer “very well” or “mostly with some exceptions” without having to answer any question with “to a limited extent” or “not at all”.

Those that find themselves in the formation stage, may be best placed to focus on one or two key sectoral systems in the first instance as a starting point, while those in level 2 or 3 – foundational or functional – will want to focus on including cross sectoral issues such as infrastructure, coordination, data standards, capacity building and strategy. Including a gender lens, and gender specialists in these conversations from the beginning can help ensure that data needs and appropriate standards can be built in as a core part of the data system.

In each case, the next step is to identify the key barriers and challenges that may be limiting system maturity.

Part three: Common challenges and barriers to the effective use of administrative data in gender statistics

Despite the significant opportunities in using data from administrative systems in the production of gender statistics, various challenges and barriers remain. These have been broadly grouped into challenges relating to the production and use of gender statistics (including the gender-blind nature of many institutional environments, lack of demand for gender data at the national level, limited capacity in the production and use of gender statistics, lack of clarity over gender data needs, and the difficulties of effective coordination). Challenges relating to administrative data systems more generally are also discussed (limitations of administrative data, lack of capacity and trust in using data from administrative systems, and limited access to administrative data files).

It should be noted that many of these challenges are interrelated, with for example, the lack of sex-disaggregated data often resulting from a lack of demand, which in course can result from the limited capacity of policymakers to recognise the need for gender data in their country or field of responsibility, and a gender-blind institutional environment.

Challenges related to the production and use of gender statistics

Gender-blind institutional environments

The weak policy space, legal and fiscal environment to produce gender statistics at the national level, along with technical challenges within NSOs and line ministries to produce gender statistics, and limited capacity on the part of users to analyse the data and inform gender-relevant policies, are common reasons as to the poor state of gender statistics (8, 10, 31). As national policy frameworks are the main driver for the production and use of gender statistics (10), there remains a noticeable lack of demand for data and statistics as information for monitoring and evaluation in countries without them. This lack of laws and policies on gender statistics usually results in the development of gender-blind workplans, leading to gaps in policy and program frameworks. While it remains difficult to assess the scope of the challenge given the lack of available data, of the 53 countries included in one study presented as part of the 2019 Sustainable Development Goals Report (76), almost one-third had gaps in their overarching legal frameworks; including those related to discrimination, violence, employment and economic benefits, and marriage and family.

The low status of gender units, when they exist, can also result in a lack of institutional legitimacy awarded to gender statistics, with a lack of understanding from senior decision-makers about the need for gender-relevant data, and only periodic reports on gender equality at the national level (9). This failure to place gender at the centre of macro-level processes is both a contributing factor to, and a product of inadequate funding, with gender focal points often marginalised and under-resourced (8, 10). A recent case study in Bangladesh, for example, found that limited political will and lack of understanding had resulted in an inadequate legal and financial environment for monitoring gender equality (51). Conversely, countries with strong national commitments to gender equality and a willingness to convert commitments into practical actions, such as Morocco, have demonstrated considerable progress in the production and use of gender statistics (53).

Lack of clarity over gender data needs

Given the emphasis on gender statistics for international reporting, and corresponding lack of emphasis on data dissemination and use at the subnational level (29), there is a lack of clarity over data needs at the local level. This stems from the lack of prioritisation within SDG targets (77), and the aspiring yet challenging principle to disaggregate indicators where relevant by income, sex, age, race, ethnicity, migratory status, disability, geographic location, and others (78). There is also limited guidance about what the priorities are for sex-disaggregation and what minimum gender-specific variables should be included in data collection forms, resulting in a general lack of clarity over data needs, particularly among line ministries responsible for creating and maintaining administrative systems.

Lack of demand for gender data

There remains a noticeable lack of demand for data and statistics as part of decision making in countries without a national policy framework on gender equality: a main driver for the production and use of gender statistics (10). This lack of demand significantly limits the likelihood of administrative systems to prioritise the collection of sex-disaggregated data – a critical first step in the production of gender statistics (34). Part of this lack of demand may come from the ‘gender blind’ nature of certain statistical topics. A 2019 study (37), for example, found that 80 percent of policymakers agreed that gender equality was a ‘high’ or ‘very high’ priority in the education sector, while only 38 percent ranked public finance as a similar priority. Without strong national demand and a clear mandate for the production of gender statistics among different ministries and agencies, many administrative data systems become ‘reactionary’ (9): either providing no gender-relevant information, or producing the bare minimum amount of data required for reporting obligations (79).

The sensitive nature of much of the data required to measure and monitor gender equality may also contribute to a lack of demand. Despite the relative lack of evidence on this challenge, it is reasonable to expect there will be sensitivities around certain gender topics in different countries and contexts, particularly around reproductive health and violence (26). It is also important to note that as part of the consultative process countries engaged with as part of defining the goals and indicators for the SDGs, several countries reported topics such as sexual and reproductive health, and unpaid care or domestic work, as having no relevance to them (8). This sensitive nature of gender statistics can lead to a lack of demand; lack of administrative system ability to collect the data; total lack of data; and a resulting lack of prominence in national policies and programming.

Limited capacity in the field of gender statistics

An overarching challenge relates to gaps in national capacity in understanding the importance and relevance of gender statistics, how to analyse data in a gender-relevant way, and how to present data in powerful ways for decision-makers at subnational and national levels (51, 71). This is a significant challenge that has important downstream consequences, as without this capacity, gender statistics remain largely peripheral in NSOs with data collection ad-hoc and under-resourced (53). It also increases the need for an enabling environment that includes opportunities for capacity building, as many issues of significance to women and girls are hard to conceptualise (poverty, empowerment); sensitive (gender-based violence); or occur in sensitive contexts (armed conflict), compounding the challenges of defining what to measure and how to measure it (23). Limited capacity also contributes, in part, to a lack of clarity around what gender-related data are needed and by whom, particularly at the subnational

level for identifying local needs (for an example, see Ghana's country case study in **Annex 2**), along with what should be prioritised when data are available.

The difficulties of coordination

The production of gender statistics is a complex and multi-actor process (51), requiring engagement and coordination not only between NSOs and line ministries, but often with a third agency or department responsible for gender more broadly. This added layer of coordination is a significant challenge and it has been attributed to the persistent and systematic weaknesses found within other complex systems, such as those for civil registration (3). Given the various agencies and organisations within one sector (67), this challenge of coordination becomes more pronounced when attempting to source data from administrative systems. Countries with decentralised systems of governance may also face additional challenges related to coordination (see Canada's country case study in **Annex 1**). When line ministries are managed by subnational governments (such as at a state, territory or provincial level), it often means that administrative data files may not be collected in the same way, making usability at the national level more challenging (45, 72, 79).

Lack of sex-disaggregated data

A persistent challenge for gender statistics is the lack of sex-disaggregated data, particularly for data that are collected at the household level (42), and this lack of disaggregation helps to hide entrenched inequalities (80). While administrative systems can provide frequent data, with a large proportion of data relating to individuals; the extent that sex and other variables of interest are recorded reflects the laws and regulations of a country (36). Several reasons may account for this lack of disaggregation at the subnational level. Most importantly, if an administrative system has not been designed to capture data by sex, the process to change it is generally difficult, requiring updating data capture forms, revising databases and staff training (79) (see **Annex 1**). The quality of disaggregated data, particularly when tabulated by multiple characteristics, also generally decreases as it becomes further removed from the immediate data needs of the administrative system.

This challenge is compounded at the national level as even when sex-disaggregated data are collected, they may remain at the subnational level, or are stored and shared in formats that are hard-to-use for statistical purposes (81, 82). This lack of disaggregated data at the national level is particularly apparent in less-mature systems, with it increasingly difficult to further utilise administrative records for statistical purposes that aren't electronic or centralized (8). This lack of digitization at the lowest levels of data collection often means that NSOs only receive aggregate tally records, which are difficult to integrate with other data sources and make cross-tabulation impossible (see **Annex 2**).

At both the national and subnational levels, if there is no demand for sex-disaggregated data or a lack of clarity over what topics should be disaggregated by sex (and other variables), this reduces the likelihood of such data being recorded in an administrative system. This represents a significant challenge in the use of administrative data for gender statistics among less-mature systems, particularly regarding intersectional analyses and the current focus on multiple disaggregation, as many systems are still struggling to collect, compile, and report on data disaggregated by sex alone (51).

Limitations of administrative data

Administrative data is not suitable for all uses

There are several inherent limitations of administrative data, as the collection of data for statistical purposes is not the primary reason that the administrative data system exists. Administrative data sources can provide reliable measures of incidence (new cases or new reports), but as they are based on services provided can only provide the prevalence of those who are “current users of the system”. They are unsuitable for determining the overall prevalence of issues within a population, such as the burden from violence or mental health issues, and struggle to define the extent of underreporting (5).

Data quality

Often, the ‘found’ nature of administrative data means that it is more likely to be messy and in need of substantial data management (21); while its multidimensional nature means the data is likely to be fragmented across many different systems, making consistent data collection practices difficult (72, 79). In many situations – forms and data collection tools may have evolved over many years and subsequently may not reflect current data needs and/or be resistant to change to address this. It may also be difficult in many systems to identify the data collection and management steps in order to evaluate the data – particularly for those who sit outside of the collection agency itself.

Coverage and inclusion

While administrative systems have the advantage of including those least-likely to take part in traditional research, considerable data quality challenges relating to coverage and completeness remain (36). This refers to the extent to which certain populations may be systematically excluded from datasets (83), and is of particular concern for women and girls who are particularly vulnerable to being excluded from administrative systems based on discriminatory legal frameworks (11). Data from national identification systems that require authorisation from male family members as part of registration, for example, generally under-represent women and girls (54). Issues of equity can further compound these challenges, with children born to mothers from the poorest wealth quintiles least-likely to have their births registered, excluding them from such administrative datasets (11).

System capacity to generate disaggregated data

Systems that are heavily reliant on manual data collection, entry or processing; or which have not been updated to meet current data collection needs, may have limited capacity to disaggregate data by gender, particularly in conjunction with other variables.

Unstable collection processes or frequent system changes

Changes to the political context can also have an impact on how administrative data are collected; with overall data quality only as reliable as the record keeping and registration practices at the point of entry or service provision (67). A service may change its eligibility criteria, thus including or excluding different population groups from the administrative data system, while the end of a government funding cycle may entirely close-down a service and its associated data collection processes. By its very nature, administrative data are not able to identify the extent to which services are responding to user’s needs (19, 84), or highlight ‘hidden’ patterns in the data (1), including data relating to the needs, activities and interests of girls and women (83).

Limited access to administrative data files

A significant challenge for NSOs also relates to the poor access to both administrative data files and documentation and microdata on administrative systems (85). As UN Women identified through their mapping of gender-relevant indicators, the existence of administrative data records is often only inferred through the indicators produced by them, with access to microdata generally not available from key systems (58). While a 'cultural history' of poor information sharing between sectors is often blamed for the poor use of administrative data by the international community (10), for countries such as Ghana who have limited formal data sharing agreements in place, the process to gain access to new administrative data files is complex, requiring official endorsements from relevant line ministers. Further, even when collected and shared, data are not always tabulated by sex, or made available in user-friendly formats to allow for meaningful gender analyses at the NSO (18, 19).

Lack of capacity and trust in using data from administrative systems

There remains an overall need to strengthen capacity within NSOs for working with data from administrative systems, both in terms of skills and resourcing, given their traditional roles in the design and implementation of large surveys (35), and budgeting tied to these processes. Capacity is also limited due to the noticeable gap in robust guidance on how to integrate a gender perspective into administrative systems in the available tools, guidance, and methods for assessing and improving administrative data such as the education management information system tools from the World Bank (85), and CRVS system assessment tools developed by WHO (86). This lack of capacity, along with limited access or ability to interrogate or influence how data is collected by line ministries in many countries, contributes to significant issues of trust in using data from administrative systems.

Self-assessment check

The self-assessment check below provides a quick summary tool to evaluate which challenges are critical in your own setting, and which you would prioritise in order to move to the next level of administrative data maturity (and to support better use of administrative data).

Box 5. Self-check: Top barriers to using administrative data sources for gender data.

| Category | Key challenges or barriers | This challenge applies to the administrative data landscape in my country | | | Considering our current level of maturity – is addressing this challenge a key priority for advancing to the next level? | Comments |
|--|--|---|-----------------------------------|---|--|----------|
| | | This is not a major challenge | We have some challenges with this | This is an important challenge in our context | | |
| Gender data related issues | Gender-blind institutional environments | | | | | |
| | Lack of clarity over gender data needs (including definitions) | | | | | |
| | Lack of demand for gender data | | | | | |
| | Limited capacity in the field of gender statistics | | | | | |
| | Difficulties of coordination | | | | | |
| General administrative data issues | Lack of sex-disaggregated data | | | | | |
| | Data quality | | | | | |
| | Coverage and inclusion | | | | | |
| | System capacity to generate disaggregated data | | | | | |
| | Unstable collection processes or frequent system changes | | | | | |
| Limited access to administrative data files | | | | | | |
| Lack of capacity and trust in using data from administrative systems | | | | | | |

Part four: Pathways to better gender data

The maturity model and self-assessment tool provided in this guidance offer a high-level overview of how well the national administrative data landscape of a country supports the data needed for monitoring gender equality, and key challenges that currently limit the use of administrative data for gender statistics or a more mature administrative data system. Addressing these challenges to improve the availability and use of gender data through administrative systems involves investment in both the administrative data landscape and specific systems more generally, and specific investments related to gender.

Investments in administrative data systems

The current global focus on making the most of existing data sources; technological advances that are rapidly expanding options for coverage, outreach and data management; and a growing interest in data protection and privacy and responsible data use frameworks all provide a platform for advocating for investment in administrative data systems, and a key entry point for gender data specialists or agencies to find a place at the table to influence those investments and designs. There is a foundational level of system maturity required before data from administrative systems are likely to be able to serve as a reliable source in the production of gender statistics. Strengthening the overall capacity of administrative data systems to improve the quality and availability of disaggregated data more broadly is likely to be an effective pathway to improve data disaggregation by sex. Ensuring that aggregate data on key measures of gender equality are readily available is an important first step, and one which can increase data demand from a variety of users (51).

Legal and governance frameworks

Countries are recommended to review and update their relevant regulatory and legislative frameworks, as the use of administrative data for official statistics must be based on clearly defined provisions in the law (52). Several sectoral-specific guidance documents already exist that outline approaches to assessing the legal frameworks permitting or prohibiting the use of administrative records in the production of official statistics, notably those relating to systems of civil registration and health, which could be adapted for use in other sectors.

Legal frameworks around open data, data protection, and identification also provide opportunities to develop formal processes for sharing data, build relationships that clearly define roles and responsibilities between sectors, and build public trust in data use and processes.

Coordination and strategic planning of the statistical system.

Ensuring that data from administrative systems are actively used in national and subnational planning, monitoring, and evaluation generally requires the development of a results-orientated strategic plan to achieve gender equality, endorsed by senior leadership, and developed through broad consultation with government and non-governmental stakeholders. Strategies at the national and subnational levels should also have measurable goals and indicators linked to high-level outcome targets to achieve gender equality, with a defined set of responsibilities, timelines, action plans and monitoring mechanisms to achieve identified priorities (62). The growing availability of sectoral guidance on using administrative data in the production of gender statistics, for example in monitoring gender-based violence (1, 67), and strengthening systems of civil registration to address issues of gender inequality (3, 11, 54), provide opportunities for

Commented [LP4]: Advisory Group Members: To what extent should this guidance document discuss sector-specific investments as a way forward? Are there critical ones for gender stats that we should discuss here? And/or can we "signpost" the importance of some of these investments by including country examples or additional resources for the user to refer to?

Please feel free to input directly into the document in tracked changes.

increased integration and use of administrative data in planning, monitoring, and evaluation and can act as examples for other sectors wishing to develop similar guidance.

The development of a national data strategy that supports the use of national data standards and routine data collection (52), and one that has an effective coordination mechanism between line ministries, the NSO, and department or agency responsible for gender more broadly (51), is essential. Countries are strongly recommended to develop coordination mechanisms through the development of specific gender statistics forums. Alternatively, countries can improve coordination through the inclusion and integration of gender into existing national statistical mechanisms, such as NSDS. Wide-scale investments in the development of NSDS, due in part to the increased importance of a comprehensive and coordinated national data infrastructure that takes a whole of government approach to statistical development required for monitoring the SDGs (29, 77), are creating opportunities for agencies responsible for the promotion of gender equality and women's rights to engage with counterparts on data-related issues.

Digitisation

Digitisation of systems – to improve access and coverage, speed up timeliness of processing, and facilitate improved data quality and local data use through feedback at this level via dashboards and other linked messaging tools is perhaps the defining investment strategy for administrative data systems at lower levels of maturity to address gender data gaps. Digitization has also enabled statistically mature countries to implement sophisticated data linkage programs, offering substantial insights into several areas of gender equality (45). However, digitization without political support and coordination is likely to fail, particularly if fundamental issues relating to what data is needed for monitoring gender equality have not been addressed.

Developing system capacity to link and anonymize data records across multiple sectors for legitimate research purposes is equally important, along with the implementation of clear legal frameworks and procedures for assessing research proposals and requests for data. Research findings and data releases should be shared with the public and made readily accessible to the community from which the data was drawn, ensuring that communities are actively engaged with the data that relates to them, and trust that the data represents their interests.

The capacity to link administrative data based on individual records, also assisted by digitization, offers a significant opportunity to better utilise existing administrative data, even when data quality is poor. Administrative data from one system can be linked to another, such as details in a population register that are matched with health records; data can be linked to contextual information, such as the district or region where a person resides (or service was provided); or linked to household survey data or the census, providing detailed and rich information, while at the same time, helping to strengthen administrative datasets by highlighting data quality issues, particularly around coverage and completeness. While the level of digitization and presence of a unique identifier greatly facilitates the process, linking can be done through 'fuzzy matching methods', such as matching personal details like names or date of birth (35). Opportunities for increased data linkage are becoming more widespread given the drive for strengthening systems as part of the SDGs and broader investments in data systems, including the push for increased digitization and implementation of national identity systems.

Commented [LP5]: Advisory Group Members: Do you have concrete examples to include of a system that that improved gender data through a more general investment in digitization?

@Morocco, perhaps the work being supported by the Danish Gov to digitalize systems?

Gender-specific investments

While important, these broad administrative data investments are insufficient to ‘move the needle’ on many of the most pervasive and intractable gender data gaps and challenges; and gender specific investments will be needed alongside general system-strengthening if real change is to occur. The ability of administrative systems to provide data for reporting against international frameworks and for monitoring gender equality as identified by national policy frameworks are greatly influenced by having clearly defined gender data requirements and a recognised role for gender statistics in the national data landscape. Commitments to reporting against international mandates, such as the CEDAW and 2030 SDG Agenda, provide the needed momentum for the production and use of gender statistics, and these can be leveraged to develop national policy frameworks that define the data and corresponding indicators needed for monitoring gender equality.

Investing in national policy frameworks also helps to create an enabling environment, clarify data needs (including requirements for disaggregation), and increase data demand, particularly when administrative systems are a prioritised data source. Through the process of localisation, global commitments are more likely to become institutionalised and sustainable, while also acknowledging the role of gender statistics in the national data landscape. Countries with strong national commitments to gender equality who have shown a willingness to convert commitments into practical actions, have also linked their national gender frameworks to budgetary and financial management decision-making processes to ensure that gender equality is considered in all government departments (45, 53).

Numerous guidance documents relating to assessing the capacity of national statistical systems to integrate a gender perspective also exist.¹⁰ Within a country’s National Strategy for the Development of Statistics (NSDS), for example, opportunities to integrate gender into statistical processes include revising or expanding data sources to better focus on gender issues, revising definitions and concepts to ensure they are gender-sensitive, and improving the presentation and dissemination of results (51).

Box 7: Key investments specifically related to gender.

- **Developing gender-enabling institutional environments.** Having a national gender policy framework is a key driver for the production and use of gender statistics. Countries without such frameworks are strongly encouraged to develop one, under the guidance of the national gender ministry, department, or agency.
- **Increasing demand for gender statistics.** Developing monitoring frameworks on gender equality with priority subnational, national, and international indicators are critical in increasing demand, and a useful starting point may be in the localization of SDG indicators for national use. It should also be noted that by improving the publication and dissemination of gender statistics, demand is likely to increase, as stakeholders become aware of the types of information available.
- **Increasing capacity in gender statistics.** Increasing capacity to analyze, interpret and work with gender data, as one component of the broader strategy of gender mainstreaming, is an ongoing activity that should be led by the national gender ministry, department, or agency, and working closely with representatives from NSOs and line ministries.

¹⁰ See Gender Statistics and Administrative Data Systems: An Annotated Resource Guide available at <file:///C:/Users/lpandolfelli/Downloads/Admin-and-gender-data-annotated-resource-guide.pdf>

- **Clarifying gender data needs.** A first step in helping to define data needs is in the development of a national gender policy with monitoring framework, which should clearly define indicators and data sources. Open conversations between the national gender ministry, department, or agency, NSO, and line ministries about what data is needed, and what data is currently available (or could be available) is another important entry point, along with reviewing current data collection mechanisms (including data capture forms used as part of administrative systems and survey instruments).
- **Improving coordination.** Establishing a national coordination mechanism to support the production of gender statistics from different administrative data systems is critical.
- **Improving the collection and availability of sex-disaggregated data.** While the national gender ministry, department, or agency, and NSO can help provide technical guidance, line ministries responsible for administrative data systems need to take on leading roles in improving the collection and availability of sex-disaggregated data at the unit-record level. There are several sectoral assessments already available to help understand strengths and weaknesses of core systems (including those in education, health, and civil registration – **Box 7**) and countries may wish to refer to these. Along with reviewing data collection forms, the implementation of digital systems is likely to greatly improve the collection and availability of sex-disaggregated data, however these are both time-consuming and (often) resource-intensive activities.

Box 8: Guidance documents for strengthening sectoral administrative data systems

(to be added)

Conclusions

Data from administrative systems have a critical role to play in monitoring gender equality and addressing persistent gender data gaps that need to be addressed if countries are to achieve the targets set under the 2030 Sustainable Development Agenda for children and their families. Well managed and resourced administrative data systems are able to provide regular and granular data at the subnational level – essential for informing effective policymaking, and may provide important contextual information and proxy measures to better inform understanding of progress between surveys and address monitoring gaps.

Despite the noted challenges, opportunities such as developing national policy frameworks and building national capacity in gender statistics increases local demand for gender statistics and clarifies data needs, addressing issues of both data demand and supply. Strengthening administrative systems for better gender statistics generally do not require ‘standalone’ investments, with, for example, large associated benefits of digitization including increasing the availability and timeliness of sex-disaggregated data. Increasing the capacity of NSOs and line ministries to work with administrative data and strengthen the production of proxy indicators for policy, along with implementing systems for data linkage, also improve immediate data availability while helping to strengthen the underlying systems.

There is no ‘correct’ pathway to better gender data, and country priorities will vary depending on their level of administrative and statistical system maturity, and the extent of their gender data gaps. However, supporting calls for broad administrative data system investments, technology advancement, and national

statistical governance and coordination are perhaps the most effective strategies available to gender advocates to strengthen the data available to them.

The international community has an important role to play in supporting the use of administrative data in the production of gender statistics, including overall system strengthening and improving guidance and clarity on how data from administrative systems can be used. This includes investments in methodological work to identify examples and adjust definitions where administrative data could: fill a data gap with a locally adjusted indicator definition; act as a proxy to produce more timely measures or improve estimates in between surveys, or; provide important contextual information either alone, or linked with other data sources. Further, the development of internationally harmonized methodologies and data collection forms could provide guidance on core data and indicators needed at a sectoral level for monitoring gender equality, which countries could adapt and localise. These have the potential to standardise and strengthen administrative data systems following a similar pathway as what has been taken with surveys. Recent guidelines on the use of administrative data for improved statistics on violence against women and girls (1, 67), for example, provide detailed and practical guidance on when administrative data should and should not be used in the construction of indicators and how countries can strengthen administrative systems for better data. The development of similar guidelines for priority topics and other sectors, particularly health and education, would greatly improve the use of administrative data in the production of gender statistics and begin to resolve some of the current gender data gaps.

Overall, administrative data will not replace the role of surveys in establishing who is not being reached through routine systems and why. Nor will it replace data that is better sourced through surveys, such as some prevalence-based measures or data on the behaviours, opinions and attitudes of women and girls. However, adopting a multi-modal approach to data collection, and integrating administrative data into routine statistical processes will provide for a wider and stronger development approach to gender equality. Such an approach reflects the essence of the gender data revolution to do more and better with existing data sources, while helping to ensure that no one, including boys and girls, are being left behind.

Annex 1. Canada country case study

This case study on administrative data systems and gender statistics is based on interviews held with technical staff from Statistics Canada during December 2019 and January 2020. Canada has highly sophisticated statistical and administrative data systems; however, it continues to face challenges associated with decentralised systems of governance and data management. The Government of Canada has demonstrated its commitment to advancing gender equality through significant investments in key programmes, policies, and initiatives. While substantial gains have been made, the Government has reflected that more work is still needed, particularly in the fields of education and skills development, economic participation, leadership, elimination of gender-based violence, reduction of poverty and improved health outcomes, as well as contributing to gender equality globally.

Country context

Introduced in 2018, the Gender Results Framework (GRF) represents the Government of Canada's vision for gender equality. It is a whole-of-government tool designed to define what is needed to achieve gender equality, determine how progress will be measured, and track progress (1). The GRF defines the gender equality agenda for the Government of Canada: it ensures that gender is considered in relation to other intersecting identity factors and has legal authority through the Canadian Gender Budgeting Act, which ensures federal government's budgetary and financial management decision-making processes consider gender equality and diversity.

Within the Framework, six key areas – that require change – have been prioritised, and progress on performance indicators is routinely monitored and made available online at Statistics Canada's Gender, Diversity and Inclusion Statistics Hub and through the Women and Gender Equality (WAGE) GRF website.¹¹ Many of the indicators, which form part of the Canadian Indicator Framework (CIF), align with other international frameworks, such as the Sustainable Development Goals (SDGs). Whenever possible, these indicators will be made available by intersecting identity characteristics such as disability, gender identity, sexual orientation, Indigenous identity, immigrant status and visible minority status. Data to support the CIF come from existing data collection mechanisms and reporting sources, including surveys, administrative records, monitoring networks, and other forms of open data (2). Such data are used for two purposes: to set Canada's goals for gender equality; and for ongoing gender budgeting and monitoring.

As set out in the Statistics Act, Statistics Canada is required to collect, compile, analyse, abstract and publish statistical information relating to the commercial, industrial, financial, social, and economic activities and condition of the people of Canada (3). It collects data directly through traditional means, such as by paper, telephone, or in person, and has over 350 active surveys on most aspects of Canadian life, along with the Census, which is collected every five years (4). Statistics Canada has also been using non-survey data in official statistics for around 100 years, with many programmes using administrative data from government agencies and private sector organizations, which are then integrated into official statistics to meet statistical and research requirements (5). Administrative data are used to complement and replace surveys (or

¹¹ Available at: https://www.statcan.gc.ca/eng/topics-start/gender_diversity_and_inclusion and <https://cfc-swc.gc.ca/grf-crrg/index-en.html>

components of surveys) and are both an economical method and one that reduces the burden on respondents. Statistics Canada plays an important role in housing data collected from various surveys and administrative systems, and has very strict privacy, security, confidentiality, and transparency policies, ensuring that any data collected is proportional to the need.

Statistics Canada is the central focal point for reporting Canada's data on the SDG indicators, which are available online through the agency's Sustainable Development Data Hub.¹² Currently 9 of the 17 sub-indicators relating to Goal 5 (Achieve gender equality and empower all women and girls) are reported online, while appropriate data sources for another seven are still being explored, and data for one sub-indicator is not available. Subject experts were involved in a consultative process to help select the best data sources for each sub-indicator, with preference given to those sources that most closely match international metadata, which resulted in six of the nine available sub-indicators being sourced from survey data.

When considering gender statistics more broadly, although Canada has comparatively good data, significant gaps remain, particularly around emerging areas such as the representation of women in politics across the country's jurisdictions, and the gendered impact of climate change on diverse groups of people. Data that have traditionally been sourced from household surveys, including topics related to the environment, labour force, and income and tax, are also of particular concern as the 'gender element is missing' from many of these surveys, which have focused on data at the household, instead of the individual level. Respondents also commented that more data on access to sexual and reproductive health services would be beneficial, along with having access to additional data for cross-tabulation, such as usual residence, to assist in lower-level statistical analyses.

Key components of a successful approach to using administrative data for gender statistics

While acknowledging the important and continued role that surveys will play in Canada's statistical system, respondents commented on the need to use multiple sources of data as part of good statistical governance. Within this context of moving away from relying primarily on surveys, respondents equally stressed the importance of needing to carefully consider the use of administrative data sources, and of being constantly mindful in understanding why the data is being collected, particularly on sensitive topics. One respondent, for example, commented that collecting data on sex and gender for display on official identity documents is very different to collecting the same data for a research project, thereby highlighting the importance of good communication about data collection and its use.

The success of Canada's approach to using administrative data is due in part to the strong national coordination mechanisms established between Statistics Canada and key partners including WAGE, the Department of Finance, and provincial ministries such as health and education. National coordination is supported by a strong partnership approach fostered by Statistics Canada to facilitate data sharing and to ensure data quality. As reflected by one respondent, "strong relationships [are] needed – otherwise data quality will suffer." Part of this work includes ensuring that data custodians, as producers of the data, can see the 'value-add' in investing in their administrative systems. For example, understanding the value of

¹² Available at: <https://www144.statcan.gc.ca/sdg-odd/index-eng.htm>

having data by sex and/or gender offers organization in terms of monitoring a policy or programme. This partnership approach is critically important, because even with legislation that mandates the sharing of data, sharing is not always guaranteed and nor is its quality.

Further, while a key role of Statistics Canada, or any National Statistical Organization (NSO), is to assist in improving the quality of data, it is the responsibility of the NSO to fully understand the data source, including any challenges and weaknesses. This process is facilitated by Statistics Canada's Quality Assurance Framework (QAF), which outlines the measures the agency has put in place to manage quality, and provides guidance to statistical programme areas as they develop and implement quality management strategies to meet their users' needs (6). One respondent commented that working with administrative data is:

"not free, [and] sometimes not useful, but that doesn't make it not worthwhile examining it – as it may be useful for something else; [or] for building a relationship with another entity and data source."

Another important lesson to come from Canada is the need to "start simply". Regarding the SDGs, for example, one respondent commented that if all indicators were disaggregated by all possible variables, it would produce over 700,000 data points, raising the new challenge of attempting to understand what all that data means. While countries with sophisticated statistical systems may, technically, be able to produce high levels of disaggregation, respondents commented on the need for data custodians and users to understand basic issues such as "what do you want to look at" and "what do you need disaggregation on." Focusing on a select number of high-priority data items, and doing them well, sets the stage to expand as well as helping to build strong relationships with data custodians for future collaborations.

Along with this central coordination and relationship-building role, Statistics Canada also provides specialized technical assistance on gender statistics. Using the GRF as a guide to help highlight gender equality issues, a training programme was developed to help organizations find gender-relevant data within Statistics Canada's website, both to help keep the data relevant and ensure organizations have access to up-to-date statistics. Training is tailored to each organization, so that staff can understand how to find the statistics, and to understand why it is important to them. Statistics Canada has also implemented standards for the transmission and composition of data messages from data custodians, to ensure that data arrives in the same format, improving the overall quality of the data and reducing the time needed to clean and validate the various data sources.

Innovations with data linkage

Statistics Canada has a sophisticated data linkage programme, offering substantial insights into several areas of gender equality. Data from income tax files have been linked with business ownership data to get a better understanding regarding the proportion of women who own businesses: while data on mothers (collected through birth registration) have been linked with census data on additional characteristics and variables to provide a more complete understanding of the lives of Canadian mothers. In Ontario, graduate earnings (as measured through tax returns two years after graduation) have been used to demonstrate education outcomes for higher-education providers, while also offering an important insight into any persistent gender wage gaps. Preliminary work has also been done in the education sector in linking administrative data on public postsecondary enrolments and graduates with census data to improve coverage on Indigenous status, which is currently poorly reported, allowing for more detailed gender analyses. Similarly, plans are underway

to link postsecondary education data to administrative data on disability support to provide an understanding of postsecondary participation for students with disabilities.

It is important to note that while several different identity numbers exist in Canada, there is no universal identifier, with most linkage being done via probabilistic methods, rather than directly. Further, all linkage is done in the context of strict privacy regulations, with one respondent commenting that the first question must always be “do we really need to link?”, followed by “are we able to?” As part of ensuring confidentiality, analytical records are kept separate from personal identifiers, and Statistics Canada has sophisticated data validation processes, which include guidelines on linkage rates, and minimum acceptable coverage levels for linked data to be published. As reflected by one respondent, given the extensive initial investments and ongoing data validation processes required, data “linkage is good, just not timely.”

Challenges and barriers when working with administrative data systems

Administratively, Canada is divided into 10 provinces and 3 territories, with provinces considered sovereign within certain areas based on the divisions of responsibility between the provincial and federal government. As with many countries that have decentralised systems of governance, this has a significant impact on operations of statistical and administrative systems. For ministries of health and education particularly, each jurisdiction (province or territory) does things differently. This means that every administrative data file may not be collected the same way, with certain jurisdictions asking questions in a slightly different way, making national-level analyses difficult. With regard to the counting of maternal deaths, one respondent commented on the ongoing difficulties in ensuring that each jurisdiction asks and records data relating to the length of pregnancy in a consistent way. For education, although gender is now being requested for postsecondary administrative data, the ability to provide it is not always possible because this information is not collected for administrative purposes by some institutions.

As reflected by one respondent, legislative change is also required for provinces to amend the wording of questions on various data collection forms, which is a very onerous process. For agencies that cannot see the direct benefit of the change, this makes the task even more difficult. Overall, this means that some changes may never happen, while others may not happen for many years: innovative approaches are required by Statistics Canada to develop ways to work with the datasets, given their limitations and weaknesses.

Moving forward

Given the significant investments in key programmes, policies and initiatives on gender equality in Canada, the Government is continuing to build on its successes in this area. The 2018 report, ‘Modernizing the Government of Canada’s Sex and Gender Information Practices’, provided recommendations on ways to modernize the Government of Canada’s handling of information on sex and gender, as an initial step to embed gender diversity in business modernization (7). In response, Statistics Canada has developed new standards on sex and gender variables and classifications, as well as offering a non-binary gender option using the ‘X’ identifier when collecting information in certain administrative systems. One respondent reflected that this will improve data availability around gender-based violence, for which the experiences of people identifying as non-binary are currently missed. While data will continue to be collected on sex, this new policy direction will allow for a better understanding of gender issues by providing a two-step process

for collecting data on sex and gender. One respondent commented that these “new and exciting” methods of data collection are needed to help “understand issues rich in experiences”, a critical component of gender analyses.

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Annex 2. Ghana country case study

This case study on administrative data systems and gender statistics is based on interviews held during December 2019 with staff from the Ghana Statistical Service (GSS), Ministry of Education, and Ministry of Gender, Children and Social Protection (MoGCSP). While Ghana has well-established statistical and administrative data systems, it continues to face challenges associated with primarily paper-based and decentralised systems for data capture and transmission. Ghana has a dedicated ministry for gender and a national policy guiding gender-related development initiatives: gender-relevant data is collected across a wide range of data sources. However, the dissemination and broader use of gender statistics that are generated through administrative data systems remains a challenge.

Country context

In May 2015, the MoGCSP released its National Gender Policy, outlining five policy commitments (1). Despite the attempts of successive governments to address gender inequality, issues of concern include: unequal access to social protection, education, and social and economic power; inequalities in decision making at all levels; and stereotyping and persistent discrimination against women and girls, with severe implications for maternal health and mortality (1). Further, while Ghana has progressed through substantial political and economic reform, poverty remains high in some areas and among certain socio-economic groups, particularly women and girls, with poverty-endemic areas often constrained by inadequate basic infrastructure such as roads, electricity supply and internet connectivity (2).

The GSS, responsible for the production of official statistics for the country (3), relies on data produced through routine surveys and administrative data provided by various ministries, departments and agencies. It has led in the localisation and coordination of indicators for reporting on the Sustainable Development Goals (SDGs), which are available on its national SDG reporting platform.¹³ Currently, three of the 14 indicators relating to Goal 5 (achieve gender equality and empower all women and girls) are reported online, two are 'in progress', and potential data sources for another nine indicators are 'being explored'. Gender statistics are also published by key line ministries including health and education, which primarily report on sex-disaggregated measures such as disease burden, enrolment rates and learning outcomes, among others. A 2017 MoGCSP assessment on gender statistics found that while some ministries and departments are generating gender statistics, not all have the possibility of disaggregating their data by sex, and the 'compilation and dissemination of such information is limited' (3) (pg. xvii).

The GSS has sophisticated quality control mechanisms at all stages of data collection, capture, processing and reporting, including a three-stage process of data validation before data is entered into the national SDG reporting portal. The GSS, through the Ghana Statistics Development Project, also provides support to line ministries, providing them with funds to acquire statistical infrastructure, direct technical support on statistical projects, and general support in the development of handbooks on key concepts and definitions to ensure data harmonisation (3). For example, the GSS has assisted in developing manuals and in-built

¹³ Available at <http://www2.statsghana.gov.gh/>

software validation rules, and supported regular training sessions, supervision, and phone support, along with post-census validation for the annual school census, managed by the Ministry of Education (MoE) (4).

Quality and usefulness of administrative data for gender statistics

There was general agreement from interviewees that administrative data is useful in reporting against national and international frameworks on gender equality, with “so much good data being collected” and administrative data being one of the “best ways to move forward” in terms of good statistical practices. However before this can happen, data custodians must be made aware of potential uses of the data, with one interviewee from the GSS commenting that capacity building at the grass-roots level is required to help data custodians understand how the data will be used for statistical purposes, and not just administrative ones. This is particularly the case for gender statistics, where there is often limited broader understanding of the types of data needed for national and international reporting, or why they are important at the sub-national level.

Within the Department of Social Welfare, MoGCSP, there is a clear pathway from receipt of quarterly reports to action, with reports viewed as a “working tool at the department level” used to identify issues and provide solutions, and used as key inputs into national policy formation. Data collection tools specify for the collection of data by sex, with “sex disaggregation very important” and an active system of follow-up when reports are submitted using aggregate numbers. However, while the system can provide adequate information for a range of administrative decisions, very little of it is used for broader statistical purposes, with limited data sharing agreements in place with the GSS, and few publicly-available reports published routinely. This has been recognised as a key challenge within the MoGCSP, who have been working with the GSS to strengthen the collection of sex- and age-disaggregated data and to develop a shared database.

Challenges and barriers when working with administrative data

“I don’t know what data they want” – “I don’t know what data they have”

Interviewees commented on a general sense of not knowing what data is needed for monitoring gender equality at the sub-national level, or what gender-relevant data was being collected by various ministries and departments. The MoE for example, conducts an annual school census on every public and most private schools in Ghana (those known to the ministry), collecting data on topics including infrastructure, the number of teachers and students, and student performance (4). Many of the resulting indicators are disaggregated by sex, and a gender parity index is calculated for each education level (from kindergarten to senior high school) (5). However, official school census reports only include a small number of indicators. While the school census collects detailed data, including the number of girls who became pregnant during the year, student deaths by sex and age, and pupils with deceased parents by sex, among others, such data is not widely published. Raw data is made available to select partners via CD (6). Further, the school census itself only collects data on a relatively small number of questions representing a fraction of the data that is routinely collected in all schools and recorded in the various administrative and class registers, log books, teacher attendance records, inventory books, cash books and visitor books (4). New items are often added to the school census, while old items are not removed (5), with one interviewee commenting:

“It is very hard to change what is collected – many people don’t know why they are collecting certain data.”

Overall, while Ghana follows best practice principles when conducting national censuses and surveys, defining data needs is much more challenging when dealing with administrative data systems, given the breadth of data being routinely collected. This challenge is particularly pronounced for countries with paper-based systems for data capture, which can result in a cycle of data not being utilised to its full potential as data custodians generally only disseminate data when specifically asked; many potential data users don’t ask as they don’t know the data is available. For both the MoGCSP and MoE, while each institution collects very detailed data at the unit record level, most of this individual-level data remains within the institution, with the national office only receiving aggregate tally reports or more detailed data upon request. This situation is compounded when working in areas such as gender, where there is limited broader understanding or communication on the types of sex-disaggregated or gender-specific data required. As reflected by a respondent from the MoE:

“[We] only report on a small number of key performance indicators, while there is lots of data in the system; unless people specifically ask for the data, it remains unused.”

Timeliness and access

Given the limited internet connectivity and intermittent power supply across the country, most administrative systems collect their records on paper, which may be aggregated and sent to the relevant national office or scanned and sent directly to the GSS. As with any paper-based system, this creates “major issues” for data users, due to the poor timeliness of the data. The Department of Social Welfare, MoGCSP, for example, while receiving quarterly reports, reflected that issues can arise when the quarter hasn’t ended but there is an urgent request for information, requiring the development of interim reports. Similarly, the process can be delayed when various institutions or regional offices are waiting for the data to be complete before they can file and submit, thus slowing the process.

Another major barrier identified is that administrative data are often in a format that cannot be further used for statistical purposes, including aggregate data – the primary form of data in many administrative systems. While school census findings from the MoE are disseminated in PDF and made available online (5; 7), there is limited availability of disaggregated data for secondary analysis, with raw data available to select partners and upon request (8). While the GSS generally requests data to be sent to them in Microsoft Excel, this can introduce errors, as it means additional data entry for the ministries. Further, administratively Ghana is divided into 16 regions and 260 districts, and each region and district have their own code for statistical purposes. However, the codes used by the GSS and line ministries often do not match, making system interoperability and data linkage difficult.

It can also be difficult to validate the data reported to the GSS, with one interviewee commenting on the difficulty in accessing and using certain administrative systems, and their inability to verify the data being reported “from the ground.” For ministries that aren’t routinely collecting their data by sex, it is also not reasonable to expect them to change their collection processes half-way through the year, or when additional data is required. The context for data sharing is also complex and often results in long delays, with any requests for new data needing to be signed-off by the minister of the relevant line ministry.

Moving forward

Overall, while Ghana has made substantial progress with its statistical and administrative systems, meeting the increased demands for monitoring gender equality requires strengthening its routine data collection systems, including digitisation. The GSS is currently working with Statistics Denmark on several data quality improvement projects, including a data-quality assurance framework and a single 'data pipeline' that ministries can use to deposit their data for direct reporting to the GSS. Further, the MoE has been working with USAID to develop a fully electronic administrative data system. However, several challenges have been encountered, primarily due to the limited electricity supply and internet connectivity. An offline version is currently in development. Numerous initiatives are also underway, including mainstreaming gender in administrative data collection forms within the MoGCSP, and the development of a database aligned with strategies from the National Gender Policy and the SDGs.

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