

USAID MEDICINES, TECHNOLOGIES, AND PHARMACEUTICAL SERVICES (MTAPS) PROGRAM

Improved Access. Improved Services. Better Health Outcomes.

Approaches and Tools for Strengthening Pharmaceutical Systems

Sex and Gender Considerations

Technical Brief | February 2023

Why is it important to consider sex and gender in pharmaceutical systems?

A pharmaceutical system consists of structures, individuals, resources, processes, and interactions within the broader health system that strive to ensure access to and appropriate use of safe, effective, quality-assured, and affordable medical products and related services to improve health outcomes. The impacts of sex and gender in the pharmaceutical system are numerous and have important implications, yet they are often underappreciated. Sex and gender must be considered in pharmacovigilance, for example, as adverse drug reactions differ both by sex (metabolism/excretion) and by gender (risks/exposure). Considering and addressing the sex (biological) and gender (social) differences in pharmaceutical systems are essential to ensuring equitable access to safe, effective, quality-assured medical products and related services and sustainably improving health outcomes for persons of all sexes and genders.

What is the difference between sex and gender?

Sex is a medical term and defines individuals by chromosomal, hormonal, and anatomical characteristics (sometimes called biological factors). A person's sex can be male, female, or intersex.

Gender is based on a person's gender identity, which is an internal, deeply felt sense of being a man or woman or something other or in between, which may or may not correspond with the sex an individual was assigned at birth. Gender may be fluid depending on the time and society in which individuals exist. The concept of gender also includes socially constructed roles, behaviors, and activities.

In this document, we present approaches and tools that MTaPS has found effective to bring sex and gender considerations to the forefront and describe how other organizations can apply them in their context.

Approaches and tools to strengthen sex and gender considerations

The USAID Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program supports pharmaceutical systems strengthening (PSS) efforts in low- and middle-income countries. Health equity is central to this work and includes a focus on sex and gender considerations. MTaPS' approach is to analyze, understand, and address sex and gender in the pharmaceutical system, striving for the highest possible standard of health for all people. Any PSS activity should include the question, "Are there sex and/or gender differences that might create poor outcomes?" in the conceptualization stage.

Specific approaches include:

- Conducting sex and gender analyses to better understand the differences and their implications for pharmaceutical policy and service provision
- Advocating for the routine collection and use of sex- and gender-disaggregated data to inform pharmaceutical policy and service provision
- Reviewing national policies and guidelines, such as antimicrobial stewardship guides and national medicines policies, to ensure adequate consideration of sex and gender differences and contribute to equitable access for persons of all sexes and genders

Additionally, MTaPS works to increase awareness of the importance of sex and gender considerations to drive action toward health equity. We highlight several areas below where sex and gender must be considered in the pharmaceutical system.

- **Supply chains:** Gender norms and imbalances in power dynamics between men and women are often reflected in health systems and institutions and may affect access to pharmaceutical services and medical products. MTaPS recognizes the importance of sex-disaggregated data in this area, for example, to:
 - Avoid shortages and stock-outs that can occur when pharmacokinetic impacts that are sex-dependent are not considered (e.g., ventilator sedation stock-outs during the pandemic because males and females metabolize medicines differently)
 - Ensure that planning accounts for everyone in the population, including women and sexual and gender minorities
- **Emerging infectious diseases:** Understanding how sex and gender influence disease is key to effective infection prevention and control and containing infectious diseases.
 - Women make up nearly three-quarters of health care and social services front-line workers.¹
 - Most PPE is designed for men, leaving women with poorly fitted equipment that can leave them more vulnerable than men.
 - Job type and location (which may be determined by gender) may increase individuals' risk for emerging infections—for example, individuals may be at risk of avian influenza if they care for chicken, ducks, or other backyard birds.
- **Pharmacovigilance:** Adverse drug reactions differ by sex (metabolism/excretion) and gender (risks/exposure), making certain individuals more vulnerable to harm from medical products:
 - Pregnant individuals and their infants are at risk for medication-related harm (e.g., a single dose of thalidomide in a pregnant individual is highly

likely to result in birth defects in the child or intrauterine death of the child).

- **Governance:** Policies that do not address the impacts of sex and gender will place those who are most disadvantaged at risk.
 - In the case of Zika, the policy was that individuals should not get pregnant. However, this policy did not account for the inability of low-income individuals to access contraception and other reproductive health products and services.
 - Policies perpetuate inequities by not addressing discrimination, such as access to care by sexual and gender minorities

Case study on sex and gender

Gender analysis leads to strengthened sex and gender considerations at Philippine Department of Health

MTaPS conducted a PSS-specific gender analysis that examined the role of sex and gender in procurement, supply chain management, and pharmacovigilance of family planning and tuberculosis programs. Based on the findings, MTaPS made several recommendations to better integrate sex and gender concerns in policy development and supply chain management.

- Report and use sex-disaggregated data to ensure that interruptions of tuberculosis and family planning commodities do not disproportionately affect one sex over another.
- Analyze and use routinely collected sex-disaggregated medicines use data to inform procurement and supply chain management decisions (e.g., forecasting, supply planning, and procurement), thereby helping to ensure gender equity.
- Integrate gender concerns into all relevant Department of Health (DOH) policy documents for the tuberculosis and family planning programs to ensure the inclusion of gender indicators and sex-disaggregated data, as well as their analysis and use for policy development and programming.

¹ Boniol M, Mclsaac M, Xu L, Wuliji T, Diallo K, Campbell J. Gender equity in the health workforce: Analysis of 104 countries. World Health Organization, Working Paper 1. 2019. <https://apps.who.int/iris/bitstream/handle/10665/311314/WHO-HIS-HWF-Gender-WP1-2019.1-eng.pdf?ua=1>

Following the study, DOH asked MTaPS to develop two e-learning modules to introduce sex and gender concepts in PSS and supply chain management. MTaPS also reviewed and edited a third e-learning module developed by DOH on gender mainstreaming in health planning. Additionally, the government integrated findings from the gender analysis into its Updated Gender Equality and Women's Empowerment Plan 2019-2025.² The updated plan now differentiates between sex and gender impacts instead of categorizing them all under gender.

How can organizations apply these approaches?

Below are resources that can equip organizations with the knowledge and tools to actively improve sex and gender considerations in their national pharmaceutical system.

Tools

- [A Checklist for Gender Considerations for Pharmaceutical Systems](#) (Overseas Strategic Consulting, Ltd.): This checklist aims to guide pharmaceutical system managers and implementers in assessing how gender relates to their program goals and objectives.
- [Taking Sex and Gender into Account in Emerging Infectious Disease Programmes: An Analytical Framework](#) (WHO 2011): This WHO framework demonstrates the roles of sex and gender in emerging diseases and can be used as a practical tool to incorporate a gender perspective into disease programs.
- [Guidance Note and Checklist for Tackling Gender-Related Barriers to Equitable COVID-19 Vaccine Deployment](#) (WHO 2021): This checklist provides practical actions to ensure gender equality and equity in COVID-19 vaccine deployment.

Additional readings and resources

- [We Can Only Fix What We Know About – Why Sex-Disaggregated Data in Pharmaceutical Systems is Crucial](#) (April 2022)
- [Tackling Antimicrobial Resistance \(AMR\) Together Working Paper 5.0: Enhancing the Focus on Gender and Equity](#) (WHO 2018)

- [Creating Sex/Gender-Responsive Health Supply Chains: COVID-19 Reminds Us Again](#) (December 2021)
- [The Importance of Being Gender Responsive for COVID-19 Vaccine Introduction: Build It Right or They Won't Come](#) (October 2021)
- [How Sex and Gender Impact Antimicrobial Resistance Risk](#) (July 2021)
- [Gender Differences in Antibiotic Prescribing in the Community: A Systematic Review and Meta-Analysis](#) (Schröder et al. 2016)
- [Sex differences in pharmacokinetics and pharmacodynamics](#) (Soldin and Mattison 2009)
- [Point Prevalence Survey of Antibiotic Use Across 13 Hospitals in Uganda](#) (February 2022)

e-Learning resources

- Pharmaceutical Systems Strengthening 101 (available in [English](#) and in [French](#)): This course introduces learners to the basic principles of PSS, including how addressing pharmaceutical system problems advances universal health coverage; combats AMR, HIV and AIDS, malaria, tuberculosis, and other public health threats; and promotes maternal and child health.

Contact

Please contact MTaPS (Management Sciences for Health) if you would like further assistance.

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About USAID MTaPS:

The USAID Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program (2018–2023) enables low- and middle-income countries to strengthen their pharmaceutical systems, which is pivotal to better health outcomes and higher-performing health systems. The program is implemented by a consortium of global and local partners, led by Management Sciences for Health (MSH), a global health nonprofit.



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² Philippine Commission on Women. Updated gender equality and women's empowerment plan 2019-2025. 2022; p. 93. <https://library.pcw.gov.ph/wp-content/uploads/2022/07/PCW-Updated-Gender-Equality-and-Womens-Empowerment-Plan-2019-2025-2022.pdf>