Everyone Counts: Lessons about collecting gender data to improve health outcomes of the transgender and non-binary population for the U.S. Census Bureau and other population-based survey instruments
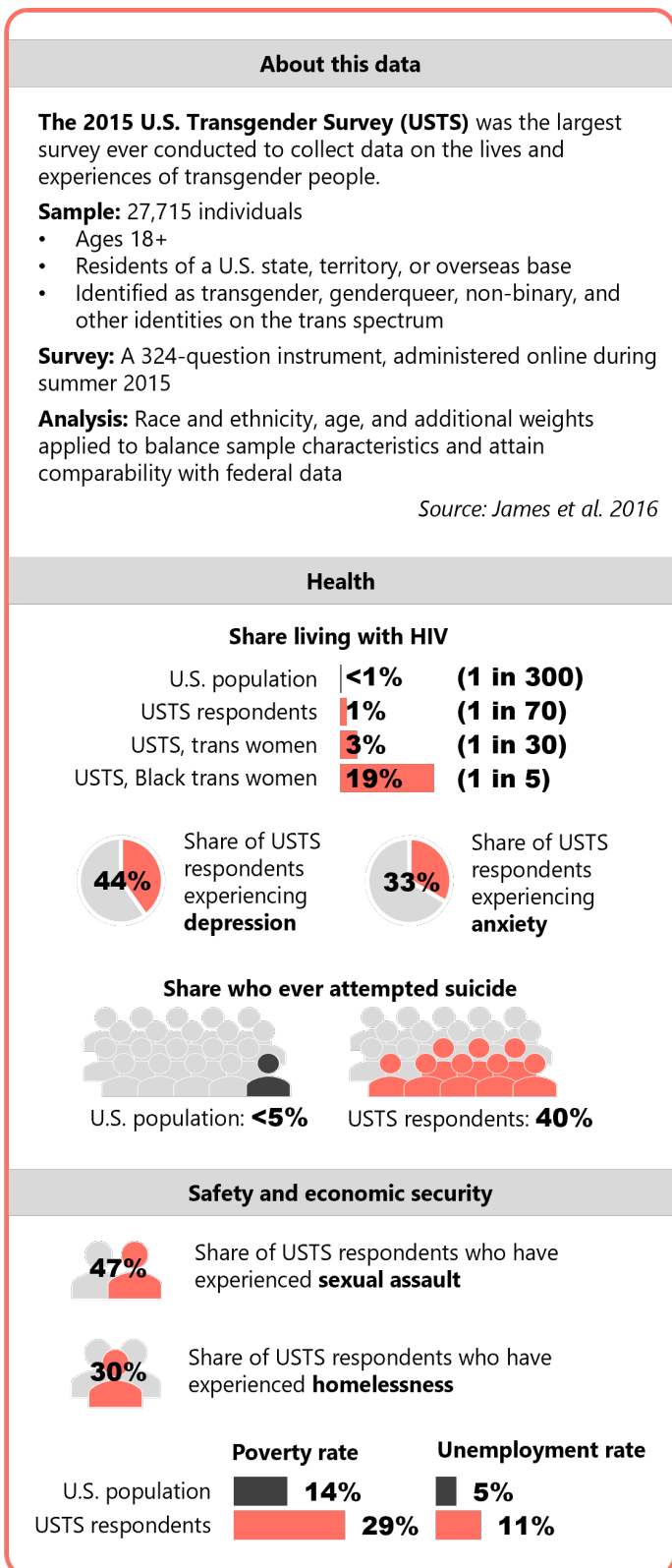
Summary Brief of Findings

To help advance gender equity and health outcomes in the United States, this study, produced with support from the Robert Wood Johnson Foundation, translates and adapts knowledge from other countries that include gender identity questions in their national censuses. The study findings generated recommendations for developing and implementing gender identity measures on the U.S. Census and other population-based surveys. Specifically, the countries and institutions that serve as case studies include Instituto Nacional de Estadística y Censos (INDEC) of Argentina, Statistics Canada, and the Office of National Statistics (ONS) of England and Wales. These three statistical bureaus' experiences provide valuable insights into the years-long process of creating a statistical standard for more gender-inclusive measures, implementing these measures on a country's census and other population-based surveys, and why doing so matters. National data on gender identity can allow federal and state governments, advocacy organizations, academia, and health foundations—including Robert Wood Johnson Foundation—to better understand the unique needs of transgender American residents and tailor interventions to improve their health outcomes.

Results from the 2015 United States Transgender Survey (USTS) and other studies show that transgender people face a heightened risk of violence, harassment, poverty, homelessness, and poor health outcomes (Figure 1). However, this and all other surveys with information on the transgender population in the United States are non-probabilistic, meaning that it might not represent the full transgender and non-binary population. Widely used probabilistic surveys like the U.S. Census only ask respondents to indicate whether their sex is "male" or "female"—missing the critical distinction between sex assigned at birth and gender identity, both of which have their own influences on a person's health. The general absence of gender identity questions in U.S. surveys means we lack high quality, nationally representative data. These data are critical to help us understand how many people in the United States identify as transgender or non-binary; how gender identity intersects with other identities to influence health outcomes; and how specific policies at the local, state, or federal level affect the health of transgender or non-binary individuals. The lack of data means transgender people, along with what makes their experiences and challenges unique, remain invisible to policymakers. This prompted the September 2023 announcement from the U.S. Census that proposes a test of sexual orientation and gender identity questions in the 2024 American Community Survey.

Figure 1. Disparities faced by transgender individuals: Evidence from the 2015 United States Transgender Survey (USTS)

About this data

The 2015 U.S. Transgender Survey (USTS) was the largest survey ever conducted to collect data on the lives and experiences of transgender people.

Sample: 27,715 individuals
- Ages 18+
- Residents of a U.S. state, territory, or overseas base
- Identified as transgender, genderqueer, non-binary, and other identities on the trans spectrum

Survey: A 324-question instrument, administered online during summer 2015

Analysis: Race and ethnicity, age, and additional weights applied to balance sample characteristics and attain comparability with federal data

Source: James et al. 2016

Health

Share living with HIV

U.S. population	**<1%**	**(1 in 300)**
USTS respondents	**1%**	**(1 in 70)**
USTS, trans women	**3%**	**(1 in 30)**
USTS, Black trans women	**19%**	**(1 in 5)**

44% Share of USTS respondents experiencing **depression**

33% Share of USTS respondents experiencing **anxiety**

Share who ever attempted suicide

U.S. population: **<5%**　　USTS respondents: **40%**

Safety and economic security

47% Share of USTS respondents who have experienced **sexual assault**

30% Share of USTS respondents who have experienced **homelessness**

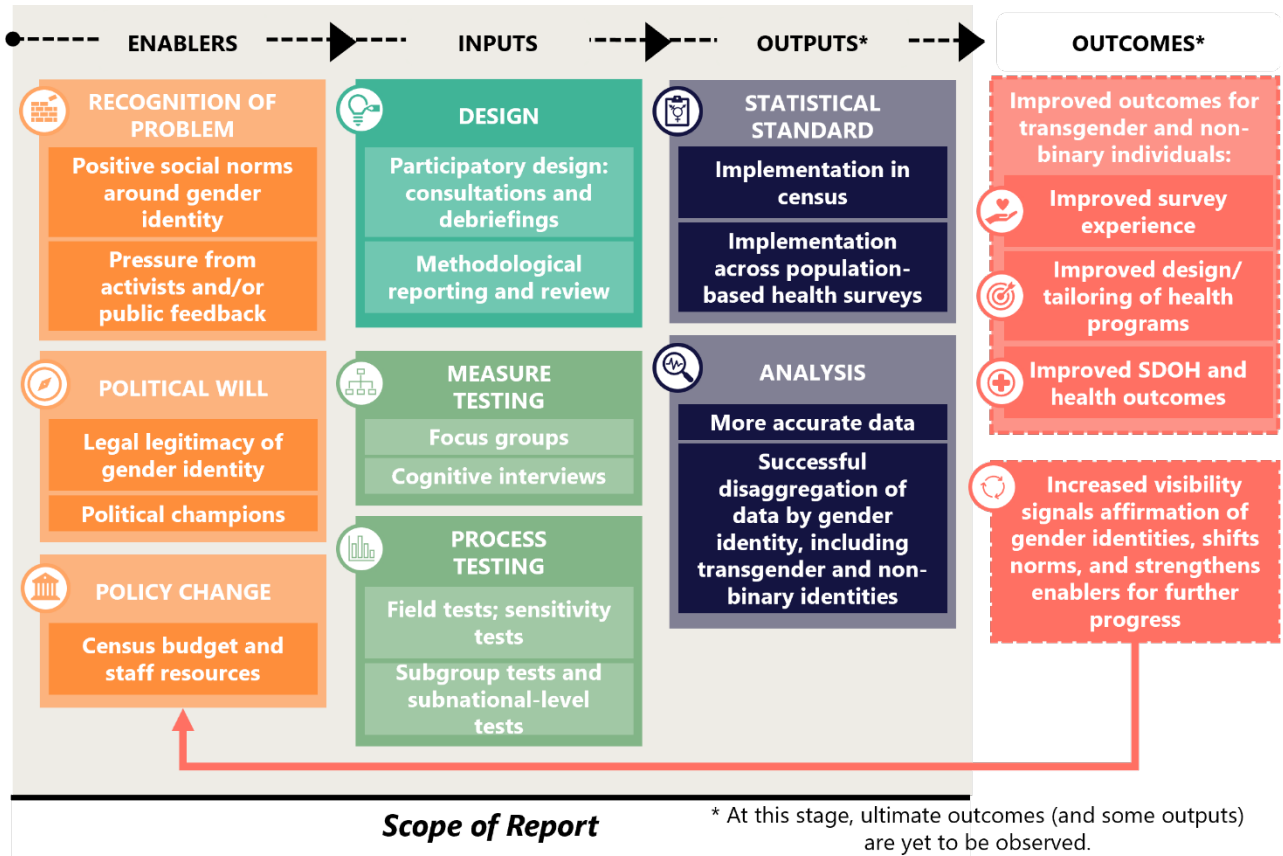|	Poverty rate	Unemployment rate
U.S. population	**14%**	**5%**
USTS respondents	**29%**	**11%**

To support the development and implementation of gender identity question in the U.S. Census and other population-based surveys, this brief highlights learnings from three case study countries by answering three research questions:

(1) What are the key sociopolitical and legal enablers to implementing gender-inclusive measures in the census?
(2) How can a census agency generate a reliable measure of more inclusive gender identity given its country's context and overcome related challenges?
(3) What are the (anticipated) benefits related to health, and the social determinants of health, of including gender-inclusive measures in the census and other population-based surveys?

To answer these questions, we employed qualitative methods to develop within- and cross-case analyses of the study countries. From our data collection, we developed a theory of change (ToC) detailing both the enablers and the methodological inputs necessary to successfully implement a more gender-inclusive measure on the census (Figure 2). To assess policy enablers, we align our ToC with the Kingdon (2010) model, which stipulates that three factors— recognition of a problem, political will, and policy change— will determine if a desired change gets implemented. To assess methodological inputs, we consider key aspects of measure design and testing as well as process testing. Because Canada, Argentina, and England and Wales successfully implemented a more inclusive gender measure in their latest censuses, we selected them as the case study countries for this analysis. They have shared information on the development of the new measure, are culturally and/or politically relevant to the U.S. context, and have relevant languages. More on the criteria for selecting case study countries appears in **Annex 1**.

To assess various aspects of implementing gender-inclusive questions in census, we conducted a literature review of 80 written sources (including media reports, gray literature, published journal/academic articles and books, government reports, and Census Bureau releases) and 14 key informant interviews (KIIs) with national statistical bureaus, the agencies responsible for implementing health surveys. Our analytical approach was to systematically describe, compare, and contrast the three case study countries to the United States using the four areas of our theory of change. More on the data and analysis can be found in **Annexes 2** and **3,** respectively.

Figure 2. Theory of change

Figure 2. Theory of change

ENABLERS → INPUTS → OUTPUTS* → OUTCOMES*

ENABLERS

RECOGNITION OF PROBLEM
- Positive social norms around gender identity
- Pressure from activists and/or public feedback

POLITICAL WILL
- Legal legitimacy of gender identity
- Political champions

POLICY CHANGE
- Census budget and staff resources

INPUTS

DESIGN
- Participatory design: consultations and debriefings
- Methodological reporting and review

MEASURE TESTING
- Focus groups
- Cognitive interviews

PROCESS TESTING
- Field tests; sensitivity tests
- Subgroup tests and subnational-level tests

OUTPUTS*

STATISTICAL STANDARD
- Implementation in census
- Implementation across population-based health surveys

ANALYSIS
- More accurate data
- Successful disaggregation of data by gender identity, including transgender and non-binary identities

OUTCOMES*

Improved outcomes for transgender and non-binary individuals:
- Improved survey experience
- Improved design/ tailoring of health programs
- Improved SDOH and health outcomes

Increased visibility signals affirmation of gender identities, shifts norms, and strengthens enablers for further progress

Scope of Report

* At this stage, ultimate outcomes (and some outputs) are yet to be observed.

Understanding the key sociopolitical and legal enablers to implementing gender-inclusive measures in the census

This section summarizes the potential factors that contributed to the enabling environment in the case study countries. In describing the enablers to inclusion of gender identity measures in the census, we also consider the similarities and differences to the U.S. context.

Recognition of Problem: Greater visibility of the transgender and non-binary population and the injustices they face can increase social acceptance, mitigate polarization, and lead to shifts in public and political opinion. These cultural changes can increase demand for more gender-inclusive public policies and transgender and non-binary data to support such decision making.

Across all case study countries, recognition of transgender rights increased the awareness and action around collecting gender identity data. Argentinian activists organized demonstrations demanding legal recognition, led data collection efforts that revealed the sociodemographic situation of the transgender population in Argentina, and employed political and judicial strategies to promote transgender rights at both provincial and federal levels. As political will to address transgender injustices started to increase, the republic began passing laws on sexual education and education inequality, raising further public awareness around the need for gender equality and trans-inclusive data collection. In Canada, rigid gender roles and norms and transgender rights came into question in Canada's political mainstream around the 1960s. Since then, national, provincial, and territorial agencies have used administrative tools to expand and enhance legal protections for transgender people. These efforts have led to shift in public and political opinion and demands for nationally representative data on transgender and non-binary persons

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that intensified after the 2016 census. In the U.K. House of Commons, the Transgender Equality Inquiry highlighted critical health disparities faced by the transgender and non-binary population. The inquiry noted that transgender people experience worse health than the general population due to the direct and indirect effects of the discrimination transgender people experience. One year after the release of this report, ONS committed for the first time to developing a more inclusive gender measure for the census.

Political Will: **Anti-discrimination laws at the centralized national level have played a significant role in promoting transgender inclusion and equality, facilitating the inclusion of gender identity census measures.**

The recognition of gender diversity and the disparities faced by transgender people coincided with political institutions in all three countries passing laws affirming transgender rights (Figure 3). The political will needed to develop and implement these gender identity protection measures is connected to the will to collect data to monitor whether these rights are being upheld as well as to improve the survey experience of transgender respondents.

In the United States, the modern LGBTQIA+ civil rights movement won a victory in 2015 with the landmark U.S. Supreme Court decisions that determined same-sex marriage is a constitutional right. In 2019, the U.S. Supreme Court deemed employment discrimination based on gender identity as unconstitutional and the current federal hate crimes statutes include crimes motivated by the victim's actual or perceived gender identity. These policies represent the only federal protections for transgender individuals today. The limited U.S. scope contrasts with case study countries, which passed more wide-reaching and comprehensive federal laws to protect transgender people's rights and contributed to updating census instruments.

Although the Equality Act was reintroduced in the U.S. House of Representatives and U.S. Senate on June 21, 2023, its fate is unclear. This law would amend existing civil rights statutes such as the Civil Rights Act of 1964, the Fair Housing Act, and the Equal Credit Opportunity Act to explicitly include sexual orientation and gender identity as protected characteristics. However, the lack of consensus among Congress members representing each state and their constituents decreases the momentum to collect and use data to assess transgender

people's access to housing, social services, education, and credit.

Lack of political will to pass federal level protections for transgender people reflected in differing state laws

Twenty U.S. states explicitly prohibit discriminating against trans individuals in employment, housing, and public accommodations. However, other states have passed laws that expressly discriminate against trans individuals by limiting access to gender affirming care for transgender youth, prohibiting transgender girls and women from competing on sports teams that match their gender identity, and banning the instruction of LGBTQIA+ issues in schools. These state differences speak to the great divide that makes it difficult to reach consensus and political will to motivate further federal protections for transgender people.

Political Will: **Transgender representation among the leadership of census bureaus and government entities can help spur the development and implementation of gender-inclusive measures in the national census.**

Based on data collected in Argentina, transgender and non-binary representatives in government and census bodies can serve as strong champions of gender equality, combat disinformation about the transgender population, bring more visibility to the injustices its members face, and advocate that the ability to count the transgender population can lead to more transgender-inclusive public health policies. In Argentina, the former head of the Undersecretary of Diversity Policies was the first openly transgender woman to hold such an executive cabinet position (Alba Rueda). She has been credited with furthering transgender inclusion and protections, specifically in labor. In 2021, Rachel Levine became the first openly transgender

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"It is critical to engage transgender advocacy organizations in the design, development, and testing of gender-identity measures to successfully implement gender-inclusive questions [on population-based surveys]."
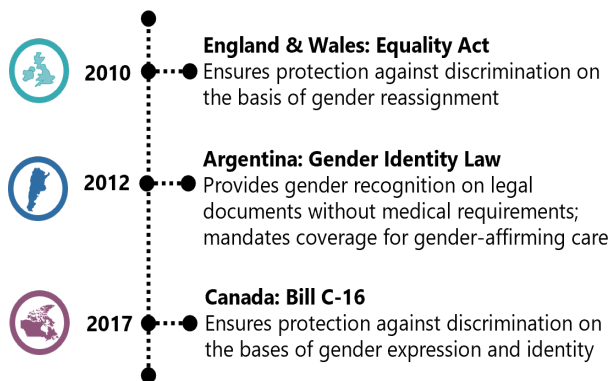
Key informant, Argentina

federal official to be confirmed by the U.S. Senate. However, there has never been an openly transgender member of the U.S. Congress. In the United States, it is unclear if and how more gender diversity in representation will translate to more transgender-inclusive data collection.

🏛 *Policy Change:* **A supportive political environment led to the policy change that allowed or mandated the inclusion of gender identity on the case study censuses.**

In 2012, Argentina passed the Gender Identity Law, which provided legal recognition of a person's gender identity and made gender-affirming care a legal right. In recent years, the Argentinian government has established new executive bodies to support the implementation of gender equality as a priority area in national policy, which led to the mandate to update the census. In Canada, around the same time that anti-discrimination protections were expanded to include gender identity and expression, Statistics Canada received requests from policymakers, researchers, and the public for more accurate data on gender. These requests, and general dissatisfaction expressed by Canadians about the question on sex, prompted Statistics Canada to convene a working group to design and test a gender measure for the next census. This work was facilitated by a favorable political environment that made transgender inclusion a priority in the national budget and policy agenda. Similarly, after the U.K. passed the Equality Act of 2010, ONS began assessing the legal framework, data user requirements, potential methodological constraints, and possible updates related to more inclusive gender data and its collection.

Figure 3. Passage of key anti-discrimination protections in case study countries

2010 — England & Wales: Equality Act
Ensures protection against discrimination on the basis of gender reassignment

2012 — Argentina: Gender Identity Law
Provides gender recognition on legal documents without medical requirements; mandates coverage for gender-affirming care

2017 — Canada: Bill C-16
Ensures protection against discrimination on the bases of gender expression and identity

To date, the U.S. Census Bureau has made significant progress developing, testing, and implementing gender identity measures on population-based surveys: a successful proof of concept that collecting these data is methodologically feasible for the Census. In 2020, the bureau launched the Household Pulse Survey to collect data on household experiences during the COVID-19 pandemic. It has evolved to include content on other emergent social and economic issues facing American households. In 2021, the Household Pulse Survey began including questions about sexual orientation and gender identity. The U.S. Census Bureau has been able to disaggregate the data on gender identity and report on the impact of the COVID-19 pandemic on transgender Americans.

Following this, another related $10 million commitment by Congress spurred the U.S. Census Bureau to investigate adding gender identity measures to the American Community Survey (ACS). The ACS and the Census often use the same measures; a valid measure used on the ACS would be a prime candidate for inclusion on the U.S. Census. Additionally, in June 2022, the "Executive Order on Advancing Equality for Lesbian, Gay, Bisexual, Transgender, Queer, and Intersex Individuals," was signed, which directed federal agencies to consider ways to improve and increase data collection on gender identity and established interagency working groups to advance effective collection and use of gender identity data.

However, the U.S. Census development process is lengthy and can be vulnerable to political interference. In the United States, the Census Bureau must have a Congressional mandate and/or a formal request from another federal agency to add new questions to the Census addressing a policy or programmatic need. However, a policy or programmatic request alone does not guarantee that these questions will be included, and political obstacles can derail efforts to add new items at any point during the years-long Census question development phase. For instance, the Department of Justice formally asked the Census Bureau in 2016 to add sexual orientation and gender identity questions to the 2020 Census. However, one year later, the Department of Justice rescinded its request. This occurred within three months of a new president being sworn in who was hostile to transgender rights. Although the United States is making good progress toward including gender identity on the 2030 Census, its inclusion depends strongly on continued political will.

Recommendations to the U.S. Census Bureau for the design, testing, and implementation of a reliable and inclusive gender identity measure

Unlike the previous section, which describes the political and cultural context that makes it possible to include gender identity question on the U.S. Census, this section delves into the technical aspects of how to develop and implement culturally appropriate gender identity measures. Specifically, we talk about U.S. progress in developing, testing, and implementing these measures; the challenges faced; the applicable lessons learned from case study countries; and the recommendations for furthering the inclusion of gender identity measures in the U.S. Census. Figure 4 shows the previous and current measures for each of the case study countries to illustrate their specific wording changes.

Figure 4. Census questions and response options related to sex and gender identity: Canada, Argentina, and England and Wales
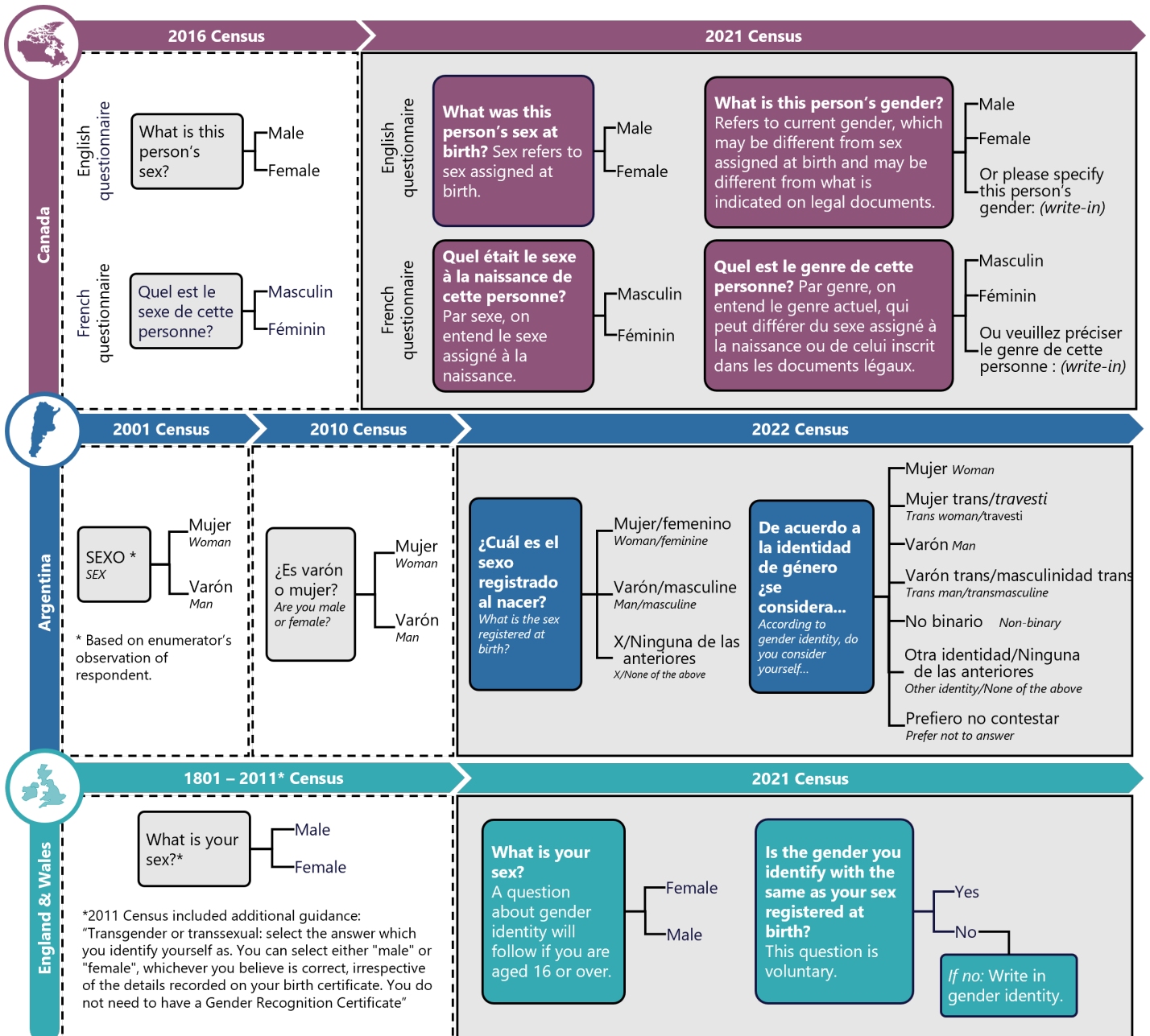
Identification of an accurate gender measure: design and testing of one-step versus two-step measures and inclusion of write-in options

⌖ **The U.S. context:** U.S. surveys use multiple methods to measure gender identity, though consensus is building that using a two-item question is the most accurate method. A two-step measure asks respondents their sex assigned at birth and their current gender. When analyzed together, these two items provide a count of transgender and cisgender individuals. Depending on the response categories of the gender question, the two-step measure may also provide a count of those who identify outside the gender binary, such as non-binary, genderqueer, or agender. However, the two-step approach presents challenges: cognitive interviews have shown that some transgender respondents' express discomfort with the "sex assigned at birth" question (National Center for Health Statistics KII).

Some non-binary and genderqueer respondents have also reported they do not see their identity reflected in the gender response options. Limiting gender response options to male and female and not having an "other" or write-in option for gender identity may also contribute to undercounting the transgender population in general, but particularly the non-binary population. For example, the inclusion of a two-step measure of gender identity on the National Crime Victimization Survey and Household Pulse Survey (Figure 5) enabled the Department of Justice and U.S. Census Bureau, respectively, to publish estimates of violent crime victimization within the cisgender and transgender populations with low measurement error (National Academies of Science, Engineering, and Medicine [NASEM] 2022; Truman and Morgan 2022). However, estimates might

Figure 5. Sex at birth and gender identity questions on the National Crime Victimization Survey (2020–2021) and the Household Pulse Survey (2021)

What sex were you assigned at birth, on your original birth certificate?
  A. Male
  B. Female
  C. Refused
  D. Don't know

Do you currently describe yourself as male, female, or transgender?
  A. Male
  B. Female
  C. Transgender
  D. None of these

not be entirely accurate because individuals, likely some non-binary respondents, who selected "none of these" for the second question were excluded from the calculations because no write-in data were available to support their inclusion in the "transgender" category (Truman and Morgan 2022). Some respondents shared not liking having transgender as a separate option for current gender identity because it may imply that trans men and women are not male or female and this is confusing for respondents (Ellis et al. 2017; NCHS KII). Despite its challenges, the implementation of these surveys is compelling evidence that the two-step approach is feasible on U.S. surveys.

A one-step measure commonly asks respondents "Are you male, female, or transgender?" U.S. population-based surveys including Behavioral Risk Factor Surveillance System (BRFSS), Population Assessment of Tobacco and Health, Health Care Patient Survey and National Inmate Survey use or have used a one-step measure for gender identity (Ellis et al. 2017). However, this type of measure is associated with the most measurement error because it lacks specificity and does not capture people with diverse experiences of gender who may not identify with the term "transgender" (NASEM 2022). United States expert consensus is that the two-item approach is the best method for measuring gender identity (NASEM 2022).

🌐 **From the case studies:** Though case study countries vary in wording gender identity questions, all employ a two-step question.

From Argentina. Argentina's 2022 census two-step measure included (1) sex at birth, with an intersex-inclusive option, and (2) gender identity, with seven response options. INDEC conducted multiple pilot tests to evaluate various wordings for the gender identity question and used the gathered information to enhance the phrasing, categories, and category grouping. Argentina determined that including both sex assigned at birth and gender identity variables was vital for calculating fertility; monitoring population indicators; and assessing disparities in areas like labor market outcomes, education, and health care coverage.

From Canada. The 2021 Canadian census employed a two-step measure. First, respondents selected their sex at birth between two response options, "male" and "female." Next, respondents were asked what is their "current gender, which may be different from sex assigned at birth and may be different from what is indicated on legal documents." Its response options include "male," "female,"

or a third write-in option. Statistics Canada aimed to design questions that allowed transgender and non-binary respondents to respond authentically and accurately while maintaining clarity for cisgender respondents, as high-quality data is needed for both groups. Statistics Canada tested and then adjusted definitions and wording to enhance comprehension based on measure testing. Write-in responses on the 2021 census were coded through a combination of machine learning and manual coding. The machine learning model underwent testing, iteratively refining its accuracy by reviewing output manually.

From England and Wales. The ONS also used a two-step approach, beginning with a question about sex, followed by an optional gender question later in the questionnaire. The gender question inquired whether the individual's gender identity is the same as their registered birth sex, prompting a "yes" response or, if not, offering a write-in option. In presenting the data, the ONS introduces three typologies, with the most extensive being an eight-category classification. ONS carried out thorough tests involving almost 60,000 respondents to evaluate response rates, question variations, data quality, acceptability, and options like proxy response and "prefer not to say." Tests included both large-scale surveys replicating the census and smaller online surveys.

Recommendation: The three case study countries use a two-step measure for gender identity, underscoring the current expert consensus in the United States that a two-step measure will yield the most accurate and comprehensive information on current and future population-based surveys. Each case study country prioritized data comparability with past census results by ensuring binary sex data was still collected in addition to a gender identity question. However, a pivotal question emerges: should the gender identity question immediately follow the sex question or find placement later within the census questionnaire? **The United States should consider empirical validation through an analysis of response rates to assess its potential impact when testing a two-step measure.**

Another critical consideration for the United States is the number of response options for the gender identity question. This requires finding a delicate equilibrium between ensuring simplicity for respondents to comprehend and simultaneously avoiding excluding individuals who don't identify with the provided options. Additionally, the question's design must consider the ease of subsequent data

coding and analysis. **It may be advisable for the United States to test and explore a write-in option that aligns with the inclusivity criteria and can be effectively processed using machine learning techniques.**

Age of respondent

The U.S. context: Key informants from the U.S. Census Bureau noted that there are outstanding challenges regarding best practices for gender identity measures for youth, including whether there should be a minimum age for asking gender identity questions and how question language and response options should be adapted for youth. The Youth Risk Behavior Survey (YRBS) piloted a one-item gender identity question in 2017 (NASEM 2022). The 2023 YRBS now includes a question on gender identity on the standard and national high school questionnaire (Figure 6).

Figure 6. Gender identity question from the Youth Risk Behavior Survey (2023)

Some people describe themselves as transgender when their sex at birth does not match the way they think or feel about their gender. Are you transgender?
A. No, I am not transgender
B. Yes, I am transgender
C. I am not sure if I am transgender
D. I do not know what this question is asking

Further research will help us understand how gender identity measures should be tailored for youth and the best age to begin asking this item (NASEM 2022).

From the case studies: The approach to imposing age thresholds for asking gender identity questions on the census varied across case study countries. Inclusion and accuracy in representing the entire population drove the decision to not have an age threshold in two countries, but methodological considerations steered these countries into focusing the analyses of these data to certain age groups.

From Argentina. Initially, INDEC suggested directing the question to those age 14 and older because of some discomfort from data collection staff in pilot tests. However, INDEC reconsidered because that directive would exclude a significant portion of the population. Both questions were presented to all respondents without age limitations.

From Canada. While there was not an age restriction in the questionnaire, Statistics Canada prioritized analyzing

the socioeconomic demographics of transgender and non-binary respondents age 15 and older.

From England and Wales. The ONS elected to ask the gender identity question to individuals age 16 and older. However, some health care providers serving transgender youth in England and Wales have raised concerns that not collecting gender identity data from youth on the census will only reinforce the exclusion of transgender youth from conversations about access to gender affirming health care.

Recommendation: Incorporating a gender identity question to include those under age 16 can offer valuable insights into societal diversity, support tailored policy formulation (particularly around health care), and ensure appropriate distribution of resources. Doing so also promotes inclusivity and recognition of different gender experiences in youth. However, including a gender identity question for individuals younger than age 16 could raise data privacy issues as well as potentially result in inaccurate responses from youth who are working through how to describe their identity. Striking a balance between understanding gender diversity and protecting minors' privacy is crucial in formulating such questions. Testing and piloting should be conducted to assess the wording of a gender identity question and potential impact for youth response rates. **The United States might consider following the approach used by England and Wales to limit the gender identity measure to older youth on the Census or the approach used by Canada of focusing on releasing information about those age 15 or older** until further testing is conducted on how to accurately and confidentially assess gender identity in younger individuals.

Language translation of gender-identity measures

The U.S. context: The U.S. Census is offered in English and 12 other languages, adding a layer of additional testing and assessment for adding gender-identity measures that are culturally and linguistically appropriate in non-English languages. Direct translation of words commonly used to describe sex and gender in American English can be difficult or impossible to translate into other languages. Some members of the transgender population may have gender identities that are culturally specific (Baker et al. 2016), and English terminology may be insufficient to express these identities.[1] Additionally, some languages lack words that distinguish between "sex" and "gender." In cognitive interviews in the United States testing the two-step measure, Spanish speakers appropriately responded to gender identity questions, including older, cisgender adults who were unfamiliar with the term "transgender."

From the case studies: Each country conducted robust tests customized to the language needs of their respondents.

From Argentina. In Argentina, the census bureau conducted sensitivity tests of the two-step measure (in Spanish). These revealed that respondents did not show any resistance and appropriately responded to the measures.

From Canada. Statistics Canada conducted pilot testing of the questions in both English and French. The testing phase clarified the appropriate terminology for both language versions to prevent confusion. To assist census workers in responding to queries from respondents, Statistics Canada established standardized answers to common questions.

From England and Wales. ONS engaged an external agency, equipped with Welsh-speaking researchers, to perform qualitative research and assess public understanding and acceptance of gender identity questions in Welsh. These tests revealed that none of the participants identified as transgender, and the resemblance between Welsh terms for sex and gender posed challenges in formulating the questions.

Recommendation: The United States should continue testing gender identity measures in Spanish and in other languages commonly spoken in the country, with a focus on addressing cultural comprehension barriers and terminology concerns. Because of multiple languages in the United States and in which the Census is administered, U.S. agencies should consider consulting with organizations representing diverse cultural and linguistic transgender communities, expert translation services, and other countries' census bureaus for feedback on potential

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[1] Baker et al. (2016) points to terms such as "two-spirit" in many Native American communities and "same-gender-loving" in some African American communities.

measures. Finally, the United States could consider creating a comprehensive guideline for defining sex- and gender-related terms in multiple languages for Census Bureau staff to use while collecting data.

Sample size and confidentiality

⌖ **The U.S. context:** U.S. respondents may have concerns about privacy and data protection when disclosing gender identity issues, particularly if they are part of a marginalized group. However, cognitive interviews conducted by the Census Bureau and Bureau of Labor Statistics in 2017 found that most respondents did not find questions about gender identity to be more sensitive or difficult than other items on the Census. At the same time, most of the respondents who did find the questions sensitive were transgender people, many of whom feared that their status as a transgender person could be used for discrimination under the political climate of the time (Ellis et al. 2017). These findings highlight that concerns about confidentiality and discrimination may be especially relevant for members of the transgender population, who represent the very people for whom these questions are intended. Some transgender people have these concerns because their identity has made them the subject to other forms of discrimination, dependent on social welfare, and/or involved in the criminal justice system (Baker et al. 2016).

Paradoxically, anonymity is only possible if enough people respond to the gender identity question. Key informants who work on BRFSS noted that reporting gender identity data is only possible when sample sizes are large enough to protect the anonymity of respondents, and this requirement will be a challenge to address as more surveys look to include gender identity measures. As key informants from LGBTQIA+ advocacy groups noted, confidentiality concerns are not a reason to avoid collecting gender identity data entirely, but community concerns regarding privacy and safety must be addressed by the U.S. Census Bureau and considered during survey development and planning. We note that even in light of these extremely valid concerns, the Census Bureau has demonstrated experience protecting transgender people's confidentiality and data from the Household Pulse Survey: in this instance, the bureau successfully disaggregated data by gender identity without compromising confidentiality, providing an encouraging sign that privacy concerns can be overcome.

🌐 **From the case studies:** All three case study countries shared similar data privacy concerns as the United States The main strategy they used to protect transgender people's identity included aggregating gender and age categories at finer local and regional levels.

From Argentina. In Argentina, privacy concerns might deter INDEC from publishing gender identity data at provincial and municipal levels if doing so could risk compromising the anonymity of vulnerable individuals, despite the data being valuable for policymakers. Results from the 2022 census have not been published at the time of this brief.

From Canada. Statistics Canada aimed for transparency and accessibility of gender data while safeguarding respondent confidentiality given the relatively small transgender and non-binary population in Canada. To balance these considerations, the organization only presented data on transgender and non-binary individuals at larger geographical areas. It employs the terms "men+" and "women+" to categorize respondents at smaller geographical areas, encompassing transgender, cisgender, and some non-binary persons. Additionally, when disaggregating data by age, the organization often adopted two broad age groups (15 to 34 and over 35) when disaggregating using the cisgender men and women, transgender men and women, and non-binary persons classification to account for small cell sizes and confidentiality concerns.

From England and Wales. Initial reports from ONS provided gender identity figures by country, area, local authorities, age, and sex and ensured data confidentiality by offering reduced detail at lower geographical levels such as output areas (the lowest level of geography used in the census).

💬 **Recommendation:** The United States should continue its standard practice to not report data below a specific sample size threshold for any new gender identity measure. Additionally, applying demographic or geographic aggregation techniques, such as presenting gender-identity data at the state or regional level or by broad age ranges like those used in Canada, may help reduce the risk of personal identification. **The United States has standard procedures to ensure data security. Communicating this effectively to respondents could help assuage their fears around the disclosure of sensitive information.** The United States should consider working with LGBTQIA+ advocacy groups to

communicate with transgender and non-binary communities and should train enumerators to effectively communicate confidentiality policies to respondents.

Proxy response

⌖ **The U.S. context:** One of the most critical considerations for adding gender identity measures to the U.S. Census is ensuring adequate performance during proxy response. Feasibility studies have indicated that proxy collection of gender identity can be successful (Holzberg et al. 2019). However, there is a lack of quantitative feasibility testing with nationally representative probability samples (NASEM 2022). This is a critical area for further research before gender identity can be added to the U.S. census.

Proxy response is a significant potential source of measurement error because the sole household respondent may not accurately report the gender identity of other members of the household. In previous Census Bureau research, gender identity questions were not particularly difficult to answer for proxy respondents, but those who did report difficulty cited not knowing the gender identity of someone else in the household as a key issue (Ellis et al. 2017). Among participants in Census Bureau focus groups of transgender individuals, some respondents said that a household member would likely refuse to report their gender identity on their behalf; overall, very few respondents felt that members of their household would report their gender identity accurately (Ellis et al. 2017). Interviews with Census Bureau researchers highlighted that these difficulties are unique to the census and ACS because they are the only major federal surveys to use a proxy response protocol; the researchers emphasized that navigating proxy responses is a critical challenge to the implementation of gender identity questions in the next census.

🌐 **From the case studies:** Not all case study countries use proxy reporting on their census. Those that do have either not fully resolved challenges with this approach or did not perceive proxy response as a challenge.

> ***From Argentina.*** Proxy response on the census is not common in Argentina. Census Day is a national holiday, which encourages people to be at home to ensure that every member of the household can actively participate in responding to the questionnaire. Those younger than age 13 are encouraged to respond independently but can receive assistance from an older household member. Between the ages of 13 and 16, individuals are encouraged

to respond independently, provided there is no health risk involved. Individuals age 16 and older are always expected to respond independently to the census questionnaire.

From Canada. Canada follows a similar practice as the United States, where census respondents are enumerated by place of residence on Census day and one person completes the census form for all persons residing in a private residence. Canada does not track the proportion of responses reported by a proxy. Gender reported by proxy is treated the same way as self-reported gender by Statistics Canada when analyzing and disseminating census data.

From England and Wales. The ONS conducted quantitative tests aiming to assess the effects of proxy respondents. However, the use of proxy respondents for gender identity and sexual orientation questions remains a challenge because they might lack accurate knowledge or provide untruthful answers due to bias or fear. During testing, respondents were given guidance that if they were answering for someone else: "where possible you should ask them how they want to answer. If they're away, select the answer you think they would choose." Around 30 percent of 2021 census responses were completed by proxy respondents, an issue the ONS is aware of but has not fully resolved.

💬⭐ **Recommendation: The United States should conduct quantitative testing of the acceptability and reliability of a gender identity measure during proxy response.** Quantitative testing, such as an American Community Survey test, will provide the United States with otherwise unavailable critical data to ensure gender identity measures do not incur a disproportionate amount of measurement error during proxy response. The United States may also consider providing specific guidance when a resident answers on behalf of someone else, similar to that used by ONS.

The observed and anticipated benefits related to health and social determinants of health of including gender-inclusive measures in the Census and other population-based health surveys

Although more time is needed to observe the full impact of updating censuses to be more gender inclusive on health outcomes, there are some early benefits and a growing evidence base for anticipated benefits. This section outlines these benefits in the chronological order one would expect them to occur.

Improved survey experience for transgender respondents

Improvement in the survey experience for the transgender population will be an immediate benefit, whereas other benefits of updating the Census could appear years later following the deployment of the new instrument. This benefit specifically relevant for the non-binary population who previously only had male and female response options and felt unseen and unrepresented.

Generally positive, but mixed response to the updated questions in Canada

Statistics Canada analyzed comments received from people responding to the census and calling the Census Help Line. There was significant positive feedback from transgender and non-binary people who mentioned that updating the sex at birth and gender questions is a good start because it acknowledges the diversity of gender identities that exist in Canada. Some reported hoping that organizations that rely heavily on data to inform their programs and strategies will be able to use it to include transgender and non-binary populations. However, a few transgender or non-binary respondents were offended by sex at birth being asked, saying that it was "dated" or "transphobic." Some would have preferred being asked about transgender identity directly rather than the agency inferring identity using the responses to sex at birth and gender identity. Statistics Canada is analyzing these comments while it works to update the gender and sex at birth questions.

Increased visibility of transgender identities can shift norms and strengthen enablers for further progress for transgender rights, health, and wellbeing

Updating the national census provides strong validation of transgender and non-binary identities, which have previously been excluded. Gender identity questions strongly signal that identities beyond binary male and female response options are valid, legitimate, and worth counting in the most thorough and comprehensive national-level data collection effort. In the three case study countries, significant media coverage occurred in anticipation of the new statistical standards; researchers, nongovernmental organizations, and decision makers showed particular interest. In Canada and in England and Wales, social media was used as a platform to ask questions of and celebrate the new measures and resulting data. Several prominent researchers expressed an eagerness to work with the data. In Argentina, updating the census to foster a more gender-inclusive Argentinean society was coupled with efforts to raise public awareness of gender diversity by passing laws that promote understandings of gender, sex, and equality in education.

Improved health program design to better serve transgender people

Data from sub-national sample surveys in the United States indicate that transgender and non-binary individuals experience significant economic and health disparities as compared to the cisgender population. Improved data collection could better focus policies by enabling an understanding of the heterogeneous effects of gender-driven disparities on different subgroups within the transgender population. Although the prevalence of certain health problems, violent victimization, poverty, and homelessness is higher among transgender people relative to cisgender people (Toomey et al. 2018; James et al. 2016), a broad body of research also suggests that the discrepancies are even more pronounced for certain subgroups *within* the transgender community, such as transgender women and/or transgender people of color. Understanding the interaction between gender identity and other factors measured on the U.S. Census, like race, ethnicity, income, and age, is critical to meeting the needs of as many people as possible. Without being able to quantify systemic disadvantages or explain changes across time periods, geographies, and socioeconomic strata, policymakers and program designers may have difficulty

developing programs or policies for transgender people.

The ONS and Statistics Canada have made, to varying degrees, the sex assigned at birth and gender identity data available. Based on the enthusiasm from researchers, the data are likely to be used for analysis. There are, however, concerns about quality issues with the data from England and Wales that may lead to an overestimation of the number of transgender respondents, due to some cisgender respondents, specifically non-native English speakers, who may not have adequately comprehended the question. In Argentina, INDEC has promised to release a gender identity report, and these data will serve as an input for planning, improving, and understanding the impact of public health policies focusing on gender minorities, such as the 2012 gender identity law made gender-affirming care a legal right and ensured free health care to transgender youth and adults in public hospitals.

⊕ ***Improved SDOH and health outcomes for transgender people***

More time is needed to understand the impact that updating census instruments to be more gender inclusive has on the social determinants of health and health outcomes for transgender people. That said, the information gathered from news clips, advocacy organizations, academics, policymakers, and U.S. Census staff show that the ultimate goal of updating the Census was to use the data to improve policy, which will in turn improve the social determinants of health and outcomes for transgender people.

Conclusion and next steps

Collecting high quality data on the transgender and non-binary population is a socially and methodologically complex task, but one that is highly beneficial. Updating the Census and other population-based surveys to be more gender inclusive can ensure that everyone is counted. These data can help identify and understand disparities and propel systemic change, whereas their absence leaves these disparities to stagnate and potentially widen. We will complete and share a final report, which includes in-depth descriptive case studies and a complete cross-case analysis, later this year.

Annex

1. Selection criteria

Canada, Argentina, and England and Wales were selected as the case study countries for this analysis based on the following criteria:

(1) Successful implementation of a more inclusive gender measures in the latest census (2021–2022)

(2) Publicly available information on the development of the new statistical standards from the census agencies, including their methodological process to measure design and testing, implementation, and data analysis

(3) Cultural and/or political context relevant to the United States to provide learnings around the key enablers to implementing a more gender-inclusive measure

(4) Relevant languages, to provide learnings around questions wording and translation

We considered including Nepal, India, Australia, and New Zealand as case study countries, but ultimately we determined they did not meet all four inclusion criteria.

2. Data

To assess various aspects of implementing gender-inclusive questions in a census, we conducted a literature review and 14 key informant interviews (KIIs) with national statistical bureaus; agencies responsible for implementing health surveys; and U.S. advocacy groups in Canada, Argentina, and England and Wales.[2]

From the 80 written sources (including media reports, gray literature, published journal/academic articles and books, government reports, and census agencies' releases) found through Google Scholar and Google News search engines, we abstracted information that contextualized the history of gender norms and identities in each country and the sociopolitical context that made including gender identity on the census possible. We also conducted a methodological review of design plans, methodological and statistical reports, and other relevant documentation on gender identity published by national and regional censuses. We held KIIs to understand each country's approach to

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[2] We were not able to secure interviews with staff at ONS in England and Wales. However, we were able to access rich information for our analysis through publicly available

methodological reports, data, media reports, and other secondary data sources.

census gender measure design, testing, and analysis; the survey design process; final measures and statistical standards used; data collection; and data disaggregation and analysis. We also asked key informants about their perceptions of the sociopolitical context around gender norms in each country and other contextual factors that enabled or hindered implementation.

3. Analysis

We conducted a descriptive within-case analysis, employing the "program effects" typology to examine causality in each country (that is, which conditions resulted in the implementation of a more gender inclusive census measure), following the four areas of our theory of change – enablers, inputs, outputs, and outcomes. We coded and analyzed documents from the review of historical and political contexts, methodological review, and transcripts from the KIIs using an Excel workbook to highlight mechanisms, contexts, similarities, and differences in perspectives. These analyses culminated in a descriptive case study report for Canada, Argentina, and England and Wales. We also employed a cross-case analysis to synthesize findings across the three case studies to answer our research questions (Program Evaluation and Methodology Division 1990). This process included assessing the progress and key outstanding barriers or challenges in the United States to date, along each area of the ToC. Next, we synthesized key learnings and pinpointed cross-case patterns through "pattern matching" (Yin 2014) from the case study countries about how they approached similar challenges or barriers, to extract learnings relevant to the U.S. context. We used a similar Excel workbook to synthesize these findings across cases as well as engaged in group brainstorming sessions using the MURAL platform.

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