



**Canadian  
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# **Final Report – Gender Identity Task Force**

Document 223093

## Executive summary

This task force (TF) was created by the Board to help the CIA understand implications of a judgment rendered by the Superior Court of Quebec in January 2021, which led to Quebec Bill 2, which was adopted June 17, 2022. Of importance to Canadian actuaries, this Bill allows Quebecers, with some limitations, to replace the sex that was assigned to them at birth and appears on some of their foundation documents by a code (M, F or X) that better corresponds to the gender to which they currently wish to be identified.

The TF scanned the regulatory environment to find that such rights had been essentially implemented in all provinces and territories.

As assumptions used by actuaries to measure risks often differ by sex, the TF considers it important for CIA members to realize that they may not be getting sex at birth when requesting or obtaining information. This may depend on the formulation or the source of their request. Members may want to consider whether using gender rather than insisting on sex at birth may be appropriate. This may require calibrating the assumption tables to recognize a blend of sex at birth and gender. If the gender or sex at birth code is “X,” members will need to decide what assumption to use.

The TF did not review exhaustively all documents pertaining to our Standards of Practice or to our guidance material but it did identify some areas where sex and gender are used interchangeably and such usage may need to be revised given the societal trend to use sex or sex at birth as the sex being assigned to an individual at birth while gender, which may be for some different than sex at birth, is the gender identity or expression that the individual may have adopted later in life.

The CIA has adopted gender-neutral terminology in all of its material and publications, with the publication of its 2022 Style Guide.

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## Introduction and background

The Board created this TF after having been informed of a judgment of the Superior Court of Quebec rendered January 28, 2021. In its overview, the [judgment](#) states, “This case highlights the difference between sex and gender identity and the discrimination that can result when the law treats them as synonyms.” Part of the judgment (removal of the requirement that young people aged 14-17 provide a letter from a physician, psychologist, psychiatrist, sexologist or social worker when applying to change their gender designation) was appealed by the Quebec government. However, most of the judgment resulted in Bill 2, which was adopted as of June 17, 2022. This Bill now allows individuals to replace the sex at birth on identification documents to M, F or X, to better express the gender of the individual.

On the one hand, sex is originally defined at birth, and we will refer to this definition as “sex at birth.” On the other hand, gender is typically self-identified by the individual years afterward. For some individuals, a limitation of two binary categories of sex or gender on official documents causes harm. The plaintiffs in the court case are or represent people who are transgender, nonbinary or intersex. For these people, gender identity or expression may not correspond to their sex at birth, or to male or female categories.

Federal and provincial governments provide citizens with documents that can fall into two categories: foundational identity documents (e.g., immigration status documents, birth certificates) or non-foundational identity documents (e.g., driver’s licenses, health cards, photo cards). Many of these documents may be used to confirm the identity of an individual under different circumstances. The complaint objects to disclosure of sex at birth on certain civil documents (e.g., driver’s license, health cards, student permanent codes and death certificates).

Approximately 100,000 Canadians aged 15 and older (out of 30 million) identified as transgender or non-binary in the 2021 census. Statistics Canada noted that this may be an underestimate of the actual number due to the methods of collecting this information.

The Board provided the TF with the following terms of reference (ToR):

1. To monitor developments in the field of gender identity, including relevant changes to legislation and regulation, both nationally and internationally.
2. To identify how such developments might affect the Standards of Practice and/or educational guidance and provide advice to the Actuarial Standards Board (ASB) or the relevant practice councils in such regard.
3. To liaise with all CIA councils and other stakeholders, as appropriate, to ensure that all entities within the CIA are well informed and prepared to address such developments in their respective areas, as required.

## Jurisdictions allowing for non-binary genders and gender identity changes

In response to the first item in its ToR, the TF looked into some Canadian and world regulations.

In recent years, the federal government has introduced a gender “X” option on official federal documents to try to improve the equitable treatment of non-binary and transgendered Canadians.

From [Wikipedia](#):

There are two main routes to changing one’s [legal gender](#) in Canada: The Immigration (or 'federal') route, and the Vital Statistics (or 'provincial/territorial' route). Of note is the distinction between 'legal gender' and 'gender marker'; a legal gender (also commonly referred to as a sex designation; sex indicator in Nova Scotia) is what appears on foundational identity documents such as immigration status documents and birth certificates, whilst a gender marker can appear on a non-foundational identity document, such as a driver's licence or photo card. A gender marker usually follows legal gender but can differ - and a change in gender marker on a non-foundational identity document alone does not provide a trans-gender individual with foundational identity documentation that establishes such a change.

In recent years, rights to modify the legal gender on foundational and non-foundational documents have evolved greatly, such that all provinces and territories offer such changes as well as the use of “X” or a blank in that field. Some jurisdictions have set some conditions to allow such changes, but the trend is clearly to allow them.

In the European Union and the United Kingdom, the following points are noted about their experiences on this topic:

- Civil records can be adjusted to change gender in an expedited process. Some have expressed concern that sex at birth may not be collected.
- Price differentiation by gender has been prohibited since 2012.
- There is no restriction on the use of sex at birth for reserving purposes.
- Germany has introduced a gender option “diverse.” There is some concern that underwriting at the time of claim may not be able to decline a claim based on non-disclosure for a gender of “diverse.”
- Reinsurance rates are required to use sex at birth.
- Defined benefit plans are prohibited from differentiating benefit accretion by gender; however, gender can be used for funding and solvency calculations.
- Individual annuity purchase rates are gender neutral.
- The main risk of moving pricing to gender neutral was basis risk (i.e., shift in proportion of M/F buying). Experience does not indicate significant shift, and the mix remains stable.

## Potential impacts on actuarial *Standards of Practice* and/or guidance material

To deal with the second point in its ToR, the TF first identified some potential general impacts that can affect all areas of practice. It then looked into impacts more specific to some areas of practice.

As actuaries, we are aware that mortality differs between males and females. The same is true in risks other than mortality, such as accident risk in P&C insurance. When individuals apply for insurance, the application form requires them to disclose their sex so that we can use a risk assumption that we consider appropriate given their disclosed sex. For some group insurance and pension plan participation, sex is disclosed through employment forms. Experience data are used to recalibrate our assumptions. These data rely on the disclosed sex. Members should be aware that using sex and gender interchangeably may lead to confusion and furthermore that there may not be consistency in what information is requested across the industry, as well as what is provided based on the request.

Our members need to be aware that as society evolves, the sex information made available to carry out our work may not be sex at birth. Sex at birth inscribed into provincial birth registries may have been changed. A practitioner wishing to use an assumption based on sex at birth may wish to request this information and may have to rely on a declaration by the applicant/participant. Members should, however, be aware that requesting sex at birth or even “original” sex at birth (if this information has been changed after original birth registering) can be traumatic to some individuals. The TF believes that “original” sex at birth may not have been systematically obtained over recent years. As a result, data records used in experience studies may not be fully homogeneous.

A code “X” or a blank as gender identity will require adjustment in pricing and valuation of risks.

The TF did not review the entire set of Standards of Practice (SoP) nor all the guidance material available to members to find all sections that could require amendments given potential differences between sex at birth and gender or the use of a code “X” as gender identity. A thorough review should be performed by committees of the CIA. The TF wishes to illustrate some potential changes required. For instance, in the general section of the SoP, paragraph 1620.02 reads “The actuary should select an appropriate model or data assumption...” What would be appropriate for “X” as gender? Paragraph 1620.11 gives, as an example of lacking data, “date of birth of pension member’s spouse.” What about the gender of this spouse? Other examples will be given in the specialty sections below. The TF recognizes that other specialties will require review.

Actuarial standards (apart from the application of general standards) do not apply to pricing, product design or rate setting, provided that appropriate provisions are made in policy reserves. Therefore, any guidance provided to actuaries on the topic of gender identity should also be accordingly distinguished by the application of the guidance (i.e., the CIA/ASB should provide specific guidance for members for the purpose of valuation, while providing more general considerations that could apply to pricing).

### Life and health insurance

#### Current industry practice

While a few insurers outwardly acknowledge that there are differences between sex at birth and gender, all major life insurers assess risks based on sex at birth rather than identified gender. Sex at birth plays a vital role in premium calculations given that the TF believes that a strong correlation remains between sex at birth and mortality. Early-stage research has begun on how to calculate premiums for transgendered or non-binary clients, but the industry is still in the very early stages of this research.

*A note on data:* Actuaries should understand if the data being used to assess mortality are based on gender or sex at birth. It is possible that the data might unintentionally be based on gender if the sales process does not verify the sex at birth of an individual.

## Pricing and valuation considerations

Actuaries have a few options as to which factor to use when assessing mortality, such as:

- sex at birth
- gender
- none

The actuary should assess the pros and cons of the available options, along with how to handle exception cases. Examples of exception cases:

- If an actuary chooses to assess mortality based on sex at birth, but only has access to gender, this is outlined under the section “sex at birth.”
- Similarly, if an actuary decides to assess mortality based on gender, and no classification is available, this is outlined under the section “gender.”

### Sex at birth

While sex at birth might be a better predictor of the mortality of an insured than gender, requesting sex at birth from a non-binary or a transgendered person can be a traumatic process for the applicant, possibly affecting their mental health. Actuaries should weigh these risks when deciding to price based on sex at birth.

If sex at birth is used by the actuary to assess mortality risk, they will need to consider the following situations:

1. Sex at birth is not available and gender is. If this is the case, the actuary may:
  - a. Use a blended table of male and female sex at birth mortality rates.
  - b. In the case of genders of male or female, use gender in place of sex at birth and assume that there are offsetting mortality impacts from persons who identify as male but were female at birth and vice versa.
  - c. Apply the more conservative assumption (e.g., assign male sex at birth mortality rates for life insurance valuation).
2. Neither sex at birth nor gender are available. If this is the case, the actuary may:
  - a. Use a blended table of male and female sex at birth mortality rates.
  - b. Apply the more conservative assumption (e.g., assign male sex at birth mortality rates for life insurance valuation).

If an insurance company decides to price based on sex at birth, they may still want to track gender to ensure that they are addressing the individual correctly when communicating with the insured. To achieve this, insurance companies may need to update systems to be able to track both gender and sex at birth and have clear practices on how each piece of data will be used.

### Gender

If gender is used by the actuary to assess mortality risk, the actuary should assess if the data used to assess mortality risk represents sex at birth or gender. If the data represent sex at birth, the actuary may need to adjust the data to ensure it appropriately represents the mortality of insureds. If gender is requested but no information is available because of a non-identifying identification card, or because of a business practice (potentially for group conversions), an actuary could:

- Use a blended table of male and female sex at birth mortality rates.
- Apply the more conservative assumption (e.g., assign male sex at birth mortality rates for life insurance valuation).

Some additional considerations if the actuary is using gender:

- Changes in gender: If gender is used to price insurance products, insurers will need to develop policies to address situations where a change in gender takes place after issue. For example, will premiums be adjusted to reflect the changed gender?
- Misstatement of sex provision: Insurance policies may currently contain provisions where misstatement of sex could result in an adjustment to policy values. Insurers will need to re-examine these provisions to deal with situations where a legitimate gender identification change has taken place and is not being done fraudulently.

None

An insurer may decide to not use sex at birth or gender when assessing mortality. If an insurer takes this path, the actuary should search for other mortality predictors to replace the predictive power of sex at birth and/or gender. If another factor cannot be found, premiums for all prospective insureds may increase.

### Impact on CIA/ASB standards of practice, educational notes or other guidance

Examples of changes possibly needed to SoP and/or guidance:

- Paragraph 2350.06 states that mortality best estimate depends on “sex” and other factors without clearly indicating whether this is sex at birth or gender. What should be done with gender “X”? The same issues exist with paragraphs 2350.10 and 2350.15.
- Educational note 202037: “Expected mortality: fully underwritten Canadian individual life insurance policies,” in its paragraph 130.1.b, refers to sex but then footnote 1 refers to gender.

## Pension practice

Below is a summary of the salient points for consideration where availability of gender data is limited and/or not possible under future legislation.

First, we will review current practices vis-a-vis the legislative requirements and arising challenges. Currently, when the actuary requests data from the plan administrator, it is virtually always the case that one field must be populated for plan member sex. The (implicit) requested data are often sex at birth, although there is growing awareness that this may not necessarily align with the gender with which the plan member identifies nor with what is provided by plan members to plan administrators. It is typical practice in the pension field today that the two are used interchangeably and the information at hand is assumed to correlate to the appropriate mortality assumption for plan members.

Moreover, as noted earlier in the document, individuals may also identify as non-binary and official government documents can legally be amended to indicate this. However, mortality tables provide male and female mortality rates and similarly pension legislation and related SoP discuss requirements in terms of male and female mortality rates without recognition of non-binary genders.

Within the pension practice, two key work products are actuarial valuations of pension plans and the administration of pension plans. Actuarial valuations are typically performed on a sex-distinct basis, which means the actuary assigns male/female sex at birth mortality rates in assessing values for plan members reported to the actuary as male/female. In terms of pension plan administration, the determination of commuted values is a first area of focus. The commuted value standards of practice require that commuted values be determined on a sex-distinct basis. However, pension legislation in all provinces other than Quebec requires that a commuted value not differ based on a member’s sex, therefore commuted values in jurisdictions other than Quebec are determined on a unisex basis. We note that federal legislation provides for optionality on whether sex-distinct or unisex rates are used in commuted values.

A common approach to determining a plan’s unisex basis for the purposes of commuted value administration is calculating the ratio of male (or female) solvency valuation liabilities eligible for



commuted value payments to total solvency liabilities eligible for commuted value payments so that if the solvency valuation would be performed on such a unisex basis for the subset of members eligible for commuted value payments, the results would be virtually the same as when the valuation is performed on a sex-distinct basis.

Therefore, the impact of not having sex information may be different for sex-distinct analyses such as actuarial valuations and Quebec legislated members' commuted value determination as opposed to commuted value determinations for members whose province of legislation is outside of Quebec.

### Sex/Gender data availability and type

Currently, it is expected that sex at birth or binary gender information will be available for most plan members, while further down the road, and depending on applicable legislation and case law, it is possible that such information will be sparse.

As such, our comments below contemplate the impact for sex-distinct analysis/commuted value determination as well as unisex commuted value determinations both initially, where the expectation is that there is a significant volume of sex at birth or binary gender data, as well as longer term, where the possibility that there is a smaller volume of such data is contemplated.

Furthermore, the commentary below assumes continued analysis on the basis of binary (male/female) mortality only and potential solutions where non-binary gender is provided. As the environment evolves in this regard and the prevalence of non-binary gender increases, additional guidance will be required. Further details regarding recommended guidance are noted in the Recommendations section of this report.

### Commuted value determination on a unisex basis

Initially, we can assume that actuaries will be able to maintain a robust determination of the unisex basis based on an analysis of male/female proportions, as described above.

In the long term, it is possible that actuaries will not be able to have sufficient gender information to determine an appropriate unisex basis. An aggregate mortality table could be used at that point. For illustration purposes, and due to lack of availability of such a table at this time, we could use the average mortality rate of male and female as the baseline. Using such a baseline, a group that is predominantly male will see increases to commuted values while the opposite will be noted for a group that is predominantly female.

### Commuted value determination on a sex-distinct basis

Initially:

- If we maintain usage of a sex-distinct basis where available:
  - Commuted values for plan members who were identified by the plan administrator as male or female would not be impacted.
  - A methodology would need to be adopted for commuted values for plan members who were not identified by the plan administrator as male or female. Options could be mortality rates that are a blend of 50% male/female rates or mortality in line with the unisex basis the actuary has established for the plan. Using a 50/50 mortality blend in place of sex-distinct rates would result in males receiving higher commuted values than had the male gender been used and females receiving a lower commuted value had the female gender been identified. The impact of using a mortality in line with the unisex basis of the plan would depend on the male/female unisex basis and the sex of the plan member in question.
- If a sex-distinct basis is no longer used and average mortality is adopted:
  - A female plan member would receive a lower commuted value.

- A male plan member would receive a higher commuted value.
- A plan member with an unidentified sex or non-binary gender would roughly receive the average value.
- Assuming there is roughly the same number of male plan members as female plan members (so the gender proportion is roughly the same as the sex proportion), the group will maintain approximately the same present value.

In the long term, it is possible that minimal sex information will be available and using average/aggregate mortality will be used either due to lack of availability of data or legal requirements. The impact will be similar to that which is outlined above.

### Other aspects of pension plan administration

Other aspects of pension plan administration may be impacted by lack of gender information. These include the following:

1. Marriage-related assumptions:  
A common approach is to assume spouses are of the opposite gender with males being three years older than females. Often different married percentages are assigned to male plan members and female plan members.
2. Actuarial equivalent calculations:  
Actuarial equivalent early retirement reductions as well as determination of option forms will often use the same unisex basis/sex-distinct basis as used in the determination of commuted values.
3. Marriage breakdowns:  
Many of the considerations for commuted value determinations would be applicable in the case of marriage breakdown calculations as well.

### Actuarial valuations

Actuarial valuations are currently typically performed on a sex-distinct basis (i.e., using sex-distinct mortality assumptions).

- Initially, liabilities for plan members who identify as male or female would not be impacted. A methodology would need to be adopted for plan members who were not identified by the plan administrator as male or female. Mortality in line with the unisex basis of the plan could be assumed and in that case the expectation would be that the impact would not be material to the valuation.
- In the long term, additional predictors may need to be more heavily relied upon as indicators of mortality risk (for example: sector and job type, postal code analysis). While these predictors currently exist and may be used to adjust and tweak liabilities, sex currently plays a much more significant role as an indicator of mortality risk. A unisex table could be developed when the next set of tables are developed by the CIA to address the lack of individual gender data.

Valuations, similar to life insurance products, are based on group calculations and therefore are less impacted by mortality assumptions made for a handful of individuals in determining liabilities. Also, any sex-related assumptions made and resulting mortality implications that do not align with actual experience will be flushed out as part of the gain/loss analysis the next time a valuation is performed. While not ideal, this offers the actuary the ability to adjust liabilities to align with actual plan experience. There may be a cost (and funding) implication to the plan, however this is somewhat anticipated for various assumptions that are made when determining liabilities. For example, commuted values are calculated at the individual level and once paid out to members, crystallize the value provided to a plan member.

## Impact on CIA/ASB standards of practice, educational notes or other guidance

Examples of SoP or guidance material that may need revisions:

- SoP (document [220009](#) and [221103](#)): The pension commuted values standard requires the use of sex unless required otherwise by law. This should at least be revised to refer to gender rather than sex. Consideration should be given if gender-distinct explicit reference as the preferred method of calculating commuted values should remain.
- Mortality selection educational note (document [214029](#)): Mortality assumption educational note refers to sex as one of the many components a jumbo plan could use to modify a published mortality table, either through development of its own mortality table or to make an adjustment to a published mortality table. Reference to sex could be replaced by gender, but as an alternative, the educational note should discuss the possibility that gender data are not credible and that therefore making an adjustment based on gender data would not be possible. That being said, many smaller plans will not have enough credibility in their own plan experience to perform even an adjustment to a published table, so this will need to be addressed by the CIA through a published table as well.

## Property and casualty insurance

### Trends in usage of gender

For property and casualty insurance, the use of gender is limited to automobile ratemaking for personal lines.

Automobile insurance industry regulation and structure varies greatly in each province. Some provinces such as Alberta and Ontario have private automobile insurance industries that operate independently subject to provincial regulatory authority. Other provinces such as British Columbia, Saskatchewan and Manitoba have public auto insurance industries in which the provincial government or a Crown corporation operates as the provider of at least the basic minimum coverage required. The “public” or “private” nature of the auto insurance industry determines if and how the gender of the insured person can be used by the actuary.

Parliament, the federal government and the legislature of each province are bound by the *Canadian Charter of Rights and Freedoms* and thus are not allowed to discriminate based on gender, race, colour and religion (among others). Thus, government owned or operated insurance companies may not use gender or sex for automobile insurance rating purposes. This may however be a moot point since British Columbia removed the use of gender in 1979, while Saskatchewan and Manitoba have not priced automobile insurance by gender since inception in 1945.

The application of the Charter has been questioned for privately operated insurance industries through several court cases, such as *Zurich Insurance Co. v. Ontario (Human Rights Commission)* [1992] and *Co-operators General Insurance Co. v. Alberta (Human Rights Commission)* [1993]. In the case of *Zurich v. Ontario*, the Supreme Court of Canada ruled in favour of Zurich, indicating that while usage of gender does constitute discrimination there are no practical alternatives to using this factor. The recommendation to the private insurance industry was provided to continue to use gender as a risk classification factor until an alternative rating variable could be found.

In both Newfoundland and Labrador and New Brunswick, public and political pressure has resulted in the removal of gender as a rating factor on the grounds of “fairness”:

- Newfoundland and Labrador moved to a unisex system in July 2004.
- New Brunswick moved to a unisex system in December 2004.

The Nova Scotia Insurance Review Board released a report in November 2004 recommending the removal of gender as a rating factor (“A Study Into the Use of Gender as a Rating Factor in Automobile Insurance in Nova Scotia”), although as of July 2022 the gender rating factor is allowed in Nova Scotia; its potential removal remains under discussion.

More recently, a report titled “Auto Insurance Data and Analytics Strategy Technical Advisory Committee Report: Fair Treatment of Consumers in Uses of Big Data Analytics in Auto Insurance” released by FSRA (Ontario) in July 2022 recommends that “to achieve fairness, pricing should not rely on variables beyond a consumer’s control such as gender.”

Further developments in the industry, such as the introduction of usage-based automobile insurance, assesses the driving behaviour through usage of telematics and no longer requires using gender as a proxy.

Although gender is still used by automobile insurers in many provinces and territories of Canada, ongoing changes to the industry’s perception of “fairness” and industry innovation are likely to make the usage of this variable obsolete.

### Gender vs. sex

For automobile insurance purposes, an insured person’s gender is collected at the application stage and relies on the information stated on the driver’s license rather than the birth certificate or other identification

documents. In automobile ratemaking, gender serves as a proxy for the policyholder’s driving behaviour. No consideration is given to whether the person’s gender is different from the person’s sex at birth.

Automobile insurance is priced on an annual basis. While fraudulent misstatement of gender could result in claim repudiation on the grounds of misrepresentation, changes to a person’s gender identity are occasionally requested by the policyholder during the term of the policy. Often, the insurance premium will be updated to reflect the change in gender, and therefore the associated risk.

### No gender vs. gender “X”

In 2017, Ontario introduced a gender “X” option on driver’s licenses and other identity cards. As stated in Section 2, all provinces and territories have now adopted a similar position.

Due to insufficient data, private insurance companies have adapted to this change by modifying existing gender-based pricing algorithms to allow for a non-binary gender option either by using a female insurance rate or the average of male and female rates. As more data become available, there is a possibility that a non-binary rate can be developed to better represent the driving behavior of non-binary drivers.

There is a possibility that gender-based insurance pricing will be banned in Canada in the future. Gender is currently not allowed to be used as a rating factor in Europe and some states in the USA.

### Impact on CIA/ASB standards of practice, educational notes or other guidance

Actuarial standards applicable to P&C practices, in particularly ratemaking, currently do not list specific rating factors such as “gender” or “sex.” No update is necessary to actuarial standards of practice for P&C insurers.



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