Errata

After publication of the report, *Health and Social Outcomes Associated with High-Risk Alcohol Use,* the following updates were required:

June 18, 2018

- **On page xx,** in the Executive Summary, under "Key Findings from Chapter 7: Patterns in Social Outcomes Associated with Alcohol Use Disorders", the text should read:

  "Across all justice indicators (Domestic violence, DWI, and having any charge recorded in the justice system database), the relative differences between cases and matches was greater among females than among males. One factor that may be at play in these findings is that the rate of justice involvement among female matches was lower than among male matches. It also appears, though, that the relative impact of having an AUD on justice involvement may be stronger among females than males."

May 22, 2019

- **On page 118,** in Chapter 9: Pharmacological Interventions for Alcohol Use Disorders, under "Pharmacotherapies for Alcohol Use Disorders", additional text was added that reads:

  " * Calcium Carbimide (ATC N07BB02) was included to identify the cohort but was excluded from these analyses because it is no longer recommended to be prescribed due to severe reactions when people consume alcohol."

- **On page 136**, in Appendix 1: Technical Definitions, under "Alcohol Use Disorder - Cases", in the table indicating ATC codes used to identify individuals with an AUD, an additional ATC code and Generic Drug Name were added that reads:

ATC Code	Generic Drug Name
N07BB04	Naltrexone

The web version of the report has been updated.

The updated pages follow.

index date, the rate of IHD remained elevated among cases compared with their matches; however, elevated rates were not consistently statistically significant after the index date.

The diagnostic incidence rate for diabetes was elevated during the year preceding the index date among males, but not among females. After diagnosis, female cases had statistically significantly elevated rates for diabetes compared with their matches.

Cases had an elevated diagnostic incidence rate of alcohol-related cancer the year before the index date. Compared to their matches and after adjustment, female cases had close to twice the rate and male cases had nearly five times the rate of alcohol-related cancer. After the index date, the differences between female cases and matches became non-significant; among males, however, differences between cases and matches remained significant throughout 18 years of follow-up.

It is important to note that there are many factors we could not account for that contribute to whether or not a person develops an AUD and their use of the healthcare system; e.g., health outcomes associated with structural racism, intergenerational trauma, intimate partner violence, etc. Our results highlight the complexity of AUDs and the need to develop holistic strategies to target these structural and social determinants of health to prevent the development of AUDs and mitigate their harmful impacts on individuals' health and well-being.

Key Findings from Chapter 7: Patterns in Social Outcomes Associated with Alcohol Use Disorders

Male cases had higher rates of justice involvement than female cases. Both male and female cases had a statistically significantly elevated rate of justice system involvement compared with their matches, even after adjusting for factors such as mental disorder comorbidities and socioeconomic status. Across all justice indicators (Domestic violence, DWI, and having any charge recorded in the justice system database), the relative differences between cases and matches was greater among females than among males. One factor that may be at play in these findings is that the rate of justice involvement among female matches was lower than among male matches. It also appears, though, that the relative impact of having an AUD on justice involvement may be stronger among females than males (updated June 18, 2018).

We saw that for DWI and for any justice system involvement, the rate of charges occurring during the year prior to index date was elevated. This pattern

was not seen with domestic/family violence[2] charges; rather, we found evidence of an increased rate of justice involvement aligning with the index year. Differences in justice involvement were attenuated after adjusting for factors such as mental disorder comorbidities and socioeconomic status.

Cases had between a 1.6 and 5.3 times higher rate of moving into social housing compared with their matches, after adjusting for mental disorder comorbidities and socioeconomic status. However, there was no spike corresponding with the index year or the year prior to index date, as with the justice system indicators.

Diagnosis with an AUD was associated with having a child taken into care of Child and Family Services. After adjusting for mental disorder comorbidities and socioeconomic status, we saw that children of female cases were consistently taken into care more often than their matches' children. During the year prior to index date, female cases' rate was 30.31 times higher than their matches'.

Although there were higher rates of income assistance among cases compared with their matches, these differences became non-significant once we adjusted for mental disorders.

When considering the social outcomes associated with having an AUD, it is vital to note that there are a multitude of social determinants (including intergenerational trauma, historical and structural racism, exposure to violence, and other systemic factors) that we could not account for in our analyses. Nevertheless, our results highlight the need for a more integrated and comprehensive approach to intervene on these social and structural determinants to better support individuals and prevent the development of AUDs in the first place.

Key Findings from Chapter 8: Outcomes Associated with Exceeding Recommended Low-Risk Drinking Limits

In Chapter 8, we examined outcomes associated with exceeding the recommended low-risk drinking guidelines:

- Low-risk daily drinking limits: two drinks per day for women and three drinks per day for men;

- Low-risk weekly drinking limits: 10 drinks per week for women and 15 drinks per week for men.

Exceeding the daily and weekly limits was associated with increased risk for having any charge in the justice system and for driving while intoxicated. We did not find

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2 We only had data on charges of domestic/family violence from the Winnipeg Police Service.

Pharmacotherapies for Alcohol Use Disorders

Our analyses focused on three pharmacotherapies* used to treat an AUD: disulfiram (Anatomical Therapeutic Classification (ATC) N07BB01), acamprosate (ATC N07BB03), and naltrexone (ATC N07BB04). We determined the overall proportion of AUD prescriptions dispensed during the study period using the Drug Program Information Network (DPIN) database. The DPIN database also allowed us to determine which prescriber specialty was most likely to prescribe a medication for AUD.

The cohort used in this analysis was a subset of the total AUD cohort used throughout the report. We limited analyses to individuals with an index date between 1996/97 and 2014/15 to align with the years of DPIN data we had available. Our cohort comprised two groups:

1. Individuals with an AUD who received a dispensation of one of the three pharmacotherapies used to treat AUD ; and

2. All other individuals with an AUD who did not receive a dispensation for a pharmacotherapy used to treat AUD.

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* Calcium Carbimide (ATC N07BB02) was included to identify the cohort but was excluded from these analyses because it is no longer recommended to be prescribed due to severe reactions when people consume alcohol. (Updated May 22, 2019)

Descriptives for Individuals with an Alcohol Use Disorder and with a Pharmacotherapy Dispensation

Table 9.1 presents the demographic information for the AUD cohort with index dates from 1996/97 to 2014/15. During the study period, a total of 493 individuals with an AUD had at least one dispensation for one of the three pharmacotherapies, which is roughly 1.42% of all individuals with an AUD:

- 0.82% of individuals with an AUD had a dispensation of naltrexone;

- 0.52% of individuals with an AUD had a dispensation of acamprosate;

- 0.08% of individuals with an AUD had a dispensation of disulfiram.

The mean age at the index date was 40 for both groups. The sex distribution differed between those who did and those who did not have a prescription dispensed; the relative proportion of females was greater amongst individuals who had a prescription dispensed than among those who did not (42.4% vs. 36.3%, respectively). The vast majority of individuals who had a prescription dispensed lived in an urban (vs rural) setting. Higher income individuals were more likely to receive a dispensation of an AUD prescription compared with their lower-income counterparts.

The following ATC codes were used to identify individuals with an AUD, using the Drug Program Information Network database:

ATC Code	Generic Drug Name
N07BB01	Disulfiram
N07BB02	Calcium Carbimide
N07BB03	Acamprosate Calcium
N07BB04	Naltrexone

(Updated May 22, 2019)

Alcohol Use Disorder – Matches

People were excluded from the pool of potential matches for a variety of reasons (outlined in Chapter 2). The table below lists the survey variables (i.e., questions) used to identify people to remove from the pool of potential matches.

Survey Variable	Survey(s) in which Variable Appeared
5+ drinks in one sitting (at least once a month for past year)	CCHS: 1.1, 1.2, 2.1, 2.2, 3.1, 2007, 2008, Healthy Aging, 2009, 2010, 2011, 2012, 2013
5+ drinks in one sitting (at least once a month for 1 year)	CCHS: 1.2
Daily alcohol consumption in past week (exceeds daily limits)	CCHS: 1.1, 1.2, 2.1, 3.1, 2011, 2012, 2013
Number of drinks in past week (exceeds weekly limits)	CCHS: 1.1, 1.2, 2.1, 3.1, 2011, 2012, 2013
Ever regularly drank >12 drinks/week	CCHS: 1.1, 1.2, 2.1, 3.1
Reason reduced drinking - drinking problem	CCHS: 1.1, 1.2, 2.1, 3.1
Reason reduced drinking - affected work/studies	CCHS: 1.1, 1.2, 2.1, 3.1
Reason reduced drinking - interfered with family or home life	CCHS: 1.1, 1.2, 2.1, 3.1
Reason reduced drinking - affected physical health	CCHS: 1.1, 1.2, 2.1, 3.1
Reason reduced drinking - affected social relationships	CCHS: 1.1, 1.2, 2.1, 3.1
Reason reduced drinking - affected financial position	CCHS: 1.1, 1.2, 2.1, 3.1
Reason reduced drinking - affected outlook on life, happiness	CCHS: 1.1, 1.2, 2.1, 3.1
Drank while pregnant	CCHS: 1.1, 2.1, 3.1
Frequency of drinks while pregnant	CCHS: 1.1, 2.1, 3.1
Alcohol dependence (yes to any question in module)	CCHS: 1.1, 1.2
Drove motor vehicle after drinking 2+ drinks in hour before	CCHS: 2.1, 2007, 2008, 2011, 2012
Frequency of driving after 2+ drinks in past year	CCHS: 2.1, 2007, 2008, 2011, 2012
Drove boat, ATV, snowmobile, etc. after drinking 2+ drinks in hour before	CCHS: 2.1, 2007, 2008, 2011, 2012
Frequency of driving boat, ATV, snowmobile after 2+ drinks in past year	CCHS: 2.1, 2007, 2008, 2011, 2012
Cause of health problems - alcohol or drugs	CCHS: 1.2, 2.1, 3.1, 2007, 2008, 2009, 2010, 2012, 2013
Cause of poor ADLs or social difficulties - alcohol or drugs	CCHS: 1.2, 2.1, 3.1,
Barrier to improving health - addiction to drugs or alcohol	CCHS: 3.1, 2007, 2008, Healthy Aging, 2011, 2012, 2013
Frequency of coping with stress by drinking alcohol	CCHS: 1.2
Depressive episodes due to alcohol	CCHS: 1.2
Manic episodes due to alcohol	CCHS: 1.2
Panic attacks due to alcohol	CCHS: 1.2
Not currently working due to use of alcohol or drugs	CCHS: 2.1
Not looking for work due to use of alcohol or drugs	CCHS: 2.1, Healthy Aging
Reason retired - use of alcohol or drugs	CCHS: Healthy Aging