**Appendix 2. Search strategy and study inclusion details**

**Sources:**

For each of 15 causes of fatal nontraffic injuries, we systematically reviewed published studies in peer- reviewed journals, government reports (e.g., medical examiners’ reports), and other “gray” literature, including proceedings of professional association meetings, coroners’ and medical examiners’ reports, and the following U.S. federal government, state government, and Canadian sources:

1. U.S. federal government sources:
   1. Centers for Disease Control and Prevention (all causes of injury)
   2. National Institute on Alcohol Abuse and Alcoholism (all causes of injury)
   3. Federal Aviation Administration (air-space transport)
   4. National Transportation Safety Board (motor vehicle nontraffic crashes, other road vehicle crashes)
   5. National Child Death Review Case Reporting System (child maltreatment)
   6. Bureau of Labor Statistics (occupational and machine injuries)
   7. United States Fire Administration (fire injuries)
   8. National Highway Traffic Safety Administration (motor vehicle nontraffic crashes)
   9. Federal Bureau of Investigation (child maltreatment, firearm injuries, homicide, suicide)
   10. National Violent Death Recording System (child maltreatment, firearm injuries, homicide, suicide)
   11. National Center for Fatality Review and Prevention (child maltreatment)
   12. National Child Death Review Case Reporting System (child maltreatment)
2. State government sources:
   1. Departments of natural resources (drowning, motor vehicle nontraffic crashes, water transport)
   2. Offices of parks and recreation (motor vehicle nontraffic crashes, water transport)
   3. Child fatality review programs (child maltreatment)
3. Canadian sources:
   1. Statistics Canada and the Centre for Addiction and Mental Health (all causes of injury)
   2. Canadian Red Cross Society (drowning, motor vehicle nontraffic crashes, and water transport)

**Search Strategy:**

To address the diverse set of terminology relevant to the 15 causes of fatal nontraffic injury, we developed separate algorithms and search terms specific to individual causes of injury. The algorithms were then adapted to the respective syntax of each of the search engines. As an example, the following sets of algorithms, which sequentially build on one another, were used for searching in PubMed.

**Air-space transport**

*Search algorithm 1*: ("Accidents, Aviation/epidemiology"[MeSH Terms] OR "Accidents,

Aviation/statistics and numerical data"[MeSH Terms]) AND (("ethanol"[MeSH Terms] OR "ethanol"[All Fields] OR "alcohol"[All Fields] OR "alcohols"[MeSH Terms] OR "alcohol"[All Fields]) OR ("ethanol"[MeSH Terms] OR "ethanol"[All Fields])) AND ("1995/01/01"[PDAT]: "2019/12/31"[PDAT])

*Search algorithm 2*: ("Accidents, Aviation"[MeSH Terms]) AND "Ethanol/blood"[MeSH Terms]

*Search algorithm 3*: (Helicopter OR glider OR blimp OR Zeppelin OR parachute) AND fatality AND (alcohol OR ethanol) AND ("1995/01/01"[PDAT] : "2019/12/31"[PDAT])

*Search algorithm 4*: (Sky diving AND (alcohol OR ethanol))

**Aspiration**

*Search algorithm* *1:* ("asphyxia" AND "Mortality"[Mesh] AND ("alcohol" OR "ethanol")

*Search algorithm* *2:* ("aspiration" AND "Mortality"[Mesh] AND ("alcohol" OR "ethanol")

*Search algorithm* *3:* ("strangulation" AND "Mortality"[Mesh] AND ("alcohol" OR "ethanol")

*Search algorithm* *4:* ("suffocation" AND "Mortality"[Mesh] AND ("alcohol" OR "ethanol")

*Search* algorithm *5:* ("choking" AND "Mortality"[Mesh] AND ("alcohol" OR "ethanol")

**Child Maltreatment**

*Search algorithm* *1:* ( "Child Abuse/epidemiology"[Mesh] OR "Child Abuse/etiology"[Mesh] OR "Child Abuse/statistics and numerical data"[Mesh] ) AND "Mortality"[Mesh] AND (("ethanol"[MeSH Terms] OR "ethanol"[All Fields] OR "alcohol"[All Fields] OR "alcohols"[MeSH Terms] OR "alcohols"[All Fields]) OR ("ethanol"[MeSH Terms] OR "ethanol"[All Fields])) AND ("*1:*99*5:*/0*1:*/0*1:*"[PDAT] : "*2:*0*1:*9/*1:2:*/*3:1:*"[PDAT])

*Search algorithm* *2:* (("Ethanol"[Mesh] OR "Alcohol Drinking"[Mesh]) AND "Child Mortality"[Mesh]) AND ("Accidents"[Mesh] OR "Accidental Injuries"[Mesh])

*Search algorithm* *3:* "Child Abuse/mortality"[Mesh] AND ("Alcohol Drinking"[Mesh] OR "ethanol"("Ethanol"[Mesh]) AND "Child Abuse/mortality"[Mesh])

*Search algorithm* *4:* ( "Infant Mortality"[Mesh] OR "Child Abuse/etiology"[Mesh] OR "Child Abuse/statistics and numerical data"[Mesh] ) AND "Mortality"[Mesh] AND (("ethanol"[MeSH Terms] OR "ethanol"[All Fields] OR "alcohol"[All Fields] OR "alcohols"[MeSH Terms] OR "alcohols"[All Fields]) OR ("ethanol"[MeSH Terms] OR "ethanol"[All Fields])) AND ("*1:*99*5:*/0*1:*/0*1:*"[PDAT] : "*2:*0*1:*9/*1:2:*/*3:1:*"[PDAT])

**Drowning**

*Search algorithm* *1:* ("Drowning"[Mesh]) AND "Mortality"[Mesh] AND ("alcohol" OR "ethanol")

*Search algorithm* *2:* ("Immersion"[Mesh]) AND "Mortality"[Mesh] AND ("alcohol" OR "ethanol")

*Search algorithm* *3:*("Bathtub Drowning" AND "Mortality" AND ("alcohol" OR "ethanol"))

*Search algorithm* *4:* (("drowning" OR "drownings") AND ("alcohol" OR "ethanol"))

*Search algorithm* *5:* (("submersion") AND ("alcohol" OR "ethanol))

**Fall Injuries**

*Search algorithm* *1:* “Accidents Falls/epidemiology"[Mesh] AND ("Mortality"[Mesh]) OR "Death"[Mesh]) AND ("ethanol"[MeSH Terms] OR "alcohol"[All Fields]

*Search algorithm* *2:* ((falls) AND (fatal\*)) AND ((alcohol OR ethanol))

*Search algorithm* *3:* ("Accidental Falls/mortality"[Mesh] AND ( "Alcohol Drinking"[Mesh] OR "Ethanol"[Mesh])

**Fire injuries**

*Search algorithm* *1:* ("Burns/mortality"[Mesh]) AND "Alcoholic Intoxication"[Mesh] AND ("*1:*99*5:*/0*1:*/0*1:*"[PDAT] : "*2:*0*1:*9/*1:2:*/*3:1:*"[PDAT])

*Search algorithm* *2:* ("Burns/mortality"[Mesh]) AND "Alcohol Drinking"[Mesh]

*Search algorithm* *3:* ("Wounds and Injuries/adverse effects"[Mesh] OR "Wounds and Injuries/mortality"[Mesh] ) AND fire AND "Alcoholic Intoxication"[Mesh]

*Search algorithm* *4:* immolation AND "Alcohol Drinking"[Mesh]

*Search algorithm* *5:* "Smoke Inhalation Injury/mortality"[Mesh] AND (alcohol OR ethanol)

**Firearm injuries**

*Search algorithm* *1:* ("Mortality"[Mesh]) AND (firearm OR gun OR weapon) AND (unintentional OR accident OR undetermined) AND (alcohol OR ethanol)

*Search algorithm* *2:* ("Accidents/mortality"[Mesh] OR "Accidents/statistics and numerical data"[Mesh] )) AND "Firearms"[Mesh] AND (alcohol OR ethanol)

*Search algorithm* *3:* (("Accidents/mortality"[Mesh] OR "Accidents/statistics and numerical data"[Mesh] )) AND "Firearms"[Mesh] AND (alcohol OR ethanol)

*Search algorithm* *4:* ((firearm OR gun or weapon) AND "Accidents"[Mesh] AND (fatality OR mortality+ AND (alcohol OR ethanol))

**Homicide**

*Search algorithm* *1:* ("Homicide"[Mesh]) AND "Ethanol"[Mesh]

**Hypothermia**

*Search algorithm* *1:* "Hypothermia/mortality"[Mesh] AND (alcohol OR ethanol)

**Motor vehicle nontraffic crashes**

*Search algorithm* *1:* ("Off-Road Motor Vehicles"[Mesh]) AND (alcohol OR ethanol)

*Search algorithm* *2:* "Off-Road Motor Vehicles/statistics and numerical data"[Mesh] AND (alcohol OR ethanol)

*Search algorithm* *3:* "Accidents, Traffic/mortality"[Mesh] AND (alcohol OR ethanol)

*Search algorithm* *4:* (("Motorcycles"[Mesh]) AND ("Mortality"[Mesh] OR death) AND (alcohol OR ethanol)

*Search algorithm* *5:* "Pedestrians"[Mesh] AND ( "Alcohol Drinking"[Mesh] OR "Ethanol"[Mesh])

*Search algorithm* *6:* (bicycle OR pedal cycle) AND ("Mortality"[Mesh] OR death) AND (alcohol OR ethanol)

*Search algorithm* *7:* "Railroads"[Mesh] AND ("Mortality"[Mesh] OR death) AND (alcohol OR ethanol)

*Search algorithm* *8:* "Motor Vehicles"[Mesh] AND ("Mortality"[Mesh] OR death) AND (alcohol OR ethanol)

*Search algorithm* 9: ((Bus OR buses) AND ("Mortality"[Mesh] OR death) AND (alcohol OR ethanol)

**Occupational and machinery injuries**

*Search algorithm* *1:* ("Accidents, Occupational"[Mesh] AND ("Mortality"[Mesh] OR "Death"[Mesh]) AND ("ethanol"[MeSH Terms] OR "alcohol"[All Fields])

*Search algorithm* *2:* (Machinery OR automation) AND ("Mortality"[Mesh] OR "Death"[Mesh]) AND ("ethanol"[MeSH Terms] OR "alcohol"[All Fields])

*Search algorithm* *3:* **(Farming OR factory) AND ("Mortality"[Mesh] OR** "Death"[Mesh]) AND ("ethanol"[MeSH Terms] OR "alcohol"[All Fields])

**Other road vehicle crashes**

*Search algorithm* 1*:* "Accidents, Traffic/mortality"[Mesh] AND (alcohol OR ethanol)

*Search algorithm* 2*:* (("Motorcycles"[Mesh]) AND ("Mortality"[Mesh] OR death) AND (alcohol OR ethanol)

*Search algorithm* 3*:* "Pedestrians"[Mesh] AND ( "Alcohol Drinking"[Mesh] OR "Ethanol"[Mesh])

*Search algorithm* 4*:* (bicycle OR pedal cycle) AND ("Mortality"[Mesh] OR death) AND (alcohol OR ethanol)

*Search algorithm* 5*:* "Railroads"[Mesh] AND ("Mortality"[Mesh] OR death) AND (alcohol OR ethanol)

*Search algorithm* 6*:* "Motor Vehicles"[Mesh] AND ("Mortality"[Mesh] OR death) AND (alcohol OR ethanol)

*Search algorithm* 7: ((Bus OR buses) AND ("Mortality"[Mesh] OR death) AND (alcohol OR ethanol)

**Poisonings (not alcohol)**

*Search algorithm* *1:* (("poisoning"[Subheading] AND "Alcohol Drinking"[Mesh]) OR "Ethanol"[Mesh]) AND "Mortality"[Mesh] AND ("*1:*99*5:*/0*1:*/0*1:*"[PDAT] : "*2:*0*1:*9/*1:2:*/*3:1:*"[PDAT])

*Search algorithm* *2:* ((“Ethanol”[Mesh] OR “Alcohol Drinking” [Mesh] AND Drugs AND ("*1:*99*5:*/0*1:*/0*1:*"[PDAT] : "*2:*0*1:*9/*1:2:*/*3:1:*"[PDAT]))

*Search algorithm* *3:* (meta analysis AND drug poisoning AND (alcohol OR ethanol))

**Suicide**

*Search algorithm* *1:* (("Suicide"[Mesh] OR "Suicide, Completed"[Mesh]) AND ("Mortality"[Mesh]) OR "Death"[Mesh]) AND ("ethanol"[MeSH Terms] OR "alcohol"[All Fields]))

*Search algorithm* *2:* (("Suicide"[Mesh] OR "Suicide, Completed"[Mesh]) AND ("blood alcohol content OR BAC))

**Water-transport**

*Search algorithm* *1:* ("Ships"[Mesh] AND ("Mortality"[Mesh] OR "Death"[Mesh]) AND ("ethanol"[MeSH Terms] OR "alcohol"[All Fields])

*Search algorithm* *2:* "Water Sports"[Mesh] AND ("Mortality"[Mesh] OR "Death"[Mesh]) AND ("ethanol"[MeSH Terms] OR "alcohol"[All Fields])

**Supplemental Figure 1.**

**Study Identification, Screening, Eligibility, and Inclusion by Cause of Injury**

