Supplementary materials

eTable 1. List of psychotic disorder diagnostic codes and ICES algorithm

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| **ED visits and hospitalizations** |
| **Definitions prior to 2016/17 (OMHRS DSM-IV manual)** |
|  | **ICD-9-CM code (OMHRS)** | **ICD-10-CA (DAD/NACRS)** |
| **Psychotic disorders** | AXIS1\_DSM4CODE\_DISCH1 = 295.x (all 295 codes), 297.x (all 297 codes), 298.x (all 298 codes).PROVDX\_DSM4CODE\_ADM1 =5 | DX10CODE1 = F20 (excluding F20.4), F22, F23, F24, F25, F28, F29, F53.1 |
| **Definitions 2016/17 onwards (Corresponding to DSM-5 manual)** |
|  | **ICD-9-CM code (OMHRS)** | **ICD-10-CA (DAD/NACRS)** |
| **Psychotic disorders** | DSM5CODE\_DISCH1 = 293.81, 293.82, 295.x (all 295 codes), 297.x (all 297 codes), 298.x (all 298 codes).PROVDX\_DSM5CODE\_ADM1 =2 | DX10CODE1 = F06.0-2, F20, F22-F29, F53.1 |
| **Outpatient services (OHIP physician billing)** |
| **Psychotic disorders** | 295 Schizophrenia |
| 297 Other paranoid states |
| 298 Other psychoses |
| **ICES algorithm for outpatient mental health services among youth aged 0 to 24**1. Psychiatrist (SPEC=19) and outpatient (LOCATION: O, L, H) and non-lab service (substr(FEECODE,1,1) ne 'G')*OR*
2. (FP/GP (SPEC=00) or Paediatrician (SPEC=26)) and MHA diagnosis code (DXCODE) and outpatient (LOCATION: O, L, H) and non-lab service (substr(FEECODE,1,1) ne 'G')*OR*
3. Paediatrician (SPEC=26) and undefined location (LOCATION =U) and MHA diagnosis code (DXCODE) and fee code\* (FEECODE=K122 or K123 or K704)

\*Paediatrician fee code description:K122 Developmental and/or behavioural care - individual developmental and/or behavioural care; K123 Developmental and/or behavioural care - family developmental and/or behavioural care; K704 Paediatric out-patient case conference**ICES algorithm for outpatient mental health services among young adults aged 25 and up**1. Psychiatrist (SPEC=19) and outpatient (LOCATION: O, L, H) and non-lab service (substr(FEECODE,1,1) ne 'G')*OR*
2. FP/GP (SPEC=00) and MHA diagnosis code (DXCODE) and outpatient (LOCATION: O, L, H) and non-lab service (substr(FEECODE,1,1) ne 'G'
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eTable 2: Follow-up analyses exploring dose-response and sex differences in the association between cannabis use and psychotic disorders.

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|  |  |  | **Psychotic disorder** |
|  |  | **Cannabis use past 12m** | **aHR** | **95% CI** |
| Weighted | *Extended Cox model exploring dose-response* |
| 12 to 19 years of age-time | Never | Ref | - |
| <Weekly | 11.49 | 0.10, 1299.88 |
| Weekly+ | **10.70** | **3.49, 32.78** |
| 20 to 33 years of age-time | Never | Ref | - |
| <Weekly | 1.31 | 0.59, 2.91 |
| Weekly+ | 1.24 | 0.44, 3.49 |
| *Extended Cox model exploring sex differences with cannabis\*sex\*age-time interaction* |
| Males 12 to 19 years of age-time | No | Ref | - |
| Yes | **9.98** | **2.89, 34.47** |
| Females 12 to 19 years of age-time | No | Ref | - |
| Yes | 13.05 | 0.44, 385.13 |
| Males 20 to 33 years of age-time | No | Ref | - |
| Yes | 1.57 | 0.63, 3.92 |
| Females 20 to 33 years of age-time | No | Ref | - |
| Yes | 0.86 | 0.35, 2.15 |
| Unweighted | *Extended Cox model exploring dose-response* |
| 12 to 19 years of age-time | Never | Ref | - |
| <Weekly | **4.23** | **1.88, 9.53** |
| Weekly+ | **6.74** | **2.85, 15.94** |
| 20 to 33 years of age-time | Never | Ref | - |
| <Weekly | **1.94** | **1.12, 3.35** |
| Weekly+ | **2.00** | **1.05, 3.83** |
| *Extended Cox model exploring sex differences with cannabis\*sex\*age-time interaction* |
| Males 12 to 19 years of age-time | No | Ref | - |
| Yes | **5.70** | **2.56, 12.69** |
| Females 12 to 19 years of age-time | No | Ref | - |
| Yes | **4.27** | **1.69, 10.77** |
| Males 20 to 33 years of age-time | No | Ref | - |
| Yes | **2.27** | **1.25, 4.11** |
| Females 20 to 33 years of age-time | No | Ref | - |
| Yes | 1.52 | 0.76, 3.02 |
| Notes: All models controlled for sex, household income, rurality, race, alcohol use, smoking, and illicit drug use. Unweighted analyses ignored survey weights and did not use bootstrap variance estimation. Follow-up analyses were exploratory and should be interpreted with caution. |