It is illegal to post this copyrighted PDF on any website. Care of Youth in Their First Emergency Presentation for Psychotic Disorder: A Population-Based Retrospective Cohort Study

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ABSTRACT

Objective: Emergency departments (EDs) are often the first point of care for youth with psychotic disorders; however, the care and aftercare they receive have not been well described. The aim of this study was to examine care and aftercare following first ED visit for psychotic disorder among youth.

Methods: We conducted a population-based retrospective cohort study of first ED presentations for psychotic disorder among youth 16 to 24 years old (N = 2,875) in Ontario, Canada. The youth were diagnosed with a psychotic disorder according to *ICD-10* coding. We captured all first visits for psychotic disorder between April 2010 and March 2013. Our primary outcome was rate of outpatient mental health care within 30 days. We also examined factors associated with timely psychiatric aftercare, rates of outpatient mental health follow-up by provider type, ED revisit, and psychiatric admission within 30 days and 1 year.

Results: Forty percent of youth discharged to the community from their first ED presentation for psychotic disorder received no outpatient mental health care within 30 days. Factors associated with psychiatric aftercare included higher neighborhood income (income quintile 5 vs 1, hazard ratio [HR] = 1.48; 95% Cl, 1.05-2.09; P=.026), rural residence (HR=0.46; 95% Cl, 0.31-0.70; P<.001), and mental health care in the 1 year before presentation (outpatient psychiatrist visit: HR = 1.89; 95% Cl, 1.50-2.37; P<.001; psychiatric admission: HR=0.71; 95% Cl, 0.52-0.98; P=.038).

Conclusions: Many youth do not receive timely follow-up after their first ED visit for psychotic disorder. There is an urgent need to improve service access for this vulnerable population.

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t is well established that treatment delays can worsen shortand long-term outcomes in schizophrenia.¹ Many recent and ongoing studies have focused on developing optimal services for young people experiencing their first episode of psychotic disorder.^{2,3} A growing body of research has examined pathways to care in young people with psychotic disorders with the goal of improving access to treatment.⁴ Studies of clinical samples frequently cite the emergency department (ED) as a common entry point into early psychosis intervention services.⁴ Two recent population-based studies^{5,6} found that almost half of incident schizophrenia spectrum disorder cases were diagnosed in the ED. Another recent study⁷ found that, among all incident cases of schizophrenia among young adults aged 14 to 35 years, a recent visit to the ED was associated with increased likelihood of timely physician follow-up. However, little is known about the care young people with psychotic disorders receive in and after a crisis presentation to the ED.

Clear recommendations for timely referral to specialty mental health care after urgent presentations with first-episode psychosis have been published.⁸ However, wait times for aftercare following a crisis ED visit are unknown. Studies of mental health care utilization show that diagnosis of a psychotic disorder is associated with greater likelihood of aftercare following index ED visit9 and psychiatric admission¹⁰ as well as greater number of ED return visits.¹¹ In a study¹² specifically examining young people with psychotic disorders, approximately 40% received no physician follow-up within 30 days of index diagnosis. While a prior mental health-related ED visit increased the likelihood of physician follow-up, aftercare from first ED visit was not specifically explored.¹² Another recent study¹³ found that most adolescents who presented to the ED with psychotic disorder received physician follow-up within 90 days but did not examine specific factors associated with disposition or aftercare. Youth transitioning from adolescence to young adulthood may be at particular risk of decreased use of outpatient mental health services,¹⁴ but timely access to follow-up care has not been specifically examined in transition-age youth with psychotic disorders.

The primary objective of this study was to determine the rate of outpatient mental health care within 30 days following first presentation to the ED with psychotic disorder among youth aged 16–24 years, as well as to understand the demographic, clinical, and service use factors that predict psychiatric aftercare among those discharged from their incident ED visit. Our secondary objectives were to understand the general profile of young people inical Points

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- Despite a clear rationale for timely mental health care following a crisis, little is known about the care young people with psychotic disorders receive after their first presentation to the emergency department.
 - Many of these youth do not receive timely follow-up; the likelihood of receiving psychiatric aftercare within 1 month is increased with higher income and recent outpatient psychiatric care and decreased with rural residence and recent inpatient psychiatric admission.

with psychotic disorder at their first ED presentation, their rates of admission and discharge, and their rates of outpatient mental health follow-up care, ED revisit, and psychiatric admission over the 30 days and 1 year following index ED presentation.

METHODS

Setting

This population-based study was set in Ontario, Canada's largest province. Canada has a system of singlepayer universal health care delivered at the provincial level. All physician and hospital visits for Ontario residents are covered by and billed exclusively through the Ontario Health Insurance Plan (OHIP), with the exception of newcomers for the first 3 months after arrival. A recent article estimated a crude annual incidence of psychotic disorder of 57 per 100,000 in Ontarians aged 14 to 35 years.⁷ A study of incident cases of schizophrenia spectrum disorders in 14- to 25-yearolds in Montreal, Quebec, which has a similar system of health care, found a standardized annual incidence of 82.9 per 100,000 for males and 32.2 per 100,000 for females¹⁵; 48% of all new cases were diagnosed in the ED.⁵ In 2004, Ontario's Ministry of Health and Long-Term Care allocated funding for early psychosis intervention (EPI) and, in 2011, released Early Psychosis Intervention Program Standards guiding service delivery to this population. At that point, there were approximately 30 EPI programs and allied services in the province¹⁶; this number has since grown to approximately 50 programs. Ontario's EPI Program Standards indicate that patients should be assessed within 2 weeks of referral. Services for young Canadians with psychotic disorders are also guided by the Canadian Psychiatric Association's 2006 recommendation that, following assessment and referral, patients presenting with first-episode psychosis be seen within 24 hours if their condition is considered to be emergent, or 1 week if it is considered to be urgent.⁸

Study Design and Data Sources

To construct our cohort, we examined data held by the Institute for Clinical Evaluative Sciences (ICES). ICES holds patient records for all publicly insured hospital and physician services linked in multiple Ontario health administrative databases. We obtained data from 4 health care databases: the Canadian Institutes of Health Information (CIHI) National Ambulatory Care Reporting System (NACRS), which records information on ED visits in Canada; the CIHI Discharge Abstract Database (CIHI-DAD), which records all acute hospitalizations in Canada; the Ontario Mental Health Reporting System (OMHRS), which collects detailed information on all admissions to mental health– designated hospital beds in Ontario; and the OHIP database, which collects billing information on physician visits and consultations, including diagnostic codes and location. We also examined information from the Registered Persons Database, including patient age, gender, and deaths. Based on patient address information, we used Statistics Canada 2006 census estimates to derive neighborhood income and rurality.

We constructed a cohort using NACRS, identifying patients aged 16-24 with valid OHIP numbers and first ED presentation for a psychotic disorder according to International Statistical Classification of Diseases and Related Health Problems, 10th Revision (ICD-10) coding (schizophrenia [F20], schizoaffective disorder [F25], or unspecified psychosis not due to a substance or known physiological condition [F29]) between April 1, 2010, and March 31, 2013. We restricted the age range to 16-24 years to increase the likelihood that subjects were experiencing firstepisode psychosis (consistent with other population-based studies)^{15,17} and because of our interest in transition-age youth. Inclusion of the F29 diagnostic code for unspecified psychosis in the psychotic disorder algorithm has been validated by chart review.¹⁸ The ED visit was considered a first, or incident, visit if there were no ED visits (in NACRS) or hospitalizations (in CIHI-DAD or OMHRS) for psychotic disorder in the 5 years prior to the index visit. Patients were excluded if they had invalid or missing data on age or gender or were not eligible for OHIP in the 5 years preceding or 1 year following the incident ED visit to capture health service utilization measures prior to and following the incident ED visit. Because patients may be transferred between general and specialty EDs in a single encounter, we considered multiple ED visits separated by < 24 hours as a single ED visit and examined only the terminal ED visit that would result in either admission or discharge to the community. The maximum follow-up date was 1 year after the final incident ED visit date, March 31, 2014. The cohort was further stratified by whether the patient was hospitalized or discharged to the community at index ED presentation.

Outcomes and Covariates

For each index visit, we examined the patient's demographics. Demographic characteristics included age, gender, rural residence (living in a community with a population of 10,000 residents or less), and income (neighborhood-level income quintiles). We also examined their recent (60-day) and remote (1-year) use of outpatient mental health services (psychiatrist, or mental health visit with a family physician or pediatrician, grouped as "primary care providers" [PCPs] using the OHIP database), mental health and addictions-related ED visits (using NACRS), and inpatient admissions (using CIHI-DAD and OMHRS)

It is illegal to post this copyrighted PDF on any website. Table 1. Characteristics of First Emergency Department Presentation for Psychotic Disorder in Youth

| | | Total | | | | | |
|--|-----------|----------|----------|---------------------|---------|----------|-------|
| | (N=2,875) | | Ac (N | dmitted = 2,063) | Di (| | |
| Characteristic | n | Column % | n | Column % | n | Column % | Р |
| Gender, female | 756 | 26.3 | 549 | 26.6 | 207 | 25.5 | .540 |
| Age group, 16–18 y (vs 19–24 y) | 786 | 27.3 | 572 | 27.7 | 214 | 26.4 | .458 |
| ncome quintile ^a | | | | | | | .115 |
| 1 (lowest) | 807 | 28.1 | 578 | 28.0 | 229 | 28.2 | |
| 2 | 591 | 20.6 | 412 | 20.0 | 179 | 22.0 | |
| 3 | 539 | 18.7 | 398 | 19.3 | 141 | 17.4 | |
| 4 | 488 | 17.0 | 336 | 16.3 | 152 | 18.7 | |
| 5 (highest) | 429 | 14.9 | 324 | 15.7 | 105 | 12.9 | |
| Rural residence (vs urban residence) ^b | 297 | 10.3 | 201 | 9.7 | 96 | 11.8 | .101 |
| Diagnosis at ED visit | | | | | | | <.001 |
| Schizophrenia | 482 | 16.8 | 279 | 13.5 | 203 | 25.0 | |
| Schizoaffective disorder | 84 | 2.9 | 44 | 2.1 | 40 | 4.9 | |
| Unspecified psychosis | 2,309 | 80.3 | 1,740 | 84.3 | 569 | 70.1 | |
| CTAS score at ED visit 1–3 (vs 4–5) ^c | 2,597 | 90.3 | 1,937 | 93.9 | 660 | 81.3 | <.001 |
| Mental health care in the prior 60 days ^d | | | | | | | |
| Outpatient PCP visit | 721 | 25.1 | 508 | 24.6 | 213 | 26.2 | .371 |
| Outpatient psychiatry visit | 640 | 22.3 | 446 | 21.6 | 194 | 23.9 | .187 |
| Hospital admission | 206 | 7.2 | 147 | 7.1 | 59 | 7.3 | .895 |
| ED visit | 622 | 21.6 | 442 | 21.4 | 180 | 22.2 | .663 |
| Mental health care in the prior 1 year | | | | | | | |
| Outpatient PCP visit | 1,356 | 47.2 | 933 | 45.2 | 423 | 52.1 | .001 |
| Outpatient psychiatry visit | 1,050 | 36.5 | 720 | 34.9 | 330 | 40.6 | .004 |
| Hospital admission | 484 | 16.8 | 344 | 16.7 | 140 | 17.2 | .715 |
| ED visit | 1,045 | 36.3 | 720 | 34.9 | 325 | 40.0 | .010 |

^aData unavailable for 21 participants.

^bData unavailable for 9 participants.

^cCTAS score of 1–3 indicates more urgent, score of 4–5 indicates less urgent. Data unavailable for 8 participants. ^dIndicates proportion who had at least 1 mental health or addictions-related encounter.

Abbreviations: CTAS = Canadian Triage and Acuity Scale, ED = emergency department, PCP = primary care

provider.

leading up to the index ED psychotic disorder visit. For incident visits resulting in a discharge to the community, we examined follow-up outpatient visits to a psychiatrist, mental health visit to a PCP, mental health ED visit, or inpatient psychiatric admission within 30 days and 1 year. Visits occurring the same day as the index ED presentation were excluded since it could not be determined if they preceded or followed the index ED presentation.

Clinical characteristics included Canadian Triage and Acuity Scale (CTAS) score, a measure of patient acuity at arrival used across Canadian EDs (1 = most urgent, 5 = least urgent), at the index ED presentation.¹⁹ Service use characteristics were outpatient visits to a psychiatrist, mental health visit to a PCP, mental health ED visit, or inpatient psychiatric admission in the 60 days and 1 year prior to index ED visit.

Statistical Analysis

We calculated baseline characteristics of patients with an index ED visit for psychotic disorder, comparing individuals who were admitted to hospital with those who were discharged to the community using χ^2 tests for dichotomous and categorical variables and *t* tests and analysis of variance for continuous variables.

We generated Kaplan-Meier curves for time to outpatient psychiatric care, censored for death and inpatient admission, within 1 year of discharge for first ED presentation for psychotic disorder. We used multivariate Cox proportional hazard regression models to determine predictors of psychiatric aftercare within 30 days and 1 year, generating hazard ratios and confidence intervals to indicate likelihood of the outcomes.

All statistical analyses were conducted using SAS Version 9.4. This study was approved by the Research Ethics Board at Sunnybrook Health Sciences Centre, Toronto, Ontario, Canada.

RESULTS

Participants

Between April 1, 2010, and March 31, 2013, 4,628 young people aged 16–24 years presented to the ED with a psychotic disorder for the first time. After 1 individual was excluded because his/her date of death preceded the index ED visit (most likely a transcription error) and additional individuals were excluded for being ineligible for OHIP coverage (N=281) and having ED visits or hospitalizations for psychotic disorder within 5 years prior to the index visit (N=1,471), 2,875 participants were eligible for our cohort.

Care at ED Presentation

Table 1 displays characteristics of participants at incident ED visit for psychotic disorder. At first presentation, 2,063 (71.8%) were admitted to hospital and 812 (28.2%) were

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Table 2. Time to Aftercare Within 1 Year Following Discharge From First **Emergency Department Visit for Psychotic Disorder**

| | | | | | | -365 | No Visit of That | | |
|--|----------|------|-----------|------|------|------|-------------------|------|---|
| | 1–7 Days | | 8–30 Days | | Days | | Type Within 1 Yea | | |
| Type of Mental Health Care | n | % | n | % | n | % | n | % | |
| Any outpatient mental health care | 251 | 30.9 | 236 | 29.1 | 220 | 27.1 | 105 | 12.9 | _ |
| Outpatient PCP visit | 84 | 10.3 | 123 | 15.1 | 277 | 34.1 | 328 | 40.4 | |
| Outpatient psychiatrist visit | 191 | 23.5 | 175 | 21.6 | 234 | 28.8 | 212 | 26.1 | |
| ED visit | 108 | 13.3 | 74 | 9.1 | 234 | 28.8 | 396 | 48.8 | |
| Hospital admission | 105 | 12.9 | 59 | 7.3 | 170 | 20.9 | 478 | 58.9 | |
| Abbreviations: $ED = emergency department$, $PCP = primary care provider$. | | | | | | | | | |

Figure 1. Kaplan-Meier Plot for Outpatient Psychiatry Aftercare Within 1 Year of First Emergency Department Visit for Psychotic **Disorder**^a



^aCensored for deaths and inpatient admission within 1 year of discharge.

discharged to the community. Fewer than half of people in their first ED visit for psychotic disorder had received outpatient mental health care from a physician in the past year: approximately one-half had a mental health visit with a PCP, and one-third had a visit with a psychiatrist. Participants who had a mental health visit with a PCP (P=.001) or psychiatrist (P=.004) in the past year were more likely to be discharged home. Over one-third of participants had had a mental health-related ED visit in the past year; these participants were more likely to be discharged home (P=.010). Around onequarter of participants had a mental health visit with a PCP and slightly fewer had a visit with a psychiatrist in the past 60 days prior to incident ED presentation for psychotic disorder. None of the 60-day service use variables were associated with disposition from the ED.

Aftercare Following ED Presentation

Table 2 indicates time to the first episode of aftercare following the index ED visit among those who were discharged. Forty percent received no outpatient mental health follow-up within 30 days after the ED visit, and 55% did not see a psychiatrist within 30 days. The mean ± SD time to any outpatient physician mental health visit was 39.89 ± 72.0 days. The most common aftercare provider was a psychiatrist. Almost one-quarter of participants who were discharged returned to the ED within 30 days, and one-fifth had a psychiatric admission. By 1 year following the index ED visit, 12.9% had not received outpatient mental health care, more than half had returned to the ED, and over 40% had a psychiatric admission.

Factors Associated With Psychiatric Aftercare Following ED Presentation

Figure 1 displays the unadjusted Kaplan-Meier survival curve for outpatient psychiatric care, censored for death and inpatient admission, within 1 year of discharge for first ED presentation for psychotic disorder. Characteristics associated with receipt of 30-day and 1-year aftercare with a psychiatrist from the multivariate Cox regression model are shown in Table 3. Generally, younger participants (HR = 1.36; 95% CI, 1.08–1.72; P = .008) and participants in higher income quintiles (highest 20% vs lowest 20%, HR = 1.48; 95% CI, 1.05-2.09; P = .026) were more likely to receive psychiatric aftercare within 30 days. Rural residence decreased the likelihood of receiving 30-day psychiatric aftercare (HR = 0.46; 95% CI, 0.31-0.70; P < .001). Having seen a psychiatrist in the 1 year prior to the index ED visit increased the likelihood of 30-day psychiatric aftercare (HR = 1.89; 95% CI, 1.50-2.37; P < .001), whereas having had a psychiatric admission was associated with lower odds of psychiatric aftercare (HR = 0.71; 95% CI, 0.52–0.98; P = .038).

DISCUSSION

Among 2,875 Ontarians aged 16-24 presenting to the ED with a psychotic disorder for the first time between 2010 and 2013, over one-quarter were discharged to the community, and of those discharged, nearly half received no outpatient aftercare within 30 days and more than 1 in 10 still had not received care by 1 year. Barriers to receipt of timely psychiatric aftercare included low income, rural residence, and recent psychiatric admission, while being younger and connected to an outpatient psychiatrist increased the likelihood of outpatient psychiatric follow-up.

Discharge at first ED visit for psychotic disorder was related to variables that indicate longer duration of symptoms and contact with mental health care providers: schizophrenia and schizoaffective disorder compared with unspecified psychosis, and mental health visit with a PCP or psychiatrist and to

lt is illegal on any website. Table 3. Multivariate Cox Regression Models for Time to 30-Day and 1-Year Aftercare With Outpatient Psychiatry

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| | 30-[Out | Day After patient | ercare V Psychia | Vith atry | 1-Year Aftercare With Outpatient Psychiatry | | | | |
|---|-------------|---------------------------|---------------------|--------------|--|----------------------|------|-------|--|
| | 95% | | | | 95% | | | | |
| | Hazard | rd Confidence o Limits | | | Hazard | Confidence Limits | | Р | |
| | Ratio | | | Р | Ratio | | | | |
| Male | 0.93 | 0.74 | 1.17 | .542 | 1.03 | 0.86 | 1.24 | .745 | |
| Age 16–18 y (reference: 19–24 y) | 1.36 | 1.08 | 1.72 | .008 | 1.25 | 1.04 | 1.51 | .016 | |
| Income quintile | | | | | | | | | |
| 1 (lowest, reference) | 1.00 | | | | | | | | |
| 2 | 1.15 | 0.85 | 1.57 | .362 | 1.13 | 0.89 | 1.43 | .329 | |
| 3 | 1.38 | 1.01 | 1.89 | .044 | 1.39 | 1.09 | 1.77 | .009 | |
| 4 | 1.46 | 1.07 | 1.98 | .018 | 1.43 | 1.13 | 1.83 | .004 | |
| 5 (highest) | 1.48 | 1.05 | 2.09 | .026 | 1.41 | 1.07 | 1.84 | .013 | |
| Rural residence | 0.46 | 0.31 | 0.70 | <.001 | 0.54 | 0.40 | 0.72 | <.001 | |
| CTAS score 1–3 (reference: 4–5) | 1.03 | 0.78 | 1.37 | .828 | 1.07 | 0.85 | 1.33 | .574 | |
| Mental health care in the prior 1 year ^a | | | | | | | | | |
| Outpatient PCP visit | 1.01 | 0.82 | 1.26 | .906 | 1.13 | 0.95 | 1.34 | .170 | |
| Outpatient psychiatry visit | 1.89 | 1.50 | 2.37 | <.001 | 1.71 | 1.43 | 2.06 | <.001 | |
| Hospital admission | 0.71 | 0.52 | 0.98 | .038 | 0.93 | 0.73 | 1.19 | .561 | |
| ED visit | 0.88 | 0.69 | 1.12 | .300 | 0.86 | 0.71 | 1.05 | .137 | |

^aIndicates proportion who had at least 1 mental health or addictions-related encounter.

Abbreviations: CTAS = Canadian Triage and Acuity Scale, ED = emergency department, PCP = primary care provider.

the ED in the past year but not in the past 60 days. Previous research has found that clinicians' perception of their patients' level of support in the community is an important factor in their admission decisions.²⁰ Given that inpatient psychiatric admissions are an expensive and limited resource, decisionmaking specific to young people with psychotic disorders is an important area for future research.

Rates of aftercare following first ED presentation for psychotic disorder in our cohort were similar to reported rates of 30-day aftercare following ED visits for other mental health presentations in young people, including self-harm²¹ and mood disorders.²² In contrast to our findings, a study specifically examining adolescents aged 13-17 presenting to the ED with psychotic disorder found that most received physician follow-up within 90 days, closer to our identified rates of follow-up at 1 year.¹³ This discrepancy may be explained by the age of each cohort: we found that young people aged 16-18 were more likely to receive psychiatric aftercare than those aged 19-24. This is consistent with other studies of psychiatric aftercare, in which psychotic disorder diagnosis appears to decrease time to psychiatric follow-up in children⁹ but not adults,²³ as well as general findings that rates of mental health service use drop off significantly at age 18.14 This may reflect differences in services and difficulties with transfer of care between the children's and adult mental health systems (typically at age 18) and a more prominent role for family members in facilitating aftercare for adolescents than for young adults.^{14,24}

Recent (1-year) contact with an outpatient psychiatrist appeared to increase likelihood of ED aftercare, consistent with studies of psychiatric aftercare post-ED for other disorders²¹ and for psychotic disorder.⁷ However, we also found that most young people presenting to the ED with a psychotic disorder for the first time had not received outpatient psychiatric care in the past year, suggesting that EDs cannot rely solely upon existing patient-provider relationships to link patients with follow-up care. PCPs can play a critical role in identification and management of psychotic disorders through formal partnerships with mental health professionals.^{25,26} Mental health services provided by case managers and psychiatrists within EPI programs can provide more specialized care, and in a recent survey, most EPI programs in Canada claimed to already receive a large proportion of their referrals from EDs.²⁷ This suggests the need to expedite access to EPI programs from EDs to connect young people who have presented with psychotic disorders with rapid, specialty follow-up. We were unable to detect whether those young people who did not receive aftercare were from catchment areas served by EPI programs; more research is needed to identify barriers to outpatient mental health care for young people with psychotic disorders in both the presence and absence of local EPI programs.

Likelihood of psychiatric aftercare was also increased in young people from high-income neighborhoods compared with the lowest income neighborhoods and in urban compared with rural dwellers, consistent with previous studies of follow-up for psychosis⁷ and other disorders in young people.^{10,21} Urban-rural disparities in access to follow-up mental health care have been well documented in Ontario,²⁸ as have income disparities, despite a health care system providing universal coverage.²⁹

Having a psychiatric admission in the past year was associated with lower likelihood of 30-day psychiatric aftercare post-index ED visit for psychotic disorder, a troubling finding given that previous psychiatric admissions may be a risk factor for relapse in first-episode psychosis.³⁰ This may be explained by a lack of outpatient psychiatric resources for young people with psychotic disorders that leads both to increased risk for psychiatric admission and to

It is illegal to post this cop poorer outpatient aftercare post-crisis. This would, however, be somewhat inconsistent with previous research in Ontario showing that areas with fewer full-time psychiatrists per capita also have lower psychiatric admission rates for schizophrenia.³¹ Another potential explanation is that young people recently discharged from psychiatric admissions may be receiving referrals to outpatient psychiatric aftercare but not attending appointments, which would be consistent with previous research indicating that those who are more psychiatrically unwell may be less likely to attend follow-up appointments.³² This finding points to a need for more research into barriers to mental health service utilization and solutions to facilitate aftercare in this population.

We found that more than 50% of young people discharged from their first ED visit for psychotic disorder presented to the ED again within 1 year, and more than 40% had a psychiatric admission. This further supports the need for outpatient follow-up of young people with psychotic disorders who present in crisis to the ED. While aftercare does not necessarily prevent revisits,^{23,33,34} the continued use of acute services by our cohort suggests that they have significant ongoing mental health service needs. Youth walk-in models that provide rapid access to specialty mental health care may present an alternative to the ED for this population.³⁵

Our study has several potential limitations. We relied on administrative data, and we could not ensure diagnostic accuracy by providers in the ED and other settings. However, diagnosis of psychotic disorder in Ontario's hospitalization and physician service claims has been validated in chart review, and we specifically limited our cohort to these validated diagnoses.¹⁸ We were not able

ghted PDF on any website. to examine outpatient visits with nonphysician providers. While nonphysicians play an important role in outpatient EPI services, as follow-up to an urgent first presentation for psychotic disorder to the ED, psychiatric aftercare is likely warranted and is advocated by current guidelines.⁸ In examining care with outpatient PCPs, we specifically limited our focus to mental health-related visits. This approach risks missing visits coded for general health in which mental health care was provided; other population-based studies have examined all PCP visits for this reason,⁷ but we wanted to ensure that follow-up care was specific to the psychotic disorder-related crisis as a way to measure transfers of care between the ED and outpatient providers. While we examined a range of predictor variables, we were not able to explore the influence of racial/ethnic factors that have been shown to affect psychiatric aftercare in previous studies,⁹ as well as important clinical variables such as drug treatment, illness severity (other than prior hospitalizations as a proxy), or family supports. Lastly, we were only able to examine aftercare visits, but not referral rates; it is possible that participants were referred to outpatient follow-up in a timely manner but did not attend their scheduled appointments. Both service accessibility and individual-level factors such as stigma most likely act as barriers to follow-up for young people with psychotic disorders.³⁶

Despite a broad mandate for EPI services in Ontario, 2 out of 5 young people with psychotic disorders with symptoms severe enough to present to the ED are not receiving adequate outpatient mental health care. Efforts to ensure better access to appropriate and timely services so critical to long-term outcomes in this population, particularly for young adults over age 18, those living in rural areas, and those living in lower income neighborhoods, are warranted.

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