

ED Waits Literature Review - Preliminary

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ACT 80 Working Meeting
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Methodology

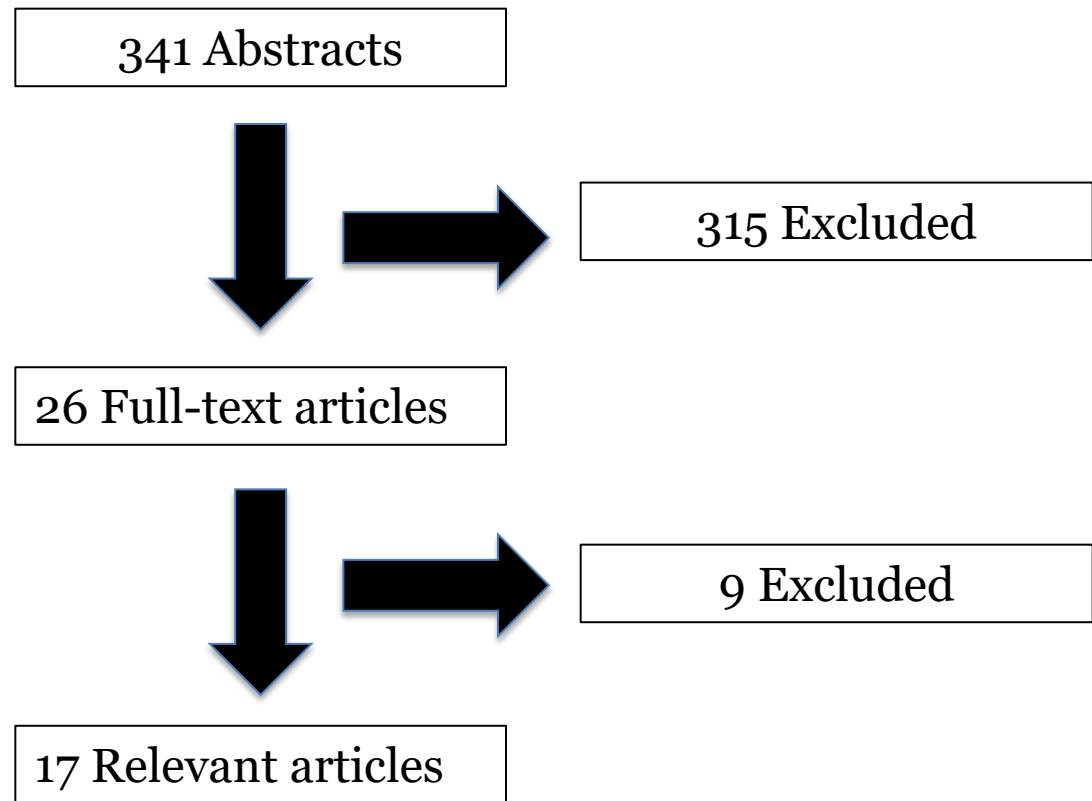
Conducted comprehensive PubMed search to identify articles that

- 1) Identified and/or quantified prolonged ED wait times for psychiatric patients; and/or
- 2) Studied causes, effects or solutions to prolonged ED waits for psychiatric patients;
- 3) Described data collection and analysis methodology;
- 4) Occurred in general ED setting

Identified a broad set of PubMed (MEDLINE) search terms to encompass inclusion criteria:

- 1) Emergency, emergency department, ED, ER
- 2) Psychiatric, mental health, behavioral health, mental illness
- 3) Waiting, boarding, crowding, prolonged, length of stay

Literature Selection Process



How Quality of Study Assessed– High to Low

1. Prospective studies that studied clearly defined outcome measure with a random or consecutive sample that was large enough to achieve narrow confidence intervals and diverse enough to suggest generalizability of the findings
2. Prospective studies more limited in terms of sample size or generalizability
3. Retrospective studies that were large enough to achieve narrow confidence intervals and diverse enough to suggest generalizability of the findings
4. Sampled by convenience or other techniques that were prone to introduce bias
5. Lacked clearly defined or validated outcome measure

Assessment of Study Quality

vermont
psychiatric
survivors

Prospective 1	Prospective 2	Retrospective 3	Sampled by Convenience 4
3	1	12	1

Literature Themes

- Disparities between ED psychiatric and non-psychiatric patients
- Factors or predictors of ED waiting for psychiatric patients
- Solutions to ED waiting for psychiatric patients

Literature Definitions

- **Psychiatric visit:**
three recorded ICD 9th Rev (ICD-9) diagnostic codes indicative of substance use or primary psychiatric diagnosis
- **Non-psychiatric visit (aka “medical”):**
all others
- **Disposition:**
 - discharge;
 - admission to medical or psychiatric bed;
 - transfer to any acute facility

Definitions (cont'd)

- **Length of Stay:**

Time of arrival to the ED to disposition

- > 6 hours
- > 12 hours
- > 24 hours

What is NHAMCS Data

National Hospital Ambulatory Medical Care Survey is conducted by the Centers for Disease Control and Prevention and collects data on the use and delivery of ambulatory care services in a variety of settings, excluding federal hospitals. Using a four-stage probability procedure, NHMAMCS derives unbiased national estimates based on sampling visits to hospital emergency and outpatient departments.

NHAMCS Data Reviewed

- 2001 – 2011
- 65 million psychiatric visits
- Psychiatric visits, ~ 6% of all ED visits

NHAMCS Data Collected

- Age
- Sex
- Race/ethnicity
- Urgency of initial triage based on patient acuity
- Insurance status
- Hospital characteristics, including geographic region (Northeast, Midwest, South, and West)
- Urban or rural

Psychiatric Dx in ED, by prevalence

- Alcohol-related disorders
- Anxiety disorders
- Suicide or intentional self-harm

[Zhu JM](#), [Singhal A](#), [Hsia RY](#) . **Emergency Department Length-Of-Stay For Psychiatric Visits Was Significantly Longer Than For Nonpsychiatric Visits, 2002-11**, [Health Aff \(Millwood\)](#). 2016 Sep 1;35(9):1698-706. doi: 10.1377/hlthaff.2016.0344.

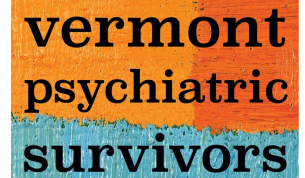
NHAMCS Data Results

- Larger percentage of psychiatric visits, uninsured (22% vs. 15%)
- Larger percentage of psychiatric patients were seen in the same ED within prior 72 hours (4.6% vs. 3.6%)
- Larger proportion of patients presenting for psychiatric issues compared to non-psychiatric issues required admission (21% vs. 13.5%)

NHAMCS Data Results (cont'd)

- Larger proportion of patients presenting for psychiatric issues compared to non-psychiatric issues required transfer (11% vs. 1.4%)
- For all dispositions, more psychiatric patients (23%) compared to non-psychiatric patients (10%) had LOS >6 hours
- 7% had LOS >12 hours (2.3% non-psychiatric)
- 1.3% had LOS >24 hours (.5% non-psychiatric)

2011 90-Percentile LOS compared

The logo for Vermont Psychiatric Survivors features the text "vermont psychiatric survivors" in a lowercase, sans-serif font. The text is arranged in three lines: "vermont" on the top line, "psychiatric" on the middle line, and "survivors" on the bottom line. The background of the logo is a textured, painterly style with orange and blue colors.

	Psychiatric	Non-Psychiatric	Difference
Admitted			
Observation	23 hours	9 hours	14 hours
Transferred	12 hours	6 hours	6 hours
Discharged	8 hours	6 hours	2 hours

Ninetieth-percentile LOS for psychiatric patients who were discharged, transferred, or admitted for observation were significantly longer than those for non-psychiatric patients with the same dispositions

[Zhu JM, Singhal A, Hsia RY](#). **Emergency Department Length-Of-Stay For Psychiatric Visits Was Significantly Longer Than For Nonpsychiatric Visits, 2002-11, *Health Aff (Millwood)***. 2016 Sep 1;35(9):1698-706. doi: 10.1377/hlthaff.2016.0344.

NHAMCS Data Analysis - Conclusions

ED psychiatric patients are admitted and transferred more frequently compared to non-psychiatric patients and experience significant disparities in Length of Stay (LOS)

Characteristics of Prolonged LOS

- Medicaid/Uninsured 2x more likely to remain in ED for > 24 hours compared to privately insured
- Suicidal Ideation/Homicidal Ideation
- Children <18
- Adults > 65
- Diagnoses: cognitive disorder; personality disorder
- Use of restraints or sitters; history of aggressive behavior
- Experiencing homelessness

ED Pediatric Psychiatric Patient Disparities

- More likely to be admitted (16.4% v. 7.6%)
- More likely to be transferred (15.7% v. 1.5%)
- Median Length of Stay (169 min vs. 108 min)
- Odds >4 hour LOS, almost twice as likely for ED Pediatric Psychiatric Patients

Characteristics of Prolonged LOS - Pediatric

- Intentional self-injury
- Six to 13 years of age
- Live in the Northeast, South, metropolitan area
- Use of lab studies
- Diagnoses: autism; developmental and intellectual disabilities
- Weekend
- Months without school vacation

Solutions in the Literature

- Quantify and monitor prolonged waits
- Improve ED care for psychiatric patients
- Make more efficient use of existing capacity (e.g., computerized bed management system)
- Collaborate between emergency rooms and community outpatient alternatives
- Work with law enforcement to divert patients away from ED
- Invest in comprehensive community crisis services
- Invest in continuity of care

Contact Information

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