Maryland
Hospital Association

# Behavioral Health Patient Delays in Emergency Departments

## *Results from the Maryland Hospital Association Behavioral Health Data Collection*

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# Behavioral Health Emergency Department Delays in Maryland

## *Results from the Maryland Hospital Association Behavioral Health Capacity Study*

The Maryland Hospital Association contracted with Wilder Research to conduct a study of behavioral health emergency department (ED) delays with 29 hospitals across Maryland. Discharge or transfer delays are defined as when a patient remains in the emergency department longer than four hours from when a decision is made about where they should go (i.e., a disposition decision). This study presents the number and rate of behavioral health discharge or transfer delays, the number of hours or days the patient remained in the emergency department and the reasons for delays. This summary includes data collected from April 15, 2019 through May 31, 2019.

Rates of

## Emergency Department Delays

**2,009 patients** or **42 percent of behavioral health patients** experienced a discharge or transfer delay during the study.

Collectively, these patients were delayed for **1,676 days,** with an average of **20 hours** per patient. (Median=11 hours)

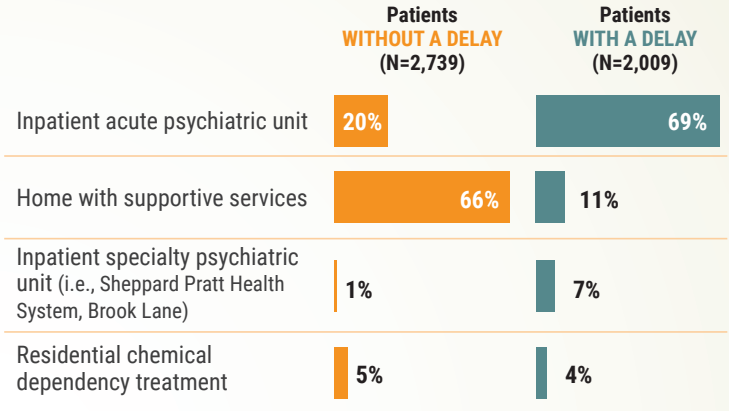
**These delays account for**

**48%** of the time behavioral health patients spent in the ED.

**Patients under age 18** tended to have delays **2x as long** (median=18 hours) as those **age 18 and over** (median=9 hours). **This difference is statistically significant.**

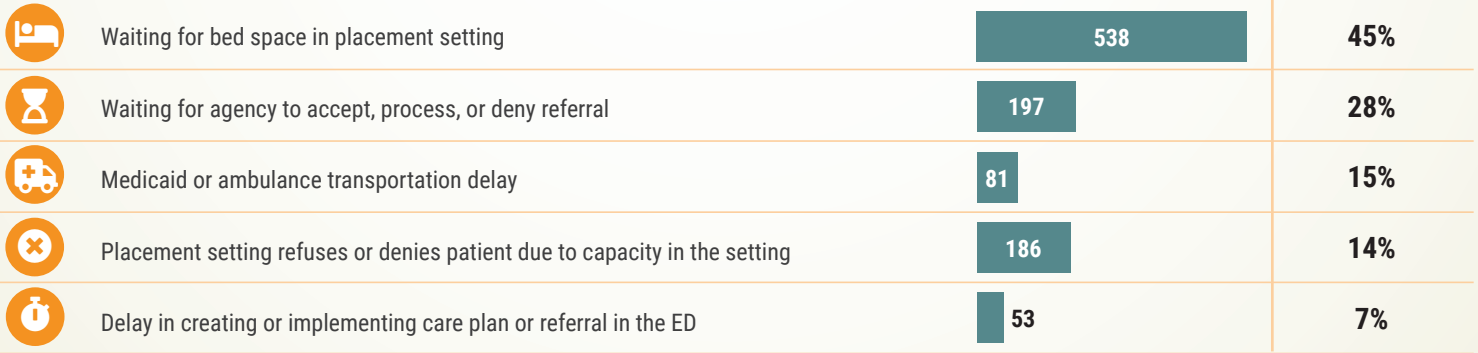
Hospital's most frequently recommended

## Post-discharge setting




## Top Reasons for Emergency Department Delays

*Note: Patients may have more than one reason for a delay during their emergency department stay, but each delay hour is only associated with one reason at a time.*



## Participating hospitals

Adventist Healthcare—Shady Grove Medical Center
Anne Arundel Medical Center
Carroll Hospital Center
Frederick Regional Health System
Garrett Regional Medical Center
Greater Baltimore Medical Center
Holy Cross Silver Spring
Holy Cross Germantown
Howard County General Hospital
Johns Hopkins Bayview Medical Center
MedStar Franklin Square Medical Center
MedStar Good Samaritan Hospital
Medstar Montgomery Medical Center
MedStar Southern Maryland Hospital Center
MedStar St. Mary's Hospital
MedStar Union Memorial Hospital
Mercy Medical Center
Meritus Medical Center
Northwest Hospital
Peninsula Regional Medical Center
Saint Agnes Healthcare
Sinai Hospital of Baltimore
Suburban Hospital
The Johns Hopkins Hospital (Adults and Children's Center)
University of Maryland Baltimore Washington Medical Center
University of Maryland Medical Center
University of Maryland Medical Center Midtown Campus
University of Maryland Prince George's Hospital Center
University of Maryland St. Joseph Medical Center

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Maryland Hospital Association

See the full report *Behavioral Health Patient Delays in Emergency Departments: Results from the Maryland Hospital Association Mental and Behavioral Health Data Collection* for more information.

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# Background

## Study purpose

With Maryland's hospitals on the front line of the behavioral health crisis, and often the providers of last resort for people having no place else to turn, it is essential to ensure an adequate supply and distribution of providers throughout the care system. In 2018, the Maryland Hospital Association conducted a study to examine the prevalence of and reasons associated with delays in inpatient care for behavioral health patients. In that study, about three-quarters of patients (72%) were admitted from an emergency department. Delays can happen in both the inpatient and emergency department care. These delays inhibit the optimal provision of care and may cause stress for patients, their families, and providers. In addition, hospital-based care is more expensive than most community-based care.

To address this issue, Wilder Research conducted a study to determine reasons for delays in the discharge or transfer of behavioral health patients in emergency departments, including alternative settings for patients if they were available. This study, conducted at the request of the Maryland Hospital Association, can inform policy and practice within the behavioral health infrastructure in Maryland.

## Study description

Wilder Research collected data from 29 participating hospitals throughout Maryland to determine reasons for delays in emergency department discharge or transfer for behavioral health patients. Hospitals were able to define which patients they identified as behavioral health patients for this study. In most cases, these patients had either a primary or secondary behavioral health diagnoses. Discharge or transfer delays are defined as when a patient remains in the emergency department longer than four hours after a decision is made about where they should go (i.e., a disposition decision). This definition aligns with the Joint Commission patient flow standards (Standard LD.04.03.11), which identified a goal for moving patients out of the emergency department within four hours of making the decision to admit or transfer the patient in the interest of patient safety and quality of care.[1] Stays longer than this four-hour timeframe are commonly considered "boarding" in the emergency department.

[1] The Joint Commission. (2013). The "patient flow standard" and the 4-hour recommendation. *Joint Commission Perspectives 33*(6). Retrieved from https://www.jointcommission.org/assets/1/18/S1-JCP-06-13.pdf

All hospitals used an online tool to enter data about patients experiencing discharge or transfer delays. All patients were identified by a random identification number exclusively used for the study to protect their confidentiality. This report reflects results for the 45-day data collection period, from April 15 through May 31, 2019. See appendix A3 for more details about the study design.

# Discharge or transfer delays

## Rate of delays

Across the 29 hospitals' emergency departments, 4,748 behavioral health patients were treated in the 45-day study period. Of those, 2,009 patients, or 42%, experienced a discharge or transfer delay, meaning they were still in the emergency department four hours after a disposition decision had been made. Collectively, these patients were delayed for 40,211 hours (1,676 days), with an average of 20 hours per delay patient (median=11 hours). These delays accounted for 48% of the time behavioral health patients spent in the emergency department. On average, patients with a delay spent about four times as long in the emergency department (average=31 hours) as those without a delay (average=8 hours).

In order to estimate the full impact of these findings across the Maryland hospital system, we extrapolated the data to a full year of behavioral health emergency department patients throughout the state. In 2017, Maryland Hospital Association records included 474,361 behavioral health emergency department patients across the state. If the rate of discharge or transfer delays found in this study was extrapolated to all behavioral health patients based on 2017 numbers, approximately 199,232 patients would experience delays. Using the average delay of 20 hours found in this study, this results in a total of 166,026 days of emergency department care that could, instead, be in an alternative setting. These estimates should be interpreted with caution since the study looked at a 45-day snapshot of emergency department visits and may not represent the full year's rate of delays.

## Reasons for delays

The study asked hospitals to identify the reasons for a discharge or transfer delay from a list of 20 possible reasons (Figure 1). The detailed definitions of these reasons can be found in appendix A1. It should be noted that 19% of patients with a discharge delay did not have an identified reason for the delay. Therefore, there were 336 days of delay (21%) that were not attributed to a specific reason and likely represent a combination of reasons.

Of the reasons identified, the most common were delays within placement settings. The single reason that affected the most patients was the lack of bed space in a placement setting (45%). This reason accounted for 538 delay days, which is over 40% of all delay days. The most common setting this reason applied to was inpatient psychiatric units (84%), followed by inpatient specialty psychiatric units (11%).

In addition, over one-quarter of patients (28%) experienced a delay due to waiting for a placement setting to accept, process, or deny a referral, which accounted for 197 delay days.

This reason most commonly applied to inpatient psychiatric units (88%), followed by specialty psychiatric units (6%).

The other reason associated with a high number of delay days was the placement setting denying patient due to capacity, which accounted for 186 days of delay. Similar to the other reasons listed here, a lack of capacity was most common for inpatient psychiatric units (87%) and specialty psychiatric units (11%).

Although affecting only 6% of delay days, ambulance or Medicaid transportation delays affected 15% of patients. Other reasons were less common, but still important for the patients experiencing them, particularly when they result in delays up to days at a time.

## 1. Reasons for discharge or transfer delays

| Delays within placement settings | Percentage of patients (N=1,630)[a] | Number of delay days (N=1,254)[a] | Percentage of delay days (N=1,254)[a] |
|---|---|---|---|
| Waiting for bed space in placement setting | 45% | 538 | 43% |
| Waiting for agency to accept, process, or deny referral | 28% | 197 | 16% |
| Placement setting refuses or denies patient due to capacity in the setting | 14% | 186 | 15% |
| Placement setting refuses or denies patient due to patient characteristics | 4% | 65 | 5% |
| Off hours (nights/weekends) when coordination not available in placement setting or outpatient services | 2% | 14 | 1% |
| Lack of access to outpatient services necessary for patient to return home | 1% | 13 | 1% |
| Lack of housing/housing instability | 1% | 4 | <1% |
| Patient's residential facility refuses to take them back | <1% | 10 | 1% |
| **Delays due to authorization or government systems** | | | |
| Medicaid or ambulance transportation delay | 15% | 81 | 6% |
| Awaiting insurance or financial benefit activation or coverage | 2% | 9 | 1% |
| Awaiting guardianship decisions or execution | 1% | 18 | 1% |
| Insurance denies authorization for placement | <1% | 6 | <1% |
| Waiting for CSA outside county of responsibility to identify and make referral | <1% | 2 | <1% |
| Waiting for Core Service Agency (CSA) inside county of responsibility to identify and make referral | <1% | 1 | <1% |
| **Internal hospital delays** | | | |
| Delay in creating or implementing care plan or referral in the ED | 7% | 53 | 4% |
| Off hours (nights/weekends) when coordination not available in the ED | 4% | 22 | 2% |

Note. A patient can only have one reason per delay hour, but a patient can have different reasons attached to different delay hours during their emergency department stay. Thus, patients can have more than one reason for delays and the total exceeds 100%. The total number of days per reason may not add up to the total number of delay days due to rounding.

[a] There were 379 patients that met the definition of a discharge or transfer delay (they were in the ED more than four hours after a disposition decision), but staff did not identify a reason for the delay, so they and their 336 delay days are not included in this figure.

### 1. Reasons for discharge or transfer delays (continued)

| Patient or family delays | Percentage of patients (N=1,630)[a] | Number of delay days (N=1,254)[a] | Percentage of delay days (N=1,254)[a] |
|---|---|---|---|
| Personal transportation delays or family inability to pick patient up | 3% | 12 | 1% |
| Patient non-adherence to plan of care/refusal of placement | 2% | 10 | 1% |
| Family refusal to pick patient up or execute plan of care | 1% | 13 | 1% |
| Delay due to patient legal involvement, including civil commitment or law enforcement | <1% | 1 | <1% |

Note. A patient can only have one reason per delay hour, but a patient can have different reasons attached to different delay hours during their emergency department stay. Thus, patients can have more than one reason for delays and the total exceeds 100%. The total number of days per reason may not add up to the total number of delay days due to rounding.

[a] There were 379 patients that met the definition of a discharge or transfer delay (they were in the ED more than four hours after a disposition decision), but staff did not identify a reason for the delay, so they and their 336 delay days are not included in this figure.

## Placement settings associated with discharge delays

Emergency department staff were asked to identify the recommended placement setting for the patient, meaning the place to which they would discharge or transfer the patient if space or supports were available. It should be noted that this is the recommended placement setting when the disposition decision is made and it could change during a patient's stay.

### *Staff recommended placement settings*

There were some notable differences in the recommended placement settings for patients, based on whether or not they experienced a discharge or transfer delay. The most common setting was an inpatient psychiatric unit for patients with a discharge or transfer delay (69%) and home with support services (66%) for those without a delay (Figure 2). Overall, these two settings combined were the recommended settings for 84% of patients in the study.

### 2. Staff recommended placement settings

| | Total patients (4,748) | Patients without a delay (N=2,739) | Patients with a delay (N=2,009) |
|---|---|---|---|
| Home with supportive services | 43% | 66% | 11% |
| Inpatient acute psychiatric unit | 41% | 20% | 69% |
| Residential chemical dependency treatment | 5% | 5% | 4% |
| Inpatient specialty psychiatric unit (i.e., Sheppard Pratt Health System, Brook Lane) | 4% | 1% | 7% |
| Inpatient acute medical hospital unit | 2% | 2% | 2% |
| Crisis residential program/crisis bed | 2% | 1% | 2% |

## 2. Staff recommended placement settings (continued)

| | Total patients (4,748) | Patients without a delay (N=2,739) | Patients with a delay (N=2,009) |
|---|---|---|---|
| Group home with services | 1% | 1% | 1% |
| Supported housing program (mental health) | 1% | 1% | 1% |
| Other residential facility | 1% | 1% | 1% |
| Residential Rehabilitation Program (RRP) | 1% | 1% | <1% |
| Assisted living facility (ALF) | <1% | <1% | 1% |
| Skilled nursing facility (SNF) or nursing home | <1% | <1% | <1% |
| Child or adult foster care | <1% | <1% | <1% |
| State psychiatric hospital (i.e., Spring Grove Hospital Center, Springfield Hospital Center, Clifton T. Perkins) | <1% | <1% | <1% |
| Child/adolescent residential treatment center in Maryland | <1% | <1% | <1% |
| Child/adolescent residential treatment center outside of Maryland | <1% | 0% | <1% |
| State chronic hospital (i.e., Deer's Head Hospital Center and Western Maryland Hospital Center) | 0% | 0% | 0% |

### *Support services needed for discharge home*

Given the need or desire for many patients to be discharged home, the support services most needed to allow for this included individual therapy (72%), medication management (49%), and outpatient chemical dependency treatment (14%; Figure 3). The supports needed for discharge home were similar for patients with and without a delay, though those with a delay were slightly more likely to need medication management, outpatient chemical dependency treatment, and a psychiatric rehabilitation program.

## 3. Specific support services needed for release home

| | Percentage of patients with home as recommended placement setting | | |
|---|---|---|---|
| | Total patients (4,748) | Patients without a delay (N=1,781) | Patients with a delay (N=223) |
| Individual therapy | 72% | 72% | 73% |
| Medication management with psychiatrist/psychiatric nurse practitioner | 49% | 48% | 57% |
| Outpatient chemical dependency treatment | 14% | 13% | 23% |
| Intensive outpatient (including partial hospitalization and day hospital) | 11% | 11% | 10% |
| ACT services | 4% | 4% | 3% |
| Psychiatric rehabilitation program (PRP) | 3% | 3% | 6% |
| Family support services (e.g., in-home caregivers or respite care) | 3% | 3% | 3% |
| Other supports needed in order to discharge home | 6% | 6% | 7% |

Note. Patients could have multiple needed supports for home, so total percentage exceeds 100.

### *Discharge settings*

Overall, 87% of patients were either discharged home or to an inpatient unit (Figure 4). Two-thirds of patients with a delay (67%) were transferred to an inpatient psychiatric unit, while two-thirds of patients without a delay (69%) were discharged home. The proportion of patients discharged to other locations was consistent between those with and without a delay, with the exception of an inpatient specialty psychiatric unit. Five percent of those with a delay ended up in a specialty psychiatric unit, while 1% of those without a delay ended up there.

## 4. Discharge location

| | Total patients (4,748) | Patients without a delay (N=2,739) | Patients with a delay (N=2,009) |
|---|---|---|---|
| Home with supportive services | 47% | 69% | 17% |
| Inpatient acute psychiatric unit | 40% | 20% | 67% |
| Inpatient specialty psychiatric unit (i.e., Sheppard Pratt Health System, Brook Lane) | 3% | 1% | 5% |
| Inpatient acute medical hospital unit | 3% | 2% | 3% |
| Residential chemical dependency treatment | 2% | 2% | 3% |
| Skilled nursing facility (SNF) or nursing home | <1% | <1% | <1% |
| Group home with services | 1% | 1% | 1% |
| Crisis residential program/crisis bed | 1% | 1% | 1% |
| Homeless/shelter | 1% | 1% | <1% |
| Corrections/jail | <1% | 1% | <1% |
| Assisted living facility (ALF) | <1% | <1% | <1% |
| Residential Rehabilitation Program (RRP) | <1% | <1% | <1% |
| Child/adolescent residential treatment center in Maryland | <1% | <1% | <1% |
| Child or adult foster care | <1% | <1% | <1% |
| State chronic hospital (i.e., Deer's Head Hospital Center and Western Maryland Hospital Center) | <1% | <1% | <1% |
| Supported housing program (mental health) | <1% | <1% | <1% |
| Other residential facility | <1% | <1% | <1% |
| Other | <1% | <1% | <1% |
| State psychiatric hospital (i.e., Spring Grove Hospital Center, Springfield Hospital Center, Clifton T. Perkins) | <1% | 0% | <1% |
| Child/adolescent residential treatment center outside of Maryland | 0% | 0% | 0% |

Most discharged patients (83%) were discharged to the staff recommended placement setting identified by staff (Figure 5). In particular, over 90% of patients who staff felt should go home or to an inpatient psychiatric unit ended up in that setting. Patients without a delay were slightly more likely to be discharged to the recommended setting (88%) compared to those with a delay (81%). The recommended placement settings in which the smallest proportions of patients ended up there were: supported housing (11%), Residential Rehabilitation Program (25%), residential chemical dependency treatment (38%), and crisis residential program (43%). This means that patients with these recommended settings tended to end up in other settings. In addition, those with a delay were less likely to end up in their recommended group home setting and more likely to end up in their recommended assisted living facility, compared to those without a delay. It should be noted that for both groups, patients who did not go to their recommended placement setting were most likely to instead go home with support services.

### 5. Patients discharged to staff recommended placement setting

| | Total number of patients with this as their recommended placement setting | Percentage of patients with this setting as both their staff recommended placement setting and discharge setting | | |
|---|---|---|---|---|
| | | Total patients | Patients without a delay | Patients with a delay |
| Home with supportive services | 2,016 | 95% | 97% | 86% |
| Inpatient acute psychiatric unit | 1,936 | 91% | 92% | 90% |
| Inpatient acute medical hospital unit | 97 | 75% | 81% | 65% |
| Group home with services | 47 | 68% | 77% | 42% |
| Inpatient specialty psychiatric unit (i.e., Sheppard Pratt Health System, Brook Lane) | 176 | 50% | 41% | 52% |
| Crisis residential program/crisis bed | 70 | 43% | 30% | 38% |
| Assisted living facility (ALF) | 21 | 38% | 27% | 50% |
| Residential chemical dependency treatment | 232 | 38% | 33% | 45% |
| Residential Rehabilitation Program (RRP) | 28 | 25% | 25% | N/A |
| Supported housing program (mental health) | 35 | 11% | 11% | 12% |
| **Overall patients discharged to recommended placement setting** | 4,748 | 83% | 88% | 81% |

Note. Recommended placement settings with fewer than 10 patients are suppressed.

# Patient characteristics

Over half of behavioral health patients arrived in the emergency department by their family or themselves (55%), while about one-third arrived by law enforcement (31%; Figure 6). Of those who were brought in by law enforcement, 94% were brought in under an emergency petition. About half of patients (52%) had been seen before in the hospital's emergency department in the past year. It should be noted that patients may also have visited other emergency departments in the past year as well, so this may underestimate the frequency of repeat patients.

### 6. Characteristics of patient emergency department visit

| Arrived by… | Total patients (4,748) | Percentage of patients without a delay (N=2,739) | Percentage of patients with a delay (N=2,009) | Median number of delay hours (N=1,676) |
|---|---|---|---|---|
| Family or self | 55% | 57% | 52% | 11 hours |
| Law enforcement | 31% | 31% | 32% | 11 hours |
| Patient brought in under emergency petition (only applies to those brought in by law enforcement) | 94% (N=1,480) | 94% (N=843) | 94% (N=637) | 11 hours |
| Other[a] | 13% | 12% | 16% | 12 hours |
| **Patient seen in hospital's ED in the past year** | 52% | 52% | 52% | 11 hours |

Note. Statistical significance was tested using independent-samples median analysis and statistically significant differences in median delay days are identified as *p<.05, **p<.01, ***p<.001. No results in this table are statistically significant.

[a] Other includes arriving by a first responder or ambulance, transfer from another ED, through crisis services or a clinician, or from school or residential program.

Nearly all patients with discharge delays were Maryland residents (97%) (Figure 7). In addition, two-thirds were insured by public insurance (66%), while 26% had private insurance, and 9% were uninsured. Over three-quarters (78%) were age 18 or over, while 22% were under age 18. However, patients under age 18 tended to have delays twice as long (median=18 hours) as those age 18 and over (median=9 hours). This difference is statistically significant.

## 7. Demographic characteristics of patients

| Patient residence | Total patients (4,748) | Percentage of patients without a delay (N=2,739) | Percentage of patients with a delay (N=2,009) | Median delay hours (N=1,676) |
|---|---|---|---|---|
| Maryland resident | 97% | 97% | 97% | 11 hours |
| Resident of another state | 3% | 3% | 3% | 9 hours |
| **Patient insurance coverage** | | | | |
| Public insurance | 65% | 65% | 66% | 11 hours |
| Private insurance | 26% | 25% | 26% | 12 hours |
| Uninsured | 9% | 10% | 9% | 9 hours |
| **Patient age range** | | | | |
| Under age 18 | 23% | 23% | 22% | 18 hours*** |
| Age 18 or older | 78% | 77% | 78% | 9 hours*** |

Note. Statistical significance was tested using independent-samples median analysis and statistically significant differences in median delay days are identified as *p<.05, **p<.01, ***p<.001.

# Patient characteristics associated with discharge delays

As a result of hospital staff feedback during the design phase of the study, the tool asked whether specific patient characteristics were associated with discharge or transfer delays. Multiple characteristics could be selected for each patient. Three-quarters of patients and 47% of delay days were not associated with a specific patient characteristic (Figure 8). However, 14% of patients and over one-quarter of delay days (27%) were due in part to a patient's age. In addition, 8% of patients and 15% of delay days were associated with patients' behavioral issues or dysregulation. Other factors affected a smaller number of patients and contributed to between 1 and 10% of delay days, but they are still important to consider when identifying barriers to discharge.

### 8. Patient characteristics associated with discharge delays

| | Percentage of patients (N=2,009) | Number of delay days (N=1,253) | Percentage of delay days (N=1,253) |
|---|---|---|---|
| Patient age (e.g., youth or geriatric) | 14% | 341 | 27% |
| Behavioral issues or dysregulation (e.g., violence, fire starting, self-harm, sexually inappropriate behavior) | 8% | 190 | 15% |
| Substance use (including addiction and medication assisted treatment) | 8% | 79 | 6% |
| Developmental disability or autism | 3% | 125 | 10% |
| Dementia | 2% | 54 | 4% |
| Significant medical comorbidity | 2% | 26 | 2% |
| Traumatic brain injury | <1% | 12 | 1% |
| Physical disability | <1% | 3 | <1% |
| None of these characteristics are contributing to this delay | 75% | 586 | 47% |

Note. A patient may have more than one characteristic contributing to their delay, so the total exceeds 100%.

# Implications

This 45-day study with 29 hospitals has documented a large number of discharge delays in emergency department behavioral health care. Many patients spend time in emergency departments after they could be safely discharged to an alternative setting because of shortages in these alternative settings. The striking results of the study have at least the following implications:

- The most common patient characteristic associated with delays was age, and patients under age 18 tended to have longer delays than patients age 18 and over. There is a clear need for additional resources to help move younger patients out of the emergency room and into alternative care settings more quickly.
- Three of the top four most common reasons for discharge delays were associated with placement setting barriers, including denying admission, taking too long to process referrals, or lacking bed space. These reasons alone accounted for over half of the delay days in the study.
  - These placement setting delays were commonly for inpatient psychiatric units, and over two-thirds of patients with delays were referred to and ultimately ended up in an inpatient psychiatric unit. The 2018 Maryland Hospital Association study identified reasons for discharge delays in inpatient psychiatric units. Acting on the reasons and recommendations from the inpatient study will likely free up bed space in inpatient psychiatric units, which will allow for more rapid placement from the emergency department.
  - Similar to the work done on the inpatient study, future work could explore agency-level barriers in other settings, such as gathering information on the underlying issues and discussing potential solutions.
- Transportation delays emerged as another common reason for delays, though they accounted for fewer delay days than the other most common reasons. This is a challenge that could be addressed without needing to build additional beds in the mental health system.
- For many patients with and without discharge delays, going home with support services is both the staff-recommended placement setting and the setting to which they are eventually discharged. Therefore, it is important to build capacity--both in residential facilities, but also in outpatient or community-based support services--to allow patients adequate supports for timely and safe discharge home.

# Appendix

## A1. Definitions for discharge or transfer delay reasons

| Reason for delay | Definition and/or Examples |
|---|---|
| Delay in creating or implementing care plan or referral in the ED | While a patient is in the ED, they are not getting the behavioral health services that have been ordered in a timely fashion (i.e., chemical dependency evaluations not getting done, psych testing not completed). This includes:<br>■ Delays in ordering necessary meds, labs, consults, and discharges<br>■ Delayed or missing documentation<br>■ Delayed follow through with written physician orders due to staff, equipment, or service issues<br>■ Waiting for testing or labs<br>■ Delay in completing referrals or developing a backup plan<br>■ Social work assessment is not completed in a timely manner |
| Off hours (nights/weekends) when coordination not available in the ED | Patient care, coordination, or referrals are unable to be made because the appropriate staff are not available, such as during the night or on a weekend. |
| Waiting for CSA inside county of responsibility to identify and make referral<br>Waiting for CSA outside county of responsibility to identify and make referral | Includes waiting on Core Service Agency (CSA) to:<br>■ Identify facility for referral<br>■ Make referrals for placement following discharge<br>■ Request financial records for referral<br>Note. This is for delays due to identification of placement in which a social service or government agency is involved and responsible for the delay. |
| Waiting for agency to accept, process, or deny referral | Referral made, but waiting for the agency to accept or reject the referral, including gathering any assessments, paperwork, or information needed to make a determination about the referral. |
| Awaiting guardianship decisions or execution | Waiting for a guardian to be identified or for the guardian to assist with decision-making for the patient. |
| Awaiting insurance or financial benefit activation or coverage | Waiting for activation of insurance or other benefits a placement requires before accepting a patient or waiting for health plan authorization for next level of care, such as a residential CD treatment program, a state chronic care hospital, necessary home-based services, etc. |
| Insurance denies authorization for placement | When insurance denies a specific placement, claim for admission, or follow-up care and this denial requires a patient to remain in the emergency department. |
| Placement setting refuses or denies patient due to patient characteristics | Agency identified and referral made, but the agency refuses to accept the patient due to something about the patient, including characteristics such as behavioral issues, medical comorbidity, disabilities, age, substance use, previous encounters with the patient, etc. |
| Placement setting refuses or denies patient due to capacity in the setting | Agency identified and referral made, but the agency refuses to accept the patient due to capacity issues within the setting. This may be because the setting is full or because they have already taken their maximum number of referrals that day. |
| Waiting for bed space in placement setting | Facility identified, patient accepted, but there is a delay in bed availability. |

# A1. Definitions for discharge or transfer delay reasons (continued)

| Reason for delay | Definition and/or Examples |
|---|---|
| Lack of access to outpatient services necessary for patient to return home | Patient is ready to go home, but unable to connect to outpatient services necessary for maintaining stability, such as an outpatient psychiatry appointment, primary care appointment, ACT services, outpatient CD treatment, or needed family services. |
| Off hours (nights/weekends) when coordination not available in placement setting or outpatient services | Placement found, but, due to hours of operation, the necessary processing or the actual admission to the setting is delayed. |
| Delay due to patient legal involvement, including civil commitment or law enforcement | Delay due to legal involvement, which may include delays due to the civil commitment process or law enforcement needs. For example, a patient is in the commitment process or needs to be held for law enforcement processing. |
| Lack of housing/housing instability | Delay due to issues with finding appropriate housing, excluding residential treatment facilities (such as a group home, nursing home, foster care, or residential mental health or chemical health treatment). |
| Medicaid or ambulance transportation delay | Placement found and patient accepted, but waiting for Medicaid or ambulance transportation to become available to transfer the patient to the new setting. |
| Personal transportation delays or family inability to pick patient up | Patient is willing to be discharged or transferred to a new setting, including home, but they are unable to find a ride, or their family is unable to pick them up. |
| Patient non-adherence to plan of care/refusal of placement | Patient is not cooperating with necessary paperwork or follow-up, they are delaying completing paperwork or follow-up, or they are not participating in care plan, including refusing the selected placement. |
| Family refusal to pick patient up or execute plan of care | Family refuses to pick up patient or is not cooperating with necessary paperwork or follow-up, they are delaying completing paperwork or follow-up, or they are not participating in care plan, including refusing the selected placement. |
| Patient's residential facility refuses to take them back | Patient was living in a residential facility (such as group home, foster care, or residential treatment) before coming to the emergency department, but the facility is unwilling to allow the patient to return at discharge. |

# A2. Data collection tool

Patient ID (only for this study, not the hospital ID): _____ Patient first and last initial: _____
Hospital Name: _____

## Maryland Hospital Association Mental and Behavioral Health Emergency Department Pilot

**Characteristics of ED Stay**

1. How did the patient arrive in the ED?*
   ☐ Family/self
   ☐ First responder or ambulance
   ☐ Law enforcement
   ☐ Transfer from another ED
   ☐ Other: _____
2. When did patient arrive in the ED?* Date: _____ Time: _____
3. When was the patient's disposition determined?* Date: _____ Time: _____
   (Note: For this study a delay is defined as starting 4 hours after the disposition determination)

**Patient Characteristics**

4. Is this patient a Maryland resident?* ☐ Yes ☐ No
5. Patient age range:* ☐ Under 13 ☐ 13 – 17 ☐ 18 – 64 ☐ 65 or older
6. Patient insurance coverage at admission:* ☐ Public insurance ☐ Private insurance ☐ Uninsured
7. Has this patient been seen in your ED in the past year?* ☐ Yes ☐ No

**Preferred Discharge or Transfer Setting**

8. If space were available, what is the preferred setting this patient would be discharged or transferred to? (Select only the one ideal setting)
   ☐ Inpatient acute medical hospital unit
   ☐ Inpatient acute psychiatric unit
   ☐ Inpatient specialty psychiatric unit (i.e., Sheppard Pratt Health System, Brook Lane)
   ☐ Skilled nursing facility (SNF) or nursing home
   ☐ Assisted living facility (ALF)
   ☐ Residential Rehabilitation Program (RRP)
   ☐ Residential chemical dependency treatment
   ☐ Child/Adolescent Residential Treatment Center in Maryland
   ☐ Child/Adolescent Residential Treatment Center outside of Maryland
   ☐ Child or adult foster care
   ☐ Group home with services
   ☐ Crisis residential program/crisis bed
   ☐ State psychiatric hospital (i.e., Spring Grove Hospital Center, Springfield Hospital Center, Clifton T. Perkins)
   ☐ State Chronic Hospital (i.e., Deer's Head Hospital Center and Western Maryland Hospital Center)
   ☐ Supported housing program (mental health)
   ☐ Other residential facility
   ☐ Home with supportive services

* Identifies questions asked of ALL behavioral health patients in the ED.

8a. What supportive services would be needed for this patient to be home?

- ☐ Intensive outpatient (including partial hospitalization and day hospital)
- ☐ Psychiatric Rehabilitation Program (PRP)
- ☐ Medication Management with Psychiatrist/Psychiatric Nurse Practitioner
- ☐ Individual Therapy
- ☐ ACT services
- ☐ Outpatient chemical dependency treatment
- ☐ Family support services (e.g., in-home caregivers or respite care)
- ☐ Other supports needed in order to discharge home: _____

**Reason for Discharge Delay**

9. Start date and time **for this reason** that the patient could not be discharged, admitted, or transferred: _____
(i.e., patient's disposition decision was made 4 hours ago, but patient is unable to be discharged, admitted, or transferred)

10. End date **for this reason** that the patient could not be discharged, admitted, or transferred: _____

11. Reason for discharge or transfer delay (i.e., why the patient cannot be discharged or transferred) - ***Select the single reason from the list below. If there are multiple reasons, separate them into multiple entries with unique times for each entry.***

- ☐ Delay in creating or implementing care plan or referral in the ED
- ☐ Off hours (nights/weekends) when coordination not available in the ED
- ☐ Waiting for Core Service Agency (CSA) inside county of responsibility to identify and make referral
- ☐ Waiting for CSA outside county of responsibility to identify and make referral
- ☐ Waiting for agency to accept, process, or deny referral
- ☐ Awaiting guardianship decisions or execution
- ☐ Awaiting insurance or financial benefit activation or coverage
- ☐ Insurance denies authorization for placement
- ☐ Placement setting refuses or denies patient due to patient characteristics
- ☐ Placement setting refuses or denies patient due to capacity in the setting
- ☐ Waiting for bed space in placement setting
- ☐ Lack of access to outpatient services necessary for patient to return home
- ☐ Off hours (nights/weekends) when coordination not available in placement setting or outpatient services
- ☐ Delay due to patient legal involvement, including civil commitment or law enforcement
- ☐ Lack of housing/housing instability
- ☐ Medicaid or ambulance transportation delay
- ☐ Personal transportation delays or family inability to pick patient up
- ☐ Patient non-adherence to plan of care/refusal of placement
- ☐ Family refusal to pick patient up or execute plan of care
- ☐ Patient's residential facility refuses to take them back

12. Did any of the following patient characteristics contribute to this delay?

- ☐ Developmental disability or autism
- ☐ Traumatic brain injury
- ☐ Dementia
- ☐ Physical disability
- ☐ Behavioral issues or dysregulation (e.g., violence, fire starting, self-harm, sexually inappropriate behavior)
- ☐ Significant medical comorbidity
- ☐ Substance use (including addiction and medication assisted treatment)
- ☐ Patient age (e.g., youth or geriatric)
- ☐ None of these characteristics are contributing to this delay

**Discharge or Transfer Information**

13. When was the patient transferred or discharged?* Date: _____ Time: _____

14. Where was this patient transferred or discharged to?*
    - ☐ Inpatient acute medical hospital unit
    - ☐ Inpatient acute psychiatric unit
    - ☐ Inpatient specialty psychiatric unit
    - ☐ Skilled nursing facility (SNF) or nursing home
    - ☐ Assisted living facility (ALF)
    - ☐ Residential Rehabilitation Program (RRP)
    - ☐ Residential chemical dependency treatment
    - ☐ Child/Adolescent Residential Treatment Center in Maryland
    - ☐ Child/Adolescent Residential Treatment Center outside of Maryland
    - ☐ Child or adult foster care
    - ☐ Group home with services
    - ☐ Crisis residential program/crisis bed
    - ☐ State psychiatric hospital
    - ☐ State Chronic Hospital (i.e., Deer's Health Hospital Center and Western Maryland Hospital Center)
    - ☐ Supported housing program (mental health)
    - ☐ Other residential facility
    - ☐ Home with support services
    - ☐ Other (please specify):_____

Optional: What additional services do you think would have been helpful to meet this patient's need? These can include services that already exist in Maryland or services that you have heard of in other areas.

Comments (optional):

* Identifies questions asked of ALL behavioral health patients in the ED.

# A3. Detailed study methods

## Study sample

A total of 29 hospitals agreed to participate in the 45-day data collection period (see Acknowledgements for list of hospitals). Hospitals were asked to track all behavioral health patients in the emergency department from April 15, 2019 through May 31, 2019. For this study, a delay started if a behavioral health patient was still in the emergency department four hours after a disposition decision was made.

## Data collection tool

The Maryland Hospital Association conducted a study of inpatient discharge delays in 2018, so the same tools and processes were updated for this study. Staff from Maryland Hospital Association and Wilder Research hosted a series of design calls with representatives from several hospitals and the Maryland Hospital Association. The tool includes information about the emergency department visit, patient characteristics, placement options for the patient, and the dates and reasons for discharge or transfer delays (see Appendix A2 for the tool and Appendix A1 for the associated definitions). All hospitals completed this tool online.

## Staff training

To train staff on how to conduct data collection, representatives of Wilder Research and Maryland Hospital Association hosted an instructional webinar that included sample cases and time for questions and answers. The webinar was recorded and made available to participating hospitals. In addition, Wilder Research created a written protocol with comprehensive instructions for completing the tool and provided technical assistance on data collection questions throughout the study.

### Data cleaning

The data required extensive cleaning in order to prepare it for analysis. In particular, the following issues were the most common and were addressed in the following ways:

***Missing or illogical dates:*** Missing or illogical dates were the most common data cleaning issue. The following decisions were made to address this:

- If the arrival time in the ED or the disposition decision time was missing, then the case was removed.
- If the start time for a delay was less than 4 hours after the disposition decision time, then the start time was moved to be exactly 4 hours after the disposition decision time.
- The discharge delays were entered sequentially and the end date for the first reason was used as the start date for the second, and so forth, if any dates in the series were missing.
- If the end date for a reason was after the discharge date, the discharge date was used as the end date for the final reason.
- If the discharge date was missing and there was an end date for a delay reason, then the end date was used as the discharge date.
- If the discharge date was missing and the patient was not still in care (as identified by the hospital) and there was not a delay reason documented, the case was removed.

***Missing reasons:*** If a reason for discharge delay was missing, then it was assigned the "reason not identified" label. If there was a span of time between 4 hours from the disposition decision and discharge not accounted for by a reason, it was also assigned the "reason not identified" label.

***Duplicate cases:*** If a case had a duplicate admission date, discharge delay start and end date, and discharge delay reason, the case was unduplicated.

***Truncated dates:*** Some patients were admitted prior to the start of the study or were still in care at the close of the study. In these cases, their start date was revised to the study start date (12:01AM on April 15, 2019) and their end date was revised to the end date of the study (11:59 PM on May 31, 2019).

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| | |
|---|---|
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MedStar Franklin Square Medical Center
MedStar Good Samaritan Hospital
MedStar Montgomery Medical Center
MedStar Southern Maryland Hospital Center
MedStar St. Mary's Hospital
MedStar Union Memorial Hospital
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