Maryland Hospital Association

# Delays in Hospital Discharges of Behavioral Health Patients

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

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# Behavioral Health Discharge Delays in Maryland Hospitals

## *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 discharge delays with 31 hospitals across Maryland. A discharge delay occurs when a patient is stabilized and ready to be discharged, but is unable to be discharged from the hospital. This study presents the number and rate of behavioral health discharge delays, the number of days the patient remained in inpatient hospital care beyond stabilization, and the reasons for delays.

This summary includes data collected from August 8, 2018 through November 16, 2018.

## Rates of Discharge Delays

**266 patients** or **3 percent of behavioral health patients**— experienced a discharge delay during the study.

Collectively, these patients were delayed for **3,514 days**, with an average of

**13 days per patient.**

**Discharge delays were experienced in about . . .**

**7%** of behavioral health patients IN MEDICAL SURGICAL UNITS

**2%** of patients IN INPATIENT PSYCHIATRIC UNITS

## Hospital's most frequently recommended Post-discharge setting

| | Percentage of patients (N=266) |
|---|---|
| Inpatient acute psychiatric unit (if not currently in one) | 24% |
| Home with support services | 14% |
| Skilled nursing facility or nursing home | 12% |
| Residential chemical dependency treatment | 11% |
| Crisis residential program/crisis bed | 10% |

**55% OF PATIENTS ended up in the recommended placement setting**

## Top Reasons for Discharge Delays

*Note: Patients may have more than one reason for a discharge delay during their admission, but each delay day is only associated with one reason at a time.*

| | Number of delay DAYS (N=3,514) | Percentage of PATIENTS (N=266) |
|---|---|---|
| Placement setting refuses or denies patient admission | 895 | 18% |
| Waiting for agency to accept, process, or deny referral | 617 | 19% |
| Lack of bed space in placement setting | 608 | 34% |
| Delay due to patient legal involvement, including civil commitment or guardianship | 387 | 5% |
| Waiting for Core Service Agency inside county of responsibility to identify and make referral | 222 | 3% |
| Lack of housing/housing instability | 192 | 5% |
| Patient non-adherence to plan of care/refusal of placement | 187 | 8% |

## Participating hospitals

Adventist Healthcare - Shady Grove Medical Center
Adventist Healthcare - Washington Adventist Hospital
Anne Arundel Medical Center
Bon Secours Baltimore Health System
Brook Lane Health Services
Doctors Community Hospital
Frederick Memorial Hospital
Garrett Regional Medical Center
Greater Baltimore Medical Center
Holy Cross Germantown Hospital
Holy Cross Hospital
Howard County General Hospital
Johns Hopkins Bayview Medical Center
MedStar Franklin Square Medical Center
MedStar Good Samaritan Hospital
MedStar Harbor Hospital
MedStar Montgomery Medical Center
MedStar St. Mary's Hospital
MedStar Union Memorial Hospital
Northwest Hospital
Peninsula Regional Medical Center
Saint Agnes Hospital
Sinai Hospital of Baltimore
Suburban Hospital
The Johns Hopkins Hospital
University of Maryland Baltimore Washington Medical Center
University of Maryland Medical Center
University of Maryland Medical Center - Midtown Campus
University of Maryland St. Joseph Medical Center
University of Maryland Upper Chesapeake Health
Western Maryland Regional Medical Center

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Maryland Hospital Association

See the full report *Delays in Hospital Discharges of Behavioral Health Patients: 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's essential to ensure an adequate supply and distribution of providers throughout the care system. For decades, the state has consistently cut the number of state-operated psychiatric beds, resulting in hospital patients remaining for days, weeks, and even longer while waiting for space in more appropriate settings. 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 of patients, 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 mental health infrastructure in Maryland.

## Study description

Wilder Research collected data from 31 participating hospitals throughout Maryland to determine reasons for delays in hospital discharge for behavioral health patients. Discharge delays occur when a patient is stabilized and ready to be discharged, but is unable to be discharged. These patients still require some treatment, but no longer need hospital-level care.

All hospitals used an online tool to enter data about patients experiencing discharge delays. All patients were identified by a random identification number exclusively used for the study to protect their confidentiality.

Nineteen hospitals included only inpatient psychiatric units in the study, ten hospitals included only behavioral health patients in medical-surgical units, and two included both. This report reflects results for 100 days of the data collection period, from August 8, 2018 through November 16, 2018. See appendix for more details about the study design.

# Discharge delays

## Rate of discharge delays

Across the 31 hospitals' participating units, 8,301 behavioral health patients were treated in the 100-day study period. Of those, 266 patients, or 3 percent, experienced a discharge delay, meaning they were stabilized and ready to be discharged, but were unable to be discharged. Collectively, these patients were delayed for 3,514 days, with an average of 13 days per patient. It should be noted that patient discharge delays ranged from 1 to 100 days, with 100 days being the maximum number due to the study period. Approximately 12 percent of patients had discharge delays that started prior to the study start date and 6 percent of patients were experiencing a delay at the close of the study. These additional days are not included in the study, but they highlight the importance of considering this study as a point-in-time estimate.

In medical surgical units, about 7 percent of behavioral health patients experienced a discharge delay (98 out of 1,404 patients), while about 2 percent of patients in inpatient psychiatric units had a discharge delay (168 out of 6,897 patients).

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 patients throughout the state. In 2017, Maryland Hospital Association records included 45,965 inpatient behavioral health admissions across the state. If the rate of discharge delays found in this study was extrapolated to all behavioral health patients based on 2017 numbers, approximately 1,379 patients would experience discharge delays. Using the average delay of 13 days found in this study, this results in a total of 17,926 days of inpatient care that could, instead, be in an alternative setting. These estimates should be interpreted with caution since the study looked at a 100-day snapshot of admissions and may not represent the full year's rate of discharge delay days.

## Reasons for discharge delays

The study asked hospitals to identify the reasons for a discharge delay from a list of 17 possible reasons (Figure 1). The reason that affected the most patients was the lack of bed space in a placement setting (34%). This reason accounted for 608 discharge delay days, the third highest number. Although the discharge placement settings and reasons for discharge delays were not directly connected in the data collection tool, patients with this reason (N=90) were most likely to have inpatient psychiatric unit (41%), crisis residential program (20%), and residential chemical dependency treatment (16%) identified as the placement setting being pursued.

The reason associated with the most discharge delay days (895 days) was the placement setting refused or denied patient admission. Again, this reason cannot be directly connected to the placement setting in the tool, but those with this reason (N=47) were most likely to have inpatient psychiatric unit (32%) and skilled nursing facility (26%) identified as the placement setting being pursued.

The other top reason for discharge delays was waiting for an agency to accept, process, or deny a referral. This reason affected 19 percent of patients for 617 days in the 100-day data collection period. It is important to note that all three of these top reasons were associated with agency or placement barriers and they accounted for 60 percent of the discharge delay days in the study.

Although affecting a smaller proportion of patients, factors associated with patient circumstances, including patient legal involvement, lack of housing, non-adherence to the plan of care or refusal of placement, and family inability to pick patient up, also accounted for one-quarter of discharge delay days (24%; 835 days).

Waiting for Core Service Agencies inside or outside the county of responsibility accounted for 9 percent of delay days, but affected fewer than ten individual patients. Other reasons appear to be less common, but still important for the patients experiencing them, particularly when they result in delays up to 30 days at a time.

### 1. Reasons for discharge delays

| | Percentage of patients (N=266) | Number of delay days (N=3,514) |
|---|---|---|
| Placement setting refuses or denies patient admission | 18% | 895 |
| Waiting for agency to accept, process, or deny referral | 19% | 617 |
| Lack of bed space in placement setting | 34% | 608 |
| Delay due to patient legal involvement, including civil commitment or guardianship | 5% | 387 |
| Waiting for Core Service Agency (CSA) inside county of responsibility to identify and make referral | 3% | 222 |
| Lack of housing/housing instability | 5% | 192 |
| Patient non-adherence to plan of care/refusal of placement | 8% | 187 |
| Waiting for Core Service Agency (CSA) outside county of responsibility to identify and make referral | 1% | 95 |
| Lack of access to outpatient services necessary for patient to return home | 4% | 78 |
| Family inability to pick patient up | 4% | 69 |

Note. A patient can only have one reason per delay day, but a patient can have different reasons attached to different delay days during their inpatient stay. Thus, patients can have more than one reason for delays and the total exceeds 100 percent.

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

| | Percentage of patients (N=266) | Number of delay days (N=3,514) |
|---|---|---|
| Awaiting insurance authorization | 4% | 46 |
| Awaiting insurance or financial benefit activation | 2% | 40 |
| Delay in creating or implementing care plan/execution of MD orders | 5% | 39 |
| Delay of social worker/discharge planner execution of referral | 2% | 17 |
| Medicaid transportation delay | 1% | 13 |
| Off hours (nights/weekends) when coordination not available | 1% | 9 |
| Awaiting waiver approval | 0% | 0 |

Note. A patient can only have one reason per delay day, but a patient can have different reasons attached to different delay days during their inpatient stay. Thus, patients can have more than one reason for delays and the total exceeds 100 percent.

# Placement settings associated with discharge delays

Hospital staff were asked to identify the preferred placement setting for the patient, meaning the place to which they would discharge the patient if space or supports were available. Because the preferred placement setting may not be a viable option in some cases due to capacity issues, staff were also asked to identify the placement setting they were pursuing for discharge, if different from the preferred placement setting.

## *Preferred placement settings*

There was a wide variety in preferred placement settings for patients, but the most common was an inpatient psychiatric unit for patients in medical-surgical units (24%; Figure 2). The next most common were: at home with support services (14%), a skilled nursing facility (12%), residential chemical dependency treatment (11%), and a crisis residential program (10%).

## 2. Staff-determined preferred discharge settings

| | Preferred placement setting (N=266) |
|---|---|
| Inpatient psychiatric unit (if not currently in one) | 24% |
| Home with support services | 14% |
| Skilled nursing facility (SNF) or nursing home | 12% |
| Residential chemical dependency treatment | 11% |
| Crisis residential program/crisis bed | 10% |
| Assisted living facility (ALF) | 9% |
| Residential Rehabilitation Program (RRP) | 7% |
| State psychiatric hospital | 6% |
| Other residential facility | 5% |
| Group home with services | 4% |
| Supported housing program (mental health) | 4% |
| Child or adult foster care | 2% |
| Inpatient acute medical hospital unit | <1% |
| Child/Adolescent Residential Treatment Center | <1% |
| State Chronic Hospital (i.e., Deer's Health Hospital Center and Western Maryland Hospital Center) | 0% |

Note. Patients could have more than one preferred placement setting during their admission, so total percentage exceeds 100.

### *Pursued placement settings*

Overall, staff were able to pursue the preferred placement setting for 84 percent of patients. The most common settings that were not considered feasible (for 62 cases) included: residential rehabilitation program (18%), state psychiatric hospital (16%), assisted living facility (15%), supported housing program (11%), and home with support services (8%). The settings most likely to be pursued when the preferred setting was not feasible included: home with support services (31%), crisis residential program (21%), and assisted living facility (19%). Notably, home with support services was one of the most common settings in both groups.

### *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 include medication management (51%), individual therapy (46%), partial hospitalization (32%), and access to a psychiatric rehabilitation program (32%; Figure 3).

### 3. Specific support services needed for release home

| | Percent of patients with home as preferred placement setting (N=37) |
|---|---|
| Medication Management with Psychiatrist/Psychiatric Nurse Practitioner | 51% |
| Individual Therapy | 46% |
| Psychiatric Rehabilitation Program (PRP) | 32% |
| Partial hospitalization | 32% |
| Family support services (e.g., in-home caregivers or respite care) | 27% |
| Intensive Outpatient | 16% |
| ACT services | 14% |
| Outpatient chemical dependency treatment | 8% |

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

## *Discharge settings*

Over one-quarter of patients (26%) were discharged to their home with support services, while 15 percent discharged into another inpatient unit (Figure 4). About 20 percent of patients were discharged to facilities that can provide continued care, including an assisted living facility (10%), skilled nursing facility (8%), or residential rehabilitation program (3%). About 10 percent were discharged to a crisis residential program and a residential chemical dependency treatment program for specific care needs.

### 4. Discharge location

| | Percentage of patients (N=266) |
|---|---|
| Home with support services | 26% |
| Inpatient psychiatric unit (if not currently in one) | 15% |
| Assisted living facility (ALF) | 10% |
| Crisis residential program/crisis bed | 10% |
| Residential chemical dependency treatment | 9% |
| Skilled nursing facility (SNF) or nursing home | 8% |
| Residential Rehabilitation Program (RRP) | 3% |
| Group home with services | 3% |
| Homeless or temporary housing | 3% |
| Child or adult foster care | 2% |
| Supported housing program (mental health) | 2% |
| Other residential facility | 2% |
| Hospice | 1% |
| Police custody | <1% |
| Not discharged – still in inpatient care | 6% |

Just over half of discharged patients (55%) were discharged to the preferred placement setting identified by staff. The preferred placement settings in which the most patients were discharged elsewhere were inpatient psychiatric units and the state psychiatric hospital (Figure 5). It should be noted that no patients were discharged to the state psychiatric hospital.

### 5. Discharge location by preferred placement setting

| | Number of discharged patients (N=250) with this setting as their… | |
|---|---|---|
| | Last preferred placement setting | Discharge setting |
| Home with support services | 14% | 23% |
| Inpatient psychiatric unit (if not currently in one) | 24% | 15% |
| Assisted living facility (ALF) | 8% | 10% |
| Crisis residential program/crisis bed | 10% | 10% |
| Residential chemical dependency treatment | 11% | 9% |
| Skilled nursing facility (SNF) or nursing home | 10% | 8% |
| Residential Rehabilitation Program (RRP) | 6% | 4% |
| Group home with services | 3% | 4% |
| Supported housing program (mental health) | 3% | 2% |
| Other residential facility | 4% | 2% |
| Child or adult foster care | 2% | 1% |
| Child or adolescent residential treatment center | <1% | 0% |
| State psychiatric hospital | 5% | 0% |
| Other | 1% | 12% |

Note. Percentages may not equal 100 due to rounding.

# Patient characteristics

Most of behavioral health patients experiencing a discharge delay were admitted to psychiatric units (63%), which may be because nearly twice as many psychiatric units participated in the study compared to medical surgical units. Most patients with a discharge delay were admitted voluntarily (73%). And, the majority were admitted from the same hospital's emergency department (72%; Figure 6). Also, data are not available for behavioral health patients who did not experience a discharge delay. So, it is unclear if those experiencing discharge delays are disproportionately represented in any category.

### 6. Admission characteristics of patients experiencing discharge delays

| | Percentage of patients (N=266) | Number of delay days (N=3,514) |
|---|---|---|
| **Admitted from…** | | |
| Emergency department of this hospital | 72% | 2,052 |
| Emergency department or medical unit of an outside hospital | 20% | 1,193 |
| Medical unit of this hospital | 6% | 242 |
| Inpatient psychiatry unit of outside hospital | <1% | 3 |
| Other | 2% | 24 |
| **Admitted to…** | | |
| Psychiatric units | 63% | 2,335 |
| Medical-surgical units | 37% | 1,179 |
| **Admission was…** | | |
| Voluntary | 73% | 2,034 |
| Involuntary | 27% | 1,480 |

Nearly all patients with discharge delays were Maryland residents (96%), with the greatest representation from Baltimore City (29%), Baltimore County (20%), and Montgomery County (16%). About three-quarters (74%) were age 18 through 64, while 21 percent were age 65 or older, and 5 percent were under age 18. In addition, 78 percent were insured by public insurance, while 17 percent had private insurance, and 5 percent were uninsured (Figure 7).

### 7. Demographic characteristics of patients experiencing discharge delays

| Patient residence | Percentage of patients (N=266) | Number of delay days (N=3,514) |
|---|---|---|
| Maryland resident | 96% | 3,335 |
| Resident of another state | 4% | 179 |
| **Patient age range** | | |
| Under age 18 | 5% | 162 |
| Age 18-64 | 74% | 2,465 |
| Age 65 or older | 21% | 887 |
| **Patient insurance coverage** | | |
| Public insurance | 78% | 2,873 |
| Private insurance | 17% | 335 |
| Uninsured | 5% | 306 |

# 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 delays. Multiple characteristics could be selected for each patient. Over half of patients and 40 percent of delay days were not associated with a specific patient characteristic (Figure 8). However, over one-quarter of patients with a discharge delay had behavioral issues or dysregulation associated with their delay. This factor alone contributed to 38 percent of delay days and these patients had an average delay of 19 days, nearly a week longer than the overall average of 13 days. Other factors affected a smaller number of patients and contributed to between 3 and 10 percent 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=266) | Number of delay days (N=3,514) |
|---|---|---|
| Behavioral issues or dysregulation (e.g., violence, fire starting, self-harm, sexually inappropriate behavior) | 26% | 1,329 |
| Substance use (including addiction and medication assisted treatment) | 15% | 229 |
| Significant medical comorbidity | 12% | 236 |
| Physical disability | 8% | 340 |
| Patient age (e.g., youth or geriatric) | 6% | 128 |
| Developmental disability or autism | 3% | 209 |
| Traumatic brain injury | 1% | 107 |
| None of these characteristics are contributing to this delay | 51% | 1,438 |

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

# Implications

This 100-day study with 31 hospitals has documented a large number of discharge delays in inpatient behavioral health care. Many patients spend time in inpatient units 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 study demonstrates that research can estimate the extent of the problem of discharge delays. Analysis of costs would enhance this picture. The results could inform policy development at the state and county level.
- The three most common reasons for discharge delays were associated with agency or placement barriers, including placement settings denying admission, taking too long to process referrals, or lacking bed space. These reasons alone accounted for 60 percent of discharge delay days. Future work could explore these agency-level barriers in more depth, such as gathering information on the underlying issues and discussing potential solutions.
- When patients remain in inpatient care after they are eligible for discharge, it results in fewer behavioral health beds available for new patients who need to be served in the hospital. Those new patients include those in this study who were in medical-surgical units, for whom inpatient psychiatric units were the most common preferred discharge setting.
- For many patients with discharge delays, living at home with support services is both the preferred 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.
- An assessment of emergency department referrals of behavioral health patients was outside the scope of this study, but given that 72 percent of these patients were admitted from their hospital's emergency department, such a study could provide information about the number of patients awaiting inpatient psychiatric admission. Maryland Hospital Association is launching a study of delays for behavioral health patients in emergency departments in spring 2019.

# Appendix

## A1. Definitions for discharge delay reasons

| Reason for delay | Definition and/or examples |
|---|---|
| Delay in creating or implementing care plan/execution of MD orders | While patient may meet criteria for being in the hospital, 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. |
| Delay of social worker/discharge planner execution of referral | Delay in action by the hospital social work department. For instance, the social workers not completing referrals or developing a backup plan, or the social work initial assessment is not completed on admission (hospital day 1) or by hospital day 2. |
| 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 insurance or financial benefit activation | Waiting for activation of insurance or other benefits a placement requires before accepting a patient. |
| Awaiting insurance authorization | Waiting for a 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. |
| Awaiting waiver approval | Placement found and patient accepted, but awaiting waiver approval (e.g., disability waiver) for the service. |
| Medicaid transportation delay | Placement found and patient accepted, but waiting for Medicaid transportation to become available to transfer the patient to the new setting. |
| Preferred setting refuses or denies patient admission | Agency identified and referral made, but the agency refuses to accept the patient. This may be due to specific patient characteristics or capacity issues within the agency. |
| Lack of bed space in preferred setting | Facility identified, patient accepted, but there is a delay in bed availability. |
| Lack of access to outpatient services | 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 | 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 guardianship | Delay due to legal involvement, which may include delays due to the civil commitment process or the appointment or decisions around legal guardianship. For example, a patient is admitted, but is in the commitment process. They have stabilized and are ready for a lower level of care, but need to remain hospitalized until commitment process is completed. |

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

| Reason for delay | Definition and/or examples |
|---|---|
| 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). |
| Patient non-adherence to plan of care/refusal of placement | Patient/family 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 inability to pick patient up | Patient is willing to be discharged to a new setting, including home, but the family is unwilling or unable to pick up or transfer the patient. |

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

# Maryland Hospital Association Mental and Behavioral Health Data Collection Pilot

Thank you for assisting in collecting data for the Maryland Hospital Association pilot study. The goal of this study is to measure the number, percent, and reasons for discharge delays, which are defined as days in inpatient hospital care when a patient is stabilized and ready to be discharged to a different care setting, but is unable to be discharged. This pilot study will serve to inform policy and practice within the mental health infrastructure in Maryland. These indicators will illustrate the opportunities for patient care outside of the inpatient hospital system.

## Admission Characteristics

1. Is this patient in a psychiatric unit or a medical unit?
   - ☐ Psychiatry unit
   - ☐ Medical-surgical unit

2. Where was this patient admitted from?
   - ☐ Emergency department of this hospital
   - ☐ Medical unit of this hospital
   - ☐ Emergency department or medical unit of outside hospital
   - ☐ Inpatient psychiatry unit of outside hospital
   - ☐ Other: _____

3. Was this patient admitted: ☐ Voluntarily ☐ Involuntarily

4. When was this patient admitted for inpatient care on this unit? _____

5. When was the patient clinically ready for discharge? _____
   (i.e., the start date of the potentially avoidable days)

## Patient Characteristics

6. Is this patient a Maryland resident? ☐ Yes ☐ No
   6a. If yes, what is this patient's county of residence? _____

7. Patient age range: ☐ Under 13 ☐ 13 – 17 ☐ 18 – 64 ☐ 65 or older

8. Patient insurance coverage at admission: ☐ Public insurance ☐ Private insurance ☐ Uninsured

## Preferred Discharge Setting

9. If space were available, what is the preferred setting this patient would be discharged to? (Select only the one ideal setting)
   - ☐ Inpatient acute medical hospital unit
   - ☐ Inpatient acute psychiatric unit (if not currently in one)
   - ☐ Skilled nursing facility (SNF) or nursing home
   - ☐ Assisted living facility (ALF)
   - ☐ Residential Rehabilitation Program (RRP)
   - ☐ Residential chemical dependency treatment
   - ☐ Child/Adolescent Residential Treatment Center
   - ☐ 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
     9a. What support services would be needed for this patient to be home?
     - ☐ Intensive Outpatient
     - ☐ Partial hospitalization
     - ☐ 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: _____

10. What type of placement setting are you pursuing for this patient?
☐ Preferred placement setting above
☐ A setting other than the preferred placement setting
10a. If a setting other than the preferred placement setting, which setting are you pursuing?
☐ Inpatient acute medical hospital unit
☐ Inpatient acute psychiatric unit (if not currently in one)
☐ Skilled nursing facility (SNF) or nursing home
☐ Assisted living facility (ALF)
☐ Residential Rehabilitation Program (RRP)
☐ Residential chemical dependency treatment
☐ Child/Adolescent Residential Treatment Center
☐ 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

**Reason for Discharge Delay**

11. Start date **for this reason** that the patient could not be discharged: _____
(i.e., the patient is ready to be discharged, but is unable to be discharged)

12. End date **for this reason** that the patient could not be discharged: _____
(i.e., a new reason for the discharge delay starts or a patient is discharged)

13. Reason for discharge delays (i.e., why the patient cannot be discharged) - ***Select the single reason from the list below. If there are multiple reasons, separate them into multiple forms with unique dates.***

☐ Delay in creating or implementing care plan/execution of MD orders
☐ Delay of social work/discharge planner execution of referral
☐ 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 insurance or financial benefit activation
☐ Awaiting insurance authorization
☐ Awaiting waiver approval
☐ Medicaid transportation delay
☐ Placement setting refuses or denies patient admission
☐ Lack of 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
☐ Delay due to patient legal involvement, including civil commitment or guardianship
☐ Lack of housing/housing instability
☐ Patient non-adherence to plan of care/refusal of placement
☐ Family inability to pick patient up

14. Did any of the following patient characteristics contribute to this delay?
    - ☐ Developmental disability or autism
    - ☐ Traumatic brain injury
    - ☐ 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 Information**

15. End date for inpatient care: _____

16. Where was this patient discharged to?
    - ☐ Inpatient acute medical hospital unit
    - ☐ Inpatient acute psychiatric unit (if not currently in one)
    - ☐ Skilled nursing facility (SNF) or nursing home
    - ☐ Assisted living facility (ALF)
    - ☐ Residential Rehabilitation Program (RRP)
    - ☐ Residential chemical dependency treatment
    - ☐ Child/Adolescent Residential Treatment Center
    - ☐ 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
    - ☐ 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):

# A3. Detailed study methods

## Study sample

A total of 31 hospitals agreed to participate in the three-month data collection period (see Acknowledgements for list of hospitals). Hospitals were asked to track behavioral health patients in inpatient care from August 8, 2018 through November 16, 2018 (even if admitted prior to August 8th). Delay data were collected when a patient was eligible to be discharged to a different care setting, but continued to stay in their facility.

Hospitals with inpatient psychiatry units were asked to only track patients admitted to inpatient psychiatry (excluding partial hospitalization patients). Hospitals without inpatient psychiatry units were asked to track all behavioral health patients admitted to inpatient units.

## Data collection tool

The Minnesota Hospital Association conducted a similar study in 2016, so the tools and processes Minnesota used were the basis for this study. Staff from Maryland Hospital Association gathered feedback from the MHA Behavioral Health Task Force, several hospitals with inpatient psychiatric units, and community behavioral health providers to adapt the tool. The tool includes information about patient admission, patient characteristics, placement options for the patient, and the dates and reasons for discharge delays (see Appendix A2 for the tool and Appendix A1 for the associated definitions). All hospitals completed this tool online.

## Staff training

In order to train staff on the data collection pilot, representatives of Wilder Research, Maryland Hospital Association, and the Minnesota Hospital Association hosted a series of four webinars. The first was an introductory webinar to build buy-in with potential participating hospitals. The second and third were instructional webinars which included sample cases and time for questions and answers. The final was a mid-point check-in to discuss progress on data collection and answer any additional questions. The webinars were all 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 addressed in the following ways:

***Missing dates:*** Missing dates were the most common data cleaning issue. 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 a hospital admission date was missing, the first discharge delay reason date was used. If the first reason date was missing, the hospital admission date was used. If the reason end date was missing, then the discharge date was used. If the discharge date was missing, the pilot end date was used.

***Missing reasons:*** If a reason for discharge delay was missing, then the case was excluded.

***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:*** Many patients were admitted prior to the start of the study and many were still in care at the close of the pilot. In these cases, their start date was revised to the study start date (August 8, 2018) and their end date was revised to the end date of the study (November 16, 2018).

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- Bon Secours Baltimore Health System
- Brook Lane Health Services
- Doctors Community Hospital
- Frederick Memorial Hospital
- Garrett Regional Medical Center
- Greater Baltimore Medical Center
- Holy Cross Germantown Hospital
- Holy Cross Hospital
- Howard County General Hospital
- Johns Hopkins Bayview Medical Center
- MedStar Franklin Square Medical Center
- MedStar Good Samaritan Hospital
- MedStar Harbor Hospital
- MedStar Montgomery Medical Center
- MedStar St. Mary's Hospital
- MedStar Union Memorial Hospital
- Northwest Hospital
- Peninsula Regional Medical Center
- Saint Agnes Hospital
- Sinai Hospital of Baltimore
- Suburban Hospital
- The Johns Hopkins Hospital
- University of Maryland Baltimore Washington Medical Center
- University of Maryland Medical Center
- University of Maryland Medical Center - Midtown Campus
- University of Maryland St. Joseph Medical Center
- University of Maryland Upper Chesapeake Health
- Western Maryland Regional Medical Center

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