2019 PASRR National Report

A Review of Preadmission Screening and Resident Review (PASRR) Programs

A partnership of IBM® Watson Health™ and Mission Analytics Group, Inc.

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Executive Summary

Preadmission Screening and Resident Review (PASRR) is a federal Medicaid requirement that mandates states operate programs designed to: (1) identify individuals who might be admitted to or reside in a nursing facility (NF) who have a serious mental illness (SMI), or an intellectual disability or a related condition (ID/RC); (2) consider both NF and community placements for such individuals and recommend NF placement only if appropriate; and (3) identify the PASRR-specific needs that must be met for individuals to thrive, whether in a NF or the community. This eighth PASRR National Report provides data on the following:

- The ability of states to track data that may support quality monitoring and quality improvement (QM/QI);
- The prevalence of SMI and ID/RC in NFs across the country, as recorded in the Minimum Data Set (MDS) in the PASRR identification items as well as in other diagnostic items;
- The percentages of individuals who exhibit problematic behavioral symptoms toward themselves or others, as recorded in the MDS; and
- The percentages of NF residents with an SMI who have dementia, whose Level II evaluations may be terminated early when the dementia is primary (42 CFR 483.128(m)).

Section 1 of this report provides a brief overview of the PASRR requirements.

Section 2 documents states' self-reported capacity to track data about their program activities that may support QM/QI, such as the number of Level I screens conducted, the number of those screens that resulted in a referral for Level II evaluation, and the number of Level II evaluations (before and after admission) that resulted in a positive determination of SMI or ID/RC. In 2019, 35 states provided or confirmed information regarding their data collection practices. Of those, 69 percent reported collecting information on at least half of the QM/QI measures for people with an SMI as well as for people with ID/RC. This marks an increase from the 2017 National Report, in which we found that 59 percent of participating states reported collecting QM/QI measures for both populations.

Section 3 uses data from the MDS to report on the number of NF residents across the country who have been recorded in the MDS as having a PASRR-identified SMI or ID/RC, as compared with the number of residents who have been recorded on the MDS as having an SMI or an ID/RC without a concurrent PASRR identification. A larger number of individuals are identified in the MDS as having SMI compared with those identified as having a PASRR SMI; the same is not true for people with an ID/RC.

Section 4 uses data from the MDS to examine the prevalence of problematic behavior symptoms among PASRR-identified individuals compared with other NF residents. The results indicate that problematic behavior symptoms are more prevalent among PASRR-identified individuals than among the rest of the NF population.

Section 5 uses data from the MDS to explore the prevalence of dementia among individuals who have a PASRR-identified SMI versus an SMI as recorded in other diagnostic items on the MDS. This analysis is mostly informational at this stage, as there are several limitations in the reporting of PASRR when NF residents are identified as having dementia in the MDS. The MDS does not have a means of capturing people with an SMI who have been ruled out of PASRR due to having a primary dementia diagnosis. Preliminarily, we found that individuals with an SMI but no PASRR diagnosis are more likely to have dementia identified than people identified with an SMI under PASRR.

1   Introduction

Preadmission Screening and Resident Review (PASRR) was added to Title XIX of the Social Security Act in 1987 as part of the Nursing Home Reform Act.[1] PASRR has an important and unique role in Medicaid law. It requires states to (1) identify individuals who might be admitted to or reside in a nursing facility (NF) who have a serious mental illness (SMI), or an intellectual disability or a related condition (ID/RC); (2) consider both NF and community placements for such individuals and recommend NF placement only if appropriate; and (3) identify the PASRR-specific needs that must be met for individuals to thrive, whether in a NF or the community.

The regulations that govern PASRR (42 Code of Federal Regulations [CFR] § 483.100–138) require that states administer a PASRR program. PASRR programs must identify all individuals who are applying for NF admission, as well as NF residents, who have a possible SMI or ID/RC; this identification function is called Level I. Next, individuals with a possible SMI or ID/RC are given a more in-depth evaluation to confirm whether they have such a disability and, if so, whether they need Specialized Services to address their PASRR-related needs. The CFR calls this a Level II evaluation. The PASRR program then issues a Level II determination, which provides recommendations for the setting in which services should be received, as well as any NF services or Specialized Services necessary to support the individual's SMI or ID/RC.

PASRR is somewhat unusual for a Medicaid program in that, although the state's Medicaid agency is ultimately responsible for compliance with federal regulations, responsibility for some PASRR activities is specifically assigned by statute to two other authorities. The state mental health authority (SMHA) is responsible for making the Level II determinations for people with an SMI, and the state intellectual disability authority (SIDA) is responsible for making determinations for people with an ID/RC. Aside from these critical components outlined above, program design and implementation are largely at the states' discretion.

This report examines issues explored in the 2016 and 2017 PASRR National Reports: the ability of PASRR programs across the country to track the kinds of data that would support quality monitoring and quality improvement (QM/QI). As in previous years, we also analyzed data in the Minimum Data Set (MDS) to assess the number and percentages of NF residents identified under PASRR with an SMI or an ID/RC.

We also include two new analyses. The first examines the prevalence of problematic behavioral symptoms among PASRR-identified individuals compared with NF residents who have not been PASRR-identified. The second details the prevalence of dementia among individuals with an SMI. People with primary dementia and secondary SMI are statutorily excluded from PASRR identification (Section 1919(e)(7)(G)(i). They do not need to be identified in the MDS as having PASRR SMI. These factors create challenges for drawing meaningful conclusions, but we

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[1] Social Security Act, 42 U.S. Code 1919(e)(7) (1987).

believe this initial analysis is an important first step in understanding the way state PASRR programs interpret SMI in the presence of dementia.

2   Quality Monitoring and Quality Improvement

Quality monitoring and quality improvement (QM/QI) indicators are critical for measuring and promoting program success. Currently, states are responsible for developing and collecting their own quality measures for PASRR.

We developed a model list of QM/QI measures that we believe could help states track the outcomes of their PASRR programs. Neither federal statute nor regulation requires states to collect these model measures[2]; rather, these measures have been identified as providing data that would be likely to help support a PASRR program's activities. This basic framework for PASRR data collection follows from the three main goals of PASRR:

1. To evaluate all applicants to and residents of Medicaid-certified NFs for evidence of an SMI, or ID/RC;
2. To ensure that such individuals are living in the most appropriate setting, whether in the NF or in the community, depending on their desires and needs; and
3. To recommend PASRR-related services that individuals need, wherever they are placed.

These model QM/QI measures fall into four broad categories: Level I screens, exempted hospital discharges (EHDs), Preadmission Level II evaluations and determinations, and Level II Resident Reviews and determinations. We analyzed state data collection capacity for people with an SMI, ID/RC and dual diagnoses of SMI and ID/RC separately. We examined measures for people with an SMI and ID/RC separately because separate state authorities are responsible for each type of determination – the SMHA for people with an SMI and the SIDA for people with an ID/RC – and in some states, each authority might have a separate data collection process. Additionally, although the CFR does not separately identify individuals with a dual diagnosis, some states consolidate the evaluation for people with dual diagnoses and track them separately.

2.1   Methods

Table 1 lists the model QM/QI measures that states might collect and what we analyzed in our assessment of current state QM/QI practices.

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[2] Current regulations at 42 CFR 483.112(c) require that states track whether Level II determinations are made within an average of 7–9 working days from the date of referral. Section 1919(e)(7)(D)(iv) of the Social Security Act expects that states can report on the number of individuals who were discharged from NFs because they no longer needed NF level of services or no longer needed NF level of services and Specialized Services.

Table 1: Measures Linked to QM/QI in PASRR Systems

Measure
Total # of NF Admissions Statewide
Total # of Level I evaluations performed statewide
# of Level I evaluations that were done before admission
% of Level I evaluations that were done before admission
# of positive Level I evaluations
% of Level I evaluations testing positive
# of negative Level I evaluations
% of Level I evaluations testing negative
Exempted Hospital Discharges
# of NF admissions
# of NF admissions under EHDs
% of NF admissions under EHDs
# of EHDs with stays longer than 45 days
% of EHDs longer than 45 days
Preadmission Evaluation (Preadmission Screens) – Level II Evaluations
# of PAS – Level II evaluations
# of PAS that were done before admission
% of PAS that were done before admission
# of positive PAS (i.e., finding of SMI or ID/RC)
% of PAS leading to positive determinations
# of positive determinations that recommend Specialized Services
% of positive determinations that recommend Specialized Services
# of categorical determinations
% of categorical determinations
# of positive PAS recommending either community placement or any institutional placement
% of positive PAS recommending either community placement or any institutional placement
# of positive PAS recommending any institutional placement (NF, ICF/IID, or inpatient psychiatric)
% of positive PAS recommending any institutional placement (NF, ICF/IID, or inpatient psychiatric)
# of positive PAS recommending institutional placement (ICF/IID or inpatient psychiatric)
% of positive PAS recommending institutional placement (ICF/IID or inpatient psychiatric)
# of positive PAS recommending institutional placement (NF)
% of positive PAS recommending institutional placement (NF)
# of positive PAS recommending community placement
% of positive PAS recommending community placement
# of positive PAS leading to institutional placement (NF)
% of positive PAS leading to institutional placement (NF)
# of positive PAS leading to institutional placement (ICF/IID or inpatient psychiatric)
% of positive PAS leading to institutional placement (ICF/IID or inpatient psychiatric)
# of positive PAS leading to community placement
% of positive PAS leading to community placement
Annual average time (days) between Level I and Level II PAS determination
Resident Review – Level II Evaluations
# of RRs – Level II evaluations
# of positive RRs (i.e., finding of SMI or ID/RC)
% of RRs leading to positive determinations
# of negative RRs (i.e., finding of no SMI, no ID/RC)
% of RRs leading to negative determinations
# of positive RRs recommending continued NF placement
% of positive RRs recommending continued NF placement
# of positive RRs recommending community placement
% of positive RRs recommending community placement

Measure
# of positive RRs leading to continued NF placement
% of positive RRs leading to continued NF placement
# of positive RRs leading to community placement
% of positive RRs leading to community placement

Abbreviations: EHD, exempted hospital discharge; ICF/IID, intermediate care facility for individuals with intellectual disability; ID, intellectual disability; NF, nursing facility; PAS, Preadmission Screens; PASRR, Preadmission Screening and Resident Review; QM/QI, quality monitoring and quality improvement; RC, related condition; RR, Resident Review; SMI, serious mental illness.

The states' self-reported collection of these QM/QI measures was used as the basis of the 2016 and 2017 National Reports. In order to allow states time to make measurable adjustments to their data collection processes based on the 2017 Report, in 2018, the National Report shifted focus to states' PASRR-related claiming of Federal Financial Participation.

For the 2019 National Report, each state received a fact sheet developed using information collected for the 2016 and 2017 National Reports (consisting of data we gathered from publicly available information about the states' PASRR programs and information voluntarily supplied by the states themselves). The fact sheet listed all of the recommended QM/QI measures and indicated (1) whether we had reason to believe that the states collected the information (marked "yes"), (2) whether we had reason to believe that the states did not collect the information (marked "no"), or (3) whether no information was publicly available or had been previously provided by the state (marked "no information").

Work for the 2019 National Report began in early June of 2019 when PASRR program staff members in each state received the fact sheet for their state and were given the option to update the information that it contained. A reminder of this option was sent 2 weeks later to states that did not initially respond. Eighteen states (35 percent) updated their fact sheet, 17 states (33 percent) acknowledged receiving the fact sheet but did not provide updates, and 16 states (31 percent) did not respond.

2.2   Findings and Discussion

Appendix Section A1 presents a suite of tables displaying the number and percentage of states indicating that they currently track the QM/QI measures listed above. Interested readers can find tables with data on these measures displayed separately for SMI, ID/RC, and dual diagnoses, both for 2017 and for 2019.

The key table in Appendix Section A1 is Table 10, which summarizes the percentage of states indicating they can collect each measure by PASRR condition and by year. Patterns emerge from comparisons within year, across disability type and measure type, and across years, within PASRR condition and measure/measure type.

In 2019, 35 states confirmed their data collection practices. Of those 35 participants, 69 percent reported collecting information on at least half of the QM/QI measures for people with an SMI as

well as for people with ID/RC.[3] This marks an increase from the 2017 National Report, in which we found that 59 percent of participating states reported collecting QM/QI measures for people with an SMI and for people with an ID/RC.

Looking more closely at some of the QM/QI measures in the 2019 data, we observe the following:

- *Number of Level Is performed preadmission*. Level I screens must be performed for eligible NF applicants before admission to identify individuals with possible SMI or ID/RC who will require Level II evaluations. Tracking whether Level Is were performed preadmission helps ensure that the preadmission PASRR requirements are observed and ensures that individuals with possible SMI or ID/RC are not inappropriately admitted to NFs. Of the 35 states that provided information for this report, 40 percent reported collecting data for this quality measure for people with an SMI as well as for people with an ID/RC.

- *Number of positive Level Is*. Tracking the receipt of positive Level Is helps ensure that state PASRR programs can promptly initiate the Level II evaluation process and identify how many resources must be allocated for Level IIs. Of the 35 states participating in this report, 63 percent reported collecting information for this measure for people with an SMI and 66 percent for people with ID/RC.

- *Number of EHD admissions.* EHDs, which exempts individuals from Level II evaluation, are applied when an individual seeks admission to a NF to convalesce from an illness or procedure that required acute care and requires NF services for 30 calendar days or fewer, as certified by a physician. Tracking the number of EHD admissions allows PASRR programs to identify possible misuse or overuse of the exemption. Of the 35 states participating in this report, 40 percent reported collecting information for this measure for people with an SMI as well as for people with ID/RC.

- *Number of EHD admissions with stays longer than 45 days*. The CFR requires that individuals with possible SMI and ID/RC who were admitted under the EHD and who end up staying in the NF for longer than the anticipated 30 days must be referred by the NF for a Resident Review by the 40th day of admission. Identifying EHD admissions who, due to an extended stay, are still in the NF beyond the 40-day mark can help state PASRR programs verify that NFs are making the required referrals and that residents with possible SMI or ID/RC are receiving the necessary Level II evaluations. Of the 35 states participating in this report, 43 percent reported collecting information for this measure for people with an SMI as well as for people with ID/RC.

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[3] We would also note that of the 35 states that provided or confirmed data collection practices, 35 percent reported tracking one or measures for people with dual diagnoses separately, while 63 percent collected 50 percent or more QM/QI measures separately. More information about how states track QM/QI measures for people with dual diagnoses is contained in the tables in Appendix Table 8 and Table 9.

- *Number of Level IIs (evaluations and determination) done preadmission.* For NF applicants with possible SMI or ID/RC (and who are not being admitted under an EHD), the Level II evaluation and determination process must be completed before admission. This ensures that applicants are not improperly admitted to a NF, and if they are admitted to a NF, they are not admitted without an appropriate plan for services. Tracking whether Level IIs were performed preadmission helps ensure that the preadmission PASRR requirements are being observed. Of the 35 states that provided information for this report, 66 percent reported collecting data for this quality measure for people with an SMI and 63 percent for people with ID/RC.
- *Number of preadmission Level IIs recommending Specialized Services.* One of the two determinations PASRR programs make for people with an SMI or ID/RC is whether the individual requires Specialized Services in the NF. Tracking the number of Specialized Services recommendations helps PASRR programs confirm that all required determinations are being made and provides a sense of how many people in NFs are receiving Specialized Services. Of the 35 states that provided information for this report, 74 percent reported collecting data for this quality measure for people with an SMI and 80 percent for people with ID/RC.
- *Number of preadmission Level IIs recommending community placement instead of NF or other institutional placement.* Another critical function of PASRR is to help divert individuals with an SMI or ID/RC whose needs can be met in a community setting rather than an institutional setting. This helps ensure that individuals are not funneled into unnecessary institutional placements that are undesirable to the individuals and more costly for the state. Of the 35 states that provided information for this report, 71 percent reported collecting data for this quality measure for people with an SMI and 63 percent for people with ID/RC.
- *Annual average of days between preadmission Level I referral and Level II determination.* The CFR requires that PASRR programs complete Level II evaluations and determinations on an annual average of 7-9 working days from the date of Level I referral. This helps ensure that individuals do not experience unnecessary delays in NF admission or service delivery. Tracking this measure ensures that states are meeting this federal requirement. Of the 35 states that provided information for this report, 69 percent reported collecting data for this measure for people with an SMI and 60 percent for people with ID/RC.
- *Number of Resident Reviews completed.* Residents with an SMI or ID/RC who experience a significant change in physical or mental condition, and residents who appear to have a previously unidentified SMI or ID/RC, are required to receive a Resident Review (essentially a post-admission Level II evaluation and determination). Tracking the number of Resident Reviews helps PASRR programs ensure that NFs are making the appropriate referrals for Resident Reviews and that PASRR programs are promptly conducting these reviews. Of the 35 states that provided information for this report, 74

percent reported collecting data for this quality measure for people with an SMI and 69 percent for people with ID/RC.

- *Number of Resident Reviews recommending transition to the community*. A critical function of PASRR is to ensure that residents with an SMI or ID/RC who may be served in the community can transition out of the NF. Tracking the number of Resident Reviews that result in transition recommendations can help PASRR programs evaluate the positive impact of PASRR reviews. Of the 35 states that provided information for this report, 63 percent reported collecting data for this quality measure for people with an SMI and 60 percent for people with ID/RC.

3   Prevalence of SMI, ID/RC, and Dual Diagnoses in NFs

All residents of Medicaid- and Medicare-certified NFs are assessed using the MDS, which collects a rich array of details about NF residents' medical, social, and functional status, which are recorded on the MDS under different codes. The MDS contains two sections (items A1550 and I5700-I6100) where an individual's diagnosis of ID/RC or SMI may be recorded. The MDS also contains two questions about whether an individual has been identified as having an SMI or an ID/RC by the state's PASRR process:

- Question A1500 asks whether an individual has been identified as having a PASRR condition. The response options are *No*, *Yes*, or *Not a Medicaid-Certified Unit*. A *Yes* response leads to the completion of A1510.
- Question A1510 asks which type of PASRR condition an individual has, with the following options: *Serious Mental Illness, Intellectual Disability*, or *Other Related Conditions*.

The suite of tables in Appendix Section A2 shows the number and percentages of individuals with an SMI and ID/RC marked in A1510, as well as the number and percentages of individuals reported with SMI or ID/RC in the sections of the MDS that ask for diagnostic information. The rates of SMI or ID/RC reported in other items may not match the rates reported in A1510 (PASRR). Reasons for differences between the PASRR reporting and diagnosis reporting in other sections of the MDS are discussed below in Section 3.2.

3.1   Methods

Using several methods of counting, as described below, we calculated the percentage of individuals in NFs with an SMI or ID/RC in 2016, 2017, and 2018. Table 2 below provides a list of the MDS questions that are intended to capture identification by a state's PASRR system along with items that record PASRR-related diagnoses, independent of whether PASRR has identified a person as having that diagnosis.

Table 2: Key Minimum Data Set Items

Item #	Response Options
A1510: Level II Preadmission Screening and Resident Review conditions	A: Serious mental illness B: Intellectual disability C: Other related conditions
A1550: Conditions related to ID/RC status	A: Down syndrome B: Autism C: Epilepsy D: Other organic conditions related to ID/DD E: ID/DD with no organic condition Z: none of the above

Item #	Response Options
I5700–I6100: Psychiatric mood disorders	I5700: Anxiety disorder I5800: Depression I5900: Bipolar disorder I5950: Psychotic disorder I6000: Schizophrenia I6100: PTSD
I8000: Additional active diagnoses	Can be used to record ICD-9/10 codes for all conditions of SMI, ID, and RC not otherwise recorded

Abbreviations: DD, developmental disability; ICD-9/10, International Classification of Diseases, Ninth Revision/Tenth Revision; ID, intellectual disability; PTSD, post-traumatic stress disorder; RC, related condition; SMI, serious mental illness.

For each year, in order to demonstrate the range of disability that falls under the diagnosis of SMI, we constructed two tables – one showing results for a broad definition of SMI and the other showing results for a narrow definition of SMI. The broad definition includes individuals with anxiety, depression, post-traumatic stress disorder (PTSD), bipolar disorder, schizophrenia, and psychotic disorder. The narrow definition includes only those individuals with bipolar disorder, schizophrenia, and psychotic disorder.

Using the items in Table 2, combined with the year-end count of NF residents nationwide, we compared:

- the number and percentage of individuals identified by PASRR *to*
- the number and percentage of individuals identified by PASRR *plus* the number and percentage of individuals identified by MDS diagnostic items and *to*
- the number and percentage of individuals identified by PASRR *plus* the number and percentage of individuals identified by MDS diagnostic items *plus* the number and percentage of individuals identified by ICD codes.

These comparisons aimed to assess how many individuals in NFs have an SMI or ID/RC but *lack* a PASRR identification. Readers interested in additional details about how these measures were constructed can consult Section A2, which spells out the logic in a step-by-step fashion.

3.2   Findings and Discussion

Appendix Section A2 presents a suite of tables with the numbers and percentages of individuals with an SMI and ID/RC, using the comparisons described in the Methods section. Readers interested in a detailed breakdown of the data may wish to inspect these tables.

There are three key tables in Appendix A2: Table 14, which summarizes the percentage of individuals with broadly defined SMI, for 2016, 2017, and 2018; Appendix Table 18, which summarizes the percentage of individuals with an SMI narrowly defined, by year; and Appendix Table 22, which summarizes the percentage of individuals with an ID/RC, by year.

Because there are only minor variations from year to year for either form of SMI or for ID/RC, we can focus on the patterns in 2018, the most recent year for which we have complete MDS data. Appendix Table 14 indicates that, using all diagnostic items in the MDS, roughly 60 percent of NF residents have a mental illness broadly defined, while Appendix Table 18 indicates that roughly 20 percent of NF residents have a mental illness narrowly defined. By contrast, roughly five (5) or six (6) percent of NF residents have been identified by PASRR as having SMI.

The data in Appendix Table 22 suggest a different pattern for ID/RC: Using all diagnostic information in the MDS, 3.4 percent of NF residents have an ID/RC, while 2.4 percent have a PASRR identified ID/RC. Thus, PASRR identification for ID/RC closely approximates identification using all diagnostic items in the MDS.

While these findings suggest a large difference between the number of people with SMI and the number of people with *PASRR-identified* SMI, at this time, we cannot draw conclusions about the significance of this discrepancy. There are limitations to the MDS and the assessment process that may explain differences in reporting in PASRR and other questions. Currently, the MDS does not capture the following scenarios:

- **Exempted hospital discharge (EHD):** Individuals with an SMI or an ID/RC diagnosis admitted under an EHD (meaning they do not need to receive Level II screening before admission) may not be recorded in the MDS as having a PASRR-identified condition because they have not yet been assessed by the PASRR program.
- **Failure to meet all PASRR criteria:** The MDS currently does not capture whether an individual with an SMI or ID/RC diagnosis had been assessed by the PASRR program and determined not to meet PASRR criteria. In this instance, the MDS would correctly record that an individual has an SMI or an ID/RC but no PASRR identification.
- **Primary diagnosis of dementia:** The PASRR program may have evaluated an individual with an SMI and determined that he or she had a primary diagnosis of dementia, which would exclude the individual from PASRR (as discussed further in the next section). Again, the MDS would correctly record that the individual has a diagnosis of SMI without a PASRR identification.

In addition to limitations of the MDS, some data-reporting issues may stem from errors made during the MDS assessment or non-compliance on the part of NFs. Three such scenarios include:

- **Absence of Specialized Services:** An individual who has been identified by the PASRR program as having an SMI or an ID/RC for PASRR purposes but does not require Specialized Services would have a positive Level II PASRR determination in his or her NF record. However, some assessors might believe that a determination that Specialized Services are not needed means that the individual lacks a PASRR identification altogether.

- **Failure to notify the relevant state authorities:** When individuals undergo a significant change in status, NFs are obligated to notify the relevant state authority, which determines whether a Resident Review is needed (§483.20(2)(ii)). It is possible that some NFs may not comply with this obligation, thereby decreasing the percentage of individuals who would otherwise be recorded in the MDS as having a PASRR determination.
- **Failure to capture the outcomes of Resident Reviews:** It is also possible that Resident Reviews that lead to positive PASRR determinations are not recorded in the MDS. Although individuals admitted under an exempted hospital discharge are required to receive a Resident Review if they stay in the NF for more than 30 days, it is not clear whether MDS assessments are always updated to reflect the outcome of the Resident Review. Similarly, the MDS may not be updated when a resident is identified through post admission evaluation as having a PASRR SMI or ID/RC. People may incorrectly believe that PASRR identification applies only to Preadmission Screening and may not realize that responses to A1500 should be updated after Resident Reviews.

4 Prevalence of Problematic Behavioral Symptoms Among Individuals with PASRR Disabilities

This section describes an analysis of the MDS that looked at whether problematic behavioral symptoms (self-directed and directed at others) are more common among individuals identified as having a PASRR condition than among the NF population without a PASRR condition. This analysis examined problematic behavioral symptom codes recorded in Section E of the MDS.

4.1 Methods

For the first analysis, we produced summary statistics showing the prevalence of reported problematic behavioral symptoms in Section E of the MDS, for individuals with a PASRR-identified SMI as indicated in Item A1510A, versus other NF residents with an SMI who were not reported as having an SMI in A1510A. We present a parallel analysis for individuals identified as having an ID/RC in Items A1510B (ID) or A1510C (RC).

Table 3 below provides the MDS items indicating problematic behavioral symptoms and the response options.

Table 3: Minimum Data Set Items Indicating Problematic Behavioral Symptoms

Item #	Response Options
E0200: Behavioral Symptom – Presence & Frequency	A – Physical behavioral symptoms directed toward others (e.g., hitting, kicking, pushing, scratching, grabbing, abusing other sexually) B – Verbal behavioral symptoms directed toward others (e.g., threatening others, screaming at others, cursing at others) C – Other behavioral symptoms not directed toward others (e.g., physical symptoms such as hitting or scratching self, pacing rummaging, public sexual acts, disrobing in public, throwing or smearing food or bodily wastes, or verbal/vocal symptoms like screaming, disruptive sounds)
E0500: Impact on Resident	Did any of the identified symptom(s) – A – Put the resident at significant risk for physical illness or injury? (yes/no) B – Significantly interfere with the resident's care? (yes/no) C – Significantly interfere with the resident's participation in activities or social interactions? (yes/no)
E0600: Impact on Others	Did any of the identified symptom(s): A – Put others at significant risk for physical injury? (yes/no) B – Significantly intrude on the privacy or activity of others? (yes/no) C – Significantly disrupt care or living environment? (yes/no)

4.2 Findings and Discussion

Appendix Section A3 presents a suite of tables showing the number and percentage of individuals with an SMI or ID/RC who exhibit problematic behavioral symptoms compared to the number and percentage of NF residents who exhibit these same symptoms but *lack* a PASRR identification, for the years 2016, 2017, and 2018. Readers interested in a detailed breakdown of the data may wish to inspect these tables.

There are two key tables in the Appendix: Table 26, which summarizes the percentage of individuals with PASRR SMI who show problematic behavioral symptoms compared to other NF residents, for 2016, 2017, and 2018; and Table 30, which summarizes the percentage of individuals with PASRR ID/RC who show problematic behavioral symptoms compared to other NF residents, by year. Because there are only minor variations from year to year, we can focus on the data for 2018, the most recent year for which we have complete MDS data.

In all cases, the prevalence of problematic behavioral symptoms was higher among individuals with a reported PASRR identification. This pattern holds for both the population with an SMI (A1510A) and the population with an ID/RC (A1510B/C). Two of the greatest areas of departure between the PASRR-identified populations and the non-PASRR-identified populations were in threatening, screaming, or cursing (MDS Item E0200B) and in hitting or scratching, self-pacing, rummaging, public sexual acts, disrobing in public, throwing or smearing food or bodily wastes, or verbal symptoms such as screaming or disruptive sounds (MDS Item E0200C):

- 12 percent of residents with PASRR SMI exhibited behaviors captured in E0200B compared to 6 percent for other residents with an SMI who were not PASRR-identified, while 9 percent of residents with PASRR ID/RC exhibited these behaviors compared to 6 percent for other residents with an ID/RC who were not PASRR-identified.
- We note that 11.1 percent of residents with PASRR SMI exhibited behaviors captured by E0200C compared to 4.4 percent of other residents; and 9.4 percent of residents with PASRR ID/RC exhibited these behaviors compared to 4.7 percent of other residents with an ID/RC who were not PASRR-identified.

As noted previously in this report, there is uncertainty as to how accurately the MDS captures the number of people with a PASRR SMI and ID/RC.

5   Prevalence of Dementia Among Individuals with an SMI

Statutorily, people with primary dementia and secondary SMI are not considered to have an SMI for PASRR purposes (Section 1919(e)(7)(G)(i) of the Social Security Act). They need not be identified on the MDS as having PASRR SMI. We might then expect rates of dementia to be higher among NF residents with an SMI who *lack* a PASRR identification. However, we also note that many individuals with both SMI and a dementia diagnosis will still qualify for a PASRR identification. This analysis compared the prevalence of people identified in the MDS as having both dementia and an SMI, compared to the prevalence of people identified as having both dementia and PASRR SMI.

5.1 Methods

We determined the percentage of individuals with a dementia diagnosis as reported in Items I4200 (Alzheimer's Disease), I4800 (Non-Alzheimer's Dementia), or the *Unspecified dementia without behavioral disturbance* ICD-10 code (F03.90) in Item I8000. The percentages are reported among NF residents identified with a PASRR SMI in Item A1510A compared with the population of NF residents identified with an SMI elsewhere in the MDS who do not have a PASRR diagnosis.

5.2 Findings and Discussion

Appendix Section A4 presents a suite of tables showing the number and percentage of NF residents with an SMI who have a diagnosis of dementia, comparing residents who have a PASRR-identified SMI to those who have an SMI as indicated elsewhere in the MDS but have *not* been identified by PASRR. Readers interested in a detailed breakdown of the data may wish to inspect these tables.

In Table 31 to Table 33, we present data for the years 2016, 2017, and 2018. The key table is Appendix Table 34, which summarizes these percentages by year. Because there are only minor variations from year to year, we can focus on 2018, the most recent year for which we have complete MDS data.[4]

The percentage of individuals with dementia was higher in the group of residents with an SMI who did not have a PASRR diagnosis than in the group with a diagnosis of PASRR SMI, as reported in A1510A. In 2018, 59 percent of individuals with no PASRR identification had a dementia diagnosis reported in the MDS, compared to only 36 percent of individuals with a PASRR-identified SMI.

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[4] There is one case in which the year-to-year variation may be meaningful: In 2018, very few cases of dementia were reported in item I8000, whether for individuals with PASRR SMI or for individuals with an SMI identified by other diagnostic items in the MDS. It is difficult to tell whether this drop from prior years should be considered meaningful.

However, the MDS does not currently record whether dementia is "primary". At this stage, this analysis is presented only for informational purposes. Further analysis is required to identify any relationship between the identification of dementia and SMI under PASRR. This information may be helpful in future conversations about ensuring that individuals with an SMI and a dementia diagnosis are not improperly excluded from PASRR consideration.

About PTAC and Requesting Technical Assistance

The PASRR Technical Assistance Center (PTAC) holds a contract with CMS to provide technical assistance to state PASRR agencies/authorities about their PASRR programs, including responding to questions by phone and email and providing on-site support. PTAC also provides voluntary technical assistance opportunities, including webinars, peer support calls with states, and communications such as this report. These services are offered free of charge.

Additional information and training materials are available on the PTAC website (www.PASRRassist.org).

A   Appendix: Data Tables

A1   Quality Monitoring and Quality Improvement Data Tables

Table 4 and Table 5 show the numbers and percentages of states (the number of states divided by 35 times 100%) that could report on the listed quality measures for individuals with an SMI in 2017 and 2019, respectively. Table 6 and Table 7 show parallel data for the same years for individuals with an ID/RC. Table 8 and Table 9 show parallel data for the same years for individuals who have a dual diagnosis (both SMI and ID/RC). Table 10 summarizes these percentages by PASRR identification type and year.

Table 4: States Able to Report on Quality Data Measures for SMI in 2017 (n=34)

Measure	SMI					
	# Yes	% Yes	# No	% No	# NI	% NI
Total # of NF Admissions Statewide						
Total # of Level I evaluations performed statewide	16	50.0	7	21.9	10	31.3
# of Level I evaluations that were done prior to admission	15	46.9	8	25.0	10	31.3
of Level I evaluations that were done prior to admission	13	40.6	8	25.0	12	37.5
# of positive Level I evaluations	18	56.3	6	18.8	9	28.1
of Level I evaluations testing positive	17	53.1	7	21.9	9	28.1
# of negative Level I evaluations	16	50.0	7	21.9	10	31.3
of Level I evaluations testing negative	16	50.0	7	21.9	10	31.3
Exempted Hospital Discharges						
# of NF admissions	17	53.1	7	21.9	9	28.1
# of NF admissions under EHDs	14	43.8	9	28.1	10	31.3
of NF admissions under EHDs	13	40.6	10	31.3	10	31.3
# of EHDs with stays longer than 45 days	14	43.8	10	31.3	9	28.1
of EHDs longer than 45 days	14	43.8	10	31.3	9	28.1
Preadmission Evaluation (Preadmission Screens) – Level II Evaluations						
# of PAS – Level II evaluations	30	85.7	1	2.9	4	11.4
# of PAS that were done prior to admission	23	65.7	6	17.1	6	17.1
of PAS that were done prior to admission	23	71.9	2	6.3	8	25.0
# of positive PAS (i.e., finding of SMI or ID/RC)	19	59.4	6	18.8	8	25.0
of PAS leading to positive determinations	17	53.1	7	21.9	9	28.1
# of positive determinations that recommend Specialized Services	21	65.6	4	12.5	8	25.0
of positive determinations that recommend Specialized Services	19	59.4	5	15.6	9	28.1
# of categorical determinations	22	68.8	3	9.4	8	25.0
of categorical determinations	20	62.5	4	12.5	9	28.1
# of positive PAS recommending either community placement or any institutional placement	16	50.0	7	21.9	10	31.3
of positive PAS recommending either community placement or any institutional placement	15	46.9	8	25.0	10	31.3
# of positive PAS recommending any institutional placement (NF, ICF/IID, or inpatient psychiatric)	19	59.4	6	18.8	8	25.0
of positive PAS recommending any institutional placement (NF, ICF/IID, or inpatient psychiatric)	19	59.4	6	18.8	8	25.0
# of positive PAS recommending institutional placement (ICF/IID or inpatient psychiatric)	20	62.5	5	15.6	8	25.0
of positive PAS recommending institutional placement (ICF/IID or inpatient psychiatric)	19	59.4	6	18.8	8	25.0
# of positive PAS recommending institutional placement (NF)	17	53.1	7	21.9	9	28.1
of positive PAS recommending institutional placement (NF)	16	50.0	8	25.0	9	28.1
# of positive PAS recommending community placement	19	59.4	5	15.6	9	28.1
of positive PAS recommending community placement	18	56.3	6	18.8	9	28.1
# of positive PAS leading to institutional placement (NF)	18	56.3	7	21.9	8	25.0

Measure	SMI					
	# Yes	% Yes	# No	% No	# NI	% NI
of positive PAS leading to institutional placement (NF)	18	56.3	7	21.9	8	25.0
# of positive PAS leading to institutional placement (ICF/IID or inpatient psychiatric)	13	40.6	12	37.5	8	25.0
of positive PAS leading to institutional placement (ICF/IID or inpatient psychiatric)	12	37.5	13	40.6	8	25.0
# of positive PAS leading to community placement	7	21.9	18	56.3	8	25.0
of positive PAS leading to community placement	6	18.8	19	59.4	8	25.0
Annual average time (days) between Level I and Level II PAS determination	6	18.8	19	59.4	8	25.0
Resident Review – Level II Evaluations						
# of RRs – Level II evaluations	22	68.8	4	12.5	7	21.9
# of positive RRs (i.e., finding of SMI or ID/RC)	20	62.5	5	15.6	8	25.0
of RRs leading to positive determinations	18	56.3	7	21.9	8	25.0
# of negative RRs (i.e., finding of no SMI, no ID/RC)	19	59.4	6	18.8	8	25.0
of RRs leading to negative determinations	18	56.3	7	21.9	8	25.0
# of positive RRs recommending continued NF placement	20	62.5	5	15.6	8	25.0
of positive RRs recommending continued NF placement	19	59.4	6	18.8	8	25.0
# of positive RRs recommending community placement	17	53.1	8	25.0	8	25.0
of positive RRs recommending community placement	17	53.1	8	25.0	8	25.0
# of positive RRs leading to continued NF placement	14	43.8	11	34.4	8	25.0
of positive RRs leading to continued NF placement	13	40.6	11	34.4	9	28.1
# of positive RRs leading to community placement	8	25.0	16	50.0	9	28.1
of positive RRs leading to community placement	7	21.9	17	53.1	9	28.1

Abbreviations: EHD, exempted hospital discharge; ICF/IID, intermediate care facility for individuals with intellectual disability; ID, intellectual disability; NF, nursing facility; NI, no information; PAS, Preadmission Screens; RC, related condition; RR, Resident Review; SMI, serious mental illness

Table 5: States Able to Report on Quality Data Measures for SMI in 2019 (n=35)

Measure	SMI					
	# Yes	% Yes	# No	% No	# NI	% NI
Total # of NF Admissions Statewide						
Total # of Level I evaluations performed statewide	20	57.1	7	20.0	8	22.9
# of Level I evaluations that were done prior to admission	14	40.0	10	28.6	11	31.4
% of Level I evaluations that were done prior to admission	14	40.0	10	28.6	11	31.4
# of positive Level I evaluations	22	62.9	5	14.3	8	22.9
% of Level I evaluations testing positive	19	54.3	7	20.0	9	25.7
# of negative Level I evaluations	18	51.4	7	20.0	10	28.6
% of Level I evaluations testing negative	19	54.3	7	20.0	9	25.7
Exempted Hospital Discharges						
# of NF admissions	19	54.3	8	22.9	8	22.9
# of NF admissions under EHDs	14	40.0	10	28.6	11	31.4
% of NF admissions under EHDs	13	37.1	11	31.4	11	31.4
# of EHDs with stays longer than 45 days	15	42.9	11	31.4	9	25.7
% of EHDs longer than 45 days	14	40.0	11	31.4	10	28.6
Preadmission Evaluation (Preadmission Screens) – Level II Evaluations						
# of PAS – Level II evaluations	30	85.7	1	2.9	4	11.4
# of PAS that were done prior to admission	23	65.7	6	17.1	6	17.1
% of PAS that were done prior to admission	23	65.7	6	17.1	6	17.1
# of positive PAS (i.e., finding of SMI or ID/RC)	28	80.0	3	8.6	4	11.4
% of PAS leading to positive determinations	27	77.1	3	8.6	5	14.3
# of positive determinations that recommend Specialized Services	26	74.3	3	8.6	6	17.1
% of positive determinations that recommend Specialized Services	25	71.4	3	8.6	7	20.0
# of categorical determinations	24	68.6	4	11.4	7	20.0
% of categorical determinations	23	65.7	5	14.3	7	20.0
# of positive PAS recommending either community placement or any institutional placement	25	71.4	5	14.3	5	14.3
% of positive PAS recommending either community placement or any institutional placement	24	68.6	5	14.3	6	17.1
# of positive PAS recommending any institutional placement (NF, ICF/IID, or inpatient psychiatric)	26	74.3	5	14.3	4	11.4
% of positive PAS recommending any institutional placement (NF, ICF/IID, or inpatient psychiatric)	23	65.7	5	14.3	7	20.0
# of positive PAS recommending institutional placement (ICF/IID or inpatient psychiatric)	24	68.6	5	14.3	6	17.1
% of positive PAS recommending institutional placement (ICF/IID or inpatient psychiatric)	23	65.7	5	14.3	7	20.0
# of positive PAS recommending institutional placement (NF)	26	74.3	5	14.3	4	11.4
% of positive PAS recommending institutional placement (NF)	25	71.4	5	14.3	5	14.3
# of positive PAS recommending community placement	25	71.4	5	14.3	5	14.3
% of positive PAS recommending community placement	23	65.7	5	14.3	7	20.0
# of positive PAS leading to institutional placement (NF)	17	48.6	12	34.3	6	17.1

Measure	SMI					
	# Yes	% Yes	# No	% No	# NI	% NI
% of positive PAS leading to institutional placement (NF)	16	45.7	12	34.3	7	20.0
# of positive PAS leading to institutional placement (ICF/IID or inpatient psychiatric)	10	28.6	17	48.6	8	22.9
% of positive PAS leading to institutional placement (ICF/IID or inpatient psychiatric)	9	25.7	17	48.6	9	25.7
# of positive PAS leading to community placement	10	28.6	17	48.6	8	22.9
% of positive PAS leading to community placement	9	25.7	17	48.6	9	25.7
Annual average time (days) between Level I and Level II PAS determination	24	68.6	5	14.3	6	17.1
Resident Review – Level II Evaluations						
# of RRs – Level II evaluations	26	74.3	3	8.6	6	17.1
# of positive RRs (i.e., finding of SMI or ID/RC)	25	71.4	4	11.4	6	17.1
% of RRs leading to positive determinations	24	68.6	4	11.4	7	20.0
# of negative RRs (i.e., finding of no SMI, no ID/RC)	24	68.6	4	11.4	7	20.0
% of RRs leading to negative determinations	23	65.7	4	11.4	8	22.9
# of positive RRs recommending continued NF placement	24	68.6	5	14.3	6	17.1
% of positive RRs recommending continued NF placement	23	65.7	5	14.3	7	20.0
# of positive RRs recommending community placement	22	62.9	6	17.1	7	20.0
% of positive RRs recommending community placement	21	60.0	6	17.1	8	22.9
# of positive RRs leading to continued NF placement	17	48.6	11	31.4	7	20.0
% of positive RRs leading to continued NF placement	16	45.7	11	31.4	8	22.9
# of positive RRs leading to community placement	9	25.7	17	48.6	9	25.7
% of positive RRs leading to community placement	8	22.9	17	48.6	10	28.6

Abbreviations: Abbreviations: EHD, exempted hospital discharge; ICF/IID, intermediate care facility for individuals with intellectual disability; ID, intellectual disability; NF, nursing facility; NI, no information; PAS, Preadmission Screens; RC, related condition; RR, Resident Review; SMI, serious mental illness.

Table 6: States Able to Report on Quality Data Measures for ID/RC in 2017 (n=34)

Measure	ID/RC					
	# Yes	% Yes	# No	% No	# NI	% NI
Total # of NF Admissions Statewide						
Total # of Level I evaluations performed statewide	17	53.1	7	21.9	9	28.1
# of Level I evaluations that were done prior to admission	15	46.9	9	28.1	9	28.1
of Level I evaluations that were done prior to admission	14	43.8	9	28.1	10	31.3
# of positive Level I evaluations	19	59.4	6	18.8	8	25.0
of Level I evaluations testing positive	17	53.1	7	21.9	9	28.1
# of negative Level I evaluations	16	50.0	8	25.0	9	28.1
of Level I evaluations testing negative	17	53.1	7	21.9	9	28.1
Exempted Hospital Discharges						
# of NF admissions	18	56.3	6	18.8	9	28.1
# of NF admissions under EHDs	14	43.8	8	25.0	11	34.4
of NF admissions under EHDs	13	40.6	9	28.1	11	34.4
# of EHDs with stays longer than 45 days	13	40.6	9	28.1	11	34.4
of EHDs longer than 45 days	13	40.6	9	28.1	11	34.4
Preadmission Evaluation (Preadmission Screens) – Level II Evaluations						
# of PAS – Level II evaluations	25	78.1	2	6.3	6	18.8
# of PAS that were done prior to admission	20	62.5	6	18.8	7	21.9
of PAS that were done prior to admission	19	59.4	7	21.9	7	21.9
# of positive PAS (i.e., finding of SMI or ID/RC)	25	78.1	2	6.3	6	18.8
of PAS leading to positive determinations	22	68.8	4	12.5	7	21.9
# of positive determinations that recommend Specialized Services	24	75.0	2	6.3	7	21.9
of positive determinations that recommend Specialized Services	21	65.6	4	12.5	8	25.0
# of categorical determinations	17	53.1	6	18.8	10	31.3
of categorical determinations	16	50.0	7	21.9	10	31.3
# of positive PAS recommending either community placement or any institutional placement	20	62.5	6	18.8	7	21.9
of positive PAS recommending either community placement or any institutional placement	19	59.4	7	21.9	7	21.9
# of positive PAS recommending any institutional placement (NF, ICF/IID, or inpatient psychiatric)	20	62.5	7	21.9	6	18.8
of positive PAS recommending any institutional placement (NF, ICF/IID, or inpatient psychiatric)	19	59.4	8	25.0	6	18.8
# of positive PAS recommending institutional placement (ICF/IID or inpatient psychiatric)	17	53.1	8	25.0	8	25.0
of positive PAS recommending institutional placement (ICF/IID or inpatient psychiatric)	16	50.0	9	28.1	8	25.0
# of positive PAS recommending institutional placement (NF)	21	65.6	7	21.9	5	15.6
of positive PAS recommending institutional placement (NF)	20	62.5	7	21.9	6	18.8
# of positive PAS recommending community placement	18	56.3	9	28.1	6	18.8
of positive PAS recommending community placement	17	53.1	9	28.1	7	21.9
# of positive PAS leading to institutional placement (NF)	15	46.9	10	31.3	8	25.0

Measure	ID/RC					
	# Yes	% Yes	# No	% No	# NI	% NI
of positive PAS leading to institutional placement (NF)	14	43.8	11	34.4	8	25.0
# of positive PAS leading to institutional placement (ICF/IID or inpatient psychiatric)	5	15.6	19	59.4	9	28.1
of positive PAS leading to institutional placement (ICF/IID or inpatient psychiatric)	4	12.5	20	62.5	9	28.1
# of positive PAS leading to community placement	6	18.8	20	62.5	7	21.9
of positive PAS leading to community placement	5	15.6	20	62.5	8	25.0
Annual average time (days) between Level I and Level II PAS determination	18	56.3	7	21.9	8	25.0
Resident Review – Level II Evaluations						
# of RRs – Level II evaluations	22	68.8	4	12.5	7	21.9
# of positive RRs (i.e., finding of SMI or ID/RC)	21	65.6	5	15.6	7	21.9
of RRs leading to positive determinations	19	59.4	7	21.9	7	21.9
# of negative RRs (i.e., finding of no SMI, no ID/RC)	17	53.1	8	25.0	8	25.0
of RRs leading to negative determinations	17	53.1	8	25.0	8	25.0
# of positive RRs recommending continued NF placement	19	59.4	5	15.6	9	28.1
of positive RRs recommending continued NF placement	20	62.5	4	12.5	9	28.1
# of positive RRs recommending community placement	17	53.1	7	21.9	9	28.1
of positive RRs recommending community placement	16	50.0	8	25.0	9	28.1
# of positive RRs leading to continued NF placement	15	46.9	9	28.1	9	28.1
of positive RRs leading to continued NF placement	15	46.9	9	28.1	9	28.1
# of positive RRs leading to community placement	8	25.0	16	50.0	9	28.1
of positive RRs leading to community placement	7	21.9	17	53.1	9	28.1

Abbreviations: Abbreviations: EHD, exempted hospital discharge; ICF/IID, intermediate care facility for individuals with intellectual disability; ID, intellectual disability; NF, nursing facility; NI, no information; PAS, Preadmission Screens; RC, related condition; RR, Resident Review; SMI, serious mental illness.

Table 7: States Able to Report on Quality Data Measures for ID/RC in 2019 (n=35)

Measure	ID/RC					
	# Yes	% Yes	# No	% No	# NI	% NI
Total # of NF Admissions Statewide						
Total # of Level I evaluations performed statewide	20	57.1	6	17.1	9	25.7
# of Level I evaluations that were done prior to admission	14	40.0	10	28.6	11	31.4
% of Level I evaluations that were done prior to admission	14	40.0	10	28.6	11	31.4
# of positive Level I evaluations	23	65.7	4	11.4	8	22.9
% of Level I evaluations testing positive	20	57.1	6	17.1	9	25.7
# of negative Level I evaluations	19	54.3	6	17.1	10	28.6
% of Level I evaluations testing negative	20	57.1	6	17.1	9	25.7
Exempted Hospital Discharges						
# of NF admissions	19	54.3	7	20.0	9	25.7
# of NF admissions under EHDs	14	40.0	9	25.7	12	34.3
% of NF admissions under EHDs	13	37.1	10	28.6	12	34.3
# of EHDs with stays longer than 45 days	15	42.9	10	28.6	10	28.6
% of EHDs longer than 45 days	14	40.0	10	28.6	11	31.4
Preadmission Evaluation (Preadmission Screens) – Level II Evaluations						
# of PAS – Level II evaluations	29	82.9	1	2.9	5	14.3
# of PAS that were done prior to admission	22	62.9	6	17.1	7	20.0
% of PAS that were done prior to admission	22	62.9	6	17.1	7	20.0
# of positive PAS (i.e., finding of SMI or ID/RC)	28	80.0	2	5.7	5	14.3
% of PAS leading to positive determinations	25	71.4	3	8.6	7	20.0
# of positive determinations that recommend Specialized Services	28	80.0	2	5.7	5	14.3
% of positive determinations that recommend Specialized Services	25	71.4	3	8.6	7	20.0
# of categorical determinations	21	60.0	4	11.4	10	28.6
% of categorical determinations	22	62.9	4	11.4	9	25.7
# of positive PAS recommending either community placement or any institutional placement	24	68.6	4	11.4	7	20.0
% of positive PAS recommending either community placement or any institutional placement	22	62.9	6	17.1	7	20.0
# of positive PAS recommending any institutional placement (NF, ICF/IID, or inpatient psychiatric)	22	62.9	7	20.0	6	17.1
% of positive PAS recommending any institutional placement (NF, ICF/IID, or inpatient psychiatric)	21	60.0	7	20.0	7	20.0
# of positive PAS recommending institutional placement (ICF/IID or inpatient psychiatric)	21	60.0	7	20.0	7	20.0
% of positive PAS recommending institutional placement (ICF/IID or inpatient psychiatric)	20	57.1	7	20.0	8	22.9
# of positive PAS recommending institutional placement (NF)	22	62.9	7	20.0	6	17.1
% of positive PAS recommending institutional placement (NF)	22	62.9	7	20.0	6	17.1
# of positive PAS recommending community placement	22	62.9	6	17.1	7	20.0
% of positive PAS recommending community placement	22	62.9	6	17.1	7	20.0
# of positive PAS leading to institutional placement (NF)	16	45.7	11	31.4	8	22.9

Measure	ID/RC					
	# Yes	% Yes	# No	% No	# NI	% NI
% of positive PAS leading to institutional placement (NF)	15	42.9	11	31.4	9	25.7
# of positive PAS leading to institutional placement (ICF/IID or inpatient psychiatric)	10	28.6	16	45.7	9	25.7
% of positive PAS leading to institutional placement (ICF/IID or inpatient psychiatric)	8	22.9	16	45.7	11	31.4
# of positive PAS leading to community placement	9	25.7	16	45.7	10	28.6
% of positive PAS leading to community placement	9	25.7	16	45.7	10	28.6
Annual average time (days) between Level I and Level II PAS determination	21	60.0	5	14.3	9	25.7
Resident Review – Level II Evaluations						
# of RRs – Level II evaluations	24	68.6	4	11.4	7	20.0
# of positive RRs (i.e., finding of SMI or ID/RC)	23	65.7	5	14.3	7	20.0
% of RRs leading to positive determinations	22	62.9	5	14.3	8	22.9
# of negative RRs (i.e., finding of no SMI, no ID/RC)	22	62.9	6	17.1	7	20.0
% of RRs leading to negative determinations	21	60.0	6	17.1	8	22.9
# of positive RRs recommending continued NF placement	22	62.9	5	14.3	8	22.9
% of positive RRs recommending continued NF placement	22	62.9	4	11.4	9	25.7
# of positive RRs recommending community placement	21	60.0	6	17.1	8	22.9
% of positive RRs recommending community placement	19	54.3	7	20.0	9	25.7
# of positive RRs leading to continued NF placement	17	48.6	10	28.6	8	22.9
% of positive RRs leading to continued NF placement	16	45.7	10	28.6	9	25.7
# of positive RRs leading to community placement	10	28.6	16	45.7	9	25.7
% of positive RRs leading to community placement	9	25.7	16	45.7	10	28.6

Abbreviations: Abbreviations: EHD, exempted hospital discharge; ICF/IID, intermediate care facility for individuals with intellectual disability; ID, intellectual disability; NF, nursing facility; NI, no information; PAS, Preadmission Screens; RC, related condition; RR, Resident Review; SMI, serious mental illness.

Table 8: States Able to Report on Quality Data Measures for Dual Diagnoses in 2017 (n=34)

Measure	Dual					
	# Yes	Yes	# No	No	# NI	NI
Total # of NF Admissions Statewide						
Total # of Level I evaluations performed statewide	14	43.8	8	25.0	11	34.4
# of Level I evaluations that were done before admission	13	40.6	9	28.1	11	34.4
of Level I evaluations that were done before admission	14	43.8	9	28.1	10	31.3
# of positive Level I evaluations	16	50.0	6	18.8	11	34.4
of Level I evaluations testing positive	15	46.9	7	21.9	11	34.4
# of negative Level I evaluations	15	46.9	7	21.9	11	34.4
of Level I evaluations testing negative	15	46.9	7	21.9	11	34.4
Exempted Hospital Discharges						
# of NF admissions	16	50.0	6	18.8	11	34.4
# of NF admissions under EHDs	13	40.6	8	25.0	12	37.5
of NF admissions under EHDs	12	37.5	9	28.1	12	37.5
# of EHDs with stays longer than 45 days	12	37.5	9	28.1	12	37.5
of EHDs longer than 45 days	12	37.5	9	28.1	12	37.5
Preadmission Evaluation (Preadmission Screens) – Level II Evaluations						
# of PAS – Level II evaluations	21	65.6	2	6.3	10	31.3
# of PAS that were done prior to admission	16	50.0	6	18.8	11	34.4
of PAS that were done prior to admission	15	46.9	7	21.9	11	34.4
# of positive PAS (i.e., finding of SMI or ID/RC)	20	62.5	3	9.4	10	31.3
of PAS leading to positive determinations	17	53.1	5	15.6	11	34.4
# of positive determinations that recommend Specialized Services	21	65.6	2	6.3	10	31.3
of positive determinations that recommend Specialized Services	18	56.3	4	12.5	11	34.4
# of categorical determinations	13	40.6	7	21.9	13	40.6
of categorical determinations	12	37.5	8	25.0	13	40.6
# of positive PAS recommending either community placement or any institutional placement	16	50.0	7	21.9	10	31.3
of positive PAS recommending either community placement or any institutional placement	15	46.9	7	21.9	11	34.4
# of positive PAS recommending any institutional placement (NF, ICF/IID, or inpatient psychiatric)	16	50.0	6	18.8	11	34.4
of positive PAS recommending any institutional placement (NF, ICF/IID, or inpatient psychiatric)	15	46.9	7	21.9	11	34.4
# of positive PAS recommending institutional placement (ICF/IID or inpatient psychiatric)	14	43.8	7	21.9	12	37.5
of positive PAS recommending institutional placement (ICF/IID or inpatient psychiatric)	13	40.6	8	25.0	12	37.5
# of positive PAS recommending institutional placement (NF)	18	56.3	5	15.6	10	31.3
of positive PAS recommending institutional placement (NF)	16	50.0	6	18.8	11	34.4
# of positive PAS recommending community placement	15	46.9	8	25.0	10	31.3
of positive PAS recommending community placement	14	43.8	8	25.0	11	34.4
# of positive PAS leading to institutional placement (NF)	13	40.6	9	28.1	11	34.4

Measure	Dual					
	# Yes	Yes	# No	No	# NI	NI
of positive PAS leading to institutional placement (NF)	12	37.5	10	31.3	11	34.4
# of positive PAS leading to institutional placement (ICF/IID or inpatient psychiatric)	5	15.6	16	50.0	12	37.5
of positive PAS leading to institutional placement (ICF/IID or inpatient psychiatric)	4	12.5	17	53.1	12	37.5
# of positive PAS leading to community placement	5	15.6	17	53.1	11	34.4
of positive PAS leading to community placement	4	12.5	17	53.1	12	37.5
Annual average time (days) between Level I and Level II PAS determination	17	53.1	5	15.6	11	34.4
Resident Review – Level II Evaluations						
# of RRs – Level II evaluations	16	50.0	5	15.6	12	37.5
# of positive RRs (i.e., finding of SMI or ID/RC)	16	50.0	5	15.6	12	37.5
of RRs leading to positive determinations	15	46.9	6	18.8	12	37.5
# of negative RRs (i.e., finding of no SMI, no ID/RC)	14	43.8	7	21.9	12	37.5
of RRs leading to negative determinations	14	43.8	7	21.9	12	37.5
# of positive RRs recommending continued NF placement	16	50.0	5	15.6	12	37.5
of positive RRs recommending continued NF placement	16	50.0	5	15.6	12	37.5
# of positive RRs recommending community placement	12	37.5	9	28.1	12	37.5
of positive RRs recommending community placement	12	37.5	9	28.1	12	37.5
# of positive RRs leading to continued NF placement	12	37.5	9	28.1	12	37.5
of positive RRs leading to continued NF placement	12	37.5	9	28.1	12	37.5
# of positive RRs leading to community placement	5	15.6	16	50.0	12	37.5
of positive RRs leading to community placement	4	12.5	17	53.1	12	37.5

Abbreviations: Abbreviations: EHD, exempted hospital discharge; ICF/IID, intermediate care facility for individuals with intellectual disability; ID, intellectual disability; NF, nursing facility; NI, no information; PAS, Preadmission Screens; RC, related condition; RR, Resident Review; SMI, serious mental illness

Table 9: States Able to Report on Quality Data Measures for Dual Diagnoses in 2019 (n=35)

Measure	Dual					
	# Yes	% Yes	# No	% No	# NI	% NI
Total # of NF Admissions Statewide						
Total # of Level I evaluations performed statewide	19	54.3	6	17.1	9	25.7
# of Level I evaluations that were done before admission	14	40.0	9	25.7	11	31.4
% of Level I evaluations that were done before admission	14	40.0	9	25.7	11	31.4
# of positive Level I evaluations	23	65.7	3	8.6	8	22.9
% of Level I evaluations testing positive	20	57.1	5	14.3	9	25.7
# of negative Level I evaluations	18	51.4	6	17.1	10	28.6
% of Level I evaluations testing negative	19	54.3	6	17.1	9	25.7
Exempted Hospital Discharges						
# of NF admissions	19	54.3	6	17.1	9	25.7

Measure	Dual					
	# Yes	% Yes	# No	% No	# NI	% NI
# of NF admissions under EHDs	14	40.0	8	22.9	12	34.3
% of NF admissions under EHDs	13	37.1	9	25.7	12	34.3
# of EHDs with stays longer than 45 days	15	42.9	9	25.7	10	28.6
% of EHDs longer than 45 days	14	40.0	9	25.7	11	31.4
Preadmission Evaluation (Preadmission Screens) – Level II Evaluations						
# of PAS – Level II evaluations	26	74.3	1	2.9	7	20.0
# of PAS that were done prior to admission	21	60.0	4	11.4	9	25.7
% of PAS that were done prior to admission	21	60.0	4	11.4	9	25.7
# of positive PAS (i.e., finding of SMI or ID/RC)	25	71.4	2	5.7	7	20.0
% of PAS leading to positive determinations	22	62.9	3	8.6	9	25.7
# of positive determinations that recommend Specialized Services	26	74.3	1	2.9	7	20.0
% of positive determinations that recommend Specialized Services	23	65.7	2	5.7	9	25.7
# of categorical determinations	19	54.3	4	11.4	11	31.4
% of categorical determinations	20	57.1	4	11.4	10	28.6
# of positive PAS recommending either community placement or any institutional placement	22	62.9	4	11.4	8	22.9
% of positive PAS recommending either community placement or any institutional placement	21	60.0	5	14.3	8	22.9
# of positive PAS recommending any institutional placement (NF, ICF/IID, or inpatient psychiatric)	21	60.0	5	14.3	8	22.9
% of positive PAS recommending any institutional placement (NF, ICF/IID, or inpatient psychiatric)	20	57.1	5	14.3	9	25.7
# of positive PAS recommending institutional placement (ICF/IID or inpatient psychiatric)	20	57.1	5	14.3	9	25.7
% of positive PAS recommending institutional placement (ICF/IID or inpatient psychiatric)	19	54.3	5	14.3	10	28.6
# of positive PAS recommending institutional placement (NF)	21	60.0	5	14.3	8	22.9
% of positive PAS recommending institutional placement (NF)	21	60.0	5	14.3	8	22.9
# of positive PAS recommending community placement	22	62.9	4	11.4	8	22.9
% of positive PAS recommending community placement	22	62.9	4	11.4	8	22.9
# of positive PAS leading to institutional placement (NF)	15	42.9	10	28.6	9	25.7
% of positive PAS leading to institutional placement (NF)	14	40.0	10	28.6	10	28.6
# of positive PAS leading to institutional placement (ICF/IID or inpatient psychiatric)	9	25.7	15	42.9	10	28.6
% of positive PAS leading to institutional placement (ICF/IID or inpatient psychiatric)	8	22.9	15	42.9	11	31.4
# of positive PAS leading to community placement	9	25.7	15	42.9	10	28.6
% of positive PAS leading to community placement	9	25.7	15	42.9	10	28.6
Annual average time (days) between Level I and Level II PAS determination	21	60.0	4	11.4	9	25.7
Resident Review – Level II Evaluations						
# of RRs – Level II evaluations	21	60.0	4	11.4	9	25.7
# of positive RRs (i.e., finding of SMI or ID/RC)	22	62.9	3	8.6	9	25.7
% of RRs leading to positive determinations	20	57.1	4	11.4	10	28.6
# of negative RRs (i.e., finding of no SMI, no ID/RC)	20	57.1	5	14.3	9	25.7

Measure	Dual					
	# Yes	% Yes	# No	% No	# NI	% NI
% of RRs leading to negative determinations	19	54.3	5	14.3	10	28.6
# of positive RRs recommending continued NF placement	21	60.0	4	11.4	9	25.7
% of positive RRs recommending continued NF placement	20	57.1	4	11.4	10	28.6
# of positive RRs recommending community placement	18	51.4	7	20.0	9	25.7
% of positive RRs recommending community placement	17	48.6	7	20.0	10	28.6
# of positive RRs leading to continued NF placement	15	42.9	10	28.6	9	25.7
% of positive RRs leading to continued NF placement	14	40.0	10	28.6	10	28.6
# of positive RRs leading to community placement	7	20.0	17	48.6	10	28.6
% of positive RRs leading to community placement	7	20.0	16	45.7	11	31.4

Abbreviations: Abbreviations: EHD, exempted hospital discharge; ICF/IID, intermediate care facility for individuals with intellectual disability; ID, intellectual disability; NF,

Table 10: Percentages of States Indicating They Collect Listed Quality Measures, by PASRR condition and Year

Measure	SMI		ID/RC		Dual	
	2017	2019	2017	2019	2017	2019
Total # of NF Admissions Statewide						
Total # of Level I evaluations performed statewide	50.0	57.1	53.1	57.1	43.8	54.3
# of Level I evaluations that were done prior to admission	46.9	40.0	46.9	40.0	40.6	40.0
of Level I evaluations that were done prior to admission	40.6	40.0	43.8	40.0	43.8	40.0
# of positive Level I evaluations	56.3	62.9	59.4	65.7	50.0	65.7
of Level I evaluations testing positive	53.1	54.3	53.1	57.1	46.9	57.1
# of negative Level I evaluations	50.0	51.4	50.0	54.3	46.9	51.4
of Level I evaluations testing negative	50.0	54.3	53.1	57.1	46.9	54.3
Exempted Hospital Discharges						
# of NF admissions	53.1	54.3	56.3	54.3	50.0	54.3
# of NF admissions under EHDs	43.8	40.0	43.8	40.0	40.6	40.0
of NF admissions under EHDs	40.6	37.1	40.6	37.1	37.5	37.1
# of EHDs with stays longer than 45 days	43.8	42.9	40.6	42.9	37.5	42.9
of EHDs longer than 45 days	43.8	40.0	40.6	40.0	37.5	40.0
Preadmission Evaluation (Preadmission Screens) – Level II Evaluations						
# of PAS – Level II evaluations	85.7	85.7	78.1	82.9	65.6	74.3
# of PAS that were done prior to admission	65.7	65.7	62.5	62.9	50.0	60.0
of PAS that were done prior to admission	71.9	65.7	59.4	62.9	46.9	60.0
# of positive PAS (i.e., finding of SMI or ID/RC)	59.4	80.0	78.1	80.0	62.5	71.4
of PAS leading to positive determinations	53.1	77.1	68.8	71.4	53.1	62.9
# of positive determinations that recommend Specialized Services	65.6	74.3	75.0	80.0	65.6	74.3
of positive determinations that recommend Specialized Services	59.4	71.4	65.6	71.4	56.3	65.7

Measure	SMI		ID/RC		Dual	
	2017	2019	2017	2019	2017	2019
# of categorical determinations	68.8	68.6	53.1	60.0	40.6	54.3
of categorical determinations	62.5	65.7	50.0	62.9	37.5	57.1
# of positive PAS recommending either community placement or any institutional placement	50.0	71.4	62.5	68.6	50.0	62.9
of positive PAS recommending either community placement or any institutional placement	46.9	68.6	59.4	62.9	46.9	60.0
# of positive PAS recommending any institutional placement (NF, ICF/IID, or inpatient psychiatric)	59.4	74.3	62.5	62.9	50.0	60.0
of positive PAS recommending any institutional placement (NF, ICF/IID, or inpatient psychiatric)	59.4	65.7	59.4	60.0	46.9	57.1
# of positive PAS recommending institutional placement (ICF/IID or inpatient psychiatric)	62.5	68.6	53.1	60.0	43.8	57.1
of positive PAS recommending institutional placement (ICF/IID or inpatient psychiatric)	59.4	65.7	50.0	57.1	40.6	54.3
# of positive PAS recommending institutional placement (NF)	53.1	74.3	65.6	62.9	56.3	60.0
of positive PAS recommending institutional placement (NF)	50.0	71.4	62.5	62.9	50.0	60.0
# of positive PAS recommending community placement	59.4	71.4	56.3	62.9	46.9	62.9
of positive PAS recommending community placement	56.3	65.7	53.1	62.9	43.8	62.9
# of positive PAS leading to institutional placement (NF)	56.3	48.6	46.9	45.7	40.6	42.9
of positive PAS leading to institutional placement (NF)	56.3	45.7	43.8	42.9	37.5	40.0
# of positive PAS leading to institutional placement (ICF/IID or inpatient psychiatric)	40.6	28.6	15.6	28.6	15.6	25.7
of positive PAS leading to institutional placement (ICF/IID or inpatient psychiatric)	37.5	25.7	12.5	22.9	12.5	22.9
# of positive PAS leading to community placement	21.9	28.6	18.8	25.7	15.6	25.7
of positive PAS leading to community placement	18.8	25.7	15.6	25.7	12.5	25.7
Annual average time (days) between Level I and Level II PAS determination	18.8	68.6	56.3	60.0	53.1	60.0
Resident Review – Level II Evaluations						
# of RRs – Level II evaluations	68.8	74.3	68.8	68.6	50.0	60.0
# of positive RRs (i.e., finding of SMI or ID/RC)	62.5	71.4	65.6	65.7	50.0	62.9
of RRs leading to positive determinations	56.3	68.6	59.4	62.9	46.9	57.1
# of negative RRs (i.e., finding of no SMI, no ID/RC)	59.4	68.6	53.1	62.9	43.8	57.1
of RRs leading to negative determinations	56.3	65.7	53.1	60.0	43.8	54.3
# of positive RRs recommending continued NF placement	62.5	68.6	59.4	62.9	50.0	60.0
of positive RRs recommending continued NF placement	59.4	65.7	62.5	62.9	50.0	57.1
# of positive RRs recommending community placement	53.1	62.9	53.1	60.0	37.5	51.4
of positive RRs recommending community placement	53.1	60.0	50.0	54.3	37.5	48.6
# of positive RRs leading to continued NF placement	43.8	48.6	46.9	48.6	37.5	42.9
of positive RRs leading to continued NF placement	40.6	45.7	46.9	45.7	37.5	40.0
# of positive RRs leading to community placement	25.0	25.7	25.0	28.6	15.6	20.0
of positive RRs leading to community placement	21.9	22.9	21.9	25.7	12.5	20.0

Abbreviations: Abbreviations: EHD, exempted hospital discharge; ICF/IID, intermediate care facility for individuals with intellectual disability; ID, intellectual disability; NF, nursing facility; NI, no information; PAS, Preadmission Screens; RC, related condition; RR, Resident Review; SMI, serious mental illness.

A2 Prevalence of SMI, ID/RC, and Dual Diagnoses in NFs

A2.1 Measure Definitions

Using several different methods of counting, Table 11 to Table 22 show the number and percentages of NF residents with an SMI or ID/RC, according to the PASRR identification items in the MDS and according to other diagnostic items in the MDS.

Measure A: Total Number of Nursing Facility Residents

We define the population in Medicaid-certified NFs using a census method (counting the number of individuals in an NF on a given day). We took a census of residents in these NFs on December 31 in 2016, 2017, and 2018.

Measure B: Residents Identified by Level II PASRR

Item A1510 on the MDS asks which type of PASRR condition an individual has. There are three responses: the person has an SMI (A1510A), the person has an ID (A1510B), or the person has an RC (A1510C).

Measure B in the ID/RC tables shows the percentage of NF residents identified as having either an ID or an RC by A1510B or A1510C, respectively. Measure B in the SMI tables shows the percentage of NF residents identified as having an SMI by A1510A.

Measure C: Residents Identified by PASRR or Questions About ID/RC or SMI

ID/RC: Item A1550 on the MDS asks whether a resident has one or more of the following conditions: Down syndrome, autism, epilepsy, other organic condition related to ID/developmental disability (DD), or ID/DD with no organic condition. In the ID/RC tables, Measure C includes all the residents identified by Measure B (A1510B, A1510C) plus those residents with at least one condition identified by item A1550.

Broad SMI: Items I5700–I6100 in the MDS identify residents with mood disorders: anxiety disorder (I5700), depression (I5800), manic depression (bipolar disorder, I5900), psychotic disorder (I5950), schizophrenia (I6000), and PTSD (I6100). Under the broad definition of SMI, Measure C includes everyone identified in Measure B (A1510A) plus additional residents identified by MDS Items I5700–I6100.

Narrow SMI: For the narrow definition of SMI, Measure C includes everyone identified in Measure B and additional residents identified by MDS Items I5900 (bipolar disorder), I5950 (psychotic disorder), and I6000 (schizophrenia).

Measure D: Residents Identified by PASRR or Questions About ID/RC/SMI or International Classification of Diseases Codes

Item I8000 in the MDS can be used to record International Classification of Diseases, Tenth Revision (ICD-10) codes for all SMI, ID, and RC conditions not otherwise recorded. Measure D

in all three tables includes all residents identified by Measure C, as well as those with ID, RC, or SMI conditions recorded using ICD codes in Section I8000 of the MDS. The ID/RC tables use the following ICD-10 codes: F70–F73, F79, Q90–Q93, Q95–Q99, Z134, and Z1389. The narrowly defined SMI tables use F20, F22–F25, F28–F34, and F39. In addition to these narrowly defined SMI ICD-10 codes, the broadly defined SMI tables use F07, F09, F21, F40–F45, F48, F50–F52, F59–F60, F63–F66, F68, F84, F90–F91, F94–F95, and F98–F99.

A2.2 Data Tables

Table 11 to Table 14: These tables present the number and percentage of NF residents with a PASRR identification of SMI, along with an SMI as recorded in other MDS items, *broadly defined*, in 2016, 2017, and 2018. Table 14 summarizes these percentages by year.

Table 15 to Table 18: These tables present the number and percentage of NF residents with a PASRR identification of SMI, along with an SMI, as recorded in other MDS items, *narrowly defined*, in 2016, 2017, and 2018. Table 18 summarizes these percentages by year.

Table 19 to Table 22: These tables present the number and percentage of NF residents with a PASRR identification of ID/RC, along with an ID/RC, as recorded in other MDS items, in 2016, 2017, and 2018. Table 22 summarizes these percentages by year.

Serious Mental Illness: Broad

Table 11: Number and Percentages of NF Residents Identified as Having SMI – Broad Definition by Different MDS Measures (2016)

Measure	#	%
A. Total nursing facility residents	**1,266,422**	**100.0**
B. Residents identified by Level II PASRR (A1510A)	63,580	5.0
Additional residents identified by SMI questions	*722,166*	
C. Residents identified by PASRR or questions about SMI	785,746	62.0
Additional residents identified by ICD codes for SMI	*21,942*	
D. Residents identified by PASRR or questions about SMI or ICD codes for SMI	807,688	63.8

Abbreviations: ICD, International Classification of Diseases; MDS, Minimum Data Set; PASRR, Preadmission Screening and Resident Review; SMI, serious mental illness.

Table 12: Number and Percentages of NF Residents Identified as Having SMI – Broad Definition by Different MDS Measures (2017)

Category	#	%
A. Total nursing facility residents	**1,247,181**	**100.0**
B. Residents identified by Level II PASRR (A1510A)	66,048	5.3
Additional residents identified by SMI questions	*706,884*	
C. Residents identified by PASRR or questions about SMI	772,932	62.0
Additional residents identified by ICD codes for SMI	*22,527*	

Category	#	%
D. Residents identified by PASRR or questions about SMI or ICD codes for SMI	795,459	63.8

Abbreviations: ICD, International Classification of Diseases; MDS, Minimum Data Set; PASRR, Preadmission Screening and Resident Review; SMI, serious mental illness.

Table 13: Number and Percentages of NF Residents Identified as Having SMI – Broad Definition by Different MDS Measures (2018)

Measure	#	%
A. Total nursing facility residents	1,248,449	100.0
B. Residents identified by Level II PASRR (A1510A)	69,684	5.6
Additional residents identified by SMI questions	698,955	
C. Residents identified by PASRR or questions about SMI	768,639	61.6
Additional residents identified by ICD codes for SMI	23,542	
D. Residents identified by PASRR or questions about SMI or ICD codes for SMI	792,181	63.5

Abbreviations: ICD, International Classification of Diseases; MDS, Minimum Data Set; PASRR, Preadmission Screening and Resident Review; SMI, serious mental illness.

Table 14: Percentages of NF Residents Identified as Having SMI – Broad Definition by Different MDS Measures, by Year

Measure	2016	2017	2018
B: Level II PASRR SMI (A1510A)	5.0	5.3	5.6
C: Level II PASRR SMI *or* MDS SMI Questions (Broad)	62.0	62.0	61.6
D: Level II PASRR SMI *or* SMI Questions (Broad) *or* SMI ICD Codes (Broad)	63.8	63.8	63.5

Abbreviations: ICD, International Classification of Diseases; MDS, Minimum Data Set; PASRR, Preadmission Screening and Resident Review; SMI, serious mental illness.

Serious Mental Illness: Narrow

Table 15: Number and Percentages of NF Residents Identified as Having SMI – Narrow Definition by Different MDS Measures (2016)

Measure	#	%
A. Total nursing facility residents	1,266,422	100.0
B. Residents identified by Level II PASRR (A1510A)	63,580	5.0
Additional residents identified by SMI questions	187,671	
C. Residents identified by PASRR or questions about SMI	251,251	19.8
Additional residents identified by ICD codes for SMI	55,814	
D. Residents identified by PASRR or questions about SMI or ICD codes for SMI	307,065	24.2

Abbreviations: ICD, International Classification of Diseases; MDS, Minimum Data Set; PASRR, Preadmission Screening and Resident Review; SMI, serious mental illness.

Table 16: Number and Percentages of NF Residents Identified as Having SMI – Narrow Definition by Different MDS Measures (2017)

Measure	#	%
A. Total nursing facility residents	**1,247,181**	**100.0**
B. Residents identified by Level II PASRR (A1510A)	66,048	5.3
Additional residents identified by SMI questions	*183,224*	
C. Residents identified by PASRR or questions about SMI	249,272	20.0
Additional residents identified by ICD codes for SMI	*51,052*	
D. Residents identified by PASRR or questions about SMI or ICD codes for SMI	300,324	24.1

Abbreviations: ICD, International Classification of Diseases; MDS, Minimum Data Set; PASRR, Preadmission Screening and Resident Review; SMI, serious mental illness.

Table 17: Number and Percentages of NF Residents Identified as Having SMI – Narrow Definition by Different MDS Measures (2018)

Measure	#	%
A. Total nursing facility residents	**1,248,449**	**100.0**
B. Residents identified by Level II PASRR (A1510A)	69,684	5.6
Additional residents identified by SMI questions	*180,995*	
C. Residents identified by PASRR or questions about SMI	250,679	20.1
Additional residents identified by ICD codes for SMI	*48,241*	
D. Residents identified by PASRR or questions about SMI or ICD codes for SMI	298,920	23.9

Abbreviations: ICD, International Classification of Diseases; MDS, Minimum Data Set; PASRR, Preadmission Screening and Resident Review; SMI, serious mental illness.

Table 18: Percentages of NF Residents Identified as Having SMI – Narrow Definition by Different MDS Measures, by Year

Measure	2016	2017	2018
B: Level II PASRR SMI (A1510A)	5.0	5.3	5.6
C: Level II PASRR SMI *or* MDS SMI Questions (Narrow)	19.8	20.0	20.1
D: Level II PASRR SMI *or* SMI Questions (Narrow) *or* SMI ICD Codes (Narrow)	24.2	24.1	23.9

Abbreviations: ICD, International Classification of Diseases; MDS, Minimum Data Set; PASRR, Preadmission Screening and Resident Review; SMI, serious mental illness.

Intellectual Disabilities and Related Conditions

Table 19: Number and Percentages of NF Residents Identified as Having ID/RC by Different MDS Measures (2016)

Measure	#	%
A. Total nursing facility residents	**1,266,422**	**100.0**
B. Residents identified by Level II PASRR (A1510 B or C)	29,382	2.3
Additional residents identified by ID/DD questions	*3,262*	
C. Residents identified by PASRR or ID/DD questions	32,644	2.6
Additional residents identified by ICD codes	*9,325*	
D. Residents identified by PASRR or ID/DD questions or ICD codes	41,969	3.3

Abbreviations: DD, developmental disability; ICD, International Classification of Diseases; ID, intellectual disability; MDS, Minimum Data Set; PASRR, Preadmission Screening and Resident Review; RC, related condition.

Table 20: Number and Percentages of NF Residents Identified as Having ID/RC by

Measure	#	%
A. Total nursing facility residents	**1,247,181**	**100.0**
B. Residents identified by Level II PASRR (A1510 B or C)	29,294	2.3
Additional residents identified by ID/DD questions	*3,213*	
C. Residents identified by PASRR or ID/DD questions	32,507	2.6
Additional residents identified by ICD codes	*9,190*	
D. Residents identified by PASRR or ID/DD questions or ICD codes	41,697	3.3

Abbreviations: DD, developmental disability; ICD, International Classification of Diseases; ID, intellectual disability; MDS, Minimum Data Set; PASRR, Preadmission Screening and Resident Review; RC, related condition.

Table 21: Number and Percentages of NF Residents Identified as Having ID/RC by Different MDS Measures (2018)

Measure	#	%
A. Total nursing facility residents	**1,248,449**	**100.0**
B. Residents identified by Level II PASRR (A1510 B or C)	29,553	2.4
Additional residents identified by ID/DD questions	*3,524*	
C. Residents identified by PASRR or ID/DD questions	33,077	2.6
Additional residents identified by ICD codes	*9,042*	
D. Residents identified by PASRR or ID/DD questions or ICD codes	42,119	3.4

Abbreviations: DD, developmental disability; ICD, International Classification of Diseases; ID, intellectual disability; MDS, Minimum Data Set; PASRR, Preadmission Screening and Resident Review; RC, related condition.

Table 22: Percentages of NF Residents Identified as Having ID/RC by Different MDS Measures, by Year

Measure	2016	2017	2018
B: Level II PASRR ID/RC (A1510B or A1510C)	2.3	2.3	2.4
C: Level II PASRR ID/RC *or* MDS ID/RC Questions	2.6	2.6	2.6
D: Level II PASRR ID/RC *or* MDS ID/RC Questions *or* ID/RC ICD Codes	3.3	3.3	3.4

Abbreviations: DD, developmental disability; ICD, International Classification of Diseases; ID, intellectual disability; MDS, Minimum Data Set; PASRR, Preadmission Screening and Resident Review; RC, related condition.

A3 Prevalence of Problematic Behavioral Symptoms Among Individuals with PASRR Conditions

Table 23 to Table 30: These tables present the number and percentage of individuals with problematic behavioral symptoms reported in Section E of the MDS among PASRR populations (SMI and ID/RC) and the rest of the NF population (i.e., residents who have not been identified by PASRR).

Table 23 to Table 26: These tables present the number and percentage of NF residents with the listed problematic behavioral symptoms, with and without a PASRR-identified SMI, for 2016, 2017, and 2018 Table 26 summarizes these percentages by year.

Table 27 to Table 30: These tables present the number and percentages of NF residents with the listed problematic behavioral symptoms, with and without a PASRR-identified ID/RC, for 2016, 2017, and 2018. Table 30 summarizes these percentages by year.

The data cover problematic physical and verbal behaviors toward others and other behavioral symptoms not directed toward others, including hurting oneself, pacing, public sexual acts, and throwing or smearing food or bodily wastes.

Table 23: Problematic Behavioral Symptoms of NF Residents with and without PASRR SMI (2016)

MDS Item	A1510A NF Residents (PASRR SMI)		Other NF Residents	
	#	%	#	%
E0200A: Physical behavioral symptoms toward others	2,931	4.6	46,487	3.9
E0200B: Verbal behavioral symptoms toward others	8,033	9.5	75,212	6.3
E0200C: Behavioral symptoms not toward others	8,069	12.7	62,674	5.2
E0500A: Behavior put resident at risk of illness or injury	1,532	2.4	16,288	1.4
E0500B: Behavior interfered with resident's care	2,730	4.3	28,840	2.4
E0500C: Behavior interfered with resident's activities or social interactions	3,227	5.1	23,746	2.0
E0600A: Behavior put others at risk of illness or injury	1,330	2.1	16,556	1.4
E0600B: Behavior interfered with privacy or activity of others	1,987	3.1	16,868	1.4
E0600C: Behavior disrupted care or living environment	3,181	5.0	28,482	2.4

Abbreviations: MDS, Minimum Data Set; NF, nursing facility; PASRR, Preadmission Screening and Resident Review; SMI, serious mental illness.

Note: The prevalence of all problematic behavioral symptoms was significantly higher among individuals with a reported PASRR condition in A1510 than among other NF residents. The differences are statistically reliable.

Table 24: Problematic Behavioral Symptoms of NF Residents with and without PASRR SMI (2017)

MDS Item	A1510A NF Residents (PASRR SMI)		Other NF Residents	
	#	%	#	%
E0200A: Physical behavioral symptoms toward others	2,910	4.4	43,086	3.6
E0200B: Verbal behavioral symptoms toward others	8,134	12.3	70,191	5.9
E0200C: Behavioral symptoms not toward others	7,888	11.9	56,479	4.8
E0500A: Behavior put resident at risk of illness or injury	1,549	2.3	14,326	1.2
E0500B: Behavior interfered with resident's care	2,836	4.3	25,867	2.2
E0500C: Behavior interfered with resident's activities or social interactions	3,198	4.8	21,219	1.8
E0600A: Behavior put others at risk of illness or injury	1,276	1.9	14,598	1.2
E0600B: Behavior interfered with privacy or activity of others	2,001	3.0	14,747	1.2
E0600C: Behavior disrupted care or living environment	3,107	4.7	25,249	2.1

Abbreviations: MDS, Minimum Data Set; NF, nursing facility; PASRR, Preadmission Screening and Resident Review; SMI, serious mental illness.

Note: The prevalence of all problematic behavioral symptoms was significantly higher among individuals with a reported PASRR condition in A1510 than among other NF residents. The differences are statistically reliable.

Table 25: Problematic Behavioral Symptoms of NF Residents with and without PASRR SMI (2018)

MDS Item	A1510A NF Residents (PASRR SMI)		Other NF Residents	
	#	%	#	%
E0200A: Physical behavioral symptoms toward others	2,943	4.2	40,768	3.5
E0200B: Verbal behavioral symptoms toward others	8,155	11.7	67,189	5.7
E0200C: Behavioral symptoms not toward others	7,707	11.1	52,044	4.4
E0500A: Behavior put resident at risk of illness or injury	1,486	2.1	13,015	1.1
E0500B: Behavior interfered with resident's care	2,701	3.9	23,829	2.0
E0500C: Behavior interfered with resident's activities or social interactions	3,159	4.5	19,535	1.7
E0600A: Behavior put others at risk of illness or injury	1,271	1.8	13,287	1.1
E0600B: Behavior interfered with privacy or activity of others	1,939	2.8	13,366	1.1
E0600C: Behavior disrupted care or living environment	3,072	4.4	23,157	2.0

Abbreviations: MDS, Minimum Data Set; NF, nursing facility; PASRR, Preadmission Screening and Resident Review; SMI, serious mental illness.

Note: The prevalence of all problematic behavioral symptoms was significantly higher among individuals with a reported PASRR condition in A1510 than among other NF residents. The differences are statistically reliable.

Table 26: Percentages of NF Residents Showing Problematic Behavioral Symptoms in the MDS, with and without PASRR SMI, by Year

MDS Item	2016		2017		2018	
	PASRR SMI	Other NF Residents	PASRR SMI	Other NF Residents	PASRR SMI	Other NF Residents
E0200A: Physical behavioral symptoms toward others	4.6	3.9	4.4	3.6	4.2	3.5
E0200B: Verbal behavioral symptoms toward others	9.5	6.3	12.3	5.9	11.7	5.7
E0200C: Behavioral symptoms not toward others	12.7	5.2	11.9	4.8	11.1	4.4
E0500A: Behavior put resident at risk of illness or injury	2.4	1.4	2.3	1.2	2.1	1.1
E0500B: Behavior interfered with resident's care	4.3	2.4	4.3	2.2	3.9	2.0
E0500C: Behavior interfered with resident's activities or social interactions	5.1	2.0	4.8	1.8	4.5	1.7
E0600A: Behavior put others at risk of illness or injury	2.1	1.4	1.9	1.2	1.8	1.1
E0600B: Behavior interfered with privacy or activity of others	3.1	1.4	3.0	1.2	2.8	1.1
E0600C: Behavior disrupted care or living environment	5.0	2.4	4.7	2.1	4.4	2.0

Abbreviations: MDS, Minimum Data Set; NF, nursing facility; PASRR, Preadmission Screening and Resident Review; SMI, serious mental illness.

Note: The prevalence of all problematic behavioral symptoms was significantly higher among individuals with a reported PASRR condition in A1510 than among other NF residents. The differences are statistically reliable.

Table 27: Problematic Behavioral Symptoms of NF Residents with and without PASRR ID/RC (2016)

MDS Item	A1510B/C NF Residents (PASRR ID/RC)		Other NF Residents	
	#	%	#	%
E0200A: Physical behavioral symptoms toward others	1,344	4.6	48,074	3.9
E0200B: Verbal behavioral symptoms toward others	2,788	9.5	80,457	6.5
E0200C: Behavioral symptoms not toward others	3,237	11.0	67,506	5.5
E0500A: Behavior put resident at risk of illness or injury	736	2.5	17,084	1.4
E0500B: Behavior interfered with resident's care	1,008	3.4	30,562	2.5
E0500C: Behavior interfered with resident's activities or social interactions	1,190	4.1	25,783	2.1
E0600A: Behavior put others at risk of illness or injury	624	2.1	17,262	1.4
E0600B: Behavior interfered with privacy or activity of others	819	2.8	18,036	1.5
E0600C: Behavior disrupted care or living environment	1,374	4.7	30,289	2.4

Abbreviations: ID/RC, intellectual disability or related condition; MDS, Minimum Data Set; NF, nursing facility; PASRR, Preadmission Screening and Resident Review.

Note: The prevalence of all problematic behavioral symptoms was significantly higher among individuals with a reported PASRR condition in A1510 than among other NF residents. The differences are statistically reliable.

Table 28: Problematic Behavioral Symptoms of NF Residents with and without PASRR ID/RC (2017)

MDS Item	A1510B/C NF Residents (PASRR ID/RC)		Other NF Residents	
	#	%	#	%
E0200A: Physical behavioral symptoms toward others	1,349	4.6	44,647	3.7
E0200B: Verbal behavioral symptoms toward others	2,781	9.5	75,544	6.2
E0200C: Behavioral symptoms not toward others	3,085	10.5	61,282	5.0
E0500A: Behavior put resident at risk of illness or injury	700	2.4	15,175	1.2
E0500B: Behavior interfered with resident's care	1,009	3.4	27,694	2.3
E0500C: Behavior interfered with resident's activities or social interactions	1,123	3.8	23,294	1.9
E0600A: Behavior put others at risk of illness or injury	602	2.1	15,272	1.3
E0600B: Behavior interfered with privacy or activity of others	787	2.7	15,961	1.3
E0600C: Behavior disrupted care or living environment	1,267	4.3	27,089	2.2

Abbreviations: ID/RC, intellectual disability or related condition; MDS, Minimum Data Set; NF, nursing facility; PASRR, Preadmission Screening and Resident Review.

Note: The prevalence of all problematic behavioral symptoms was significantly higher among individuals with a reported PASRR condition in A1510 than among other NF residents. The differences are statistically reliable.

Table 29: Problematic Behavioral Symptoms of NF Residents with and without PASRR ID/RC (2018)

MDS Item	A1510B/C NF Residents (PASRR ID/RC)		Other NF Residents	
	#	%	#	%
E0200A: Physical behavioral symptoms toward others	1,254	4.2	42,457	3.5
E0200B: Verbal behavioral symptoms toward others	2,586	8.8	72,758	6.0
E0200C: Behavioral symptoms not toward others	2,768	9.4	56,983	4.7
E0500A: Behavior put resident at risk of illness or injury	579	2.0	13,922	1.1

MDS Item	A1510B/C NF Residents (PASRR ID/RC)		Other NF Residents	
	#	%	#	%
E0500B: Behavior interfered with resident's care	851	2.9	25,679	2.1
E0500C: Behavior interfered with resident's activities or social interactions	1,004	3.4	21,690	1.8
E0600A: Behavior put others at risk of illness or injury	499	1.7	14,059	1.2
E0600B: Behavior interfered with privacy or activity of others	674	2.3	14,631	1.2
E0600C: Behavior disrupted care or living environment	1,161	3.9	25,068	2.1

Abbreviations: ID/RC, intellectual disability or related condition; MDS, Minimum Data Set; NF, nursing facility; PASRR, Preadmission Screening and Resident Review.

Note: The prevalence of all problematic behavioral symptoms was significantly higher among individuals with a reported PASRR condition in A1510 than among other NF residents. The differences are statistically reliable.

Table 30: Percentages of NF Residents Showing Problematic Behavioral Symptoms, with and without a PASRR ID/RC, by Year

MDS Item	2016		2017		2018	
	PASRR ID/RC	Other NF Residents	PASRR ID/RC	Other NF Residents	PASRR ID/RC	Other NF Residents
E0200A: Physical behavioral symptoms toward others	4.6	3.9	4.6	3.7	4.2	3.5
E0200B: Verbal behavioral symptoms toward others	9.5	6.5	9.5	6.2	8.8	6.0
E0200C: Behavioral symptoms not toward others	11.0	5.5	10.5	5.0	9.4	4.7
E0500A: Behavior put resident at risk of illness or injury	2.5	1.4	2.4	1.2	2.0	1.1
E0500B: Behavior interfered with resident's care	3.4	2.5	3.4	2.3	2.9	2.1
E0500C: Behavior interfered with resident's activities or social interactions	4.1	2.1	3.8	1.9	3.4	1.8
E0600A: Behavior put others at risk of illness or injury	2.1	1.4	2.1	1.3	1.7	1.2
E0600B: Behavior interfered with privacy or activity of others	2.8	1.5	2.7	1.3	2.3	1.2
E0600C: Behavior disrupted care or living environment	4.7	2.4	4.3	2.2	3.9	2.1

Abbreviations: ID/RC, intellectual disability or related condition; MDS, Minimum Data Set; NF, nursing facility; PASRR, Preadmission Screening and Resident Review.

Note: The prevalence of all problematic behavioral symptoms was significantly higher among individuals with a reported PASRR condition in A1510 than among other NF residents. The differences are statistically reliable.

A4 Prevalence of Dementia Among Individuals with an SMI

Table 31 to Table 33 present the number and percentage of NF residents with an SMI who have a diagnosis of dementia, comparing residents who have a PASRR-identified SMI (MDS Item A1510A = "yes") to those who have an SMI as indicated elsewhere in the MDS but have *not* been identified by PASRR (1510A = "no"), for the years 2016, 2017, and 2018. Table 34 summarizes these percentages by year.

Table 31: Dementia Diagnoses Among NF Residents with and Without a PASRR SMI (2016)

MDS Item	A1510A NF Residents (PASRR SMI)		SMI Without PASRR Diagnosis	
	#	%	#	%
Dementia reported in I4200 or I4800	23,208	36.5	145,192	59.6
Dementia reported in I8000	984	1.5	10,675	4.4
Dementia reported in I4200, I4800, or I8000	23,380	36.8	146,687	60.2

Abbreviations: MDS, Minimum Data Set; NF, nursing facility; PASRR, Preadmission Screening and Resident Review; SMI, serious mental illness.

Note: The rates of dementia were significantly lower for the NF residents with a PASRR SMI diagnosis than for those without a PASRR SMI diagnosis. The difference was statistically reliable.

Table 32: Dementia Diagnoses Among NF Residents with and Without a PASRR SMI (2017)

MDS Item	A1510A NF Residents (PASRR SMI)		SMI Without PASRR Diagnosis	
	#	%	#	%
Dementia reported in I4200 or I4800	23,901	36.2	138,815	59.3
Dementia reported in I8000	878	1.3	8,703	3.7
Dementia reported in I4200, I4800, or I8000	24,047	36.4	140,022	59.8

Abbreviations: MDS, Minimum Data Set; NF, nursing facility; PASRR, Preadmission Screening and Resident Review; SMI, serious mental illness.

Note: The rates of dementia were significantly lower for the NF residents with a PASRR SMI diagnosis than for those without a PASRR SMI diagnosis. The difference was statistically reliable.

Table 33: Dementia Diagnoses Among NF Residents with and Without PASRR SMI (2018)

MDS Item	A1510A NF Residents (PASRR SMI)		SMI Without PASRR Diagnosis	
	#	%	#	%
Dementia reported in I4200 or I4800	25,188	36.1	134,234	58.6

MDS Item	A1510A NF Residents (PASRR SMI)		SMI Without PASRR Diagnosis	
	#	%	#	%
Dementia reported in I8000	5	0.0	85	0.0
Dementia reported in I4200, I4800, or I8000	25,190	36.1	134,252	58.6

Abbreviations: MDS, Minimum Data Set; NF, nursing facility; PASRR, Preadmission Screening and Resident Review; SMI, serious mental illness.

Note: The rates of dementia were significantly lower for the NF residents with a PASRR SMI diagnosis than for those without a PASRR SMI diagnosis. The difference was statistically reliable.

Table 34: Percentages of NF Residents with Dementia Diagnoses, with and without PASRR SMI, by Year

MDS Item	2016		2017		2018	
	PASRR SMI	SMI without PASRR Dx	PASRR SMI	SMI without PASRR Dx	PASRR SMI	SMI without PASRR Dx
Dementia reported in I4200 or I4800	36.5	59.6	36.2	59.3	36.1	58.6
Dementia reported in I8000	1.5	4.4	1.3	3.7	0.0	0.0
Dementia reported in I4200, I4800, or I8000	36.8	60.2	36.4	59.8	36.1	58.6