Comparing the Value of Daily Measurement of Wellbeing Versus Reimbursement-Based Timing for Individuals with Alcohol Use Disorder

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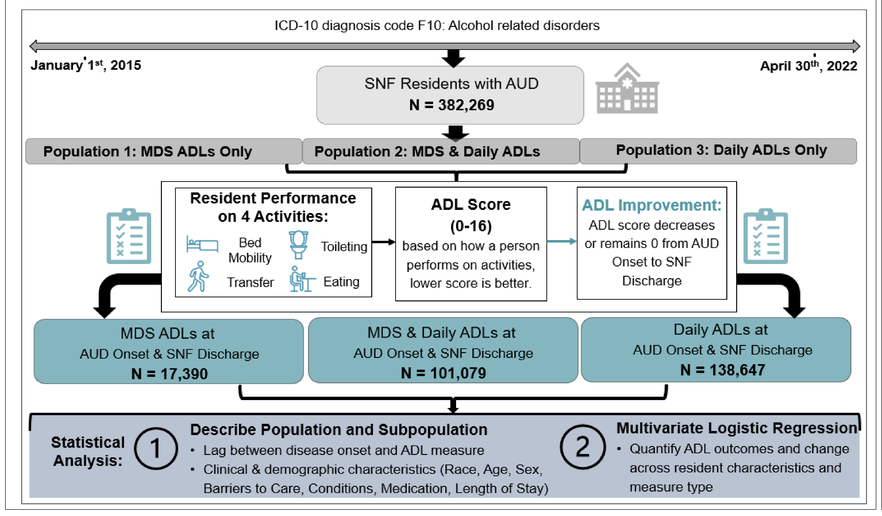
BACKGROUND

How do Daily and Reimbursement-Based measures of ADLs differ for documenting functional limitations and patient wellbeing among individuals with AUD?

- Skilled Nursing Facilities (SNFs) have seen increases in the incidence of Alcohol Use Disorder (AUD) after the height of the COVID-19 pandemic which affects care and quality of life (QoL)
- SNFs continually assess residents' QoL based on limitations in Activities of Daily Living (ADLs). Functional limitations are linked to concerns around personal control, autonomy, dependence, and wellbeing
- AUD is associated with more expensive care and greater challenges for care providers, especially in SNFs, but AUD patients tend to be younger than other SNF residents and show more improvement over time
- Studies of people with mental/behavioral health conditions like AUD often use claims data gathered for payment/reimbursement purposes, as required by Centers for Medicare and Medicaid Services (CMS)
- For SNF residents, the Minimum Data Set (MDS) provides setting-specific patient assessment instruments for clinical assessment, payment, and CMS program quality assurance
- Although often used, MDS Data are not always attuned to changes in patients' daily wellbeing
- Because they provide more regular assessments beyond billing, Daily ADL Measure Data could provide better information for assessing QoL, but they are often under-utilized for research
- We compare MDS Reimbursement-Based Data with Daily ADL Measure Data for people with AUD in three populations of SNF residents – those with only MDS ADL data, with both MDS and Daily ADL data, and with only Daily ADL data – to examine differences in group composition and assess how each capture aspects of patient wellbeing

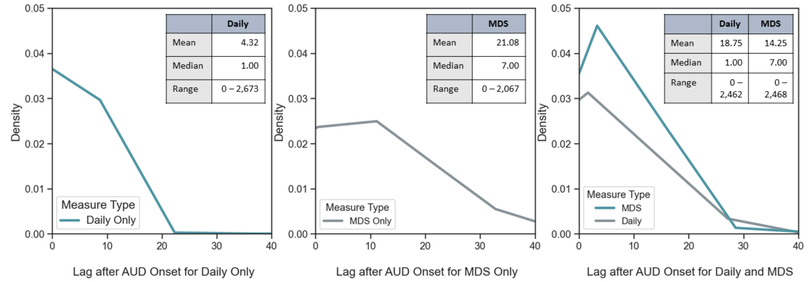
METHODOLOGY

Fig 1. Study Population & Analysis: Residents with AUD and ADL Data



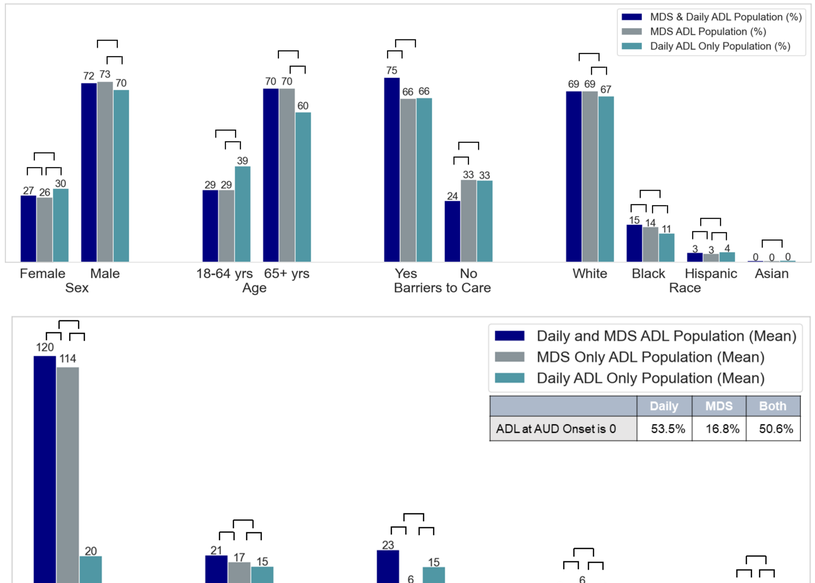
RESULTS

Fig 2. Days from AUD Onset to ADL Measurement



- MDS Data present larger "lags" in time between learning about people with AUD's condition, treatment course, and outcomes than Daily ADL data
- MDS data are timed to understand billing and program needs and requirements
- Daily ADL are timed for understanding condition trajectory, course of treatment, and patient outcomes, but nurses can refer to daily ADLs during a lookback period for MDS reporting

Fig 3. Population Descriptions: Daily ADL Data, MDS ADL Data, & Daily & MDS Only. p<0.05 [brackets]



- **Similarities** include distribution by sex and race
- **Differences** appear in age, exposure to barriers to care, days in facility, conditions, and medications
- Residents with only Daily ADL data spend significantly less time in the facility than residents with only MDS or with both MDS and Daily data
- Residents with only MDS data have higher ADL scores at AUD onset

Table 1. Logistic Regression: Fewer or No Functional Limitations at Discharge * p< 0.01

Percentage with Fewer or No Functional Limitations at Discharge	Daily Only	MDS Only	Both Daily and MDS
	47.44%	60.44%	49.99%

Fewer or No Functional Limitations at Discharge (Log odds)	Data Groups (Ref: MDS Only)		Age	Male	Barrier to Care	Race/ethnicity (Ref: White)			Condition Count	Medication Count	Days in Facility	Baseline ADL
	Daily & MDS	Daily Only				Black	Hispanic	Asian				
Model 1	-0.0003	-0.1027*										
Model 2	0.1603*	0.0475	-0.0042*	0.2559*	-0.0658*	-0.0238*	-0.0894*	-0.1350*				
Model 3	0.3513*	0.1558*							-0.0061*	-0.0104*	0.0003*	-0.0078*
Model 4	0.3557*	0.1624*	-0.0028*	0.2487*	0.0050	-0.0324*	-0.0962*	-0.1456*	-0.0060*	-0.0101*	0.0003*	-0.0053*

- Although patients with Daily ADL data were less likely to have fewer or zero ADLs at discharge prior to controls (Model 1), after accounting for differences in days in facility and number of conditions, they have better outcomes (Model 3/4)

Table 2. Linear Regression of ADL Score at Discharge * p< 0.01

ADL Score at Discharge (b)	Data Groups (Ref: MDS Only)		Age	Male	Barrier to Care	Race/ethnicity (Ref: White)			Condition Count	Medication Count	Days in Facility	Baseline ADL
	Daily & MDS	Daily Only				Black	Hispanic	Asian				
Model 1	-0.8500*	-1.4890*										
Model 2	-0.8980*	-1.2949*	0.0736*	-0.2536*	-0.4841*	0.3055*	0.5981*	0.7524*				
Model 3	0.6716*	0.8636*							0.0404*	0.0292*	0.0009*	0.5872*
Model 4	0.5365*	0.8662*	0.0505*	-0.0155	-0.0023	0.3500*	0.4386*	0.4742*	0.0345*	0.0337*	0.0008*	-0.0000*

- Although patients with Daily ADL data had lower scores at discharge prior to controls (Model 1), after accounting for differences in days in facility, number of conditions, and baseline ADL score, they had higher ADL scores at discharge (Model 3/4)

DISCUSSION, LIMITATIONS & NEXT STEPS

- Using Daily ADL measures contributes to understanding of functional limitations and patient wellbeing among individuals with AUD in several ways:
  1. They capture a broader group of SNF residents because they are not linked to payer interest and billing (Fig. 3)
  2. They are more likely to capture variation in condition trajectory, course of treatment, functional limitations, and quality of life over time because they occur at more regular intervals (Fig. 2)
- Model results (Tables 1 and 2) show different outcomes based on how changes in ADLs are modelled and which control variables are included. This indicates a need for additional modelling strategies and more consideration of different patient populations.
- Changes about condition relevant to treatment course and condition trajectory are captured in Daily ADL data, where a more specific set of status changes may result in an MDS ADL assessment that captures more limited care processes, payment needs, and may be responsive to CMS program quality aims. These findings motivate future analysis of all ADLs to capture different payer populations.
- People with AUD may experience barriers to care more commonly than people without AUD but, surprisingly, may not experience overall loss of ADLs compared to others with functional limitations. Future research will focus on how experiences varies across populations by health insurance payer and condition.

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