

Research Article

Reducing Antipsychotic Medication Use in Nursing Homes: A Qualitative Study of Nursing Staff Perceptions

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Abstract

Background and Objectives: The purpose of this study was to use qualitative methods to explore nursing home staff perceptions of antipsychotic medication use and identify both benefits and barriers to reducing inappropriate use from their perspective.

Research Design and Methods: Focus groups were conducted with a total of 29 staff in three community nursing homes that served both short and long-stay resident populations.

Results: The majority (69%) of the staff participants were licensed nurses. Participants expressed many potential benefits of antipsychotic medication reduction with four primary themes: (a) Improvement in quality of life, (b) Improvement in family satisfaction, (c) Reduction in falls, and (d) Improvement in the facility Quality Indicator score (regulatory compliance). Participants also highlighted important barriers they face when attempting to reduce or withdraw antipsychotic medications including: (a) Family resistance, (b) Potential for worsening or return of symptoms or behaviors, (c) Lack of effectiveness and/or lack of staff resources to consistently implement nonpharmacological management strategies, and (d) Risk aversion of staff and environmental safety concerns.

Discussion and Implications: Nursing home staff recognize the value of reducing antipsychotic medications; however, they also experience multiple barriers to reduction in routine clinical practice. Achievement of further reductions in antipsychotic medication use will require significant additional efforts and adequate clinical personnel to address these barriers.

Keywords: Antipsychotic medications, Dementia with behavioral disturbance, Quality of care, Quality of life

Antipsychotic medications are prescribed to approximately 20% to 35% of residents in both community and VA nursing home care settings (Chen et al., 2010; Gellad et al., 2012; Kamble, Chen, Sherer, & Aparasu, 2008; Kamble, Sherer, Chen, & Aparasu, 2010). While some uses of antipsychotic medications are warranted by a resident's clinical condition, antipsychotic medications also may be

prescribed inappropriately (American Geriatrics Society Beers Criteria Update Expert Panel, 2015; Briesacher et al., 2005; Jeste et al., 2008; Kamble et al., 2008; Mott, Poole, & Kenrick, 2005). Specifically, antipsychotic medications are commonly used in nursing homes to manage residents, particularly those with dementia, who exhibit disruptive or aggressive behaviors (American Geriatrics Society Beers

Criteria Update Expert Panel, 2015; Gauthier et al., 2010; Lövheim, Sandman, Kallin, Karlsson, & Gustafson, 2006; Mott et al., 2005).

These medications typically cause a sedative effect, which may allow nursing home staff to manage a challenging resident behavior in the short term. However, adverse effects of antipsychotic medications may outweigh their benefits as these drugs can impair memory and cognition (Harrison & Therrien, 2007), increase the rate of falls (Hartikainen, Lönnroos & Louhivuori, 2007), increase risk for infections and even contribute to premature death (Huybrechts et al., 2012; Huybrechts et al., 2012; Liperoti et al., 2009; Masand, 2000; Mintzer & Burns, 2000; Saltz, Robinson, & Woerner, 2004). Due to the risk of adverse health effects, the Food and Drug Administration placed a black box warning on the use of antipsychotic medications in older adults in 2005 (Kuehn, 2005). Specifically, the FDA warning states that conventional and atypical antipsychotic use in those with dementia has an increased risk of mortality, with most deaths being related to cardiovascular or infectious events (Jeste et al., 2008). Aside from these health risks, antipsychotic medications can also lead to social isolation and otherwise affect a resident's quality of life (Mott et al., 2005; Ven-Vakhteva, Bor, Wetzels, Koopmans, & Zuidema, 2013; Wetzels, Zuidema, De Jonghe, Verhey, & Koopmans, 2010).

Inappropriate and overuse of antipsychotic medications in the nursing home setting has been recognized for nearly three decades by federal regulators (Garrard, Chen, & Dowd, 1995; Lin & Kramer, 2013; Wiener, Freiman, & Brown, 2007). The OBRA-87 legislation created a framework for insuring care quality in nursing homes, which likely contributed to an initial decline in the use of antipsychotic medications (Svarstad, Mount, & Bigelow, 2001; Wiener et al., 2007). In 2002, the Centers for Medicare and Medicaid Services (CMS) introduced "Quality Indicators" derived from facility-reported data and which denote the prevalence of various clinical conditions in the long-stay resident population (e.g., depression, falls, pain) and the incidence of these same clinical conditions in the short-stay (i.e., Medicare, postacute care) population (Lucas et al., 2014). The intent of these indicators is to reflect the quality of care provided by nursing homes for both short and long-stay residents and also offer consumers a way to compare facilities via a publicly-reported database (www.medicare.gov/nursinghomecompare) (Stevenson, 2006).

More recently, the percent of residents prescribed antipsychotic medications was introduced by CMS as a new quality indicator with the goal of reducing use (Levinson, 2011; Tritz, Laughman & O'Donnell, 2016). This metric is now publicly-reported for all homes nationwide for both short and long-stay residents, and the results of one study showed that public-reporting of antipsychotic medication use resulted in an initial modest decline (Bowblis, Lucas, & Brunt, 2015). Additionally, CMS also recently issued guidance to the state-level Quality Improvement Organizations

to facilitate the reduction of antipsychotic medications in nursing homes throughout individual states, particularly those with prevalence rates greater than 17% in 2016 (Tritz et al., 2016). Thus, nursing homes have been under growing pressure in recent years to reduce their use of antipsychotic medications for both short and long-stay residents. Importantly, CMS also recognizes in federal regulations that there are appropriate uses for these medications in the nursing home care setting such that the rate is not necessarily expected to be zero.

A few studies have examined nursing home characteristics associated with the use of antipsychotic medications. These studies have examined a variety of characteristics including staffing level, facility size, for-profit status, geographic location, proportion of residents with dementia, and proportion of Medicaid residents, with mixed results (Cioltan et al., 2017; Hughes, Lapane, & Mor, 2000; Mattingly, 2015; Svarstad et al., 2001). The most consistent findings are that facilities that are for-profit, with a higher proportion of Medicaid residents, residents with dementia, and/or lower nurse staffing levels also have higher antipsychotic medication use (Cioltan et al., 2017; Hughes et al., 2000; Mattingly, 2015; Svarstad et al., 2001).

Other studies have shown that improvements in pain management, treatment of infections and nonpharmacological interventions may be effective strategies for managing challenging behaviors and, consequently, reducing the use of antipsychotics in nursing home residents with dementia and behavioral disturbance (Cohen-Mansfield & Mintzer, 2005; Landreville et al., 2006). In fact, the standard of care requires that nonpharmacological approaches be initiated first prior to the use of antipsychotic medications (Ballard et al., 2009; Cohen-Mansfield & Mintzer, 2005; Landreville et al., 2006; Mims, 2016). However, a recent systematic review revealed a lack of clear evidence that nonpharmacological approaches are effective for reducing aggressive behaviors among long-stay nursing home residents (Jutkowitz et al., 2016). Moreover, behavioral interventions also can require a significant amount of staff time to be effective, both in terms of initial staff training and consistent implementation, which may pose a barrier in daily care practice (Schnelle & Simmons, 2016). A recent study evaluated the dissemination of evidence-based antipsychotic prescribing guidelines, which included behavioral management strategies. Although there was an increase in self-reported knowledge and use of the guidelines and strategies, there were no significant changes in antipsychotic prescribing practices (Tjia et al., 2015).

To date, little work has been done to examine staff attitudes toward reducing antipsychotic medication use in nursing homes and their perceptions of the feasibility of behavioral management approaches in daily care practice. A recent survey of nursing home staff showed that increased behavioral monitoring and use of nonpharmacological interventions were both cited as care practice changes in response to CMS initiatives to reduce use (Ellis, Molinari,

Dobbs, Smith, & Hyer, 2015). However, a separate recent study examining medical record documentation showed that behavioral (e.g., aggression) and emotional (e.g., sadness) disturbance were commonly cited as the rationale for antipsychotic medication use among residents with dementia (Bonner et al., 2015). The purpose of this study was to use qualitative methods to explore nursing home staff perceptions of antipsychotic medication prescribing practices and identify both benefits and barriers to reducing inappropriate use from their perspective.

Methods

Subjects and Setting

Facility staff participants were recruited through informational flyers distributed at three nursing homes in Tennessee. The facilities, which were all located in an urban area, ranged in size from 60 to 240 beds (average occupancy rate = 86%) and all three provided care for both short (Medicare) and long-stay residents. Total overall staffing (licensed nurses plus nurse aides) ranged from 4.52 to 6.25 hr per resident per day (HPRD) and licensed nurse staffing ranged from 1.90 to 2.92 HPRD, which placed these facilities above the national averages for both total and licensed nurse staffing (4.17 and 1.70 HPRD, respectively). The average reported prevalence of antipsychotic medication use for these three facilities was 19.4% for long-stay residents (range 15.4% to 24.0%), which was lower than the state average (22.8%) at the time of this study.

Participants could include any type of staff member involved in resident care and was not limited to only licensed nurses. One focus group was held at each of the three nursing home sites. All study procedures were approved by the university Institutional Review Board. Written, informed consent was obtained from all staff participants, who also completed a standardized demographic questionnaire. Upon completion of the focus group, participants were compensated with a \$25 gift card.

Focus Group Procedures

Each session was led by a PhD Clinical Psychologist with expertise in focus groups and qualitative analysis and lasted between 60 and 90 min. The moderator began each session with an introduction to encourage a comfortable environment for sharing thoughts and experiences within the group and insured that all participants had an opportunity to speak throughout the session. The focus groups were recorded using digital recorders and audio files were submitted to a secure professional transcription service (<http://www.rev.com/transcription>). The transcripts were returned to investigators and formatted for coding. Identifying information was then removed, including the mention of a specific facility, staff, resident, or family member.

The moderator initiated group discussion using open-ended questions from a guide, which included four primary questions:

1. How do you see antipsychotic medications being used in your facility?
2. What changes do you think need to be made in the way antipsychotic medications are used in your facility?
3. What do you see as the pros and cons of taking residents off antipsychotic medications?
4. What do you see as the institutional barriers to reducing antipsychotic medication use?

Each question also included more specific follow-up prompts (e.g., “What kinds of resident behaviors or complaints lead to a prescription for an antipsychotic?”) that the moderator could use to further stimulate the discussion.

Results

Participant Characteristics

Informed, written consent was obtained from 29 total staff members (27 women, 2 men), which included mostly full-time employees (90%). The median age range for staff participants was 45–54 years. Seventy-two percent were White. Participants consisted of the following types of staff: licensed practical nurse (11), registered nurse (4), social worker (4), facility administrator (2), nurse practitioner (2), director-of-nursing (2), certified nursing assistant (2), assistant director-of-nursing (1), and mental health intern (1).

Qualitative Analysis

Each statement was treated as a separate quote and each quote was coded using a hierarchical coding system. The hierarchical coding system was developed based on the overall purpose of the study and a preliminary review of the transcripts by the moderator. Each major category was subdivided, and the subcategories were further expanded to describe the information related to the study question (Smith, 2007; Taylor & Trujillo, 2001; Taylor, Bogdan, & DeVault, 2015). Quotes could be assigned up to five different codes. A file management system was used to sort all identified codes and their associated quote and was then sorted by coding category. The coded data were then used to summarize the quotes and identify the significant themes that were extracted from the data. A total of 774 codes were used to describe the themes present in 582 quotes.

Coding Schematic

Based on the coding system, frequency of codes and a review of the quotes sorted by category, a model was developed to identify three primary antipsychotic prescribing pathways, which lead to specific management strategies, followed by factors related to medication reduction (Figure 1). In the

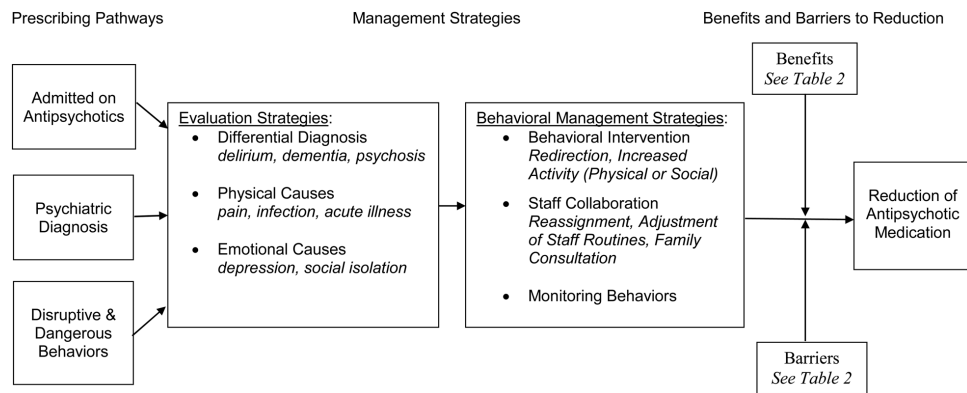


Figure 1. A model of antipsychotic medication use in nursing homes.

first pathway, residents are admitted to the facility on an antipsychotic without a clear indication, which leads to an evaluation management strategy. This strategy encompasses differential diagnosis (e.g., identification of delirium, dementia, other psychiatric diagnoses), addressing physical (e.g., pain, infection or acute illness) and emotional causes (e.g., depression, social isolation) and confirming the need for the medication. This pathway reflects residents who may be prescribed antipsychotic medications inappropriately.

A separate pathway, psychiatric diagnosis, represents those who have a history of serious mental illness with antipsychotic medication management. These residents could be newly admitted to the facility or long-stay residents with this history. Although the evaluation management strategies were still considered potentially applicable to this group, participants viewed behavior management strategies as the primary approach as they assumed that differential diagnosis had already occurred for these patients.

The third pathway represents the potential for any resident to become disruptive, aggressive or otherwise unsafe at any point during their nursing home stay, and these behaviors may fluctuate over time and may or may not be associated with a specific psychiatric diagnosis. These types of behaviors are common among those with a dementia diagnosis and pose a significant challenge for staff as they consider how to keep the individual resident safe while also protecting the staff and other residents in the facility living in close proximity.

All three pathways can potentially lead to medication reduction or the implementation of a treatment plan that does not include antipsychotic medication. Regardless of the prescribing pathway or the management strategy, the model also includes factors that influence the reduction of antipsychotic medications as defined by staff perceptions of benefits and barriers to reduction, which are delineated in Table 2.

Prescribing Practices for Antipsychotic Medications

From the perspective of staff participants, there were three main approaches to antipsychotic medication prescribing practices in the nursing home setting: (a) admitted to the

facility with a prescription and validation of need, (b) initiated by nursing home personnel as a new routine and/or Pro Re Nata (i.e., PRN, when necessary) prescription, and (c) dose reduction and/or withdrawal from antipsychotics.

Admitted to the Facility With a Pre-existing Prescription

Participants expressed that a significant proportion of their resident population is admitted to the nursing home facility with a pre-existing antipsychotic medication prescription, and most of these residents are transferred to the facility from acute care (hospital), postacute care (rehabilitation), or a different long-term care facility. The staff viewed their job as understanding the resident's need for the prescription and determining whether its continuation is warranted, stating: "We almost never get discharge summaries. 99% of the time... We don't know who started [the medication], and we don't know why."

Participants made multiple comments pertaining to validating the need for an antipsychotic prescription, especially for newly admitted patients who arrive to the facility with a pre-existing prescription. This validation process included identifying the medical and/or psychiatric conditions that potentially explain the behaviors and/or symptoms. Participants stated, "We do a process of elimination to make sure that there's not an underlying cause for the behaviors."

Initiated by Nursing Home as a New Routine and/or PRN Prescription

There also was discussion of a new antipsychotic prescription initiated by the nursing home and/or medical staff. Consistent with federal regulations, participants commented that efforts are made to avoid a newly prescribed antipsychotic medication whenever possible, particularly PRN antipsychotic use (Mims, 2016). However, they also recognized that new prescriptions were sometimes necessary and required monitoring resident symptoms and behaviors and making dose adjustments: "When a resident first starts on antipsychotics, a lot of times it's an adjustment to find that perfect level, where they're still up and involved in their daily lives and at their highest [level of] well-being."

PRN use of antipsychotic medications was reported by staff in response to a resident expressing agitation or a disruptive or potentially dangerous behavior. Some participants expressed the importance of limiting or completely avoiding PRN antipsychotic medication use:

I've been with my company a long time and the standard has always been "no PRN antipsychotics". How can you have a psychotic diagnosis that causes you only to need treatment occasionally? A psychotic diagnosis is either there or it's not. It doesn't come and go.

However, some participants thought PRN antipsychotic use might be appropriate for the short-term management of a medically-related delirium: "If a resident has an infection and they become delirious, the nurse practitioner may say, "Let's try this PRN for 7 days." Usually, after they are treated [for the infection], the delirium goes away and then that [antipsychotic] medicine goes away too."

Dose Reduction or Withdrawal of Medication

Participants also discussed their approach to determining when a resident's existing dose may be too high and steps taken to gradually reduce their dose over time: "If we can reduce it, then we will continue to reduce it as long as there are no behaviors in a certain amount of time." It was also reported that, for some newly-admitted residents, dose reduction begins immediately: "That is the routine...If we're just not sure why they're taking it, reduction is going to start [immediately]."

In addition, there also was discussion about the steps to completely withdraw antipsychotic use. Participants expressed that minimization of medications, when possible, is their goal, "If they don't need to be on it, and you tapered them off and they were fine without it, then it would be better for them to not have it" and "That's why we have our pharmacy consultants too, to help us get rid of those medications that maybe aren't as beneficial ...the less medication a patient is on is typically the better."

Reasons for Antipsychotic Medication Use

Participants identified four primary reasons for the use of antipsychotics in the nursing home setting: (a) Management of chronic or acute mental illness, (b) Unrecognized physical health issue (i.e., pain, acute illness or infection), (c) Resident behaviors caused or exacerbated by social isolation and/or insufficient physical and/or social activity, and (d) Management of disruptive behaviors.

Management of Diagnosed Mental Illness

Chronic mental health issues described by staff as, "psychosis, hallucinations, delusions" and "paranoid schizophrenics" were cited by participants as reasons for the use of antipsychotics. However, they also listed dementia as a diagnosis associated with challenging behaviors:

"If you're taking care of a resident in long-term care, and you know the resident has a dementia diagnosis, you also know that you are going to be apt to use some kind of medication to help control their behavior."

Participants also mentioned that there could be other mental health issues such as depression, anxiety, and post-traumatic stress disorder that are responsible for challenging behaviors and which might be addressed by a treatment plan that does not include antipsychotic medications. Participants reflected on addressing symptoms of depression and anxiety among residents, "Depression and anxiety referrals - I deal with a lot of grief and psycho-social losses [when I care for residents]. I would say everyone here has some type of loss they are experiencing." Due to the experience of loss, staff recognized that some behaviors can be a result of loneliness or social isolation, "residents who are withdrawn from activities or social interaction" and "They don't want to do anything, they stay in their room." Staff viewed these behaviors as more appropriate for nonpharmacological strategies, such as supporting the resident to increase their physical activity and social engagement.

Unrecognized Physical Health Issue

There was considerable discussion among participants about the importance of identifying underlying physical causes for problem behaviors, such as pain or an infection. They recognized that there may be transient behaviors caused by an acute illness or treatment, which could be resolved with alternative treatment methods: "The common urinary tract infection. Pain that isn't being addressed. Bowel and bladder issues. If we can't find an underlying cause, we will use short-acting medications to reduce the symptoms until we can find a more permanent treatment plan."

Management of Disruptive Behaviors

Aggressive or otherwise unsafe behaviors were identified as one of the more common reasons that antipsychotic medications were used in the nursing home setting. For example, participants stated, "It usually starts with a behavior that is unsafe for the resident or the community of residents" such as "A resident can get physical with another resident. That can be really difficult." Another participant referenced the safety of the staff:

"We work here. We put ourselves in this line of work because we want to help these people. There's a certain risk associated with that. I tend to be much more gung-ho [about managing the behavior] when it involves other residents."

Participants also discussed the challenge of managing disruptive behaviors, particularly those that impact other residents and/or staff, such as behaviors that create excessive environmental noise (e.g., yelling, screaming, cursing) and/or cause frequent interruptions to staff care routines (e.g.,

frequent need for redirection or assistance). One participant reported, "I had a resident the other day who was yelling and screaming and cursing at me for no reason at all." Similarly, residents who are not necessarily disruptive but who express agitation and/or anxiety were also perceived by staff as difficult to manage: "A lot of times it's terminal agitation. You don't know why but you cannot keep them still, they are just restless [all of the time]."

Behavioral Management Strategies

Participants also discussed nonpharmacological strategies for addressing behavioral challenges as an alternative to the use of antipsychotic medications. The most common themes were: (a) individualized behavioral interventions to modify a resident's emotion and/or behavior, (b) staff collaboration among disciplines and with family, and (c) behavior monitoring. Exemplary quotes related to each of these themes are displayed in [Table 1](#).

Behavioral Interventions

Participants referred to a myriad of behavioral management strategies that might be used such as: redirection, increased physical activity and/or social engagement, staff reassignment and/or adjustments in staff routines to accommodate the resident, and family consultation. Behavioral management, such as redirection and purposeful engagement often times related to a resident's prior profession, were cited by staff as common strategies: "[We] encourage them [to engage] in activities that they enjoy." Music and

reading were both mentioned as activities they often used for redirection.

Staff and Family Collaboration

Intensified caregiving also was mentioned as a common behavioral management strategy. This could include providing the resident with the same caregiver on a regular basis (i.e., consistent staff assignment) and/or providing the resident with one-on-one attention from staff to address their behavior(s). The importance of staff collaboration to manage resident behaviors also was discussed among the participants. Staff collaboration typically included planned communication among multiple disciplines as well as family members: "Sometimes, we are seeking outside services from a psychiatric nurse practitioner, for example. A lot of times we've done other interventions prior, such as one-on-one help and redirection with the resident." And, "The staff leave us notes, talking about their concerns and the resident's behaviors."

Family consultations were described as a strategy for information gathering in order to assist in implementing a care plan, "We pick their brains as much as we can." There was discussion of the importance of family meetings so that specific resident behaviors can be understood better by the staff care team.

Behavior Monitoring

Behavioral monitoring across days and shifts was mentioned as a way to better understand the frequency, severity and potential triggers of a behavior. Participants discussed the need for routine or targeted tracking of resident

Table 1. Staff Identified Behavioral Management Strategies

	Primary quote	Secondary quote
Individualized Behavioral Interventions	"We had one lady, she used to work in surgery, transporting patients. She liked to be by the elevator and tell people what elevator to get on and off. As long as she was doing that, she was perfectly fine. When you tried to make her go eat, you had to say, "Okay, it's time for you to take your break. I'm your supervisor, so go eat your lunch."	"Ms. A was a homemaker. She would always talk about cooking, and we would talk about getting recipes from her. We would just get a lot of linens from the linen closet, and she'd go through it so fast, but it redirected her a lot because she felt like our day room was her living room."
Staff and Family Collaboration	"We permanently assign nurses and nurse aides. We're also fortunate to have a really low staff turnover rate. I think those two components, consistent staff assignment and low staff turnover [help residents]."	"I think we use the care plan meeting as a tool, because we try to meet with the families within 5 to 10 days after the resident is admitted. During that meeting, we'll get a lot of family history. I know, in the past, there's been situations where a family member has said, 'If she's moaning and trying to get up, it means she needs to go to the restroom.' We share that information with the unit staff."
Behavior Monitoring	"In our Medication Administration Records, we have target behaviors listed for any resident prescribed routine or PRN antipsychotics. It is specific to that resident, whether it is delusions or anxiety, agitation, whatever. If you mark 'yes', it takes you straight to the person's behavioral documentation, where you document [the specific behavior]."	"If they are on 'Behavior Alert Status' to see if the behavior continues on other shifts, then you just track it and see if it happens during your 11 p.M. to 7 A.M. night shift or is it just happening during the daytime hours."

behaviors and/or outcomes to inform decision making. Tracking of behaviors was noted as being done, “Every day, every shift.” and “Staff also read our nursing notes for charting.” There was also discussion of specific strategies and tools used to track disruptive or dangerous behaviors and/or monitor symptoms over time.

Benefits and Barriers to Reducing Antipsychotic Medication

Participants expressed both benefits and barriers related to reducing or withdrawing antipsychotic medications.

Table 2 summarizes staff perceived benefits and barriers coupled with exemplary quotes for each primary theme.

Benefits

Participants recognized that there were many potential benefits of antipsychotic medication reduction with four primary themes: (a) Improvement in quality of life, (b) Improvement in family satisfaction, (c) Reduction in falls, and (d) Improvement in the facility Quality Indicator score (regulatory compliance). Most notably, staff mentioned improvements in a resident’s level of alertness that, in turn, enhanced their quality of life by allowing them to be more engaged in

Table 2. Staff Identified Benefits & Barriers to Antipsychotic Medication Reduction

	Primary quote	Secondary quote
Benefits		
1. Improvement in Quality of Life	“She was on Seroquel. Her behavior was erratic and sometimes obscene. She was very lethargic, not engaging at all. Since we took her off, it took a while but it’s been a turnaround. She’s responsive now. She’ll say hello when you walk into her room. She’s not as lethargic anymore. She’s actually more engaged.”	“I think that, sometimes, they come in a little over-medicated, and then, 2 or 3 days later, you’ll hear rehab say, ‘Oh, wow, they’re awake now. We couldn’t do much with them the first couple of days but now they are doing this.’”
2. Improvement in Family Satisfaction	They’ll usually be the first to tell you like, “I stopped in to see mother, and she is a totally different person.” They’re a really good source, because they know the patient better than we do.	
3. Reduction in Falls with Injury	“I think it takes 2 weeks typically before you see an effect of the medication. At that point, [we know we have to] monitor for falls.”	“We will have started [a resident] on a new medication, and then there is a fall. That’s how it goes. That’s the reality.”
4. Improvement in CMS Quality Indicator and Star Rating	“There’s a lot of pros...Administration is happy because the number look better.”	
Barriers		
1. Family Resistance	“Sometimes, families do not want the resident to come off of a medication because they’ve been on it for so long. They don’t want to upset the apple cart, so to speak, so they don’t want to change anything. It takes a lot of family education to let them know that we have to try to do certain things in order to manage a resident’s care.”	“Yeah. A lot of times I hear Dr. so and so said never let anyone take your Mom off that drug. I’ve had families often tell me that.”
2. Return or Worsening of Symptoms	“They’ve been on it so long, and you take them off and they get manic and it takes a while to get them stable.”	“She had been tapered off and her delusions or hallucinations returned and they were even worse.”
3. Lack of Effectiveness and/ or Lack of Staff Resources for Non-Pharmacological Management Strategies	“When somebody yells at night and nothing else is working and you’ve been through everything and antipsychotics are the only thing that’s left. You’ve got a whole hallway full of people that can’t sleep because one person is yelling. You run out of options pretty quick and you get a lot of pressure from some facilities [to do something about it].”	“Some residents can’t be reduced or taken off of antipsychotic medications. Some of the behaviors resurface, then we say they are not a candidate for reduction. They have to go back on the medication and start the process again to work back up to their dosage, because [the reduction or stopping the medicine] just didn’t work.”
4. Risk Aversion of Staff and Environmental Safety	“How much can you tolerate behaviors? How much does it put the facility at risk? The residents? I get a lot of pressure at some facilities [related to] how much they can tolerate reducing them, or not using them.”	“I think a potential facility barrier is [whether or not] you have a secure unit. There’s probably a little less anxiety [from the staff] about making that reduction because of the protectiveness of the environment [on a secure unit]. There is a little bit of hesitation, just environmentally [when a resident is not in a secured unit].”

daily life activities (Table 2. Benefits 1). Similarly, participants mentioned overall improvements in a resident's appetite and sleep/wake patterns as part of enhancing quality of life. These improvements in awareness, engagement and appetite were cited as noticeable to family members such that "improvements in family satisfaction" was also noted as a benefit of medication reduction (Table 2. Benefits 2). Participants recognized that antipsychotics not only cause sedative effects that may negatively impact quality of life but also increase a resident's risk for falls (Table 2. Benefits 3). Thus, they cited a reduction in falls, particularly falls with injury, as another potential benefit of reducing these medications.

Lastly, participants mentioned that, although not the primary goal, a lower rate of antipsychotic medications reported to CMS via the Quality Indicator made "administration happy" (Table 2. Benefits 4). In essence, participants expressed an awareness of the pressure they feel to reduce the overall reported rate to fulfill regulatory requirements and maintain or improve their star rating via the CMS public-reporting system to denote nursing home care quality (www.medicare.gov/nursinghomecompare).

Barriers

Despite an awareness of multiple benefits, participants also highlighted important barriers they face when attempting to reduce or withdraw antipsychotic medications. Four major themes emerged related to barriers: (a) Family resistance, (b) Potential for negative withdrawal effects (e.g., agitation or anxiety) and/or worsening of symptoms (e.g., hallucinations, delusions) or behaviors (e.g., aggression), (c) Lack of effectiveness and/or lack of staff resources to consistently implement nonpharmacological management strategies, and (d) Risk aversion of staff and environmental safety concerns.

Family Resistance

Family attitudes and/or beliefs in which they are either reluctant or opposed to reducing or withdrawing an antipsychotic medication were discussed as a major barrier to making changes (Table 2. Barriers 1). Participants expressed the frequent need to educate families about both the risks of antipsychotic medications and nursing home regulations that require staff to attempt a dose reduction and/or withdrawal at routine intervals (Director, Survey and Certification Group, 2016). These family conversations were noted as requiring a significant amount of staff time. Also, all staff did not feel equally comfortable leading these family conversations; thus, they acknowledged their own need for ongoing education about regulatory and care practice guidelines, risks and benefits of antipsychotic medications to better inform families.

Return or Worsening of Symptoms

Participants also discussed concerns about return of symptoms as a significant barrier to dose reductions, such as an increase in the resident's level of agitation, anxiety or even mania (Table 1. Barriers 2). Symptom return was thought to be more common among residents who had been treated

with antipsychotic medications for a long period of time and/or those with a dementia diagnosis:

"We have a specific unit here, it's a behavioral unit. A lot of residents on that unit and staff who work there, they deal with this day after day. For them, it may be a situation where they may say, 'Just give them the medication. I need to give them something, because they're not comfortable within their own body.'"

Participants also expressed concerns about worsening of resident behaviors, in particular aggressive or violent behaviors, and/or symptoms (e.g., hallucinations, delusions) as part of medication withdrawal (Table 1. Barriers 2). Staff were most concerned when such behaviors threatened the safety of other residents and/or interfered with their ability to provide care to the resident.

Lack of Effectiveness and/or Lack of Staff Resources for Nonpharmacological Management Strategies

Participants reported that, for some residents, they believe they have no choice but to administer antipsychotics because nonpharmacological approaches to manage behaviors have failed and/or prior attempts to reduce an antipsychotic medication resulted in worsening behaviors (Table 1. Barriers 3).

Risk Aversion of Staff and Environmental Safety Concerns

Lastly, participants discussed facility-level barriers, which included their tolerance-level for challenging behaviors as well as the availability of a secure unit to ensure resident safety if behaviors worsen when a medication is reduced (Table 1. Barriers 4). Multiple comments were made related to environmental safety concerns and the need for extra support, both in terms of staffing resources and a secure unit, when reducing antipsychotic medications.

Other noteworthy comments pertained to the challenges of caring for a more medically complex resident population and the shorter lengths of stay for postacute care patients:

"The type of people [who get admitted] is different than it used to be. Now, we can only take the people [in long-term care] who don't know who they are and can't do things for themselves. It's harder to maintain a lower percentage [of antipsychotic medication use] when we have so many people [with dementia] who have behavior problems."

"We have an entire unit of about 60 beds that's just certified for rehabilitation. That's where we're getting those 70 to 80 patients in and out in one month, where they stay only two or three weeks. Those are the ones I don't like to touch their psychiatric meds."

Discussion

Regulatory pressure for nursing homes to reduce their use of antipsychotic medications has contributed to an overall

reduction nationally. However, there remains significant variability both within and between states in the prevalence of antipsychotic medication use in nursing homes (Cioltan et al., 2017). Within the state of Tennessee, which was the location of the participating sites in this study, the average antipsychotic prevalence rate for facilities throughout the state ranged from 1.8% to 53.8% at the time of this study. In comparison, the nationally reported rates ranged from 10.9% to 24.9% for all nursing homes in the United States (Tritz et al., 2016). This variability suggests that antipsychotic medications continue to be a common treatment approach for a substantial proportion of nursing home residents.

The purpose of this qualitative study was to explore nursing home staff perceptions of antipsychotic medication use and identify both benefits and barriers to reducing use. Focus group participants were comprised of mostly licensed nurses in three high-staffed facilities, relative to the national average. In addition to being high-staffed, these facilities had routine access to nurse practitioners, whose primary care practice was within these facilities, and who can inform prescribing practices and assist in medication reduction efforts. Many community nursing homes only have access to consultant pharmacists on a monthly basis and a physician every 2 months, per regulatory requirements. Even within the participating facilities with ample resources, staff expressed numerous barriers to antipsychotic medication reduction in their routine care practice.

Notably, staff reported that many residents are admitted from the hospital or a different skilled nursing facility with an antipsychotic prescription, and they are left to discern whether or not it should be continued. These staff perceptions are likely accurate based on the results of a recent study, which showed that antipsychotics are often newly prescribed for hospitalized older adults (Herzig et al., 2016), many of whom are discharged to skilled nursing facilities for post-acute care. Being age 75 and older, of Black race, and having a diagnosis of delirium or dementia during hospitalization was significantly associated with the initiation of an antipsychotic medication during the hospital stay. Moreover, 26% of older patients were also discharged from the hospital with a new antipsychotic medication. Age 75 and older and a discharge location other than home (e.g., skilled nursing facility), were significantly associated with being discharged with an antipsychotic (Herzig et al., 2016). These findings underscore the need for hospital treatment teams to be cognizant of new antipsychotic prescriptions for older patients and the need to provide clear guidance to the next provider of necessary tapering or withdrawal of these medications to reduce prolonged or inappropriate use.

Other potential intervention strategies to reduce antipsychotic medication use might include both staff and family education regarding the benefits of antipsychotic reduction and alternative care plan strategies that do not rely on these medications, including nonpharmacological

management approaches. A recent study showed that family members were not always aware of nonpharmacological options, and many expressed a desire to be more involved in the decision-making process surrounding antipsychotic medication use for their relatives in nursing homes (Tjia et al., 2017). Staff participants in this study noted family resistance to medication reduction and/or withdrawal as a significant barrier, along with staff concerns about symptom return or worsening. Direct care staff, both nurse aides and licensed nurses, likely could benefit from training that provides specific strategies for use in daily care practice. Inadequate staff support, however, may impede the ability of staff to implement nonpharmacological approaches, which are typically time-consuming for staff (Ellis et al., 2015; Jutkowitz et al., 2016; Schnelle & Simmons, 2016). Moreover, staff perceptions that nonpharmacological interventions are often insufficient for managing more severe behaviors, such as aggression, may be well-justified as they strive to balance resident and staff safety and regulatory adherence (Jutkowitz et al., 2016; Schnelle & Simmons, 2016). Although not discussed by focus group participants in this study, alternative pharmacological approaches (e.g., antidepressants) also may be beneficial to this population.

Routine access to trained professionals, such as Nurse Practitioners and/or Pharmacy Consultants as well as Mental Health Professionals, may be key to achieving further improvements in antipsychotic prescribing practices and guiding the use of alternative (non) pharmacological treatments. As noted by the participants in this study, a typical community nursing home population is now much older and more medically complex, with a higher proportion of residents with dementia, relative to just a few decades ago. Due to this medical complexity, most nursing home residents meet criteria for polypharmacy (i.e., prescribed five or more medications) (Steinman et al., 2006) and in fact, many also meet criteria for hyperpolypharmacy (i.e., prescribed 10 or more medications) (Haider, Johnell, Weitoft, Thorslund, & Fastbom, 2009; Saraf et al., 2016). The prevalence of multiple comorbidities and associated polypharmacy in this population increases their risk for drug-drug interactions, drug-disease interactions, and adverse drug effects (Dechanont, Maphanta, Butthum, & Kongkaew, 2014; Hines & Murphy, 2011; Wimmer et al., 2017). Thus, quality care provision has become more challenging for staff. This challenge is even greater for homes with a high prevalence of residents with dementia and behavioral disturbance. Thus, further reductions in antipsychotic medication use will likely require additional skilled personnel.

There are a few notable limitations of this study. First, the three participating facilities may not represent those with lower staffing and/or a higher prevalence of antipsychotic use. Thus, barriers perceived by the nursing staff participants in these sites may differ from those encountered in facilities with fewer staffing resources and/or higher antipsychotic medication use. Second, these data reflect staff

perceived benefits and barriers to reducing antipsychotics for both short and long-stay residents and it is possible that some benefits and barriers are unique to each resident population. However, over 90% of nursing homes nationally are dual-certified for both Medicare and Medicaid (Center for Medicare & Medicaid Services, 2012). Thus, most nursing staff will encounter both types of patients.

In summary, federal policies related to public-reporting and deficiency citations have resulted in variable reductions in antipsychotic medication use (Bowblis, Crystal, Intrator, & Lucas, 2012; Bowblis et al., 2015; Cioltan et al., 2017). The results of this study suggest that the process of antipsychotic medication reduction is challenging and complex for this patient population. The nursing home staff time and skills necessary to provide clinical evaluation, behavioral management and family education will likely need to be more thoughtfully addressed to achieve sustainable improvements in antipsychotic medication use in routine nursing home care practice.

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Conflict of Interest

None of the authors have significant conflicts of interest to report related to this project or the results reported within this manuscript.

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