Exploring Antipsychotic Prescribing Behaviors for Nursing Home Residents With Dementia: A Qualitative Study

Abstract

Objectives:

Caution is advised when prescribing antipsychotics to people with dementia. This study explored the determinants of appropriate, evidence-based antipsychotic prescribing behaviors for nursing home residents with dementia, with a view to informing future quality improvement efforts and behavior change interventions.

Design:

Semi-structured qualitative interviews based on the Theoretical Domains Framework (TDF).

Setting and participants:

A purposive sample of 27 participants from 4 nursing homes, involved in the care of nursing home residents with dementia (8 nurses, 5 general practitioners, 5 healthcare assistants, 3 family members, 2 pharmacists, 2 consultant geriatricians and 2 consultant psychiatrists of old age) in a Southern region of Ireland.

Measures:

Using Framework Analysis, the predominant TDF domains and determinants influencing these behaviors were identified, and explanatory themes developed.

Results:

Nine predominant TDF domains were identified as influencing appropriate antipsychotic prescribing behaviors. Participants' effort to achieve *"a fine balance"* between the risks and benefits of antipsychotics was identified as the cross-cutting theme that underpinned many of the behavioral determinants. On one hand, neither healthcare workers nor family members wanted to see residents over-sedated and without a quality of life. Conversely, the reality of needing to protect staff, family members and residents from potentially dangerous behavioral symptoms, in a resource-poor environment, was emphasized. The implementation of best-practice guidelines was illustrated through three explanatory themes (*'human suffering'; 'the interface between resident and nursing home';* and *'power and knowledge: complex stakeholder dynamics'*) which conceptualize how different nursing homes strike this *"fine balance"*.

Conclusions:

Implementing evidence-based antipsychotic prescribing practices for nursing home residents with dementia remains a significant challenge. Greater policy and institutional support is required to help stakeholders strike that *"fine balance"* and ultimately make better prescribing decisions. This study has generated a deeper understanding of this complex issue and will inform the development of an evidence-based intervention.

Introduction

Guidelines advise against antipsychotics for the first-line management of behavioral and psychological symptoms of dementia (BPSD),[1,2] due to the increased risks of stroke and mortality.[3-5] However, antipsychotics can be appropriate when behavioral symptoms are severe, dangerous, or distressing to the person with dementia.[1,2] Despite the existence of guidelines for over a decade and national level efforts to improve dementia care, antipsychotic prescribing is still common, especially in nursing home (NH) settings.[6-8] Global estimates of antipsychotic prescribing prevalence in NH residents vary from 16% in the US,[9] 19% in England,[6] to 27% across Western Europe.[7]

A systematic review examining the effectiveness of interventions to reduce inappropriate prescribing of antipsychotics to NH residents with dementia, reported that the majority of interventions were effective in the short-term.[10] However the long-term effects were assessed in only four studies, with prescribing returning to baseline levels in two studies.[11,12]

Successful implementation of evidence-based practice requires effective and sustained behavior change, beginning with a thorough understanding of the problem.[13] A body of qualitative research has explored problematic clinical decision-making in this area. We recently published a systematic review of this literature, and found that the use of antipsychotics in NHs is the culmination of a range of healthcare professional behaviors.[14] The two main behaviors identified were appropriate requesting and prescribing of antipsychotics. However, there has been a lack of exploration of these behaviors as standalone processes and in terms of how they influence each other. Furthermore, there has been limited exploration of how different stakeholders perceive these interacting

behaviors. Hence gaps in our understanding remain, which will be best answered by further qualitative research.

The Theoretical Domains Framework (TDF) is an integrative framework of influences on behavior, identified by synthesizing multiple behavior change theories.[15] The TDF consists of 14 domains (Table 1), and provides a comprehensive, theory-informed approach to identifying the determinants (i.e. barriers and facilitator) which influence clinical behaviors.[15] Utilization of the TDF will help us to identify the determinants which influence prescribing behaviors and hence support progression from exploration to intervention.[16]

The aim of this qualitative study was to explore and interpret the determinants of appropriate prescribing behaviors (requesting and prescribing) among a range of individuals involved in the care of NH residents with dementia, with a view to informing future quality improvement efforts and behavior change interventions.

Methods

Study design

We conducted semi-structured interviews, based on the TDF, with a range of healthcare workers and family members involved in the care of NH residents with dementia, in Cork, Ireland. Ethics approval was granted by the local ethics committee. The consolidated criteria for reporting qualitative research (COREQ) statement guided study reporting (Supplementary Table S1).[17] Two Patient and Public Involvement (PPI) advisory groups composed of four people with dementia in one group, and two family members in the other group, provided input into topic guide development and recruitment. Advisor eligibility

criteria included being a person with dementia affiliated with the Alzheimer Society of Ireland or a family member of any NH resident with dementia, and having an interest in research aimed at improving the quality of medication usage in NHs. Written informed consent was obtained from all advisors.

Study setting and sampling

NHs were chosen as the focus of this study as the prevalence of antipsychotic use is highest in these settings.[18,19] Participants were purposively sampled to ensure a heterogeneous group with maximum variation according to two main pre-determined criteria (*Professional/social role* and *NH type*) (Supplementary Table S2). We also used snowball sampling to fulfil our sampling framework requirements.

Six different NH sites were selected based on our sampling framework, through publicly available directories of registered NHs on the Health Information and Quality Authority (HIQA)[20] and Nursing Home Ireland websites.[21] The Directors (Nursing or Medical) of each NH were contacted about the study. Once access was agreed, the Director and other consenting participants connected to that NH were interviewed. The Directors approached family members initially before recommending that they were suitable to be contacted.

Eligibility criteria for healthcare workers included being a physician (general practitioner [GP], geriatrician or psychiatrist of old age), a nurse, a pharmacist or a healthcare assistant (HCA) who was involved in the care of NH residents with dementia. Eligibility criteria for family members included being a relative of a NH resident with dementia (alive or deceased), who had been prescribed an antipsychotic for BPSD.

Data collection

We developed separate topic guides for healthcare professionals, HCAs and family members. Topic guides were iteratively developed using findings from our systematic review,[14] the TDF, advisor recommendations and five pilot interviews. The topic guides underwent revisions throughout the study (Supplementary Table S3), to ensure that emerging themes were captured in subsequent interviews. All interviews were conducted by the primary author. Written informed consent was obtained prior to interviews. All interviews were audio-recorded and transcribed verbatim. The author wrote detailed field notes immediately after interviews, to refine topic guides and inform data analysis. We sampled until no new ideas emerged and conducted three more interviews without any new ideas emerging to ensure that data saturation had been reached.[22] The interviews were conducted between July 2016 and April 2017.

Data Analysis

Data analysis followed the principles of Framework Analysis,[23] and utilized NVivo version 11.[24] Data collection and analysis phases occurred concurrently, to enable the exploration of emergent themes in subsequent interviews and to identify when data saturation occurred.[22] We utilized both inductive and deductive approaches to analysis. A detailed description of the analysis is available online (Supplementary Material S4). In summary, we familiarized ourselves with each transcript and coded emerging concepts inductively. Simultaneously, we coded data from the transcripts into one or more TDF domains according to the definitions for each domain (Table 1). We then created distilled summaries of each interview, to identify the predominant TDF domains and the determinants (i.e. barriers and facilitators) of the target behaviors (appropriate requesting and prescribing).[16] Finally, we developed a conceptual model of explanatory findings, by exploring possible relationships

between determinants, predominant domains, categories and theory (Figure 1). In essence, the behavioral determinants were the 'building blocks' for the explanatory themes, and an overarching theme was identified, explaining the relationship between determinants and explanatory themes. The research group (consisting of pharmacists, a GP, a health psychologist, a methodologist and a geriatrician) held regular meetings throughout the study to discuss differences in interpretation and to identify themes.

Results

We invited six NHs to participate and four agreed - two private NHs, one with and one without a dementia special care unit (SCU); one voluntary NH (state-funded but charitable organization governance) without a SCU; and one public NH (state-run) without a SCU. Of 38 individuals contacted, 27 agreed to participate (eight nurses, five GPs, five HCAs, three family members, two pharmacists, two consultant geriatricians and two consultant psychiatrists of old age) (Table 2). The median interview length was 23 minutes (range 12-56 minutes).

We identified nine predominant TDF domains, encompassing 38 behavioral determinants that influenced our target behaviors (Table 3). We also developed three explanatory themes and one over-arching theme, which are discussed below and illustrated in a conceptual model (Figure 1). The nine predominant TDF domains and the more seminal determinants are discussed below; detail on the remaining determinants is presented in Table 3.

Predominant TDF domains

Behavioral Regulation

Participants believed that HIQA, the independent NH regulator in Ireland, has put antipsychotics under scrutiny. Regulation now requires NHs to notify HIQA, on a quarterly basis, of any occasion when restraint (chemical or physical) is used.[25] Some participants believed that these regulations made them re-evaluate how they manage BPSD, with positive outcomes for residents.

> *"I think HIQA is brilliant... because I really think they force people to look at their practice, and to challenge their own practice and to change." [HCA 1]*

However, GPs in particular, felt that there was over-regulation by HIQA, resulting in increased administrative burden, which did not necessarily translate into good care.

Furthermore, some participants were confused by the regulatory requirements, and were concerned about unintended negative consequences, because of the mistaken belief that only psychotropic medications used for acute episodes were reportable.

> *"Now, conversely, what it has made some nursing homes do is, if somebody was on a PRN psychotropic, because the resident might only need it once or twice per month and because it becomes reportable, they get prescribed regularly." [Nurse 5]*

Healthcare workers reported that interdisciplinary medication reviews, audits and internal registries also provided an opportunity for self-monitoring. When in place, these systems assisted with the identification of patterns of inappropriate usage. Prescribers found international guidelines helpful in their decision-making.[2] However, succinct guidelines specific to the Irish context were sought.

Beliefs about Capabilities

Participants struggled to find solutions to BPSD other than antipsychotics in part because they felt that they lacked necessary training. NH staff struggled with the daily management of BPSD and some admitted that they needed antipsychotics to cope. GPs often felt out of their comfort zone and regularly needed input from specialists.

> *"In some ways I don't feel I have the sufficient expertise to make those decisions so I'll look to specialists at that point if I'm struggling with something." [GP 3]*

Beliefs about Consequences

Both healthcare workers and family members were worried about side effects such as sedation and falls. Some viewed these side effects as undignified and inhumane, and hence were reluctant to request or prescribe antipsychotics.

A fear of negative consequences (i.e. adverse behavioral events from residents) if antipsychotics were not prescribed was expressed by prescribers. They were conscious of the safety of their NH colleagues who were often at the receiving end of behaviors.

> *"Because you don't know what precipitated the [behavior], and then, when you're trying to pull back and you walk away, are you leaving your colleagues in the height of it then?" [GP 4]*

Emotion

Participants, particularly family and NH staff, spoke emotively about BPSD, and how these symptoms deeply impacted upon them personally. Sometimes participants believed that antipsychotics were the only solution to alleviating this distress.

"It was very hard to listen to [the BPSD]… so as far as I'm concerned, if there was a medication that would sort this thing anyway, I certainly was completely open to it." [Family member 2]

NH staff were deeply affected by behaviors leading to burn-out, frustration and poor morale. Staff sometimes took behaviors personally, which could increase the propensity to request prescribing of antipsychotics. Empathy as opposed to sympathy was viewed as an important trait when dealing with BPSD. It was seen to be important to be able to step back, evaluate the situation and determine the best course of action for the resident, without emotions clouding one's judgement.

"I feel that certain people take huge offence if a person who is cognitively impaired lashes out, punches, screams, whatever, and you have to let it go." [Nurse 8]

Environmental Context and Resources

The overall picture was one of poor resources in NHs. Although non-pharmacologic interventions were generally seen as the gold standard, there was consensus that these interventions were staff-intensive and not always feasible.

"You need to have the time to be with somebody, staffing levels don't really give you the opportunity to sit with somebody all day long or all afternoon… you can come and go but you can't stay with the person." [Nurse 4]

The physical environment was believed to have a profound impact on residents. Some participants believed that if the environment was better suited to meet the needs of the resident, then there would be less of a need to prescribe.

"I think if we had properly designed purpose built modern dementia units that allowed us to offer a different environment than the standard ward environment… I do think that would be far more humane and you'll probably get better overall results than resorting to the old fashioned chemical restraints." [Consultant geriatrician 2]

Participants described how treatment culture impacted on the resident in terms of prescribing, both positively (e.g. being resident-centered) and negatively (e.g. being task-orientated). There was a general agreement that every NH was completely different, and what may be acceptable in one NH may not be acceptable in another.

Knowledge

Both healthcare workers and family members were aware that antipsychotics cause side effects. However, non-consultants in particular, acknowledged their own limited knowledge on this topic, and welcomed further education. Furthermore, GPs believed that a better understanding of the risk/benefit profile among NH staff would reduce requests for antipsychotics.

"If you can tell someone what the potential complications [of antipsychotics] are, they may be a little bit less likely to ask for them." [GP 1]

In-depth knowledge of the resident was believed to be paramount. Knowing the resident and understanding their life story helped NH staff to adapt the environment to meet the needs of the resident, and often prevented unnecessary prescribing.

"I think just knowing the person. Knowing that they have been on them [antipsychotics] for years. Looking at them now, their state of deterioration and you know in your heart and soul they don't need them." [Nurse 5]

Memory, attention and decision-processes

The importance of conducting a holistic assessment of the resident was emphasized by participants. There was agreement that antipsychotics were only appropriate after all potential reversible causes of BPSD were ruled out. In one NH, where a comprehensive assessment protocol was recently introduced, nurses explained how this protocol assisted them with their decision-making.

Social Influences

Prescribers were based off-site so relied on accurate and objective information about residents from nurses. Prescribers largely valued and trusted the nurses' judgements and tended to make prescribing decisions based on the information provided. However this could lead to a perception that behavioral symptoms were being exaggerated in order to increase the likelihood of prescription.

> *"I think people can be a little bit biased in how they can present a case to you at times to get to the ends that they want. I know there has been one incident where… a staff member [was overheard] saying 'sure just tell her she's had hallucinations.'" [GP 3]*

Prescribers reported that pressure to prescribe antipsychotics arose from many sources including individual staff members, family members, the NH organization, and from society itself.

> *"So I feel under pressure to knock this person out, anesthetize this patient, who they see as, shouldn't be challenging. And they're already completely over-sedated and the staff want them to be even more sedated." [Consultant psychiatrist of old Age 2]*

There was a perception by some of a prevailing culture where all behaviors may be attributed to the disease rather than an unmet need. However, other participants felt that, due to the influence of HIQA, NHs were moving toward a more social model of care. This shift in culture was broadly welcomed. However, some physicians feared that the pendulum had "*swung too far" [Consultant psychiatrist of old age 1],* and that GPs, in particular, may be fearful of using antipsychotics due to the perceived anti-medication climate.

Social/Professional Role and Identity

NH staff and family members viewed themselves as the resident's advocate. This role empowered them to speak up on behalf of the resident.

> *"See mom didn't have a voice, nobody would listen to her even when she was speaking, she wasn't listened to and I was her voice." [Family member 1]*

There was a hierarchy described by participants in the NH environment. HCAs were often not involved in any degree of decision-making despite their in-depth knowledge of residents. Furthermore, one pharmacist felt disregarded in this area, despite her pharmacologic expertise. Decisions were perceived as being made between GPs and nurses, with input from consultants when needed.

> *"As it stands and we're talking about the real world, it's really the nursing staff and the GP. I don't have an influence there. If I get the script, we just have to hand it over." [Pharmacist 2]*

The importance of leadership from the NH manager was emphasized. Good leaders were perceived as those with experience who provided adequate training and support to staff.

Explanatory themes

We identified *"a fine balance" [HCA 1]* as the over-arching theme. On one hand, neither healthcare workers nor family members wanted to see residents over-sedated and without a quality of life. Conversely, the reality of needing to protect staff, family members and residents from potentially dangerous behavioral symptoms, in a resource-poor environment, was emphasized. We found that NH staff and prescribers struggled with this constant tension throughout their daily practice.

Beneath the over-arching theme of *"a fine balance",* we developed three explanatory themes as a means of illustrating why this implementation issue, non-adherence to best-practice guidelines, persists. Within these themes, opposing perspectives and trade-offs were evident which can tip the *"fine balance"* in favor of undertaking one behavior over another (e.g. prescribe versus not prescribe). We argue that the perspective of each NH toward these three explanatory themes, determines how they strike this *"fine balance"* (Figure 1).

Human Suffering

Participants described suffering related to both the disease and antipsychotic medications. Some viewed dementia as a terrible affliction: *"I think it's the hardest disease out there, to manage. It's one I would NOT like to get myself" [HCA 2].* Not only was dementia perceived to cause suffering to the resident, but often participants reported being physically and emotionally affected themselves. Antipsychotics were viewed through this perspective as a way of alleviating suffering for everyone. Conversely, others acknowledged that antipsychotics can cause severe side effects for the resident, and were used primarily for

"staff-focused" [Consultant psychiatrist of old age 2] as opposed to resident-focused purposes. From this perspective, the use of antipsychotics were frowned upon.

The Interface between Resident and Nursing Home

The perceived effect that the resident has on the NH, and vice versa, was the second explanatory theme. A resident exhibiting BPSD was perceived by some to have a negative impact on the NH environment, ultimately requiring additional staff and money: *"They haven't enough staff and they seem to think that the cheapest way is to dose them, and keep them quiet" [Family member 1].* From this perspective, antipsychotics were perceived as necessary to enable staff to care for all residents in an efficient manner. Conversely, the NH environment was perceived by others to have an important impact on the resident. From this perspective, placing the resident in *"the right place" [Nurse 3]*, i.e. a more dementia-friendly environment, was perceived to be more beneficial to the resident than any medication.

Power and Knowledge: Complex Stakeholder Dynamics

The final theme refers to the complex interplay between the many different stakeholders involved in the care of residents. The symbiotic concepts of power and knowledge can help us to understand these complex stakeholder dynamics. There were different types of knowledge valued by participants: knowledge of the disease, the drug and the resident. Often primacy was given to the latter. Hence from this perspective, nurses' in-depth knowledge of residents legitimized their power to request that an antipsychotic be started or stopped: "*The GP's will do it [deprescribe], no problem, we need to instigate it, and it's just the experience of knowing the person" [Nurse 5].* Conversely, others argued that those

in higher positions of power had knowledge that was more important (i.e. knowledge of drug and disease), in determining the best outcomes for residents: *"Old age psych usually make a recommendation and then the GP will sign the prescription" [Nurse 8].* From this perspective, those in positions of power were perceived to have the most important knowledge in determining the appropriateness of antipsychotic prescribing.

Discussion

Using a novel multi-perspective approach, we have generated a deeper understanding of the behavioral components of antipsychotic use in NH residents with dementia, the professional interactions that occur between different stakeholders and the determinants of implementation of best-practice guidelines. Our findings highlight how implementing evidence-based practice in this area remains a significant challenge, despite advances in knowledge and stricter regulations. We identified that stakeholders strive to strike *"a fine balance"* but ultimately, as humans, are influenced by interacting emotional, environmental, organizational and societal issues.

Comparison with Previous Research

This study builds on the findings of our systematic review[14] where we identified five key concepts influencing decision-making: *organizational capacity; individual professional capacity; communication and collaboration; attitudes; and regulations and guidelines*. In this current study, we found all of these concepts also play a role in implementing evidence-based practice. With regards to *organizational capacity*, the fundamental issue of inadequate resources was discussed in almost all of our interviews. This current study also extends our understanding of the influence of *regulations* on practice. Our study confirms

the important role of regulations, but also highlights unintended negative consequences that may occur as NHs undertake various workarounds. Similar workarounds have been reported in the US, where increasing diagnoses of schizophrenia in NH residents have been observed, in a suspected attempt to exempt antipsychotics from regulatory reporting requirements.[26]

We identified nine TDF domains that influenced our target behaviors which are similar to those found in previous TDF studies exploring prescribing behaviors for various conditions.[27-31] The key difference is our identification of 'emotion' as a predominant domain which is absent in the majority of other prescribing studies.[27-30] The emotional impact of BPSD on family members[32] and NH staff[33] is established in the literature. The concept that people with dementia inevitably lose their identity to dementia and thus become 'dehumanized' has been hypothesized as a rationale for why family members often struggle with BPSD.[32] In our study, this fear of dementia emerged as an important issue. It is evident that this impacts not only on family members, but also NH staff. Prescribers believe that sometimes it is challenging to decipher who precisely is distressed by the BPSD.

Foucault wrote that power and knowledge are not independent entities but are inextricably linked — *'knowledge is always an exercise of power and power always a function of knowledge'.*[34] This theory may help us to understand the complex dynamics between hierarchical stakeholders and how different types of knowledge are valued by different stakeholders. Knowledge of the resident tends to be prioritized, and sometimes this can contradict with treatment goals set by those in higher positions of power (with different types of knowledge). Hence, advocating on behalf of the resident, particularly by nurses, is central to decision-making, and a key target for potential intervention.[35,36]

Previous studies have explored the challenges GPs experience when managing BPSD.[37-39] Jennings *et al.* identified three main challenges: lack of clinical guidance; stretched resources; and difficulties managing expectations.[37] Our study corroborates these findings by highlighting the multitude of difficulties GPs face when deciding whether to prescribe antipsychotics or not. However, our study goes further by exploring the perspectives of a wider range of stakeholders, allowing us to gain a more holistic insight into this implementation problem.

Implications

It is evident that greater policy and institutional support is required to help stakeholders strike that *"fine balance"* and ultimately make better prescribing decisions. Development of national clinical guidelines may be one appropriate policy intervention. Such guidelines are currently being developed in Ireland as a priority action point of the national dementia strategy.[40] An important implication of our study is the need to clarify existing regulations for stakeholders, as it is evident that they are unsure as to which prescribing scenarios are reportable and which are not, and residents may be adversely affected by this confusion.

Further consideration should also be given to the design of future NHs. Our findings highlight the importance stakeholders attribute to dementia SCUs in terms of meeting the needs of residents with dementia. However, resident outcomes from SCUs have been mixed, along with concern over higher levels of antipsychotic usage.[41,42] Therefore, although SCUs may be desired by stakeholders, more evidence of the quality and safety of this approach is required before widespread adoption.

The perceived impact of treatment culture on antipsychotic usage featured heavily throughout this study. In line with previous systematic review findings,[14,43] the NH manager

was seen as a key determinant of NH treatment culture, as they possessed both a position of power and knowledge of the resident. We recommend that NH managers take advantage of their influential role by providing/organizing ongoing training to staff as well as encouraging the involvement of peripheral stakeholders (i.e. HCAs, pharmacists, family members) in decision-making.

Despite guidance on avoiding antipsychotics in dementia, they can play an essential role in certain situations.[1,2] Our study shows that due to the stigma attached to antipsychotics, some prescribers are fearful of prescribing them at all, risking unnecessary distress for a resident for whom the medications are indicated. A recent study demonstrated that discontinuation of antipsychotics, without non-pharmacologic substitution, can have a detrimental impact on residents' health-related quality of life.[44] Our findings suggest that an evidence-based, standardized approach involving interdisciplinary collaboration, careful documentation and regular review is needed to ensure the most appropriate use of both pharmacologic and non-pharmacologic interventions.[45] One such model program is the DICE (describe, investigate, create, and evaluate) approach, which promotes a holistic, person-centered approach to managing BPSD.[45,46]

Educational programs are the most common intervention type utilized to tackle inappropriate antipsychotic prescribing[10] e.g. the OASIS program[47], the HALT study[48] and the RedUSe project.[11] Ongoing education and training to both NH staff and prescribers is an important aspect of ensuring appropriate antipsychotic prescribing, but is not sufficient on its own. Drawing from existing programs[11,45,47,48] as well as our own findings, we recommend that future programs should include training on the assessment and management of BPSD, dealing with emotions and managing expectations. It is important for

prescribers to be empathetic and acknowledge the emotional and physical impact of BPSD, while assertively conveying, the limited benefit and serious risks associated with antipsychotics. Likewise, nurses as the key influencer on prescribing, should be aware of and communicate these issues to others within the NH and to family members. In particular, the OASIS communication training program enforces these key messages.[47] Future research should focus on determining how best to deliver educational interventions, and alongside what, in order to achieve sustainable results.

Strengths and Limitations

The trustworthiness of our findings are underpinned by the involvement of different disciplines on our research team and the participation of multiple stakeholders from different organizations during the interviews. Triangulation of analysts and participants also contributed toward the credibility of the results. Interviews took place in one region in Ireland, but transferability is supported by the provision of sufficient contextual information to enable readers to determine how applicable our findings are to their own situation. Detailed reporting of well-established methods with diagrammatical audit-trails contributed toward the dependability of our findings. Finally, in terms of confirmability, detailed reporting of participants' quotations, helped ensure that our findings were primarily borne from the data.[49]

Although 66% (4/6) of NHs and 71% (27/38) of individuals agreed to participate in our study, it is possible that only those with strong views on this topic took part. Furthermore, although we employed a purposive sampling approach, Directors may have recommended individuals for participation who were more likely to provide favorable responses about practices in their NH. Hence the possibility of selection bias cannot be excluded. Random

sampling of participants along with a larger sample may have reduced this problem, and may have allowed us to explore differences in perceptions between respondent groups and settings in greater detail.[49]

Another limitation was the small number of family members recruited. The challenges of recruiting family members of residents with dementia to research studies have been previously reported.[50] Despite engaging with our advisors on this issue, and reminding Directors to identify potential participants, we only managed to recruit three family members. It is possible that family members were apprehensive about taking part due to the emotive nature of this topic. Furthermore, it is possible that the Directors may have been over-protective of family members.

Conclusions

Implementing evidence-based antipsychotic prescribing practices for NH residents with dementia remains a significant challenge, despite advances in knowledge and stricter regulations. In striving to strike *"a fine balance"* stakeholders are influenced by interacting emotional, environmental, organizational and societal issues. Greater policy and institutional support is required to help stakeholders strike that *"fine balance"* and ultimately make better prescribing decisions. This study provides us with a deeper understanding of this complex issue and will inform the development of a theory and evidence-based intervention.

Acknowledgements

Author contributions:

Study concept and design: KW, JMcS, SB, JB, ST.

Acquisition of Data: KW.

Analysis and Interpretation of data: KW, AF, CS, JMcS, SB, JB, ST.

Drafting of the manuscript: KW.

Critical revision of the manuscript for important intellectual content: AF, CS, JMcS, SB, JB, ST.

Final approval of version to be published: KW, AF, CS, JMcS, SB, JB, ST.

The authors wish to thank all participants who kindly participated in this qualitative study. In addition we wish to extend our gratitude to Carmel Geogheghan, Dr. Emer Begley, Dr. Bernadette Rock, the Irish Dementia Working Group, the Alzheimer Society of Ireland and to our PPI advisory group members for their helpful contributions. We would also like to thank Dr. Justin Presseau and Dr. Andrea Patey, Ottawa Hospital Research Institute for their advice on the analysis.

The investigators were solely responsible for the design, methods, subject recruitment, data collections, analysis and preparation of paper and the funding sources did not participate in this process.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

References

1. Reus VI, Fochtmann LJ, Eyler AE, et al. The American Psychiatric Association practice guideline on the use of antipsychotics to treat agitation or psychosis in patients with dementia. American Journal of Psychiatry 2016; 173: 543-546.
2. National Institute for Health and Clinical Excellence (NICE). Dementia: assessment, management and support for people living with dementia and their carers. 2018. https://www.nice.org.uk/guidance/ng97.Accessed 26 Jun, 2018
3. Maust DT, Kim HM, Seyfried LS, et al. Antipsychotics, other psychotropics, and the risk of death in patients with dementia: number needed to harm. JAMA psychiatry 2015; 72: 438-445.
4. Schneider LS, Dagerman KS, Insel P. Risk of death with atypical antipsychotic drug treatment for dementia: meta-analysis of randomized placebo-controlled trials. Jama 2005; 294: 1934-1943.
5. Hsu W-T, Esmaily-Fard A, Lai C-C, et al. Antipsychotics and the risk of cerebrovascular accident: a systematic review and meta-analysis of observational studies. Journal of the American Medical Directors Association 2017; 18: 692-699.
6. Szczepura A, Wild D, Khan AJ, et al. Antipsychotic prescribing in care homes before and after launch of a national dementia strategy: an observational study in English institutions over a 4-year period. BMJ open 2016; 6: e009882.
7. Janus SI, van Manen JG, IJzerman MJ, et al. Psychotropic drug prescriptions in Western European nursing homes. International psychogeriatrics 2016; 28: 1775-1790.
8. Westbury J, Gee P, Ling T, et al. More action needed: Psychotropic prescribing in Australian residential aged care. Australian & New Zealand Journal of Psychiatry 2018; 0004867418758919.
9. Gurwitz JH, Bonner A, Berwick DM. Reducing excessive use of antipsychotic agents in nursing homes. JAMA 2017; 318: 118-119.
10. Thompson-Coon J, Abbott R, Rogers M, et al. Interventions to reduce inappropriate prescribing of antipsychotic medications in people with dementia resident in care homes: a systematic review. Journal of the American Medical Directors Association 2014; 15: 706-718.
11. Westbury J, Tichelaar L, Peterson G, et al. A 12-month follow-up study of “RedUSe”: a trial aimed at reducing antipsychotic and benzodiazepine use in nursing homes. International psychogeriatrics 2011; 23: 1260-1269.
12. Monette J, Monette M, Sourial N, et al. Effect of an interdisciplinary educational program on antipsychotic prescribing among residents with dementia in two long-term care centers. Journal of Applied Gerontology 2013; 32: 833-854.
13. Michie S, Atkins L, West R. The behaviour change wheel: a guide to designing interventions. Silverback Publishing, 2014.
14. Walsh KA, Dennehy R, Sinnott C, et al. Influences on decision-making regarding antipsychotic prescribing in nursing home residents with dementia: A systematic review and synthesis of qualitative evidence. Journal of the American Medical Directors Association 2017; 18: 897.e.
15. Cane J, O’Connor D, Michie S. Validation of the theoretical domains framework for use in behaviour change and implementation research. Implementation Science 2012; 7: 37.
16. Atkins L, Francis J, Islam R, et al. A guide to using the Theoretical Domains Framework of behaviour change to investigate implementation problems. Implementation Science 2017; 12: 77.
17. Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. International journal for quality in health care 2007; 19: 349-357.
18. Walsh KA, O'Regan NA, Byrne S, et al. Patterns of psychotropic prescribing and polypharmacy in older hospitalized patients in Ireland: the influence of dementia on prescribing. International psychogeriatrics 2016; 28: 1807-1820.
19. Zhang Y, Letuchy EM, Carnahan RM. Where Are Antipsychotics Prescribed in Nursing Homes Initiated? Journal of the American Geriatrics Society 2018; 000-000.

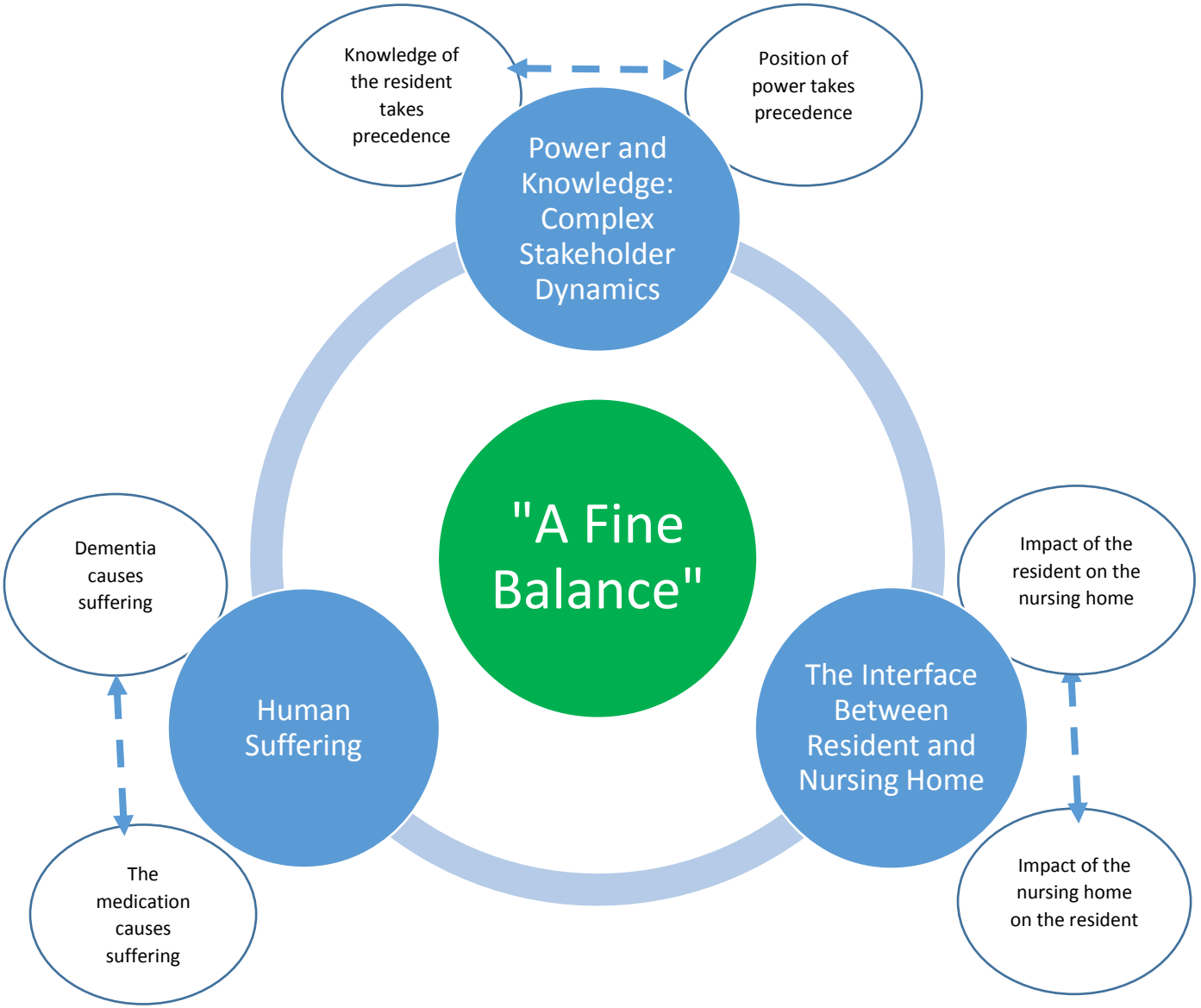
20. Health Information and Quality Authority (HIQA). Health Information and Quality Authority (HIQA). 2016. https://www.hiqa.ie/find-a-centre.Accessed 1 June, 2016
21. Nursing Home Ireland. Nursing Home Ireland. 2016. http://www.nhi.ie/.Accessed 1 June, 2016
22. Francis JJ, Johnston M, Robertson C, et al. What is an adequate sample size? Operationalising data saturation for theory-based interview studies. Psychol Health 2010; 25: 1229-45.
23. Ritchie J, Spencer L, O'Connor W. Carrying out qualitative analysis. In: Qualitative research practice: A guide for social science students and researchers (eds Ritchie J, Lewis J): 219-62. Sage, 2003.
24. QSR International Pty Ltd. NVivo Qualitative Data Analysis Software version 11. 2017.
25. Health Act 2007 (Care and Welfare of Residents in Designated Centres for Older People) Regulations 2013,. Irish Statute Book, 2013.
26. Westbury J. Antipsychotic Drug Prescribing in Nursing Homes. JAMA 2017; 318: 1829.
27. Fleming A, Bradley C, Cullinan S, et al. Antibiotic prescribing in long-term care facilities: a qualitative, multidisciplinary investigation. BMJ open 2014; 4: e006442.
28. Cadogan CA, Ryan C, Francis JJ, et al. Improving appropriate polypharmacy for older people in primary care: selecting components of an evidence-based intervention to target prescribing and dispensing. Implementation Science 2015; 10: 161.
29. Cullinan S, Fleming A, O'mahony D, et al. Doctors' perspectives on the barriers to appropriate prescribing in older hospitalized patients: a qualitative study. British journal of clinical pharmacology 2015; 79: 860-869.
30. O'Riordan D, Byrne S, Fleming A, et al. GPs' perspectives on prescribing for older people in primary care: a qualitative study. British journal of clinical pharmacology 2017; 83: 1521-1531.
31. Sargent L, McCullough A, Del Mar C, et al. Using theory to explore facilitators and barriers to delayed prescribing in Australia: a qualitative study using the Theoretical Domains Framework and the Behaviour Change Wheel. BMC family practice 2017; 18: 20.
32. Feast A, Orrell M, Charlesworth G, et al. Behavioural and psychological symptoms in dementia and the challenges for family carers: systematic review. The British Journal of Psychiatry 2016; 208: 429-439.
33. Brodaty H, Draper B, Low LF. Nursing home staff attitudes towards residents with dementia: strain and satisfaction with work. Journal of advanced nursing 2003; 44: 583-590.
34. Foucault M. Power/knowledge: Selected interviews and other writings, 1972-1977. Pantheon, 1980.
35. Mc Gillicuddy A, Crean AM, Kelly M, et al. Oral medicine modification for older adults: a qualitative study of nurses. BMJ Open 2017; 7: e018151.
36. Walent RJ, Kayser-Jones J. Having a voice and being heard: nursing home residents and in-house advocacy. J Gerontol Nurs 2008; 34: 34-42.
37. Jennings AA, Foley T, McHugh S, et al. 'Working away in that Grey Area…'A qualitative exploration of the challenges general practitioners experience when managing behavioural and psychological symptoms of dementia. Age and ageing 2017; 1-9.
38. Foley T, Boyle S, Jennings A, et al. "We're certainly not in our comfort zone": a qualitative study of GPs' dementia-care educational needs. BMC family practice 2017; 18: 66.
39. Jennings AA, Foley T, Walsh KA, et al. General practitioners' knowledge, attitudes and experiences of managing behavioural and psychological symptoms of dementia: a mixed methods systematic review. International journal of geriatric psychiatry 2018; 1-14.
40. Department of Health. The Irish national dementia strategy 2014. http://health.gov.ie/blog/publications/the-irish-national-dementia-strategy/.Accessed 18 June, 2018
41. Cioltan H, Alshehri S, Howe C, et al. Variation in use of antipsychotic medications in nursing homes in the United States: A systematic review. BMC geriatrics 2017; 17: 32.

42. Gruneir A, Lapane KL, Miller SC, et al. Is dementia special care really special? A new look at an old question. Journal of the American Geriatrics Society 2008; 56: 199-205.
43. Sawan M, Jeon Y-H, Chen TF. Relationship between Organizational Culture and the Use of Psychotropic Medicines in Nursing Homes: A Systematic Integrative Review. Drugs & aging 2018; 1-23.
44. Ballard C, Orrell M, Sun Y, et al. Impact of antipsychotic review and non-pharmacological intervention on health-related quality of life in people with dementia living in care homes: WHELD—a factorial cluster randomised controlled trial. International journal of geriatric psychiatry 2017; 32: 1094-1103.
45. Kales HC, Gitlin LN, Lyketsos CG, et al. Management of neuropsychiatric symptoms of dementia in clinical settings: recommendations from a multidisciplinary expert panel. Journal of the American Geriatrics Society 2014; 62: 762-769.
46. Kales HC, Gitlin LN, Lyketsos CG. Assessment and management of behavioral and psychological symptoms of dementia. bmj 2015; 350: h369.
47. Tjia J, Hunnicutt JN, Herndon L, et al. Association of a communication training program with use of antipsychotics in nursing homes. JAMA internal medicine 2017; 177: 846-853.
48. Brodaty H, Aerts L, Harrison F, et al. Antipsychotic deprescription for older adults in long-term care: The HALT study. Journal of the American Medical Directors Association 2018; 19: 592-600. e7.
49. Shenton AK. Strategies for ensuring trustworthiness in qualitative research projects. Education for information 2004; 22: 63-75.
50. Barry HE, Parsons C, Passmore AP, et al. Pain in care home residents with dementia: an exploration of frequency, prescribing and relatives' perspectives. International journal of geriatric psychiatry 2015; 30: 55-63.

List of Figure Captions

Fig. 1. Conceptual model of explanatory themes: Opposing perspectives and trade-offs (in white) can tip the *"fine balance"* in favor of undertaking one behavior over another (e.g. prescribe versus not prescribe). The perspective of each nursing home toward these three explanatory themes (in blue), determines how they strike a *"fine balance"* between the risks and benefits of antipsychotics.

636



28

Fig. 1. Conceptual model of explanatory themes: The perspective of each nursing toward these three explanatory themes (in blue), determines how they strike a *"fine balance"* between the risks and benefits of antipsychotics

Table 1 Theoretical Domains Framework (TDF)

Domain	Definition
Behavioral Regulation	Anything aimed at managing or changing objectively observed or measured actions
Beliefs about Capabilities	Acceptance of the truth, reality, or validity about an ability, talent, or facility that a person can put to constructive use
Beliefs about Consequences	Acceptance of the truth, reality, or validity about outcomes of a behavior in a given situation
Emotion	A complex reaction pattern, involving experiential, behavioral and physiological elements, by which the individual attempts to deal with a personally significant matter or event
Environmental Context and Resources	Any circumstance of a person's situation or environment that discourages or encourages the development of skills and abilities, independence, social competence, and adaptive behavior
Goals	Mental representations of outcomes or end states that an individual wants to achieve
Intentions	A conscious decision to perform a behavior or a resolve to act in a certain way
Knowledge	An awareness of the existence of something
Memory, Attention and Decision-Processes	The ability to retain information, focus selectively on aspects of the environment and choose between two or more alternatives
Optimism	The confidence that things will happen for the best or that desired goals will be attained
Reinforcement	Increasing the probability of a response by arranging a dependent relationship, or contingency, between the response and a given stimulus
Skills	An ability or proficiency acquired through practice
Social Influences	Those interpersonal processes that can cause individuals to change their thoughts, feelings or behaviors
Social/Professional Role and Identity	A coherent set of behaviors and displayed personal qualities of an individual in a social or work setting

Table 2 Characteristics of Interview Participants (n=27)

Characteristics of total participants (n=27)	Participants, n
Professional/social role	
Nurse	8
General Practitioner	5
Healthcare Assistant	5
Family Member	3
Pharmacist	2
Consultant Geriatrician	2
Consultant Psychiatrist of Old Age	2
Gender	
Female	17
Male	10
Other	0
Category of Nursing Home participant worked in*	
Private only	9
Public only	4
Voluntary only	3
Multiple	8
Years of professional experience (since qualification)*	
<10 years	3
10-19 years	10
≥20 years	10
Information not provided	1
Received specialist dementia training*	
Yes	16
No	8
Presence of dementia special care unit (SCU) in any nursing home participant worked in*	
Yes	7
No	17

Characteristics of Family Member Participants (n=3)	Participants, n
Gender	
Female	2
Male	1
Other	0
Category of Nursing Home person with dementia resides/resided	
Private	3
Role	
Current carer	1
Former carer	2
Age of participant	
40-49	1
50-59	1
60-69	1
Relationship to person with dementia	
Son/daughter	2
Nephew/niece	1

** N/A for n=3 family members*

Table 3 Determinants of appropriate antipsychotic prescribing behaviors (requesting and prescribing)

Predominant TDF domain	Determinants (i.e. barriers and/or facilitators) of appropriate antipsychotic prescribing behaviors	Illustrative quotes
Behavioral Regulation		
	• HIQA regulation as a stimulus for change (facilitator)	• *I think HIQA is brilliant... because I really think they force people to look at their practice, and to challenge their own practice and to change." [HCA 1]*
	• Perception of HIQA over-regulation by GPs (barrier)	• *"I think HIQA are a scurge. I wonder what they bring to the table. I think they're self-fulfilling... Ya I think most GPs would not [be happy with them]. I don't think they bring a whole lot to the table unfortunately. I think they bully private nursing home and private institutions…Ya I think it's all very, very good and ivory tower stuff and politically correct. But, could I think [sic] the money spent on HIQA could be spent better on direct services? Probably." [GP 1]*
	• Uncertainty regarding HIQA reporting requirements (barrier)	• *"Now, conversely, what it has made some nursing homes do is, if somebody was on a PRN psychotropic, because the resident might only need it once or twice per month and because it becomes reportable, they get prescribed regularly." [Nurse 5]*
	• Self-monitoring (using local systems) of antipsychotic prescribing (facilitator)	• *"So, for me it would be to monitor the scripts as they come in and maybe their charts and we do at the request of the Director of Care, we do a psychotropic audit every month. So we see where they're being reviewed." [Pharmacist 2]*
	• Guidelines for monitoring the appropriateness of antipsychotic prescribing (facilitator)	• *"Guidelines is a good thing, and licensing, because you know there isn't any license. Grade one, grade two evidence, meta-analyses… You can certainly use them to say why you're not prescribing an antipsychotic. You just say there's no evidence and it's not national policy." [Consultant Psychiatrist of Old Age 2]*
Beliefs about capabilities		
	• Poor self-efficacy in the management of BPSD among non-specialists (barrier)	• *"So I suppose in some ways I don't feel I have the sufficient expertise to make those kind of decisions so I'll look to specialists at that point if I'm struggling with something." [GP 3]*
	• Belief that assessing whether an antipsychotic prescription is 'appropriate' or not is challenging (barrier)	• *"It's a difficult one to decipher. When it's appropriate and when it's not appropriate." [Nurse 6]*
	• Belief that deprescribing antipsychotics is difficult (barrier)	• *"And it's very easy starting these things but the discontinuation of them not quite so clear cut." [Consultant Geriatrician 2]*
Beliefs about consequences		
	• Concerns about side-effects (facilitator)	• *"She was just asleep looking, absolutely drugged out of her tree looking, sitting in a chair." [Family member 1]*
	• Belief that antipsychotics are highly effective (barrier)	• *"I know the drugs can fix these things. Now not completely right. But I know that drugs can fix these things." [Family member 2]*
	• Belief that NPIs are not a feasible alternative (barrier)	• *"But if you have somebody at 2 o clock in the morning that you're pacing the floor with until 6 o clock in the morning, where are your therapies then?" [HCA 2]*
	• Belief that the return of symptoms are caused by the reduction of antipsychotic dosage (barrier)	• *"I think people often think, that if something doesn't work straight way or if there happens to be a coincidental problem as soon as you start to reduce it, suddenly there is this complete fear that this has caused it they expect more immediate, they see the immediate things as being either absent or present so when you start a new drug if it hasn't worked straight away there is a bit of 'oh it's not working.'" [GP 3]*
	• Anticipated regret (barrier)	• *"Because you don't know what precipitated the [behavior], and then, when you're trying to pull back and you walk away, are you leaving your colleagues in the height of it then?" [GP 4]*
Emotion		
	• Fear of dementia (barrier)	• *"It was very hard to listen to [the BPSD]… so as far as I'm concerned, if there was a medication that would sort this thing anyway, I certainly was completely open to it." [Family member 2]*
	• Taking behaviors personally (barrier)	• *"I feel that certain people take huge offence if a person who is cognitively impaired lashes out, punches, screams, whatever and you know, you have to let it go." [Nurse 8]*
	• Burn-out and frustration (barrier)	• *"You'll get staff who are burned out, they just can't cope. They're sick of saying X, Y and Z and they're not being listened to, and they just don't care anymore." [Nurse 3]*

	• Empathy toward people with dementia (facilitator)	• *"I think people with a very empathetic view of dementia would be less likely to encourage, prescription of antipsychotics, because there is that, 'oh it's, you know, you don't have to give them drugs for it, it's just their dementia, we can get around it,' and then, some people… will see the more negative side of the dementia, and be like, 'isn't it awful for them, God wouldn't you just give them something to relax them.' [Nurse 6]*
	• Emotions of healthcare professionals tend to reflect those of family members (barrier)	• *"I'll get [a phone call], 'The family were in today they're very worried about mammy. She's very upset and agitated'. I never get those phone calls to say that they're worried that's she's just sitting there staring into space." [GP 1]*
	• Personal experience of dementia (barrier/facilitator)*	• *"We're all human, we all bring our own stuff." [HCA 3]*
Environmental Context and Resources		
	• Lack of adequate resources (barrier)	• *"You need to have the time to be with somebody, staffing levels don't really give you the opportunity to sit with somebody all day long or all afternoon… you can come and go but you can't stay with the person." [Nurse 4]*
	• Perception that it's cheaper to give antipsychotics than deliver NPIs (barrier)	• *"They haven't enough staff and they seem to think that the cheapest way is to dose them, and keep them quiet" [Family member 1].*
	• Impact of the built environment on the person with dementia (facilitator/ barrier)*	• *"I think if we had properly designed purpose built modern dementia units that allowed us to offer a different environment than the standard ward environment… I do think that would be far more humane and you'll probably get better overall results than resorting to the old fashioned chemical restraints." [Consultant geriatrician 2]*
	• Each nursing home is different (facilitator/barrier)*	• *"You go to different nursing homes and attitudes are very different." [Nurse 3]*
	• Impact of treatment culture on residents (facilitator/barrier*)	• *"Sometimes it can feel like the person is there as… I don't know how to say this politely, but they're in the bed and they have to acquiesce or be compliant with the system around them, be good children or good grown-ups and play the game. And if you don't do that, then you get labelled and your behavior gets labelled." [Consultant Psychiatrist of Old Age 1]*
Knowledge		
	• Knowledge of antipsychotics (facilitator)	• *"If you can tell someone what the potential complications [of antipsychotics] are, they may be a little bit less likely to ask for them." [GP 1]*
	• Knowledge on the cause and nature of BPSD (facilitator)	• *"I think if people understood… why [residents] have behaviors that challenge I think that would go a long way for a lot more understanding and people not wanting just to sedate somebody." [Nurse 3]*
	• Knowledge of the resident (facilitator)	• *"I think just knowing the person. Knowing that they have been on them [antipsychotics] for years. Looking at them now, their state of deterioration and you know in your heart and soul they don't need them." [Nurse 5]*
Memory, attention and decision-processes		
	• Decision-making based on a thorough assessment (facilitator)	• *"Then with the physical as well, we do the PINCH ME acronym so we...pain, infection, constipation, hydration, nutrition, medications, environment, we look at real holistic view of the person and try and rule out any triggers there [sic]." [Nurse 6]*
	• Paying attention to *where* the challenge lies with regards to the behavioral symptoms (facilitator)	• *"Sometimes it just ultimately again it takes me back, you need to take a step back, who are you treating? Are you treating the carer who wants a certain amount given so somebody is peaceful or a certain amount of investigation is done, or are we treating the staff who are treating the patient because they want a peaceful night or a peaceful day on the ward, or are we making a decision to make our own lives easier. And we just have to take a step back sometimes." [GP 5]*
Social Influences		
	• Social Pressure to prescribe (barrier)	• *"So I feel under pressure to knock this person out, anesthetize this patient, who they see as, shouldn't be challenging. And they're already completely over-sedated and the staff want them to be even more sedated." [Consultant psychiatrist of old Age 2]*
	• Reliance on accurate information from nursing home staff (facilitator/barrier)*	• *"I think people can be a little bit biased in how they can present a case to you at times to get to the ends that they want. I know there has been one incident where… a staff member [was overheard] saying 'sure just tell her she's had hallucinations.'" [GP 3]*

	• Modelling of prescribing behavior (facilitator/barrier)*	• *"A lot of our learning seems to come from the consultations and referrals that we actually see what the psychiatry of the elderly prescribe in these situations, and we have been led by that, so quetiapine just seems to be one they seem to use." [GP 5]*
	• Prevailing culture of care (facilitator/barrier)*	• *"Medication comes first in Ireland. 'Give it to them as much as possible'". [Family member 1]*
Social/ Professional Role and Identity		
	• Advocacy role of nursing home staff and family members (facilitator)	• *"See mom didn't have a voice, nobody would listen to her even when she was speaking, she wasn't listened to and I was her voice." [Family member 1]*
	• Professional identity (facilitator/barrier)*	• *"It depends on what background you are coming from and when you trained, how you view the medications and the use of medications. I think there is a difference, between the younger generation of nurses and the older generation of nurses. There appears to be more of a reluctance, I think, in the younger generation of nurses with giving out, I suppose the high risk medications like [antipsychotics]… And I think there is a difference there then because you're not seeing your nursing profession as a medical profession, you're almost a facilitator...and when you see it from that perspective then medication isn't always the first kind of thing that pops into your head." [Nurse 6]*
	• Variable sense of responsibility for prescribing decisions (facilitator/barrier)*	• *"But I suppose it's up to the prescriber to be able to sort the wheat from the chaff and see what's a good grounded opinion and what's maybe not as reliable you know." [HCA 3]*
	• Leadership role of nursing home manager (facilitator)	• *"You need a manager who is supporting staff and is knowledgeable and roles out good training to the staff. And has good experience so, and ideally good mental health experience because that's, not all of them have good mental health experience but it is important for the manager, if you meet the manager, you can usually see the tone of the home." [Consultant Psychiatrist of Old Age 2]*
	• Traditional hierarchy (barrier)	• *"As it stands and we're talking about the real world, it's really the nursing staff and the GP. I don't have an influence there. If I get the script, we just have to hand it over." [Pharmacist 2]*

*** This determinant could be a barrier or a facilitator depending on the individual circumstance**

BPSD: Behavioral and Psychological Symptoms of Dementia; GP: General Practitioner; HCA: Healthcare assistant; HIQA: Health Information and Quality Authority; NPIs: Non-pharmacological interventions; TDF: Theoretical Domains Framework