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Review Article

Influences on Decision-Making Regarding Antipsychotic Prescribing in Nursing Home Residents With Dementia: A Systematic Review and Synthesis of Qualitative Evidence

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A B S T R A C T

Background: Antipsychotic prescribing is prevalent in nursing homes for the management of behavioral and psychological symptoms of dementia (BPSD), despite the known risks and limited effectiveness. Many studies have attempted to understand this continuing phenomenon, using qualitative research methods, and have generated varied and sometimes conflicting findings. To date, the totality of this qualitative evidence has not been systematically collated and synthesized.

Aims: To synthesize the findings from individual qualitative studies on decision-making and prescribing behaviors for antipsychotics in nursing home residents with dementia, with a view to informing intervention development and quality improvement in this field.

Methods: A systematic review and synthesis of qualitative evidence was conducted (PROSPERO protocol registration CRD42015029141). Six electronic databases were searched systematically from inception through July 2016 and supplemented by citation, reference, and gray literature searching. Studies were included if they used qualitative methods for both data collection and analysis, and explored antipsychotic prescribing in nursing homes for the purpose of managing BPSD. The Critical Appraisal Skills Program assessment tool was used for quality appraisal. A meta-ethnography was conducted to synthesize included studies. The Confidence in the Evidence from Reviews of Qualitative research approach was used to assess the confidence in individual review findings. All stages were conducted by at least 2 independent reviewers.

Results: Of 1534 unique records identified, 18 met the inclusion criteria. Five key concepts emerged as influencing decision-making: organizational capacity; individual professional capability; communication and collaboration; attitudes; regulations and guidelines. A “line of argument” was synthesized and a conceptual model constructed, comparing this decision-making process to a dysfunctional negative feedback loop. Our synthesis indicates that when all stakeholders come together to communicate and collaborate as equal and empowered partners, this can result in a successful reduction in inappropriate antipsychotic prescribing.

Conclusions: Antipsychotic prescribing in nursing home residents with dementia occurs in a complex environment involving the interplay of various stakeholders, the nursing home organization, and external influences. To improve the quality of antipsychotic prescribing in this cohort, a more

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holistic approach to BPSD management is required. Although we have found the issue of antipsychotic prescribing has been extensively explored using qualitative methods, there remains a need for research focusing on how best to change the prescribing behaviors identified.

Antipsychotics are commonly prescribed to manage the behavioral and psychological symptoms of dementia (BPSD).[1] These medications have a role to play in BPSD when there is a danger of harm to self or others, when there is a psychosis, or when non-pharmacologic approaches have not been effective.[2] However, these agents are often prescribed inappropriately, despite evidence of an increased risk of stroke and mortality, and a lack of effectiveness in these patients.[1,3,4] People with dementia are prescribed significantly more of these agents than the general older population,[5,6] and it is in the nursing home setting where the majority of this prescribing occurs.[7]

A 2014 systematic review found that many interventions are effective in the short-term at reducing the inappropriate prescribing of antipsychotics in nursing homes to people with dementia.[8] The authors highlighted the need for a greater understanding of the contextual drivers of inappropriate prescribing in order to improve the long-term sustainability of the reviewed interventions.

Qualitative research allows for a rich understanding of complex social environments such as nursing homes and can be used to develop and improve interventions in this context.[9] A number of original qualitative studies have been conducted on antipsychotic prescribing in people with dementia but to date these have not been the subject of a systematic review.

The most commonly utilized method for synthesizing qualitative evidence is meta-ethnography.[10] This 7-step method of qualitative evidence synthesis employs an inductive approach moving from specific observations to broader generalizations. It is a systematic interpretive approach that is particularly useful for generating new theories or concepts, which can influence policy and practice.[11] For example, recently published clinical guidelines on multimorbidity[12] have been informed by a high-quality meta-ethnography in this similarly complex field.[13]

The aim of our study was to synthesize the findings from individual qualitative studies in order to develop novel interpretations of the influences on decision-making regarding the prescribing of antipsychotics in nursing home residents with dementia, with a view to informing intervention development and quality improvement in this field.

Methods

We conducted a systematic search of primary qualitative studies exploring antipsychotic prescribing in nonacute, long-term care institutions. We used a "meta-ethnographic synthesis,"[10] as adapted by Atkins et al,[14] to guide our methods. The review protocol was registered with the PROSPERO international prospective register of systematic reviews (registration number: CRD42015029141).

Six electronic databases were searched from inception to July 2016; Medline, PubMed, EMBASE, CINAHL, PsycINFO, and Academic Search Complete. Database-specific search strategies were developed with assistance from a medical librarian. Search terms included a combination of Medical Subject Heading terms, keywords and a comprehensive list of synonyms of the following: "dementia" AND "prescription" AND "antipsychotic agents" with the aim of being as sensitive as possible. The search was not limited by dates of publication or country of origin. To supplement the database search, we conducted hand-searches of key journals and conference proceedings; citation searches of highly cited key studies; reviews of reference lists of key studies; and contacted authors of relevant conference abstracts and studies. The gray literature search was further supplemented by checking the first 100 hits from Google Scholar and by consulting the websites and key personnel from various international Alzheimer societies (Supplementary Table S1).

We included any English-language, peer-reviewed primary study, published in full, using recognized qualitative research methods of both data collection and analysis. Mixed-methods studies were only included if they used qualitative methods as a component of the study. Only the qualitative components of these studies were extracted for analysis. We only included questionnaire studies if the written comments had been analyzed using qualitative methods.

For the first stage of study selection, 1 reviewer conducted preliminary screening of titles to exclude records that were clearly not relevant (eg, preclinical studies). For the second stage, 2 reviewers independently screened titles and abstracts, against inclusion criteria, to identify potentially relevant studies. In the third stage, 2 reviewers independently reviewed full texts of studies. Consensus on inclusion in stages 2 and 3 was reached by discussion between both reviewers, with arbitration by a senior reviewer if required. The Critical Appraisal Skills Program assessment tool for qualitative research was used to assess the quality of included studies,[15] by 2 reviewers independently, and consensus was reached by discussion. Studies were not excluded based on the assessed level of quality. Methodological limitations of included studies were accounted for in the Confidence in Evidence from Reviews of Qualitative research (CERQual) assessments (discussed below).[16]

Four reviewers read and re-read the included studies, with a focus on the content and context. As a group, we identified what we believed to be the conceptually-richest "index paper,"[17] and used this as the starting point. Three reviewers read all 18 included studies starting with the "index paper" and then chronologically. One reviewer open coded the study findings of all included studies (Results and Discussion sections), focusing specifically on first-order interpretations (views of the participants) and second-order interpretations (views of the authors). To ensure credibility and dependability of coding, another reviewer coded the "index paper" and 2 other randomly selected studies,[18,19] and differences in interpretation were discussed and consensus reached.[20] The 4 reviewers convened several times to discuss independently derived concepts and patterns from the studies. Reflexivity was preserved as 1 reviewer conducted memo writing.[20] As a multidisciplinary group, we were cognizant of our professional biases, therefore, we ensured that there was a balance between clinical and nonclinical reviewers at this stage.

Collectively, we developed 5 key concepts to reflect the main findings of all included studies. We developed a matrix of these concepts and assessed how each individual study related to each concept. Two reviewers independently extracted data regarding contextual information from each included study. Discrepancies were resolved through discussion between both reviewers. QSR International's NVivo v 11 (Melbourne, Australia) was used to assist with data analysis and synthesis.[21]

In line with the constant comparative method of qualitative analysis,[22] the first- and second-order interpretations were compared and contrasted across primary studies to identify similarities and disagreements. The importance of context to each interpretation was carefully observed. In this way, reciprocal and refutational translations were conducted.[11] All 8 reviewers were involved in this and the following stages to ensure no important meanings were lost upon translating one study into the next.

We collaboratively developed third-order interpretations by synthesizing first- and second-order interpretations from each study. The