It is time to address the Culture of Residential Aged Care Facilities to support Pharmacists in reducing psychotropic prescribing

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The high-level use of psychotropic medicines, particularly antipsychotics, for the treatment of Behavioural and Psychological Symptoms of Dementia (BPSD) in Residential Aged Care Facilities (RACFs) is widely acknowledged. The current estimates of the prevalence of psychotropic medicines in such facilities are high: 44% in the UK (1), 61% in Australia (2), and over 60% in the US (3). Despite guidelines and mandates that recommend psychotropic treatment for the management of BPSD should not be used first line, and the risk of adverse effects associated with use, high levels of inappropriate prescribing of these medicines have been reported (3, 4). They are often used outside of approved indications, for longer than recommended or at higher doses (5).

Interestingly previous research has also demonstrated variation in the level of psychotropic medicine use across nursing homes (6-8). This perhaps could be explained by differences in organisational culture; recent Australian research has found that organisational culture plays a significant role in shaping the decisions and practices of both on-site and visiting staff, which has important implications for psychotropic prescribing (9-11). Organisational culture is a complex phenomenon underpinned by taken for granted beliefs that explain why members behave the way they do (12). Research has shown that it is not enough to reinforce ideals for the appropriate use of psychotropic treatment in on-site and visiting staff, without addressing these beliefs first (11). In the Medical Research Council (MRC) framework, complex intervention development requires a coherent theoretical basis to develop and describe the intervention (13). Schein's theory of organisational culture provides a detailed framework and conceptualises culture into three levels: i) artifacts (artifacts may be visible or non-visible), ii) espoused values and iii) basic assumptions (12, 14). Table 1 uses Schein's theory of organisational culture (14), findings from a systematic review (15) and qualitative studies (9-11) to describe how each aspect of culture influences psychotropic prescribing and the pharmacists' role.

Aspects of culture that form barriers to the appropriate use of psychotropic treatment include a 'box ticking exercise' approach of measures to reduce inappropriate psychotropic prescribing by RACFs, limited managerial support for and facilitation of measures to reduce psychotropic prescribing, on-site staff and general practitioners (GPs) giving in to resident or their carers requests and resistance to withdraw treatment, little or no involvement of residents or their carers in discussions regarding risk versus benefit of treatment, low managerial expectations for medication optimisation, poor interdisciplinary teamwork and communication, and staff feeling helpless to do the right thing due to

perceptions of limited resources and inter-disciplinary conflict. On the other hand, managerial support for and facilitation of interdisciplinary interventions to reduce psychotropic prescribing, mutual respect and trust among all staff, interdisciplinary teamwork that recognises all stakeholders can contribute to resident-centred prescribing, structured meetings between stakeholders and residents or their carers to discuss the risk versus benefits of treatment, all stakeholders taking responsibility to ensure that resident care is person-centred, were aspects of culture that promoted appropriate psychotropic treatment.

The most recent Australian intervention study involved on-site and visiting staff education and pharmacists conducted a medication review in collaboration with a nurse (16). While the study was successful in reducing antipsychotic prescribing, the sustainability of the intervention is unclear. Other studies evaluating the long-term effect of interventions at 12 months were mixed (17, 18). Prescribing is a result of complex interactions between the on-site staff (managers, nurses and nursing assistants) and visiting staff (GP, specialists, nurse practitioners and pharmacists) and everyone take responsibility to ensure the psychotropic prescribing is resident-centred (9-11, 19). Policies, RACFs as well as RACF managerial and clinical leadership need to be cognisant of the contextual influences and underlying beliefs that inform staff decisions to use psychotropic medicines for any intervention to be both successful and sustainable.

Pharmacists have skills, such as medication knowledge and interdisciplinary communication, and can play several roles in improving appropriate use of psychotropic medicines in RACFs. Approaches to improve the RACF culture in order to facilitate the pharmacists' role to reduce psychotropic prescribing is also outlined in Table 1. Overall, there is a need for policies and RACFs to move towards greater pharmacist involvement and integration within the RACF. Pharmacists embedded within the RACF can communicate with on-site staff and GPs face-to-face to develop consensus on pharmaceutical care plans, perform regular medication reviews, participate in medication advisory committee (MAC) meetings to develop agreement on approaches to medication management and drug utilisation, monitor residents response to deprescribing, respond to on-site staff concerns regarding residents response to treatment, communicate with residents or their carers to identify residents goals and preferences for medications, educate and train on-site staff and GP.

The evidence for pharmacists embedded in RACFs is scarce and there is a need for randomised controlled trials (RCTs) investigating the impact of greater involvement of pharmacists within RACFs on psychotropic prescribing. In the UK, a trial is underway to test the effectiveness of an intervention where pharmacists integrated within RACFs assume responsibility for medicines management, including repeat prescriptions' monitoring and authorising (20). The Royal Commission of Australia has recently called for an inquiry into Australian RACFs to investigate the ongoing highly prevalent use of psychotropics (21). Similarly, the independent Banerjee Report to the UK Department of Health has called a 'time for action' to reduce antipsychotic use in RACFs (22). A whole system approach that is of wider relevance to the context of the RACF setting is needed and this includes improving the RACF culture to utilise the skills and knowledge of pharmacists. An international focus on the culture of RACFs through action research will help create sustainable improvements to reduce psychotropic prescribing and achieve appropriate use of these medicines.

Table 1. Aspects of culture that influence psychotropic prescribing and recommendations related to pharmacist role

Aspect of Culture[a]	Findings	Recommendations
Visible Artifacts	▪ The adoption of measures, such as medication management reviews and interdisciplinary meetings, to reduce psychotropic prescribing varied across RACFs. Some RACFs used measures as a 'box-ticking exercise' for accreditation purposes, which led to no improvement in the use of psychotropic medicines. In other RACFs, measures were embraced by RACF managers and on-site staff to discuss ways to improve the level of psychotropic medicine use. ▪ Managerial support for interdisciplinary measures to improve psychotropic prescribing facilitated reduction in psychotropic medicines. ▪ Facing resistance from the resident or their families held considerable weight with the GP and on-site staff when reviewing psychotropics medicines. ▪ In some RACFs, residents or their carers were not involved in discussions on the risk versus benefits of psychotropic treatment.	▪ Outline in RACF standards and policies how measures to reduce psychotropic prescribing need to be operationalised. For example, – inter-disciplinary meetings need to be attended by various health professionals, including pharmacists, and involve discussions on the level of psychotropic prescribing practices. – pharmacy-led medication reviews need to be initiated by on-site staff when there is a concern with inappropriate psychotropic prescribing, interdisciplinary meetings with residents or their carers require discussions on residents' medication history, treatment and pharmaceutical care goals. ▪ Policy, RACFs and managerial support for and facilitation of interdisciplinary measures to reduce psychotropic prescribing involving pharmacists. ▪ Interdisciplinary meeting with residents and their carers that entails shared decision making ▪ Pharmacists to identify residents' goals and preferences for medications.
Climate (Non-visible Artifacts)	▪ RACF managers who clearly communicated priorities for the non-pharmacological management of BPSD and optimisation of medications led to a reduced on-site staff preference for psychotropic treatment. ▪ RACF managers who supported the involvement of on-site staff and pharmacists in the review of psychotropic medicines facilitated the reduction of psychotropic prescribing. ▪ Distress and burden from workload were related to on-site staff requests for the use of psychotropic medicines and was a barrier for the reduction or cessation of psychotropic medicines. ▪ High-level use of psychotropic medicines associated with limited on-site staff training to address resident behavioral or sleep disturbances. ▪ GPs have limited time to attend interdisciplinary meetings, conduct thorough clinical review and monitor patients response to treatment	▪ Policy and RACFs support structures that promote open communication between on-site and visiting staff and interdisciplinary teamwork. ▪ Managers create connections among on-site and visiting staff including pharmacists, and support the role of pharmacists. ▪ Managerial leadership promote mutual respect and trust among all staff ▪ Pharmacists train on-site staff and GPs on recommended practice in the management of BPSD and appropriate use of medicines ▪ Pharmacists meet with GPs face-to-face to develop consensus on pharmaceutical care plans ▪ Pharmacists perform regular medication reviews and monitor residents response to withdrawal of medication ▪ Managers empower on-site staff to participate in monitoring residents' response to psychotropic medicines and prescribing decisions, and communicate findings to the pharmacists and GP.

	▪ Trust and respect among on-site and visiting staff facilitated review and cessation of psychotropic medicines. ▪ Traditional hierarchical structures limited review of psychotropic treatment.	
Espoused Values	▪ On-site and visiting staff valued teamwork and person-centeredness to ensure the appropriate use of psychotropic medicines	▪ Managers communicate and reinforce espoused values among on-site and visiting staff ▪ On-site and visiting staff advocate for person-centred values to be upheld.
Basic Assumptions	▪ When RACF staff felt helpless to the right thing by the resident or to restrict time on a given task then psychotropic medicines were initiated or used for too long to manage BPSD.	▪ On-site and visiting staff take responsibility for the appropriate use of psychotropic medicines. ▪ Policies and RACFs recognise that all stakeholders take responsibility for the appropriate use of psychotropic medicines.

a) The first layer of culture is the artifacts that explain 'how' and 'what' is taking place in an organisation. Artifacts may be visible or non-visible. Visible artifacts are those that are 'seen, heard and felt within an organisation. In the nursing home, this includes processes and observed behaviours. The non-visible artifacts are the perception of members of the organisation regarding their work environment and interactions with each other or outsiders. Schein refers to these perceptions as the climate of the organisation. The middle layer is the espoused values that are the ideal standards and goals of an organisation. The core layer is the basic assumptions, defined as the unsaid, taken for granted beliefs and values. This layer of culture explains why the espoused values may or may not be congruent with what is taking place at the level of artifacts.

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