

(10 vs. 9.7) and anticholinergic medications (3.5 vs. 3.1) was reduced; this was not the case in the control group, where the mean number of overall medications remained the same (11.92) and the mean number of anticholinergic medications increased (3.83 vs. 3.92). More significantly, in comparing admit versus discharge scores, both the mean ACB and DBI scores were reduced in the intervention group, but in the control group both the ACB and DBI scores either remained the same or increased at the time of discharge. This clearly shows that a simple intervention (highlighting anticholinergic medications in the patient chart) can have a clinically beneficial outcome of reducing these harmful medications in patients. With approximately 50% of the older population taking at least one anticholinergic drug, the importance of reducing anticholinergic burden cannot be overemphasized.

#### THE OPIOID EPIDEMIC IN LONG-TERM CARE: A STAFF PERSPECTIVE

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Opioid-based analgesic therapy is a common treatment for moderate to severe pain among long term care (LTC) residents. It has been estimated that 60% of LTC residents have an opioid prescription. Of these, 14% use opioids as part of a long term pain management strategy. LTC residents are particularly vulnerable to opioid misuse, exhibiting higher rates of adverse drug events. However, addressing pain, polypharmacological needs and resident well-being in the LTC setting is challenging. More research and education regarding opioid use in LTC is needed. The Utah Geriatric Education Consortium conducted interprofessional focus groups with LTC partners to 1) determine educational needs of staff regarding opioid use, and 2) gather qualitative data about the pain management experiences of staff when working with residents and families. Staff identified the following training needs: pain manifestation and assessment; certified nurse assistant education on opioid use; non-pharmacological options for pain management. Review of staff's perception of the intersection of opioids, family and staff in a LTC setting revealed that 1) family is concerned about opioid use; 2) conversely, staff may not see opioid use as a problem; and 3) non-pharmacological options for pain management are often costly and unavailable to those in LTC. Identifying educational needs of LTC staff will help guide the development of educational materials and provide baseline data for future assessments of the impact of opioid education on long-term care patient outcomes.

#### TRENDS IN OPIOID USE IN LONG-TERM CARE NURSING HOME RESIDENTS WITH DEMENTIA

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We examined opioid use in long-term care nursing home residents with dementia. This retrospective cohort study used Minimum Data Set linked Medicare data, 2011-2016, and included long-term care episodes for residents 65+ years who survived 100+ days each year (592,211 episodes for 256,207 residents). Cognitive status at first annual assessment was classified as none/mild, moderate and severe impairment.

Overall opioid use, prolonged opioid use (prescription supply 90+ days) and long-acting opioid use were identified from Medicare part D. Descriptive statistics were used to describe opioid use by cognitive impairment. Cochran Armitage trends test was used to determine trends in opioid use. 114,622 (19%) patients had severe and 129,257 (22%) had moderate dementia. Overall opioid (none/mild=15.4%, moderate=13.9%, severe=9%), prolonged opioid (none/mild=5.2%, moderate=4.5%, severe=3.2%) and long-acting opioid use (none/mild=1.1%, moderate=0.9%, severe=0.3%) were lower in patients with advanced dementia. Opioid use was significantly higher in females and Whites and varied by states. Substantial increase was found in overall opioid and prolonged opioid use from 2011 to 2016, with greater increase in none/mild and moderate dementia patients. For example, prolonged opioid use increased by 69% in none/mild and 71% in moderate dementia patients compared to 52% in severe dementia patients ( $p<0.0001$ ). Long-acting opioid use decreased, with a greater decline in none/mild (69%) and moderate (71%) dementia patients compared to severe dementia patients (58%) ( $p<0.0001$ ). Contrary to decreasing opioid use in community setting, overall and prolonged opioid use increased in nursing home residents. Future studies should identify the reasons behind increased use.

#### CHALLENGES FACED BY OLDER PERSONS IN USING PRESCRIPTION MEDICATION LABELS: WHAT NEEDS TO CHANGE?

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In Singapore, while many older people cannot read English, prescription medication labels (PMLs) are predominantly dispensed in English. This qualitative study documented the challenges faced and solutions employed by users (i.e. older Singaporeans) and dispensers (i.e. pharmacy staff) of PMLs. In total, 30 in-depth interviews were conducted; 20 were equally divided between older Singaporeans ( $\geq 60$  years) who could read English and those with limited/no English reading ability, and 10 were conducted with pharmacy staff across 6 polyclinics. The audio-taped interviews were transcribed verbatim and analysed thematically. The interviews with older Singaporeans and pharmacy staff revealed similar challenges in using PMLs. The first challenge related to reading and understanding PMLs by older people, mainly due to their limited English proficiency (LEP) or illiteracy. Consequently, older Singaporeans often relied on family members, domestic workers or pharmacy staff to help them interpret PMLs. Specifically, to address LEP, pharmacy staff reported translating PML instructions verbally and also handwriting them on PMLs. For illiterate patients, pharmacy staff reported drawing illustrations on PMLs to communicate key medication information. The second challenge related to PML readability, due to small font size. To address this, pharmacy staff routinely re-wrote medication information on PMLs in larger handwriting. Such improvised solutions by pharmacy staff to address the challenges faced by older Singaporeans in using PMLs indicate a pressing need for system-level improvements to PMLs. Improvements such as standardised and legible bilingual medication instructions and/or pictograms would appreciably facilitate medication