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allow admission of patients with OUD. Other discharge barriers identified include patient access and facility ability to administer Medication Assisted Treatment (MAT), insurance coverage for MAT, and a lack of X-waivered physicians at receiving sites. Our study results are limited to a single site medical center and a single nursing care network in Chicago.

Conclusion/Discussion: As the population of older adults with OUD continues to grow, it is imperative to evaluate and improve care processes for this underserved population. This needs assessment identifies many barriers to safe and effective care transitions for this group of patients. Future interventions, including a standardized discharge protocol, may be considered to help improve discharge pathways to address barriers to discharge for patients with OUD.

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## Management of Amiodarone in the Long-Term Care Setting



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Introduction/Objective: Amiodarone is used for ventricular arrhythmias and other cardiac pathologies. Its half-life is ~47 days in adults aged >65 years and is typically started with large doses to "load" the patient. However, patients may be discharged to a long-term care facility (LTCF) in the middle of this loading dosing and the higher dose may be continued long-term into the LTCF. This project was designed to characterize the prevalence and bring attention to this issue. Long-term, inappropriate doses of amiodarone can lead to serious adverse effects (e.g., prolonged QTc interval, vision impairment, pulmonary toxicities) and can be more pronounced in older adults.

Design/Methodology: Student pharmacists undertook a cross-sectional review of all residents living in one of 34 LTCFs of the same nursing home chain who were receiving amiodarone at the end of July 2020. They utilized the electronic health record to collect data on dose, indication, and concomitant medications, including those which prolong the QTc interval (using the list of medications from CredibleMeds of both "known" and "probable" risk of torsades de pointes) and levothyroxine. Data was characterized using descriptive statistics.

Results: The final analysis included 108 patients (average age 78 years; gender: 61(56.5%) female) across 34 LTCFs in Texas. Overall, 18 residents (16.7%) were taking >400 mg/day, 75 (69.4%) were taking 200 mg/day, 13 (12.0%) were taking 100 mg/day, and 2 (1.9%) were taking <100 mg/day. Most common indications were atrial fibrillation (n=57), hypertension (n=20), and unspecified arrhythmia (n=19). Residents were evaluated to determine if they were taking any additional QTc prolonging medications on either a scheduled or as needed (PRN) basis. Over half were taking an additional QTc prolonging medication on a PRN basis (n=59), and on a schedule (n=64). Tramadol (30.6%) and donepezil (13.8%) were the most common QTc prolonging medications taken PRN and scheduled, respectively. Concomitant use with any thyroid product was also evaluated (38.9%). Over half of female residents (n=61) were documented to be taking a thyroid product (52%) and almost three-quarters of male residents (n=47) were not receiving a thyroid product (78.7%).

Conclusion/Discussion: Across multiple LTCFs, nearly 1 in 6 older adults were prescribed amiodarone at a high dose (>400 mg/day) and for off-label indications. This has the potential to lead to severe adverse events. Additionally, geriatric residents are prescribed multiple medications that can interact with amiodarone, especially those that further prolong QTc. Addressing the role of amiodarone and polypharmacy associated with LTCFs is essential for all healthcare providers involved in the care of geriatric patients. Consultant pharmacists and cardiologists should play a role in addressing this issue, both in the transition of care and for long-stay

residents.

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## Medical and Mental Health Services in US Assisted Living Settings During COVID-19: Challenges and Opportunities



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Introduction/Objective: The COVID-19 pandemic has disproportionately affected long-term care settings, staff, residents, and residents' families across the US; related reports and recommendations highlight the confusion around where assisted living (AL) belongs within the context of "long-term care." Although much attention has been paid to skilled nursing facilities in the context of COVID-19, AL and other residential care settings have rarely been singled out in media and empirical discourse. This study describes perceptions of medical and mental health care provisions within US AL communities in the COVID-19 context.

Design/Methodology: We identified stakeholders with expertise in medical care, mental health services, and COVID-19 response in AL: AL operators, trade and healthcare association representatives, clinicians, dementia care experts, advocacy organizations, and state policymakers. Respondents participated in semi-structured interviews from July to October 2020 (n=41); they were asked to describe medical care, mental health care, and COVID-19 policies and practices applicable to AL. We analyzed the interviews using thematic analysis to derive key patterns and themes related to these and other topics identified by participants.

Results: Participants described how the COVID-19 pandemic has exacerbated existing systemic challenges associated with medical and mental health care access and services in AL. Recurring themes included: assessment/medication management, the role of nursing and medical directors, adequate staffing levels, quality of staff training and education, the impact of regulatory variation on scope of practice, and the lack of intersection between geriatric and mental health care, including residents' biopsychosocial needs. COVID-19 introduced new opportunities and challenges related to telehealth, dementia care, social isolation, and balancing residents' health-related needs with social model principles.

Conclusion/Discussion: COVID-19 has simultaneously exposed infrastructure limitations and presented an opportunity to rethink AL operations to best meet individual needs of residents to promote their health and safety. Policymakers, operators, and healthcare providers may benefit from understanding the nuanced context of AL within each state, including intra-state and operational variability. These contexts have implications for the scope of and access to services provided, and therefore the ability of AL to respond to blanket public health guidelines extended to other licensed health settings.

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## Observations of Polypharmacy and Interactions on Varying COVID-19 Medication Regimens in Nursing Home Residents



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Introduction/Objective: Around 800,000 preventable medication-related errors occur yearly in nursing homes (NHs). With NHs susceptible to medication errors, COVID-19 can potentially increase their occurrence. No evidence-based regimen exists for COVID-19, yet different "cocktails" are

prescribed at NHs as prophylaxis or treatment for COVID-19. Little is known regarding long-term consequences of such regimens, including increased pill burden, stable disease exacerbation, or adverse drug reactions. While preventing COVID-19 spread and decreasing mortality are important, doing so safely and effectively should be a priority. Pharmacists can play a pivotal role even with little information available regarding this issue.

Design/Methodology: Student pharmacists performed a retrospective review of medication profiles of individuals living in a single nursing home chain who had an ICD-10 code for COVID-19 (U07.1) contained within their electronic health record from March 1to September 20, 2020. Medications started specifically for COVID-19 were collected, as were the number of scheduled medications +/-14 and +/-30 days from the COVID-19 diagnosis date. Drug interactions were screened via Lexi-Comp if new medications were started for COVID-19 and significant drug-disease interactions were based on clinical skills of the candidate and a review by the geriatrics-focused preceptor.

Results: Across 31 facilities, 759 patients were diagnosed with COVID-19. Out of 759 patients, 322 (42.4%) were treated pharmacologically following diagnosis. Interventions included antibiotics, antiplatelets, anticoagulants, nutritional supplements, and other medications. There were 164 patients (21.6%) prescribed antibiotics, 64 (8.4%) anticoagulants, 36 (4.7%) aspirin, 1 (0.1%) clopidogrel, 21 (2.8%) hydroxychloroquine, 124 (16.3%) corticosteroids, and 312 (41.4%) supplements. Nearly 1 in 5 individuals (n=148) were exposed to dangerous drug-drug interactions, with potential for increased bleeding risk and QTc prolongation the most common possible outcomes. Important drug-disease interactions were found in 221 patients with the most common being use of dexamethasone in diabetic patients. The average number of medications added for COVID-19 was 2.8 (range 1-10). The average increase in medications 30 days post-infection was 2.15 (range 1-13); however, 135 patients had fewer medications post-COVID-19, and 214 had no change. While anticoagulants and antibiotics typically did not persist long past infection resolution largely due to stop dates, supplements continued on profiles 30 days after diagnosis.

Conclusion/Discussion: Pharmacists have a vital role in recommendations of evidence-based medication regimens, as well as ensuring proper monitoring parameters are employed. Making certain stop dates are used can also greatly improve patient care and avoid unnecessary polypharmacy. Pharmacists should ensure when medications are being used for a COVID-19 infection, the indication is properly stated, as this will assist with classification of these individuals in other large database studies.

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## Prevention of Vision Loss and Blindness Among Nursing Home Residents



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Introduction/Objective: Organic eye disease is often not addressed properly within nursing homes for a variety of reasons. However, the majority of vision problems are correctible or preventable if detected during their early stages. Since 1957, there have been 11 studies that attempted to define age-related eye diseases (AREDs) and vision loss within nursing homes. Ours is the first large scale clinical study. The aim of this research is to determine the prevalence of AREDs, vision impairment, and blindness using clinical eye disease data collected by a single provider. The hypothesis examines whether or not timely and proper eye care provided in nursing homes influences the prevalence of AREDs, vision loss, and resultant blindness.

Design/Methodology: The study was a cross sectional, retrospective study in which individual patient data were collected by a single investigator from 20 Delaware nursing homes. Data sets from the Delaware Nursing Home Eye Study (DNHES) were examined through summary statistics and regression analyses. The study variables were programmatically abstracted using Python 3.7 from original patient examination records encapsulated in Excel files. Records were manually reviewed whenever an irregular or

missing value was detected. All 48 Delaware nursing homes at the time of the study were approached for participation. Twenty sites agreed to participate and permit eye care services to be offered. A total of 2019 eye examination records were analyzed. Patients received eye examinations based on federally established referral criteria or orders from the facility medical director or attending physicians. In addition, families or patients could make a request. Every patient went through a standardized examination, in accordance with the Centers for Medicare & Medicaid Services guidelines, which included a detailed medical and ocular history, refraction, tonometry, biomicroscopy, and dilated fundoscopy.

Results: The overall prevalence of vision impairment or blindness was 63.8% and was above 60% for each race, age, and sex category. Prevalence of vision impairment or blindness was 68.4% among patients with cataracts, 69.4% among patients with macular degeneration, 70.5% among patients with glaucoma, and 68.4% among patients with diabetic retinopathy. Prevalence of blindness was 14.1%. Among patients with AREDs, prevalence of blindness ranged from 15.0% for patients with cataracts to 22.6% for patients with diabetic retinopathy.

Conclusion/Discussion: 63.8% of patients examined in this study had AREDs resulting in significant vision loss, which indicates that vision and eye health should be thoroughly incorporated into the regimen of care for nursing home residents. Moreover, the paucity of consistent measures of visual function and eye diseases makes it impossible to amass information. This study proposes that a systematic method to cumulate vision data could substantiate foundational evidence to improve eye health and quality of life to inform nursing home practice and policy.

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The Association Between Nursing Home Resident Characteristics and Transfers to the Emergency Department: A Population-Level Retrospective Cohort Study



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Introduction/Objective: Nursing Home (NH) residents require complete or extensive support, including 24-hour nursing and personal care. LTC residents contribute a greater number of emergency department (ED) visits when compared to community-dwelling older adults. Little is known about which resident-level characteristics at admission are predictive of ED transfers from NH. We set out to identify which admission characteristics are associated with ED transfers, potentially preventable ED transfers, and low-acuity ED transfers in Ontario, Canada.

Design/Methodology: We conducted a population-level retrospective cohort study using NH data collected from the Resident Assessment Instrument Minimum Data Set Version 2.0 (RAI-MDS). The cohort included 56,433 NH resident admission assessments from January 1, 2017, to December 31, 2018. Logistic regression and 10-fold cross-validation were used to identify adjusted associations between characteristics routinely collected during NH admission assessment and ED transfers. Model performance was assessed using the area under the receiver operating characteristics curve (AUC). Outcomes of interest included overall ED use, and potentially preventable and low acuity ED transfers.

Results: A recent change in medical orders, previous ED visitation, female sex, the presence of an indwelling catheter, and the need for oxygen therapy were informative predictors for overall, potentially preventable, and low acuity ED transfers. Deterioration in cognitive status and change in behavior was influential to all ED transfers only. Urinary tract infections, pneumonia, indictors of delirium, and change in mood are unique to potentially preventable ED transfers, and antibiotic resistance is unique to low acuity ED transfers. A similar discrimination was reached for overall ED use (AUC = 0.630), potentially preventable transfers (AUC = 0.659), and low acuity transfers (AUC = 0.645).

Conclusion/Discussion: The factors associated with ED transfers may be modifiable, and closer attention to these factors may help reduce ED