Medical Care Research and Review
2022, Vol. 79(5) 731–737

DOI: 10.1177/10775587211053410
journals.sagepub.com/home/mcr
SAGE

Promoting Quality of Life and Safety in Assisted Living: A Survey of State Monitoring and Enforcement Agents

Brian Kaskie[1], Lili Xu[1], Seamus Taylor[1], Lindsey Smith[4], Portia Cornell[2,3], Wenhan Zhang[2], Paula Carder[4], and Kali Thomas[2,3]

Abstract

Our goal was to learn about monitoring and enforcement of state assisted living (AL) regulations. Using survey responses provided in 2019 from administrative agents across 48 states, we described state agency structures, accounted for operational processes concerning monitoring and enforcement, and documented data collecting and public reporting efforts. In half of the states, oversight of AL was dispersed across three or more agencies, and administrative support varied in terms of staffing and budget allocations. Operations also varied. While most agents could deploy a range of monitoring and enforcement tools, less than half compiled data concerning inspections, violations, and penalties. Less than 10 states shared such information in a manner that was easily accessible to the public. Future research should determine how these varied administrative structures and processes deter or contribute to AL communities' efforts to implement regulations designed to promote quality of life and provide for the safety of residents.

Keywords

Alzheimer's disease, assisted living, state regulations, monitoring and enforcement

Introduction

Assisted living (AL) has become a primary place of residence for many older adults who require long-term services and supports. Each day in 2016, approximately 29,000 AL residences across the United States provided home for more than 800,000 Americans (Harris-Kojetin et al., 2019). While persons who live in AL range in age, most residents are aged above 85 years. Most AL residents also require some assistance with daily functioning and many receive supportive care such as chore and meal service, medication management, and transportation (Harris-Kojetin et al., 2019). Estimates suggest more than half of older AL residents experience some form of cognitive impairment, with as many as one in every five exhibiting severe cognitive impairment (Zimmerman et al., 2014). People living with Alzheimer's disease and related disorders (ADRD) in residential care often have co-occurring chronic illnesses, experience poor health outcomes, and are especially vulnerable to abuse, harm, and neglect (Castle et al., 2012; Dong, 2014; Dong et al., 2014). How states promote the quality of life and safety of AL residents, especially those with ADRD, certainly is a public health policy concern.

The Fair Housing Act of 1974 requires that safe housing must be available to AL residents, and the Americans with Disabilities Act of 1990 necessitates that equal protection be extended to all persons with disabilities, including those who reside in AL and experience ADRD and other degenerative neurological conditions (42 U.S.C. § 12102; 42 U.S.C. § 12182; Rempfer, 1997; U.S. Securities and Exchange Commission, 2006). It also is well known that state governments are responsible for upholding these federal laws and often must oversee the monitoring and enforcement of additional state-specific AL regulations intended to promote

This article, submitted to *Medical Care Research and Review* on February 27, 2021, was revised and accepted for publication on September 17, 2021.

[1]The University of Iowa, Iowa City, USA
[2]Brown University, Providence, RI, USA
[3]U.S. Department of Veterans Affairs Medical Center, Providence, RI, USA
[4]Oregon Health & Science University-Portland State University School of Public Health, USA

Corresponding Author:
Brian Kaskie, College of Public Health, The University of Iowa, 145 Riverside Drive, N214, Iowa City, IA 52242, USA.
Email: brian-kaskie@uiowa.edu

quality of care and resident safety (Carder, 2017; Kaskie et al., 2015; Nattinger & Kaskie, 2017; Wilson, 2007).

Previous research has documented state policy requirements for AL (e.g., staff training) and described how these regulations vary considerably (Carder, 2017; Carder et al., 2015; Kaskie et al., 2015; Kaskie & Kingsley, 2009). Smith et al. (2021) reported that 35 states required dementia-specific cognitive screening upon admission into AL, but requirements pertaining to the use of a standard cognitive assessment varied by the particular type of AL license. Researchers have also documented variation with state-level regulatory monitoring and enforcement activities (Harrington et al., 2004; 2008). For example, Wang et al. (2020) recently examined state-level issuance of civil monetary penalties (CMPs) for care deficiencies in nursing facilities (NFs) and observed substantial variation from one state to the next in terms of reporting such oversight activities. However, such analyses of regulatory activity have been limited to NFs. Less is known about state efforts to monitor and enforce AL regulations.

Conceptual Framework

Our approach is informed by Armandi and Mills (2006) as well as Hawes's (1997) conceptualization of administrative structures, operational processes, and outcomes to describe monitoring and enforcement activities. To begin, our model recognizes two approaches to regulatory monitoring and enforcement implemented by state administrative agencies (Marume & Jubenkanda, 2016). In one approach, states may assign regulatory operations to a single administrative agency contending that such centralization may correspond with standardized and coordinated operations. This sort of administrative centralization also may result in a top-down bureaucracy in which authority is limited to a few individuals and operations are more likely to be influenced by external factors (e.g., interest groups, market forces). Using another approach, states may disperse regulatory oversight across separate administrative agencies, with each upholding a particular function or task. For example, in some states, monitoring of patient safety may be left to a department or agency charged with conducting physical site inspections of all licensed facilities including NFs, AL communities, and community-based programs such as adult day care, while the enforcement of food quality standards and safety assurances may fall to another agency. This dispersed administrative structure may correspond to increased capacity and responsiveness but also may lead to a lack of coordination or consistency in upholding AL regulations.

Regardless of whether monitoring and enforcement are centralized in a single administrative agency or diversified across several agencies, state agents themselves are critical to upholding these regulations. The assignment of dedicated staff with sufficient skills and resources increases the likelihood that monitoring and enforcement operations reach their intended goals and outcomes. For example, Walshe and Harrington (2002) associated dedicated staffing with an increase in NF inspections and reported deficiencies. Conversely, Arora et al. (2021) observed how a reduction in dedicated Medicaid agency staff contributed to delays in service authorization and decreases in beneficiary satisfaction.

Beyond administrative structures and staffing, Fiene (2016) and Moe and Gilmour (1995) suggested that a state's ability to uphold regulatory frameworks (aka, monitoring and evaluating regulatory compliance) corresponds with the scope and depth of procedures to do so. Referring to how states monitor and enforce NF regulations, previous research (Kaskie & Kingsley, 2009) documented how such approaches are applied to AL. One set of AL monitoring and enforcement processes consist of "inspections" conducted at the time of licensure, upon a reported infraction, after an ombudsman or consumer complaint, or done at will. A second set of procedures involve "notifications" that consist of issuing a formal statement of regulatory violations and requiring a facility correct the observed deficiencies. A third set consists of "penalties" imposed by the state agency when a facility fails to comply with a regulatory requirement, and such penalties include restricting admissions, imposing civil monetary penalties, and revoking licenses.

The outcomes of such monitoring and enforcement also may be critical to deterring or supporting regulatory compliance. For example, publicly disclosing facility-level inspection results is a primary outcome associated with state monitoring and enforcement activities. By making such information available to researchers and public officials, as well as residents and their families alike, AL communities are more likely to comply with state regulations (Benami et al., 2015; Bhandari et al., 2019; Lowe et al., 2003; Mor, 2005). Aggregated individual and facility-level clinical data, inspection results (such as per resident number of care deficiencies), patient satisfaction surveys, and violation notices are examples of different kinds of information that can be compiled and disseminated as a way to publicize AL regulatory compliance (Lowe et al., 2003). Roberts et al. (2020) recently documented how a few states have posted such information specific to AL on publicly accessible websites.

Research Objectives

This research study is organized by three objectives. Using the results of a survey field among state agents involved with monitoring and enforcement of AL regulations, we first detail the range of administrative agencies involved with AL oversight, account for the extent state agency staff are dedicated to AL monitoring and enforcement activities, and account for the budget allocated to AL. We then illuminate state-level processes used to monitor and enforce AL regulations, including the range of inspections, notifications, and penalties applied to AL. Third, we document states' data

collection and reporting efforts, focusing on whether they offer public access to such data.

New Contribution

While previous work has documented the extensive variety of state AL regulations themselves, researchers have not yet captured states' administrative approaches to meeting these legal obligations. Indeed, state administrative agents play a critical role in assuring the public that AL communities implement regulations intended to support the highest practicable level of care and protect individual residents from harm and neglect. Until now, these state efforts have not been documented. This work not only reveals what occurs relative to AL regulatory compliance but also demonstrates how researchers might begin to methodically examine the critical role of public agencies in upholding regulatory frameworks designed to support and protect individuals residing in AL.

Method

Between March and August 2019, we surveyed agents from all 50 states who hold primary responsibility for monitoring and enforcement of regulations pertaining to residential AL communities. Agents were provided a secured link to the online survey that consisted of 21 questions derived from our prior work and piloted by project consultants most familiar with AL monitoring and enforcement. Questions focused on agency structures and staffing (e.g., in addition to AL communities, what other type of facilities fall under the jurisdiction of your organizational unit?), monitoring and enforcement processes (e.g., when do on-site inspections of AL facilities occur?), and efforts to aggregate data and publicize results of facility inspections (e.g., does your state post the results of AL inspections on a publicly accessible website?).

Sample

We considered each state as a unit of analysis and collected data from a total of 48 states (Connecticut and New York did not participate despite multiple outreach efforts). The agents who completed our survey were identified through information published by the National Center on Assisted Living (NCAL, 2018), soliciting known experts in AL familiar with state AL regulatory activity, and searching state websites. Email invitations were sent to agents in all 50 states 3 times between February and April 2019, and for those who had not responded, three follow-up phone calls were made between April and July 2019. In states where AL monitoring and enforcement staff were dispersed across multiple agencies, we contacted all individuals who were most qualified to respond to the survey. In all, one agent completed the survey in 41 states, while two or more agents provided responses for seven states. Because we did not collect personal information or opinions and did not subject participants to any experimental procedures, this project did not require approval from our institutional human subjects research administration.

Data

Survey data were collected and managed using REDCap electronic data capture tools hosted at our University (Harris et al., 2019). We verified or augmented agent responses by reviewing state departmental websites, the NexisUni database of state regulations, Federal reports published by the Government Accountability Office and the Assistant Secretary for Planning and Evaluation, and reports published by NCAL. For example, if an agent did not know whether the state had ever established a task force concerning AL, we searched the compendiums compiled by NCAL and the state government website. In December 2019, we contacted the agents who completed the survey a second time and requested they verify answers, affirm the validity of the information we collected from other sources, and reconcile any remaining discrepancies.

Measures of Regulatory Monitoring and Enforcement

Administrative Structures. Our survey asked respondents to identify administrative units that have jurisdiction for AL. The choices included: *Department of Health and Human Services*, *Department of Public Health*, *Medicaid*, *Social Services*, *State Unit on Aging*, and others such as *Department of Licensing* or *Department of Inspections*. Based on the number of units identified, we defined a centralized administrative structure to consist of one or two units, whereas a more dispersed approach consisted of three or more separate administrative units with jurisdiction over AL.

We asked whether agents had responsibilities for monitoring and enforcement of facilities or programs in addition to AL, including *nursing and other types of residential facilities*, *community-based care programs* such as *adult care homes* or *adult foster homes*, *inpatient and outpatient hospitals*, *public health agencies*, and other medical facilities such as *outpatient clinics* and *hospice*. We considered the agent as dedicated if they were responsible for only one other type of facility in addition to AL; otherwise, we defined the agent's responsibilities as not dedicated. We also asked respondents to report the annual budget for AL licensing and monitoring activities.

Monitoring and Enforcement Processes. The survey included 13 questions about monitoring and enforcement processes state agents follow to ensure compliance with state regulations. Monitoring included different kinds of inspections and how often they were conducted. Enforcement included types of notifications and penalties that can be imposed by the state

agency when a facility fails to uphold a regulation. We also asked about technical assistance and other support the state provides to facilities.

Data Collection and Public Reporting. We asked respondents to identify data elements (e.g., resident falls) AL communities must report for quality monitoring and improvement. We also asked whether states make all notices, penalties, and suspensions publicly available on a website or in some other public forum; provide such information directly to the resident and/or family; require AL communities to post such information in a public space inside the facility; or share information with state officials, administrators, or industry representatives.

Analysis

We calculated summary statistics of survey data pertaining to administrative structures, monitoring and enforcement processes, and data reporting activities. All data management was performed using STATA/SE 16.0 (StataCorp LLC, 2019).

Results

Administrative approaches for monitoring and enforcement varied (Table 1), with some states using a centralized approach and others a dispersed approach. Only one state used a single agency to oversee AL; in five states, the jurisdiction for AL was located in two separate administrative units; and in 16 states, three agencies were involved. In 26 states, jurisdiction of AL was dispersed across three or more agencies other than the primary administrative agency, including the Department of Public Health, Medicaid, State Unit on Aging, and other task-specific agencies such as Commercial Licensing and Facility Inspections and Ombudsman Office. The extent to which staff were dedicated to AL varied as well, with 11 states limiting agent assignment to AL only and 12 state agents being assigned to oversee one other type of facility. Agents in the 25 other states were responsible for at least three different types of health care settings including AL. When combined, we identified nine states had a centralized structure with dedicated staffing, 14 states upheld a more dispersed administrative structure with agents dedicated to the monitoring and enforcement of AL regulations, 13 states upheld centralized administrative efforts but lacked dedicated staff, and 12 states had a dispersed structure and a lack of dedicated agents. While 18 agents reported their states allocated a budget line-item for both monitoring and licensing activities in general, most of these could not report how much was allocated to support operations specific to AL monitoring and enforcement relative to NF oversight and other operations. Nonetheless, 12 agents reported they increased both licensing and monitoring budgets compared to 5 years ago.

In regard to monitoring and enforcement processes, we determined that 45 states conduct inspections of AL facilities at the time of licensure, 41 state agencies conduct inspections in response to an ombudsman's referral, 39 conduct annual or biannual inspections (vs. every 3 or 5 years), and seven states require AL facilities to submit an annual compliance report. A total of five states engage in all forms of AL facility inspection, while 32 others do everything except require facilities to submit an annual report. The three states that do not inspect AL facilities at the time of licensure could conduct inspections in response to an ombudsman referral, resident complaint, or at-will.

A total of 44 states send violation notices when a facility is considered to be noncompliant and require AL facilities to submit a plan of correction; 38 of these states also conduct follow-up inspections. In addition, 25 states offer AL facilities technical assistance with regulatory compliance and 22 provide third-party management when facilities are challenged to meet state regulations. In regard to penalties, 39 states assess fines, 36 restrict admissions, and 44 states can revoke AL licenses.

In terms of collecting and reporting AL-level data elements, 27 states do not collect any information relevant to residential care, 12 states track resident falls, and five states track the use of antipsychotic medications. Moreover, 32 states require that information concerning inspections and notices of violation for any individual facility be posted within the AL community itself, and 19 states share this information on a website as individual reports (not aggregated). A total of seven states engaged in all forms of information sharing related to inspections, notices, and penalties, whereas eight states do not disclose any of this information at all.

Discussion

This was the first national survey of bureaucratic agents who assume primary responsibility for monitoring and enforcement of state AL regulations. Our efforts to describe administrative structures and processes associated with their monitoring, enforcement, and reporting activities offer several insights into the states' varying approaches. First, administrative structures are organized differently. In some states, there is a centralized administration, and in others, regulatory efforts were dispersed across several units. We also found that nearly half of the state agents were dedicated to AL operations, but the others assumed multiple responsibilities. Walshe and Harrington (2002) reported that such state agency staff mostly were focused on monitoring and enforcement of NF regulations and had little time for assessing compliance of AL and other residential care facilities. Nearly 20 years later, our survey suggests that agency staff in at least half of the states still may not be sufficiently dedicated to AL oversight despite the substantial growth of the industry.

Table 1. Summary Statistics of Agent Survey Data.

Survey items	Number of states ($N = 48$)
Administrative structure	
Organizations or units other than the primary agency with jurisdiction over AL	
Two or fewer (Centralized)	22
Three or more (Diversified)	26
Other types of facilities that the primary agent oversees *other than* AL	
One (Dedicated)	23
Two or more (Not dedicated)	25
Receive a line item for both licensing and monitoring	18
Increased both licensing and monitoring budget compared to 5 years ago	12
Monitoring and enforcement tools	
Inspections	
Regular annual/biannual inspection	39
Initial inspection	45
Inspection in response to Ombudsman's referral	41
Inspection in response to complaints	47
Require annual report	7
Notifications	
Send notice of violation	44
Request a plan of correction	44
Offer technical assistance or training	25
May require third-party management	22
Conduct a follow-up review or verification	44
Penalties	
May restrict future admissions	36
May assess a fine	39
May revoke license	44
Data collection and public reporting	
Data collection	
Use of antipsychotic medication	5
Resident falls of unknown origin	12
Staff turnover	2
Resident assessments	8
Use of Emergency Services	5
Resident satisfaction	8
Other information	4
Do not compile such information	27
Public disclosure	
Post basic AL information on a website	28
Send notices, violations directly to the resident and/or family	5
Post notices, violations in a public space inside the facility	32
Share notices, violations with state officials, administrators, or industry	15

Note. AL = assisted living.

We suspect a state's administrative structure and staffing pertaining to AL may reflect the complexity of the regulatory framework itself. Wilson (2007) described four different models of AL: the *housing model* of assisted living most closely resembles a board and care home, the *hospitality model* emphasizes amenities and accommodations, the *health model* focuses on the provision of medical and supportive services that allow individuals to remain in assisted living for as long as possible, and the *hybrid model* is a combination of these three. States that uphold a greater number of AL models are likely to have a greater number of regulations that require greater administrative involvement. Smith and colleagues (2021) recently reported how some states issue up to five types of licenses for AL facilities, and each of these may be regulated differently in terms of admission, staffing, and other components of residential care.

Twenty-four state agents could not identify a budget allocation for monitoring and enforcement activities, and most of the others could not disentangle state budget allocations specific to AL from those pertaining to nursing and other

residential care facilities. Moe and Gilmour (1995) and Walshe and Harrington (2002) both contended that successful bureaucratic operations (defined by the ability to meet regulatory goals and objectives) are tied directly to maximizing budgets. If a state agent does not have an operating budget or must parse out resources among several competing priorities, the ability to monitor and enforce regulations specific to AL may be constrained.

Our second objective was to better understand monitoring and enforcement processes. State agents largely affirmed how AL processes mirror nursing and other residential facilities and consist of inspections, notices of violation, and penalties (The Assisted Living Workgroup, 2003; Walshe & Harrington, 2002). Still, we are left wondering why nearly one of every six states has put few if any of these well-established processes fully in place. One state agent reported that on-site AL facility inspections were not required at the time of licensure and only occurred, at best, once every 3 to 5 years. Two state agents reported how they do not issue fines or other penalties to AL facilities that do not meet regulatory compliance.

In addition, less than half of the states offered technical assistance or third-party management to support AL providers' understanding and compliance with the regulatory framework. Benami et al. (2020) suggested that such technical assistance can reduce uncertainty and increase regulatory compliance. Arguably, states that offer assistance may be more concerned with promoting qualify of life and providing for the safety of AL residents. Perhaps states that do not offer such technical assistance do not have financial support to do so. A better understanding of the factors influencing states' efforts to support regulatory compliance of AL communities is needed.

The absence of dedicated budgeting also may hamper efforts to compile and publicly share data concerning AL. For example, although falls are among the most common adverse and potentially avoidable events among AL residents (Harris-Kojetin et al., 2019), only 25% of the states required AL communities to report on these events. We found that public information about AL currently shared by the states mostly is limited to AL community descriptions (e.g., size, ownership) and there is no apparent effort to compile standardized data that would allow AL communities within any given state to be compared as a means to advance quality improvement initiatives. In addition to our findings, Roberts et al. (2020) reported only three states posted easily accessible information about fines levied against AL communities. This pervasive lack of standard data collection and public information sharing has been a long-standing concern relative to AL (Kaskie & Kingsley, 2009).

Limitations

Such variations across administrative structures and processes related to monitoring and enforcement of AL regulations are not necessarily worrisome. They could reflect how states have been left to adopt different regulatory approaches in response to state-level interests and local circumstances. Indeed, we suspect state officials may take such varied regulatory approaches in response to state-level market (e.g., number of AL communities) and social factors such as a high level of consumer demand for public oversight (Blankart et al., 2019; Hansen et al., 2019; Harrington et al., 2004, 2008; Wang et al., 2020). Our point-in-time survey of state agents does not provide sufficient power to conduct such hypothesis testing. We recognize that surveys of agency activity need to be fielded over an extended period as to have a sufficient number of observations to determine what shaped such different approaches and how these different approaches may impact facility compliance and ultimately shape residents' outcomes. Such repeated observations certainly may help us better understand the critical role state administrative agents play in assuring the public that AL communities implement regulations intended to support the highest practicable level of care and protect individual residents from harm and neglect.

Authors' Note

The views expressed in this article are those of the authors and do not necessarily reflect the position or policy of the Department of Veterans Affairs or the U.S. government.

Declaration of Conflicting Interests

The author(s) declared the following potential conflicts of interest with respect to the research, authorship, and/or publication of this article: The contents do not represent the views of the Department of Veterans Affairs or the United States Government.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This study was supported by the National Institute of Aging (R01 AG057746; PI: K.S.T.) and the U.S. Department of Veterans Affairs Health Services Research and Development Service (CDA 14-422; PI: K.S.T.).

ORCID iDs

Brian Kaskie https://orcid.org/0000-0003-0887-854X
Kali Thomas https://orcid.org/0000-0003-3436-2184
Lindsey Smith https://orcid.org/0000-0003-4630-3114

References

Armandi, B., & Mills, E. (2006). Organizational size, structure, and efficiency: A test of a Blau-Hage model. *The American Journal of Economics and Sociology*, *41*, 43–60. https://doi.org/10.1111/j.1536-7150.1982.tb01667.x

Arora, K., Rochford, H., Todd, K., & Kaskie, B. (2021). Medicaid managed care in Iowa: Experiences of older adults and people with disabilities. *Disability and Health Journal*, *14*(1), 100975. https://doi.org/10.1016/j.dhjo.2020.100975

The Assisted Living Workgroup. (2003). *Assuring quality in assisted living: Guidelines for federal and state policy, state regulation, and operations*. U.S. Senate Special Committee on Aging.

Benami, E., Ho, D. E., & McDonough, A. (2020). *Innovations for environmental compliance: Emerging evidence and opportunities* [SIEPR Policy Brief, Stanford Institute for Economic Policy Research, Stanford, CA]. https://reglab.stanford.edu/publications/innovations-for-environmental-compliance/

Bhandari, N., Scanlon, D. P., Shi, Y., & Smith, R. A. (2019). Why do so few consumers use health care quality report cards? A Framework for understanding the limited consumer impact of comparative quality information. *Medical Care Research and Review*, *76*(5), 515–537. https://doi.org/10.1177/1077558718774945

Blankart, C. R., Foster, A. D., & Mor, V. (2019). The effect of political control on financial performance, structure, and outcomes of US nursing homes. *Health Services Research*, *54*(1), 167–180. https://doi.org/10.1111/1475-6773.13061

Carder, P. C. (2017). State regulatory approaches for dementia care in residential care and assisted living. *The Gerontologist*, *57*(4), 776–786. https://doi.org/10.1093/geront/gnw197

Carder, P. C., O'Keeffe, J., & O'Keeffe, C. (2015). *Compendium of residential care and assisted living regulations and policy*. U.S. Department Health and Human Services.

Castle, N. G., Wagner, L. M., Sonon, K., & Ferguson-Rome, J. C. (2012). Measuring administrators' and direct care workers' perceptions of the safety culture in assisted living facilities. *Joint Commission Journal on Quality and Patient Safety*, *38*(8), 375–382. https://doi.org/10.1016/s1553-7250(12)38048-3

Definition of disability., 42 U.S.C. § 12102 §.

Dong, X. (2014). *The population study of Chinese elderly in Chicago*. SAGE.

Dong, X., Chen, R., & Simon, M. A. (2014). Elder abuse and dementia: A review of the research and health policy. *Health Affairs*, *33*(4), 642–649.

Fiene, R. (2016). *Theory of regulatory compliance* (SSRN Scholarly Paper No. ID 3239691). Social Science Research Network. https://doi.org/10.2139/ssrn.3239691

Hansen, K. E., Hyer, K., Holup, A. A., Smith, K. M., & Small, B. J. (2019). Analyses of complaints, investigations of allegations, and deficiency citations in united states nursing homes. *Medical Care Research and Review*, *76*(6), 736–757. https://doi.org/10.1177/1077558717744863

Harrington, C., Mullan, J. T., & Carrillo, H. (2004). State nursing home enforcement systems. *Journal of Health Politics, Policy and Law*, *29*(1), 43–74.

Harrington, C., Tsoukalas, T., Rudder, C., Mollot, R. J., & Carrillo, H. (2008). Variation in the use of federal and state civil money penalties for nursing homes. *The Gerontologist*, *48*(5), 679–691.

Harris, P. A., Taylor, R., Minor, B. L., Elliott, V., Fernandez, M., O'Neal, L., & Kirby, J. (2019). The REDCap consortium: Building an international community of software platform partners. *Journal of Biomedical Informatics*, *95*, 103208.

Harris-Kojetin, L. D., Sengupta, M., Lendon, J. P., Rome, V., Valverde, R., & Caffrey, C. (2019). *Long-term care providers and services users in the United States, 2015-2016*. National Center for Health Statistics.

Hawes, C. (1997). Regulation and the politics of long-term care. *Generations: Journal of the American Society on Aging*, *21*(4), 5–9. https://www.jstor.org/stable/44877448

Kaskie, B., & Kingsley, K. (2009). *State enforcement actions pertaining to persons with dementia residing in assisted living facilities*. Alzheimer's Association National Public Policy Office.

Kaskie, B. P., Nattinger, M., & Potter, A. (2015). Policies to protect persons with dementia in assisted living: Déjà vu all over again? *The Gerontologist*, *55*(2), 199–209.

Lowe, T. J., Lucas, J. A., Castle, N. G., Robinson, J. P., & Crystal, S. (2003). Consumer satisfaction in long-term care: State initiatives in nursing homes and assisted living facilities. *The Gerontologist*, *43*(6), 883–896.

Marume, S. B., & Jubenkanda, R. R. (2016). *Centralization and decentralization*. https://www.managementstudyguide.com/centralization_decentralization.htm

Moe, R. C., & Gilmour, R. S. (1995). Rediscovering principles of public administration: The neglected foundation of public law. Public Administration Review, *55*, 135–146.

Mor, V. (2005). Improving the quality of long-term care with better information. *The Milbank Quarterly*, *83*(3), 333–364. https://doi.org/10.1111/j.1468-0009.2005.00405.x

National Center on Assisted Living. (2018). *Assisted living state regulatory review*. Assisted living state regulatory review.

Nattinger, M. C., & Kaskie, B. (2017). Determinants of the rigor of state protection policies for persons with dementia in assisted living. *Journal of Aging & Social Policy*, *29*(2), 123–142.

Prohibition of discrimination by public accommodations., 42 U.S. Code § 12182 §.

Rempfer, M. (1997). *Mental disability and the ADA: Public policy in the courtroom*. http://citeseerx.ist.psu.edu/viewdoc/summary?doi=10.1.1.173.7729

Roberts, M., Peterson, L. J., & Hyer, K. (2020). The state of states' assisted living websites: Information available to consumers. *The Gerontologist*, *60*(5), 878–884. https://doi.org/10.1093/geront/gnz174

Smith, L., Carder, P., Bucy, T., Winfree, J., Brazier, J. F., Kaskie, B., & Thomas, K. S. (2021). Connecting policy to licensed assisted living communities, introducing health services regulatory analysis. *Health Services Research*, *56*(3), 540–549. https://doi.org/10.1111/1475-6773.13616

StataCorp LLC. (2019). *Stata Statistical Software* (Release 16) [Software]. https://www.stata.com/

U.S. Securities and Exchange Commission. (2006). *Transition Report: Assisted Living Concepts, Inc*. (Annual Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 No. 001–13498). https://www.sec.gov/Archives/edgar/data/929994/000095013707004617/c13618e10vk.htm

Walshe, K., & Harrington, C. (2002). Regulation of nursing facilities in the United States: An analysis of resources and performance of state survey agencies. *The Gerontologist*, *42*, 475–487. https://doi.org/10.1093/GERONT/42.4.475

Wang, X., Gammonley, D., & Bender, F. (2020). Civil Money Penalty Enforcement Actions for Quality Deficiencies in Nursing Homes. *The Gerontologist*, *60*(5), 868–877.

Wilson, K. B. (2007). Historical evolution of assisted living in the United States, 1979 to the present. *The Gerontologist*, *47*(Suppl. 1), 8–22.

Zimmerman, S., Sloane, P. D., & Reed, D. (2014). Dementia prevalence and care in assisted living. *Health Affairs*, *33*(4), 658–666.