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Report to the Chairman, Subcommittee on Health and Long-Term Care, Select Committee on Aging, House of Representatives

February 1992

BOARD AND CARE HOMES

Elderly at Risk From Mishandled Medications

GAO/HRD-92-45

GAO

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The Honorable Edward Roybal
Chairman, Subcommittee on Health
and Long-Term Care
Select Committee on Aging
House of Representatives

Dear Mr. Chairman:

In an October 25, 1990, letter, you asked us to review the nature and extent of reported misuse and mismanagement of residents' medications in board and care homes for the elderly. In this report we discuss whether (1) staff who work in licensed board and care homes for the elderly are knowledgeable about the proper handling of medications; (2) staff follow proper procedures in storing, supervising, and assisting residents with taking medications; and (3) residents receive the appropriate medications. We did not assess the accuracy of the medical diagnoses for which the medications were prescribed because such information was not readily available.

We did work in three states: California, Missouri, and Washington. We chose states that Department of Health and Human Services (HHS) officials and advocacy groups believe provide oversight of medication issues that could result in higher quality services to residents. Consequently, although our results cannot be generalized to other locations, conditions may well be worse in less regulated states. We discussed medication-related issues with federal and state program officials and advocacy groups. We reviewed state regulations for these states and inspection reports for a sample of 111 homes, and made 12 unannounced visits to homes in San Francisco, St. Louis, and Seattle. We also reviewed the medical conditions and medications for 35 residents in the homes we visited. Our scope and methodology are discussed further in appendix I.

Background

"Board and care home" is a generic term—along with adult home, personal care home, and rest home—used to describe a variety of nonmedical community-based residential facilities. These homes provide room, meals, and some protective supervision and assistance to residents, below the level of nursing care, including assistance with medications. Although state regulations and monitoring practices are designed to promote safe and adequate care, board and care staff are primarily responsible for the day-to-day supervision and assistance of residents who self-administer medication. Board and care homes differ from boarding homes, which provide only a

place to sleep and eat. The homes we visited housed from 2 to 96 residents, with half of the homes housing 6 or fewer residents.

Although board and care homes have been an integral part of residential care for the elderly for many years, little is known about the number of homes in operation or the quality of care that residents receive. As we reported in 1989, state regulatory agencies estimate that about 10,000 licensed homes with about 264,000 beds were identified as serving elderly residents nationwide.[1] More recently, HHS estimated that as many as 75,000 board and care homes, licensed and unlicensed, serve over 1 million dependents, about half of whom are functionally disabled elderly persons. Another study reported that the two types of protective assistance most frequently needed by residents were with food preparation and medication.

Historically, HHS has had a limited role in board and care issues, but more recently this role has been expanded. In the past, states had sole responsibility to establish licensing, regulatory, and inspection requirements, which vary from state to state. With the 1976 enactment of the Keys Amendment to the Social Security Act, HHS acquired a limited role in overseeing board and care homes that are likely to have residents receiving Supplemental Security Income. In addition, in the early 1980s, HHS undertook some technical assistance programs, which were later discontinued as resources were shifted elsewhere. Most recently, the 1990 Omnibus Budget Reconciliation Act required HHS to establish minimum standards and assure compliance with them for homes housing disabled elderly Medicaid recipients.

Results in Brief

Residents in board and care homes are at risk of being harmed by medication errors because the staff may not be properly trained or do not follow state regulations. In our sample of state inspection reports, staff in about one-third of the homes did not meet their state's training requirements and staff in one-half of the homes did not consistently follow state regulations when supervising and assisting with medications. Further, state inspectors found that several of the homes did not keep required records of residents' health-related conditions.

State inspection reports in our sample cited homes whose staff lacked skills and knowledge, such as current first aid and cardiopulmonary resuscitation training. These inspection reports also cited the failure of

[1]Board and Care: Insufficient Assurances That Residents' Needs Are Identified and Met (GAO/HRD-89-50, Feb. 10, 1989.)

staff to secure stored medications to keep them inaccessible to other residents. In addition, state inspection procedures varied. Because of this variation, other violations may go undetected. Further, lax record keeping makes it difficult for staff to know how much assistance residents need with self-medication, and how much assistance was provided to them.

Regarding the appropriateness of medications prescribed for residents, records available in the homes supported the use of the medications for about one-half of the residents. Because the information we needed was not always available in the homes, we could not determine the appropriateness of medications prescribed for the rest of the residents in our review.

To help minimize the risk to residents from medication errors, HHS should assist states in addressing proper medication handling and developing training programs.

Staff Receive Little Medication Training

Although board and care homes are not medical facilities, staff assist residents with medications that can have serious side effects or health consequences if not taken as ordered. Medication training can provide the skills and knowledge staff need to properly carry out routine assistance, thus lowering the risk of adverse effects to residents. However, we found that California and Washington require little medication training. Further, over one-third of the homes in our sample employed staff who did not meet their state's medication-related training requirements.

Training requirements for board and care staff varied in the states we visited. State regulations for Missouri and for small homes in Washington require that staff receive training covering supervision and assistance with medications.[2] Effective January 1991, Missouri requires staff who assist residents with medications to attend 8 hours of medication-related training and pass a test on the subject. Washington requires operators of small homes to attend 4 hours of medication-related training, but they are not tested on their knowledge. Regulations for California and for large homes in Washington do not require specific classroom training on medication. However, both California and Washington require staff to have current first aid training certificates. This basic medication-related requirement helps prepare staff to properly respond to medication-related emergencies. State regulations are discussed further in appendix II.

[2]In Washington, large and small board and care homes are regulated by different agencies. One agency regulates large homes that house three or more residents. Another regulates small homes that house six or fewer residents. Homes housing three to six residents may elect either classification. See appendix II for additional information.

In our sample of state inspection reports, inspectors cited about one-third of the homes for employing administrators or staff who did not meet required medication-related training regulations, as shown in table 1. Appendix III lists the types of violations found by inspectors.

Table 1: Medication-Related Training Violations Cited by State Inspectors in 1990[a]

Location	Homes cited[b]	Homes in sample
San Francisco	6	30
St. Louis	9	30
Seattle	24	51
Total	**39**	**111**

[a]Includes violations of required first aid, cardiopulmonary resuscitation, and infection-control procedures.

[b]Homes that had one or more staff who did not document required training.

In the homes we visited, 7 of the 12 staff who assisted with medications reported little or no formal medication-related training. In addition, 10 of the 12 staff reported little or no medication-related on-the-job training.

Staff Frequently Violate Medication-Handling Regulations

Requirements to safeguard medications, supervise assistance, and log actions related to medications decrease the potential for errors. Such errors may include residents taking a medication prescribed for another resident or taking duplicate doses. Half of the homes in our sample of inspection reports contained medication-handling violations. In our view, state inspectors could further reduce the likelihood of such errors and the subsequent risk to residents if they observed staff supervising and assisting with medications to help assure that proper procedures are followed.

Regulations for storing medications, supervising and assisting with residents' self-medication, and disposing of medications are similar in the three states we reviewed, except for the degree of assistance that staff are authorized to give residents in self-medicating. In each state, regulations stipulate that all medications, both over-the-counter and prescription, must be stored so that they are inaccessible to other residents and in labeled containers provided by the manufacturer or the pharmacist. The regulations generally require that medications be taken according to the label instructions and that logs be kept of dispensed and disposed of medications. In Missouri, trained nonmedical staff can administer doses, unlike

in California and Washington, where nonmedical staff cannot do so. These state regulations are discussed further in appendix II.

State inspectors found many instances where these regulations were not followed, as shown in table 2. Appendix III lists the types of violations found by inspectors.

Table 2: Storage, Supervision, or Disposal-of-Medication Violations Cited by State Inspectors in 1990

Location	Homes cited[a]	Homes in sample
San Francisco	14	30
St. Louis	22	30
Seattle	20	51
Total	**56**	**111**

[a]Homes that had one or more violations.

In one home, we found an unlocked, centrally located cabinet containing medications for all residents in the home. The staff person told us she usually kept it locked, but she kept the key in an unlocked desk drawer next to the cabinet. In another home, we saw a mortar and pestle that were caked with the residues of many medications. The staff person told us that she used the mortar and pestle to pulverize medication for residents who had trouble swallowing pills. Finally, several homes lacked the required logs of disposed medications, and some retained former residents' medications that should have been destroyed.

State Inspection Procedures May Not Identify Violations

Rather than observing staff who are supervising and assisting with medications, California and Washington inspectors may use "pill counts" to determine whether medications were taken as ordered. That is, the number of pills remaining in a bottle is compared to the prescription fill date to determine whether the number is correct. Pill counts, however, do not confirm that residents received the medications as ordered. In contrast, practical nurses responsible for medication inspections in St. Louis systematically observe staff when they are supervising and assisting residents with medications. The nurses check whether all aspects of physicians' orders are followed, including whether the medications are taken in the prescribed doses and at the indicated time of day.

Staff Do Not Always Maintain Required Resident Records

States require staff to maintain limited records that document the level of assistance that residents require to self-medicate. Staff also use these records to document residents' conditions and, in some cases, required drug reviews.[3] The reviews provide some protection to residents from taking improper medications. Several homes in our sample of inspection reports were cited for record-keeping violations.

Regulations in the states we visited require homes to maintain updated records that include information about a resident's medical condition and physical and mental capabilities. These records differ from medical records in that they may be filled out by staff in the homes, or a resident's social worker or family member, and may contain only very general medical information. Generally, medical records are maintained by outside private physicians in their own offices, and should include such information as diagnoses, examination, and test results. State regulations are discussed further in appendix II.

State inspection reports for 1990 showed several violations of these regulations, as shown in table 3. Appendix III lists the types of violations found by inspectors.

Table 3: Record-Keeping Violations Cited by State Inspectors in 1990[a]

Location	Homes cited	Homes in sample
San Francisco	7	30
St. Louis	5	30
Seattle	6	51
Total	**18**	**111**

[a]Includes violations involving drug reviews.

In one home, we found very few resident records. The administrator told us that she did not ask about residents' medical conditions because she thought this would be an invasion of privacy.

[3]Drug reviews are checks by licensed medical professionals for medication problems, such as improperly prescribed doses or mixes of medications. They do not assess the appropriateness of medications. Drug reviews are required for all residents in Missouri and for certain residents in large homes in Washington.

Records Supported the Appropriateness of Medications for About Half of the Residents Reviewed

In the homes we visited, resident records contained sufficient medical information to indicate that medications were appropriately prescribed for 20 of the 35 residents in our sample. For the other 15 residents, the records were insufficient for us to draw a conclusion. States do not require homes to keep the type of medical information we needed, so it was not always available in the homes. Our medical review is discussed further in appendix IV.

All three states restrict the use of chemical restraint.[4] For five residents, we identified drugs capable of functioning as chemical restraints in the doses prescribed. We could not establish whether the medications were being used for that purpose for four residents because the medications could also serve therapeutic purposes. For the fifth, resident records were sufficient to support the use of the medications for medical treatment. The use of chemical restraint did not appear to be a problem in the 12 homes we visited, nor was it cited by inspectors in our sample of inspection reports. Appendix IV describes our medical review of 35 residents.

HHS Assistance Needed

States would benefit from HHS technical assistance in the form of guidance and training related to medication handling. Officials of the three states we visited told us that HHS guidelines and model training programs on medication assistance and handling could help them improve their oversight of board and care homes. Our visits to homes and our review of state inspection reports also underscored the need for this type of assistance.

HHS has developed a long-term strategy for addressing board and care issues and concerns in response to its expanded role that resulted from recommendations made by the HHS Inspector General and GAO, and certain provisions of the 1990 Omnibus Budget Reconciliation Act (OBRA). HHS has three efforts underway:

- In response to the Inspector General's recommendation, HHS is establishing a board and care home task force, chaired by the Assistant Secretary for Planning and Evaluation, to oversee its board and care initiatives.
- In response to GAO's recommendation, it is evaluating the effects of regulation on the quality of care by studying conditions in licensed and unlicensed homes.

[4]Chemical restraint is the use of drugs affecting a person's mental state that are administered to discipline an individual or for the convenience of the caretaker and not required to treat medical symptoms.

- As required by OBRA, it is developing regulations that set minimum quality standards and compliance mechanisms for certain providers of care, including board and care home operators.

HHS also has other initiatives planned:

- It will develop a data base on board and care home operations for use in examining the impact of proposed HHS and congressional policies.
- It will provide short-term technical assistance and training initiatives to assist practitioners in responding to day-to-day problems.

Development and dissemination of medication-related guidelines and model training programs are consistent with HHS's planned initiatives and can be incorporated into its technical assistance and training activities.

Conclusions

Properly trained staff and periodic monitoring of medication usage are necessary to minimize risks to board and care home residents from improperly supervised medication assistance. We visited homes operating in states that are considered to have greater regulatory oversight of medications, yet we found staff who are not adequately trained to assist residents with medications and improper medication supervision and assistance. In homes with inadequate records on residents' health conditions, we question whether the staffs are kept sufficiently aware of the levels of care required by the residents. In addition, we believe improper medication-related assistance that puts residents at risk can be minimized when inspectors observe staff supervising and assisting with medications.

Recommendations by the HHS Inspector General and GAO, and certain provisions of OBRA, have heightened concern about the health and safety of residents in board and care homes. These events have led to an increased role for HHS in the board and care area. As part of its expanding role, HHS could assist states in reducing risk to residents by providing assistance in the form of medication-related guidance and model training programs.

Recommendations to the Secretary of Health and Human Services

To minimize the risk of improper medication assistance to residents, we recommend that the Secretary direct HHS to develop and disseminate to states

- guidelines for assisting with self-medication, storing and disposing of medications, and record keeping and

- model classroom training programs for board and care home administrators, operators, staff, and state inspectors on such topics as medication types, proper storage, supervision and assistance, and adverse effects of medications.

As you requested, we did not obtain written comments on this report. However, we discussed its contents with HHS officials—who agreed with our recommendations—and with state program officials, and incorporated their comments where appropriate.

As agreed with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report for 30 days. At that time, we will send copies to the Secretary of HHS, state program officials, and interested parties. We will also make copies available to others upon request. If you have any questions concerning this report, please call me at (202) 275-6193. Other major contributors are listed in appendix V.

Sincerely yours,

Joseph F. Delfico

Joseph F. Delfico
Director, Income Security Issues

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Abbreviations

GAO	General Accounting Office
HHS	Department of Health and Human Services
OBRA	Omnibus Budget Reconciliation Act

Scope and Methodology

Scope

The scope of our work included a review of state board and care home licensing requirements and regulations for four programs in California, Missouri, and Washington; a review of state inspection files for 1990; visits to 12 board and care homes; a medical review of 35 residents' medication regimens; and obtaining information from and holding discussions with officials of HHS, states, and national advocacy groups.

Methodology

To provide the information requested, we selected three states—California, Missouri, and Washington—from among those that HHS and advocacy groups identified as being more active than others in governing medication handling in board and care homes. We did this because we believed that any problems identified in these states would indicate that the safety and health of board and care residents in less regulated states would be at even greater risk. In each state we reviewed program regulations and licensing criteria as provided by state officials; interviewed state program officials, including ombudsmen and inspectors; and selected one metropolitan area for our review of inspection reports and visits to board and care homes.

We selected the metropolitan areas of San Francisco, St. Louis, and Seattle. In the Seattle area, board and care homes are regulated by two different programs, depending on the size of the home (known as Congregate Care and Adult Family homes). For these locations we reviewed 111 randomly selected 1990 state inspection reports—30 for San Francisco, 30 for St. Louis, and 51 for Seattle (21 Congregate Care and 30 Adult Family homes). Because our selection was limited to these three cities, the results cannot be generalized to their respective states or to the nation.

We made unannounced visits to 12 board and care homes, 4 in each city. These selections were made to coincide with state inspection plans, which allowed us to benefit from the presence and knowledge of state inspectors. At each home, we interviewed staff, observed medication assistance procedures and compliance with state regulations, and collected information on staff qualifications. We also randomly selected three residents who were at least 60 years of age in each of 11 homes and all in the remaining home, which housed only two residents. We collected information on their medication regimens and related health information from their resident records.

The medication regimen and health-related information collected for the 35 residents was reviewed by a panel of two physicians, specializing in ger-

ontology, and one pharmacist. This panel was selected through GAO's process for obtaining the services of health care experts.

During our work we obtained information from and interviewed officials of HHS, the three states we visited, and national advocacy groups.

Our review was conducted betwen December 1990 and June 1991 in accordance with generally accepted government auditing standards, with one exception. We did not verify the completeness of the board and care home lists provided to us by the states and from which we selected our sample of state inspection reports and homes visited.

Summary of State Licensing Requirements and Selected Medication-Related Regulations

			Washington	
	California	**Missouri**	**Congregate Care**	**Adult Family Home**
Licensing				
Licensing agency	Department of Social Services	Department of Social Services	Department of Health	Department of Social and Health Services
License	Required for homes providing care and supervision to one or more elderly residents. Initial license for 1 year. Renewals for up to 2 years, if compliance is maintained.	Required for homes with three or more residents. Licensed for up to 2 years. Two classifications of homes based on level of care provided.	Required for homes with three or more residents. Licensed annually.	Required for homes caring for unrelated adults full time in licensee's home with: - one or more state-pay residents or - two or more private-pay residents. Licensed annually. Maximum of six residents per home.
Inspections	At least annually. Unannounced. When complaint filed. Pill counts may be used to measure dispensing accuracy.	At least two annually. At least one must be unannounced. When complaint filed. To verify correction of deficiencies. Medication assistance and dispensing to all residents observed during all regulaar inspections by licensed practical nurses.	Annually. Unannounced. Assistance with self-medication may be observed on a spot-check basis. Pill counts may be used to measure dispensing accuracy.	Every 18 months. Announced 2 weeks or more in advance. Unannounced inspections to investigate a complaint. Pill counts may be used to measure dispensing accuracy.

(Continued)

			Washington	
	California	**Missouri**	**Congregate Care**	**Adult Family Home**
Medication-related assistance requirements	Health conditions of resident require only incidental medical services. Resident suffers only mild problems, such as forgetfulness, which require reminding and assistance to self-medicate. No as-needed medication or injections unless resident is independently self-medicating or unless medical professionals are available.	Residents must be: -substantially capable of caring for own personal needs, -able to independently negotiate a path to safety.	The amount and nature of needed assistance with medication or medication service is available to residents in the home.	Residents must be at least capable of administering their own medication properly with minimal guidance and assistance. Home must be able to meet residents' needs and assure residents' safety.
State Regulation	State Regulation	State Regulation	State Regulation	State Regulation
Staff training, general	Staff must have knowledge and ability to respond to problems. Staff must receive on-the-job training or have related experience for assigned tasks. Administrator must have: -knowledge of requirements for providing care and supervision of elderly, -knowledge of laws and regulations, and -20 hours annually of continuing education in areas related to aging or administration.	None required.	Staff training must include procedures necessary to perform duties and actions in emergencies. Administrator training must include education or experience in care of elderly.	Knowledge and skills needed to meet residents' needs. Fourteen hours of specified training in addition to the medication-related training.

(Continued)

			Washington	
	California	**Missouri**	**Congregate Care**	**Adult Family Home**
Staff training, specialized	On-the-job training to include assistance with self-medication if job requires assisting with medications. Current first aid card.	For staff and administrators: - self-study, - minimum 8 hours' formal instruction, and - pass course to become certified as level I medication aide. For administrators: - current license as nursing home administrator or - age 21 and no criminal record related to board and care home plus attendance at 1 approved continuing education workshop per year[a]	For staff and administrators: - current first aid card, - current CPR card, and - HIV/AIDS training, including infection control.	Current first aid card. Current CPR card. Infection control training for HIV/AIDS. Four hours training on self-medication, illness, and infection control.

(Continued)

			Washington	
	California	**Missouri**	**Congregate Care**	**Adult Family Home**
Storage	Central storage required if: - medication requires refrigeration and resident does not have private refrigerator, or - physician orders home to store medication, or - administrator or inspector determines medication to be a hazard to others. Storage to be locked. Properly labeled. In original container. Logs maintained of: - stored medication and - as-needed medication taken.	Central storage of prescription medication unless: - resident's physician and facility provide written permission for other storage, and - permission is renewed annually and after any hospitalization. Nonprescription medication may be stored by resident, unless physician or facility prohibit in writing. Central storage to be locked. Prescription medications labeled according to professional pharmacy standards. Over-the-counter medications to be labeled with resident's name. Log maintained of dispensed medications. Storage to be maintained at proper temperature.	Central storage to be locked. Medication in original container with pharmacist-prepared label. Medication for each resident to be kept together but separate from that of other residents. Accessible only to designated staff or appropriate resident. Stored as recommended on label if centrally stored. Log maintained of: - prescriber's orders and - whether resident takes medication.	Locked or inaccessible storage whether centrally stored or stored by resident. Medication in original containers and with original label. Log maintained of doses taken.

(Continued)

			Washington	
	California	**Missouri**	**Congregate Care**	**Adult Family Home**
Supervision and assistance with self-medication	Assist residents as needed with self-administration of medication that is usually self-administered; or for illness that is temporary or minor; or when help is required due to tremor, failing eyesight, or similar conditions.	Medications to be distributed as prescribed. Medication to be delivered to resident in original container or in individual dose in pill cup. Oral medication may be administered by staff certified as a level I medication aide. External prescriptions or medication may be applied if authorized by resident's physician. Insulin injections may be administered by non-medically licensed staff if properly trained.	Assure resident obtains medications as prescribed. Remind, guide, and coach resident when to take medication. May open container but cannot dispense unless staff is licensed medical professional.	Written consent of resident needed to assist. Remind resident when to take medication. Medication may be taken to resident and container opened. Staff to know and practice infection control.
Disposal	Unneeded medication to be destroyed: -two witnesses present, one must be the home administrator and one a non-resident adult, and -log of destruction maintained.	Discarded or outdated medication must be destroyed or returned to pharmacy: -two witnesses to disposal required, one of whom is a pharmacist, nurse, or state inspector, and -log to be maintained of disposal.	Maintain pharmacist-recommended plan for outdated, discontinued, or unneeded medications. Keep log of actions signed by two witnesses.	Proper disposal required of unused or expired medication.

(Continued)

			Washington	
	California	**Missouri**	**Congregate Care**	**Adult Family Home**
Record keeping	Preadmission appraisal and recent medical appraisal to evaluate suitability of placement, including record of currently prescribed medication and medication storage needs. Appraisal updated as needed. Maintain current written record of care. Current and complete resident record, including continuing record of illness or medical care.	Documentation of physical examination at admission. For residents referred by Department of Mental Health, annually updated treatment plans required. At a minimum, monthly notes of residents' conditions and medication consumption.	Document resident's ability to function in home and requirements for assistance with medication or nursing care. Categorize and document needed level of assistance with medication. Note changes in residents' physical, mental, and emotional functioning. Reevaluate category of assistance if problem is suspected. Document required medical reviews.	Written medical history upon admission. Service plan of care and services needed and must be updated when client's condition changes.
Drug review	None required.	Review at least quarterly by pharmacist or registered nurse.	Registered nurse or physician must review resident's condition and medical regimen at least quarterly if the resident requires assistance by medically licensed staff.	None required.
Chemical restraint	May be used only when ordered by a physician.	May be used when authorized in writing by a physician for a specific length of time. May be used in an emergency by designated professional personnel who report to a physician.	Must be authorized by law.	Prohibited if not included in the service plan.

Note: Regulations are as provided by state officials.

[a]Administrators of board and care homes providing a higher level of care must hold a current license as nursing home administrators.

Medication-Related Violations Cited by State Inspectors (1990)

	San Francisco (homes in sample, 30[a])	St. Louis (homes in sample, 30)	Seattle	
			Congregate Care (homes in sample, 21)	Adult Family Home (homes in sample, 30)
Staff training, general	Administrator lacked sufficient training hours (3).[b]	None.	None.	None.
Staff training, specialized	No current first aid training (3).	No documentation of training (9).	No current first aid and/or CPR training (5). No infection-control or HIV/AIDS training (11).	No current first aid and/or CPR training (11). No infection-control or HIV/AIDS training (10).
Storage	Prescriptions not properly recorded (9). Medication not locked up (7). Name of pills and prescription label do not match (1). Combined same medication from two bottles (1).	Medications not properly logged (8). Medications not locked up (6). Medication not properly labeled (10). Resident controlled medication without physician's order (6).	Medication log not properly filled out (7). Medication not properly stored (2). No thermometer in refrigerator (1).	Documentation missing (1). Medication not properly stored (1).
Supervision and assistance with self-medication	Insulin not provided by a qualified medical professional (1). No physician's approval for resident to store and self-medicate without supervision (1).	Medication missed or not given as ordered (12). Medication should not have been given (4). Medication improperly handled (6). Medication given by noncertified staff (1). Pulse not checked as required (4). Medication cup reused (1). Resident's placement in home is improper (1).	No physician order for medication service or management (6). Residents not categorized by medication assistance needed (13). No written medication assistance policy (8). Improper assistance (4). Improper diet provided (1).	None.

(Continued)

	San Francisco	St. Louis	Seattle	
	(homes in sample, 30[a])	(homes in sample, 30)	Congregate Care (homes in sample, 21)	Adult Family Home (homes in sample, 30)
Disposal	None.	Medication retained after expiration date (1).	Medication not properly disposed of (4). No approved disposal plan (11).	None.
Record keeping	Medical appraisal or physician's report missing, incomplete, or out of date (7).	No documentation of required physical examination (2). Medical condition and weight notes missing missing (3).	Residents' records missing or incomplete (6).	None.
Drug review	Not applicable.	Medical review not conducted (6). Problems not reported to physician (1).	No documentation of review (1).	Not applicable.
Chemical restraint	None.	None.	None.	None.
Homes with no medication-related violations	Six.	Six.	Two.	Ten.

[a]The number of homes in sample for the three states is 111.

[b]Numbers in parentheses indicate the number of homes in our sample cited for this violation during 1990. Homes may have violations of more than one regulation; thus the number of homes in violation of regulations may exceed the number of homes in the sample.

Review of Residents' Medical Regimens

We selected a medical panel of two physicians, who are specialists in gerontology, and one pharmacist and asked them to review the information on medications and medical conditions for a sample of 35 randomly chosen residents. These residents were selected from the 12 homes we visited. The number of medications—both prescription and over-the-counter—for these residents ranged from 0 to 13, with a median of 4.

A lack of medical records in the homes hampered our analysis of the appropriateness of medications prescribed for residents. Resident records are not required to include detailed medical information, nor are they likely to be annotated with up-to-date information on changes in a resident's medical condition. Where we could not document the purpose of medications using resident records, we were not able to determine whether the record was incomplete or the medication inappropriately prescribed.

Our analysis was further hampered by some lack of agreement among the panelists. We believe this lack of agreement reflects the variability in treatment generally found in the medical community. The results of the medical review are summarized in table IV.1 and reflect instances in which all three panelists agreed that a problem existed.

Table IV.1: Review of Medications for 35 Residents

Medication-related problems[a]	Number of residents[b]
Problems cited in body of this report	
Resident record did not document medical condition that prescribed medication treats	15
Medication could be used as a chemical restraint in the dose and frequency prescribed	5
Other problems we identified	
Staff did not know or misunderstood the purpose of medication	18
Drug interactions or side effects present	8
Strength or frequency of medication inappropriate	4
Label instructions inappropriate	1
Could be used as a chemical restraint in a different dose and frequency	0

[a]More than one type of medication-related problem may be present for any resident; thus, the number of problems exceeds the number of residents reviewed.

[b]For residents taking more than one medication, the resident was included in the table if a problem was identified with one or more medications.

Potential Chemical Restraint Medications

The medical review panel had difficulty determining whether certain medications used by five residents were for chemical restraint or for therapeutic purposes. For one of the five, the panelists agreed that the resident record was sufficient to establish that the medication was taken to treat a specific medical condition. Because the medications used by the other four residents could be used to treat medical conditions, the panelists could not determine the purpose for which these medications were prescribed. For the five residents, the medications that the medical panel agreed could be used as a chemical restraint are listed in table VI.2.

Table IV.2: Potential Chemical Restraint Medications Taken by Five Residents

Resident	Medication
A	Haloperidol
B	Haloperidol
C	Fluphenazine
D	Haloperidol
E[a]	Lorazepam and haloperidol

[a]The resident record supported the use of these medications for medical treatment.

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