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**AFFORDABLE FIRE SAFETY IN BOARD
AND CARE HOMES. A REGULATORY
CHALLENGE. FINAL REPORT**

Bernard M. Levin, Norman E. Groner and Roseanne Paulsen
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Fairfax, VA 22030

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Administration on Aging
Health Care Financing Administration
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NOTICE

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AFFORDABLE FIRE SAFETY IN BOARD AND CARE HOMES

A REGULATORY CHALLENGE

FINAL REPORT

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PROJECT SPONSORS:

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ABSTRACT

This is the final technical report on a project concerning fire safety in Board and Care Homes. Homes vary greatly in the level of disability of the residents and financial resources of the residents. A major concern is the availability of satisfactory care for clients with limited funds. Meeting fire safety codes can mean an unaffordable capital cost to financially marginal providers who cannot borrow money. One focus of the study is the use of the provisions in the Life Safety Code. Many agencies use these requirements and find they lead to a high level of safety without excessive costs. All have developed or adopted a procedure for rating Evacuation Difficulty that they find workable, and many find satisfactory. Other agencies use other requirements, sometimes more lenient and often more strict. Costs of fire safety systems, such as sprinklers, can vary greatly, impeding a dialogue on the benefit-cost relationships of these systems. It appears that in some locations there are many homes that provide the services of Board and Care Homes but are not regulated.

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A REGULATORY CHALLENGE
FINAL REPORT

INTRODUCTION AND BACKGROUND

Framework of the Study

This report describes some of the information obtained during a study of the feasibility of achieving a high degree of fire safety in Board and Care Homes¹ without unnecessary expense or interference with the program objectives of the Homes. It was focussed on the requirements of the National Fire Protection Association's (NFPA) Life Safety Code (LSC). The report places information and opinions obtained through contacts with regulators, providers, advocates, and fire officials within the broader contexts of the various "Board and Care Home" developments and issues.

The study was funded by six agencies: in the Department of Health and Human Services -- the Administration on Developmental Disabilities, the Administration on Aging, the Health Care Financing Administration, the National Institute of Mental Health, and the Social Security Administration; and in the Department of Education -- the National Institute on Disability and Rehabilitation Research. This report was prepared by George Mason University: the work was monitored by the Building and Fire Research Laboratory of the National Institute of Standards and Technology.

The Board and Care Occupancies requirements of the Life Safety Code were based on a set of requirements developed specifically for this occupancy by the National Institute of Standards and Technology, formerly the National Bureau of Standards. The first of two primary purposes of this study was to foster the use of the requirements, with an emphasis on determining the manner and scope of their current use and the degree to which their use is achieving the desired goals. The second major purpose of this research study was to provide the information necessary to make informed judgments regarding the need for additional requirements or the refinement of existing ones.

The authors believe that fire safety is one important part of a total system of providing care to citizens with disabilities. When developing or evaluating fire safety requirements, it is important to understand the total system and the relationship of fire safety to other aspects of the system. This report contains information on many aspects of the total system. To provide a coherent picture, we place the findings of the study within a broad framework of information and opinions regarding the board and care system.

¹ We use the term "Board and Care Home" to refer to Homes providing personal but not skilled medical care to 4 or more nonrelated residents in a non-institutional environment. This is the term used in the National Fire Protection Association's Life Safety Code to describe such facilities. Other commonly used designations include Group Home, Personal Care Home, Halfway House, Community-based Residential Care Facility, and Intermediate Care Facility/MR (ICF/MR).

Background

The Movement to Smaller Residential Settings

During the decade of the 1960's, a movement was growing to provide care for citizens with disabilities within the community rather than in isolated institutions. A larger percentage of children who had mental retardation or other developmental disabilities were now staying with their parents rather than being sent to a professionally run facility. When a child was sent to a professionally run facility, the facility was more likely to be a community-based facility located in a city or town near the child's family, and the facility was more likely to be a single small or medium sized building rather than a campus of large buildings. Where persons with significant impairments remain in large buildings on an institutional campus, there are attempts to relocate them into small, residential-like settings in the community (or on the campus).²

This movement, together with the development of new drugs, led to the release of patients with mental illnesses, either to live unsupervised or to live in supervised Board and Care Homes. A variety of living arrangements were being developed for the elderly who need some supervision or the assistance of a support system but who do not need the medical services of a Nursing Home or hospital.

Fire Safety Rules for Board and Care Homes

Until 1985 there were no model fire safety requirements that were specially designed for Board and Care Homes. With the rapid growth in the number of Board and Care Homes, years ago it became increasingly clear that there was a need for fire safety requirements specifically designed for Board and Care Homes. Sometimes existing fire rules required an unnecessarily expensive set of fire safety features--such as the requirements for a Nursing Home. For example, the Nursing Home requirements were being applied, in some jurisdictions, to a small Home with eight high functioning residents. However, a more lenient and less expensive set of requirements--such as the requirements for a Boarding Home--would not have provided a satisfactorily high level of fire safety for a Home with low functioning residents. Claims were being made that the cost of providing fire safety was retarding the development of Board and Care Homes.

The National Institute of Standards and Technology (formerly called the National Bureau of Standards)--with support from the Department of Health and Human Services--developed a set of stringent but flexible fire safety requirements for Board and Care Homes. The National Fire Protection Association (NFPA) adopted these new requirements, with modifications, as Chapter 21 of the 1985 edition of the Life Safety Code. (An updated version with minor modifications is included in the 1988 edition and a third edition was published in the spring of 1991. In the 1991 Edition, there are two chapters for Board and Care Occupancies, one for new and one for existing

² "On January 31, 1991, the last five residents of Laconia Developmental Services, New Hampshire's only large public institution serving persons with developmental disabilities, left the facility to start their lives in the community. The closure of Laconia puts New Hampshire in the unique position of being the first state, nationwide, to discontinue using large public institutions to serve persons with developmental disabilities." Reference: New Directions National Association of State Mental Retardation Program Directors, 113 Oronoco St. Alexandria, VA 22314, Feb. 1991, Vol. 21, No. 2, p.4.

facilities.) The Life Safety Code is a model (voluntary) code: the model requirements in the code become legal requirements only after they are adopted by law or regulation by the appropriate regulatory authority.

The knowledgeable and responsible officials, in the Department of Health and Human Services and the Department of Education, believe that the Board and Care requirements in the Life Safety Code provide a high level of safety without excessive cost and without undue interference with the programs and objectives of the Homes. They believe that a vital part of any program to provide good care--in the least restrictive environment to those citizens who need a sheltered residential environment--is to assure that the fire safety regulations for Board and Care Homes are based on the Life Safety Code.

Many state and local officials agree, as do many of the providers who are required to meet these requirements. Not all officials and providers do agree. Some believe that the requirements are too lenient and some feel they are too strict. However, there has been insufficient technical data or information to support any of these conclusions. A major task of this study was to develop the information and technical data that can serve as a basis for decisions regarding adoption of the Board and Care requirements of the Life Safety Code and decisions regarding modifying requirements in the 1991 Edition.

THE BOARD AND CARE SYSTEM AND ITS REGULATIONS

The Regulatory "Jungle"

Introduction

In 1988, the American Association of Retired Persons published a report by Leah Dobkin entitled *The Board and Care System: A Regulatory Jungle*. As its title implies, Ms. Dobkin found that the regulatory system for regulating Board and Care Homes appears quite complex. While we will neither concede nor dispute that the term "Jungle" is appropriate, we do believe that it is important to understand some of the complexities of the fire safety portion of the regulatory system if one is to properly understand the findings in this report.

As we will discuss further below, this complexity is a result of many factors, including:

A Home may be subject to regulation by several jurisdictions. The rules imposed by the jurisdictions may differ.

The occupancy classification or label assigned to a facility plus the number of residents (and sometimes the capability of the residents) determine which set of regulations in the code applies.

When adopting a model code, the adopting jurisdiction can make any additions or modifications it deems necessary.

The Life Safety Code and other model codes are updated and new editions published, but these new editions are not effective until adopted by the authority having jurisdiction.

Multiple Hurdles

We have found that a Board and Care Home may be required to meet several different sets of fire regulations. A Board and Care Home may be required to meet both state and local rules. (Often, one of the state requirements is that the building must meet all local requirements.) At the state level, the building may be required to meet some combination of the following: 1. the State Building Code; 2. the State Fire Code or the requirements of the State Fire Marshal; 3. the fire safety requirements for state funding; 4. the fire safety requirements for a state license to operate a Board and Care Home; 5. the fire safety requirements for a state or local social service agency to place a client or to recommend a facility to clients. At the Federal level, the Home may be required to meet the fire safety requirements for the Health Care Financing Administration's (HCFA) ICF/MR funding or for eligibility for Veterans Administration referrals.

Fortunately, any one building would normally not have to meet as many different sets of regulations as implied above. Often more than one agency may adopt the same requirements. For example, the Life Safety Code is a model code that more than one agency in a state may adopt, by regulation or by state law. At the Federal level, HCFA and the Veterans Administration use the 1985 and 1991 Editions of the Life Safety Code, respectively. Often the licensing requirement of a social

service agency is that the building meet the requirements set by the State Fire Marshal, which may or may not be based on the Life Safety Code.

Sometimes one set of requirements is sufficiently more rigorous than another so that one can essentially ignore the less rigorous. In some situations, one set may be more rigorous for buildings of one size (e.g. 5 or less residents) and the other may be more rigorous for larger buildings (e.g. 6 or more residents). For example, the Life Safety Code requires more safety features for Board and Care Homes with 4-5 residents than most Building Codes because building codes apply the requirements for one and two family houses to Board and Care Homes of this size. However, Building Codes (e.g. the BOCA National Building Code) usually require more safety features than the Life Safety Code for Homes with 6-16 high-functioning residents.

Moreover, the picture may become more confusing as different social service agencies adopt different fire safety requirements for licensing (or funding) similar facilities serving different populations, e.g., residents who are aging and residents with developmental disabilities. We have also found the situation where there is one state agency having responsibility for setting fire safety requirements for smaller facilities and another agency setting requirements for larger facilities serving similar populations.³ We have found different agencies issuing different requirements for Homes that appear, at first, to be similar--however, in some, if not all, of these cases, the average levels of disability and the assumed levels of care differ.⁴

Finally, the regulations are constantly being updated and modified. Sometimes a facility that passed previous inspections is required to upgrade its fire safety. While this may be due to different interpretations by different inspectors, it also may be due to changes in the Code. Often the provider is unaware that the Code has changed when he is required to upgrade.

Occupancy Classifications

Another factor that can affect the choice of fire safety rules to be applied is the occupancy classification (or use group) assigned to the facility. The fire safety rules that are applied to Board and Care Homes are usually part of (or adapted from) a fire safety code (such as the Life Safety Code) or a building code, which covers all types of buildings. An occupancy classification is used in this report to indicate a type of building usage. Residential Board and Care Occupancies is the building usage in the Life Safety Code that is of most interest to this study.

³ For example, in Michigan, the State Fire Safety Board promulgates rules providing for adequate fire prevention and safety for Homes with seven or more residents. The Department of Social Services sets the requirements for smaller Homes.

⁴ For example, in New York State, the Residential Care Centers for Adults (RCCA) Program is designed for clients with mental illnesses whose care is provided by the Office of Mental Health: the Office sets the fire safety requirements which are high, i.e., Requirements for Institutional Occupancies in the NYS Uniform Fire Prevention and Building Code. It is assumed that the performance level of the clients is low. Homes that are part of the Community Residence Program of the Department of Social Services are required to meet less strict requirements but the residents are required to be capable of self preservation. In 1990, it was estimated that 9,493 persons with mental illnesses lived in these Community Residences.

As used in this report, a Board and Care Home means a facility that provides for a fee: 1. room; 2. board; and 3. personal care and/or protective oversight to one or more residents with a physical or mental disability. It does not include facilities that provide the medical care provided by a Nursing Home or hospital. It should be noted that many jurisdictions label Homes that provide care for one or two (or sometimes more) residents as Foster Care Homes. (Emphasis is given in this report to Homes with four or more residents: the Life Safety Code defines Board and Care Homes as having 4 or more residents.)

The Life Safety Code defines a Residential Board and Care Occupancy as "A Building or part thereof used to provide lodging, boarding, and personal care services for four or more residents unrelated by blood or marriage to its owners or operators." Facilities that provide only room and board to 16 or fewer (but at least 4) residents, without providing personal care, would be called Lodging and Rooming Houses, and those that provide services to 17 or more residents, without providing personal care, would be called Hotels. Facilities that provide services to three or fewer residents, with or without providing personal care, are treated as One and Two-Family Dwellings.

Each model code and each regulatory authority has its own definition and interpretation of what constitutes a Board and Care Home and its own name (or set of names) for Board and Care Homes. However, most jurisdictions generally follow the approach of the Life Safety Code, e.g. a facility that provides medical or nursing care would not be considered a Board and Care Home. See Section, Distinguishing Between Health Care and Board and Care Occupancies, on page 51.

The BOCA National Building Code 1990 (a widely used model building code) has a Use Group I-1 for Board and Care Homes for six or more residents if all residents are "physically able to respond to an emergency situation without personal assistance." If any residents are not able to respond, Use Group I-2 is applied: Use Group I-2 is also applied to Nursing Homes and its requirements are more rigorous.

Problems with Occupancy Classifications

We are finding the distinction between Board and Care Homes and Foster Homes to be blurred. For example, we were informed that all Board and Care Homes for residents with disabilities in Texas were required to meet the Board and Care Chapter of the Life Safety Code. We later found that there was a fire with a fatality in a Foster Care Home with six children receiving care. The Board and Care Requirements of the Life Safety Code had not been applied. We found the same situation in the District of Columbia. (In the District of Columbia the Foster Care provider was permitted to care for more than the normal maximum because of the shortage of foster care providers.)⁵ There is a concern that a label like Foster Care can be used, either deliberately or accidentally, to avoid more stringent regulations.

While the concept of personal care is well understood, it is a matter of interpretation and judgement whether or not a given facility provides personal care or whether or not a given individual requires personal care. In many cases it is clear and obvious, but in other cases it requires an analysis of the situation. If Homes that provide room and board claim they do not

⁵ Washington Post: August 25, 1991, p. B1; August 26, 1991, p. D1; August 27, 1991, p. B1, and editorial; and August 28, 1991, p. B1. Also, San Antonio Express News, March 25, 1991, p. 1-A.

provide personal care, one of the residential occupancy classifications would apply, e.g. Lodging or Rooming Houses. Board and Care Homes whose operators do not admit to providing personal care may not be required to meet the fire requirements for Board and Care Homes, even if they do, in fact, provide personal care services to private paying clients.

Factors that affect the number of Board and Care Homes that are not meeting the State (or local) fire safety requirements for Board and Care Homes include:

- the availability of manpower (or priority) within the appropriate regulatory authority for finding and checking on these Homes.
- the reporting of the existence of these Homes to the proper authorities by their complying competitors.

It can be assumed, based on comments given to the project staff (but not substantiated), that both of these factors are affected by the availability of complying facilities that have empty beds available to accept new clients. We have spoken to state officials who claim there are very few, if any, non-complying Board and Care Homes in their state. We have also spoken to state officials in other states who concede that there may be many non-complying Board and Care Homes in their state. See the Section, Falling Through the Cracks, on page 19.

Board and Care Homes tend to be regulated by state agencies. Facilities that provide only room and board tend to be regulated by local fire authorities and building code agencies. Regulation by social service agencies is often minimal for Homes that do not provide personal care. These Homes should have more capable residents than normally found in Board and Care Homes, but since operation of these facilities often is not really regulated, special effort is required to assure that Boarding Homes do not have residents who require personal care services.

Model Codes, Regulations and Laws

Model Codes are written and published by private organizations, usually trade or professional organizations. Federal, state and local regulatory agencies can adopt model codes as published or with modifications. Federal agencies are restricted to adopting only those model codes that are developed through a consensus procedure with procedural safeguards. The procedure for developing a model code has many similarities with procedures for developing federal regulations: this includes the opportunity for interested parties to make suggestions and comments which must be considered by the code writers (but not necessarily accepted). In this context, a consensus means there is general agreement. It does not mean that everyone approves of the total code, that everyone agrees with any one portion, nor that anyone agrees with all portions of the code. A model code is a combination of many compromises.

A model code usually becomes a requirement within a jurisdiction when the proper authority adopts the code, issuing a regulation requiring its use. Its use can also be mandated by law: usually the law is supported with regulations that clarify how the model code is to be used.

The Life Safety Code developed and published by the National Fire Protection Association is such a model code. There are three model building codes: The BOCA National Building Code published by the Building Officials & Code Administrators International, Inc.; The Standard

Building Code published by the Southern Building Code Congress International; and The Uniform Building Code published by the International Congress of Building Officials. Each of these organizations publishes a number of model codes, e.g. the National Electric Code, Standard Fire Prevention Code, etc.

When adopting a code, the adopting jurisdiction can make any additions or modifications it deems desirable. See Section of this report, Additional Requirements Imposed by Jurisdictions or Agencies Using the Board and Care Chapters, on page 47 for details.

Editions of the Life Safety Code

The Life Safety Code is frequently updated and revised, recently every three years. Regulatory agencies using the Life Safety Code determine which Edition of the Code is used in their jurisdiction. Adopting a new Edition involves some cost such as training costs and the cost of buying books containing the new Edition.

Normally each Edition of the Code requires a higher level of safety for new buildings than previous Editions. The changes are made in response to new technology, and to fire experience, including fire tragedies. However, the Board and Care Committee is considering some changes to make it easier to retrofit existing private residences to house eight or fewer high functioning residents. See the section, Anticipated Changes in the 1994 Life Safety Code, on page 43.

The first Edition of the Life Safety Code to include a Chapter specifically directed at Board and Care Homes was the 1985 Edition. The 1988 Edition contained major editorial changes to make the Code easier to apply and some technical changes which were not controversial. The 1991 Edition requires additional safety features beyond those in previous editions. It contains one requirement that is controversial: it requires automatic sprinklers in all new Board and Care Homes, including small Homes being started in existing buildings. The Board and Care Committee is considering dropping the requirement for sprinklers when *retrofitting* a residence to house eight or fewer high functioning residents, i.e., when the Home is classified as Prompt. See Section on AUTOMATIC SPRINKLER SYSTEMS starting on page 39 (especially page 42), for a discussion of this controversy.

Building Codes

In most areas of the country new buildings must meet the state or local building code. In addition, existing buildings converted to Board and Care Homes are normally covered by the building code. Most of these codes are based on one of three model building codes: The BOCA National Building Code; the Standard Building Code; and the Uniform Building Code. Each of these model codes is designed so that any Board and Care Home meeting the model building code will provide a high level of fire safety. Those officials we contacted who used only a Building Code (and possibly the associated Fire Code) indicated they were happy with the Building Code.

In many locations only the Building Code (and likely the associated Fire Code) is used. In many other locations Board and Care Homes must meet all the requirements of the applicable Building Code, and also meet the requirements in the Life Safety Code. In discussing the regulation of fire safety in Board and Care Homes with state officials, sometimes we were informed that an accommodation was made so that the Life Safety Code would be the only set of fire safety

requirements that the provider would be required to meet: this accommodation was sometimes an unofficial arrangement. We also found situations where there appeared to be no effective fire safety regulation. i.e., neither a Building Code nor the Life Safety Code was applied, but the number of locations where this occurs appears to be decreasing. For example, while this project was underway, Texas has implemented a new licensing law.

The BOCA National Building Code has a separate Use Group (or occupancy classification) for Board and Care Homes called Use Group I-1. It is one of three Institutional Use Groups. The requirements of Use Group I-1 are applied to Board and Care Homes with six or more residents, all of whom "are physically capable of responding to an emergency situation without personal assistance." If there are fewer than six residents, a Residential Use Group is applied. If any resident is unable to respond without personal assistance, Use Group I-2 normally would be applied: Use group I-2 requirements are also applied to nursing homes.

The requirements for Use Group I-1 are less rigorous than the requirements for Use Group I-2. This means that the Code recognizes that the requirements for Board and Care Homes with somewhat high functioning residents should be less rigorous than for Nursing Homes or for Board and Care Homes with residents who require physical assistance in evacuating. This is consistent with the comment in the Americans with Disabilities Act Handbook, "... any safety standard must be based on objective requirements rather than stereotypes or generalizations about the ability of persons with disabilities..."⁶ See THE IMPACT OF CIVIL RIGHTS LEGISLATION on page 34.

The Virginia Uniform Statewide Building Code is closely based on the BOCA Code. However, they have added a feature that assigns to Use Group R-3, Board and Care Homes with six to eight residents, all of whom are capable of responding to an emergency situation without personal assistance. One and Two Family Homes are included in Use Group R-3. The Virginia modification also requires that group homes or care facilities (i.e., Board and Care Homes) in Use Group R-3 be sprinklered. In other words, Board and Care Homes with six to eight high functioning residents need only meet--in addition to the sprinklers--the requirements for private residences.

During the development of the 1993 Edition of the BOCA Code, it was recommended that the Virginia modification be included in the 1993 Edition.⁷ On the other hand, it was recommended by another submitter that Use Group I-1 include facilities of all sizes, including Homes with fewer than six residents. Both proposals were rejected.

⁶ Reference: Americans with Disabilities Act Handbook, Published by the U.S. Equal Employment Opportunity Commission and the Department of Justice, U.S. Printing Office, October 1992, Appendix M, p. 13.

⁷ As part of the justification for this change, the requirements of the Fair Housing Act were referenced. The implication was that the current requirements are unnecessarily severe and therefore discriminatory. It was claimed that the proposed change "would bring the code into better compliance." Reference: Building and Code Administrators International, 1992 Proposed Changes, Final Hearing Roster, for Consideration at the 77th Annual BOCA Conference, September 20-25, 1992, St. Paul, Minnesota.

Differences Among Homes for Disability Groups

At both the state and Federal levels of government, separate agencies provide services to the various disability groups. These agencies have different histories, different responsibilities, and different levels of funding. While each agency is unique, there tend to be similarities among agencies in different states serving the same type of client, for example, agencies serving persons with mental illnesses. These similarities include the responsibilities, goals and resources of the agencies. Thus there tend to be similarities in Board and Care Homes serving one type of client, irrespective of state.

Homes for Elderly Persons Who Need Assistance or Care

The state agencies concerned with the elderly tend to be advocacy organizations rather than agencies that provide services to individuals. They neither operate Board and Care Homes nor cover the cost of their clients staying in a Home.

The Federal government does provide some funds through two programs: 1. the Supplemental Security Income (SSI) program of the Social Security Administration (which includes state funded supplements to Federal payments); and 2. the support of some veterans by the Department of Veterans Affairs (VA).

Elderly persons and their families usually make their own arrangements with the provider, often with the guidance of a social service agency. For example, the VA will recommend a Board and Care Home that meets VA standards: the veteran, who is being supported by the VA, is free to select another Home if he chooses. Many of the residents of these Homes have very limited funds: this includes those supported by SSI, those supported by the VA, and those supported by their savings, retirement, or families.

Marilyn Moon has described some of the problems facing Board and Care Homes for frail elderly persons with limited financial resources as follows:

Two stark realities regarding residential care facilities readily present themselves. First, and foremost, what residents can afford in residential care facilities dictates what will be offered to them. For those with the lowest incomes these residences will provide minimal services in bleak surroundings. Second, these facilities serve to bridge the gap between full independent living and intensive nursing care, which makes the quality and extent of social and medical services provided crucial to the quality of life. Homes that try to bridge the gap with few resources run the risk of quality of care problems, but attempts to regulate quality and offer consumer protection may also create difficulties by limiting the flexibility of Homes.

Traditionally, residents of board and care homes tend to be low- and middle-income individuals. The frail elderly are likely to be older and have lower incomes than individuals in their early years of retirement, for example. Moreover, persons with higher incomes may be able to remain at home with the help of paid attendants, and when they need to move, they are likely to be able to afford life care communities or other similar facilities that offer quality services in comfortable settings. Board and care homes are the options for those with limited resources,

often constituting an inadequate alternative.⁸ For the very poor, public support is quite limited. Residential care facilities are not considered medical institutions and thus usually are not covered by private or public health insurance. The major public resource available to low-income persons is Supplemental Security Income (SSI), the cash program targeted on low-income elderly and disabled persons. In some states, providers that serve the very poor elderly and disabled who receive SSI must do so on the federal guarantee level. (\$368 per month in 1989.)⁹ Other states supplement this amount, but often to a limited degree. It is hard to imagine how many services can be offered beyond room and board on \$12 a day. Other government programs offer little or no support. Currently, the federal government and most state governments do not fund much in the way of community-based care for individuals at this level of frailty. Thus, older individuals must largely rely on their own limited resources or limited SSI payments in purchasing accommodations in residential care facilities.¹⁰

The lack of well funded government programs and the limited financial resources of many elderly residents have a number of consequences which are discussed in other parts of Moon's essay. In the area of fire safety, the problem is that many providers have marginal operations from a profitability standpoint. The cost of upgrading their buildings to meet additional fire safety requirements is a major problem for a significant number of Homes. On the other hand, the financial problems of the providers are only relevant to the objectives of this project to the extent they affect the quality or availability of care to citizens who need the services of Board and Care Homes (or if government programs need to be created, expanded or modified to assure that people with disabilities have access to proper care). This will be discussed in the Section, Some Impacts of Limited Funds, on page 14.

There are, of course, many elderly citizens with substantial incomes. Homes that we have seen that cater to this affluent portion of the market tend to be larger and to meet strict fire codes. When building new structures to meet the growing demand, the providers are likely to include all fire safety features they anticipate might be required. The cost of meeting fire safety requirements is not a major concern when providing care to affluent residents in new buildings.

Homes for Persons with Developmental Disabilities

State governments have a long history of providing care for citizens with mental retardation. Years ago the norm was to provide care in large institutions. (In 1967, 194,650 individuals resided in

⁸ Moon applies the term Board and Care Homes to a more restrictive set of facilities than the set of facilities considered as Board and Care Homes in the Life Safety Code and in the remainder of this report.

⁹ \$434 per month in 1993. (\$14 per day)

¹⁰ Reference: Moon, M., Gaberlavage, G., Newman, S.J., Preserving Independence, Supporting Need: The Role of Board and Care Homes, Public Policy Institute, American Association of Retired Persons, Washington, DC, no date, pp. vii, viii.

large publicly operated institutions.)¹¹ There has been a trend toward providing care for persons with disabilities in smaller--non institutional--settings, including small Board and Care Homes and the person's own family home. (In 1988, 91,440 individuals resided in large publicly operated institutions.)¹² However, the state governments have tended to maintain responsibility for the care of persons with mental retardation and developmental disabilities. Their programs are supported and influenced by strong advocacy organizations. As a result, sufficient government funding is often available to support high quality Board and Care Homes, and even, sometimes, provide financial and other support to natural and adoptive parents.¹³ In many cases, the state actually operates some Board and Care Homes. More often the state strongly monitors and regulates privately operated Homes funded by or through the state. Sometimes, one state agency monitors and regulates Homes operated by another state agency. *In other words, the funding is available and the organizational structure is in place to provide and assure high quality care for many citizens with developmental disabilities.*

While funding is generally available, it is limited. One state, slightly larger than average, in 1991, had 1100 citizens with developmental disabilities on its waiting list for placement in Board and Care Homes. Funds were not available for establishing new Homes more rapidly.¹⁴

A major source of funds is the Health Care Financing Administration's Medicaid Program to support Intermediate Care Facilities/MR (ICF/MR's). While in some states these funds help support state institutions, this program is a major source of funds to support high quality Board and Care Homes. The use of these funds is limited to facilities caring for residents who need a level of care called "institutional care" although the care may be provided in a non-institutional setting such as a small Board and Care Homes with a residential ambience.¹⁵

¹¹ Reference: Braddock, Hemp, Fujiara, Bachelder, and Mitchell (1990), *The State of the States in Developmental Disabilities*, Baltimore, Paul H. Brookes Publishing Company, 1990 as referenced in *New Directions*, National Association of State Mental Retardation Program Directors, 113 Oronoco St. Alexandria, VA 223314, April 1990, Vol. 20, No. 4.

¹² Reference: *New Directions*, IBID.

¹³ For example, Michigan's Family Support Subsidy program which is part of the state's Permanency Planning Program "provides monthly stipends to families (including adoptive families) that have a child with severe disabilities." Reference: *New Directions*, IBID.

¹⁴ *Washington Post*, Vol. 114, No. 209, July 2, 1991, p. B1.

¹⁵ Institutional level of care has been characterized as follows: the provision of "continuous", "aggressive" active treatment services, coupled with constant oversight and supervision. Reference: Gettings, Robert M. and Smith, Gary A., *Federal Medicaid Policies and Services to Americans with Developmental Disabilities: Critical Issues -- Difficult Choices*, National Association of State Mental Health Retardation Program Directors, Inc., January 1989, p. 64.

Another major user of Medicaid funds is the Home and Community-Based Waiver Program.¹⁶ It is estimated that 98,000 persons with developmental disabilities will be served by this program in 1993. The Waiver Program is also limited to residents who require an institutional level of care. More residents with developmental disabilities are now being housed in facilities covered under the Waiver Program than in traditional ICF/MR's.¹⁷

Homes for Persons with Mental Illness

States also have a long history of providing care for persons with mental illnesses. Years ago the norm was to provide custodial care in special hospitals. As treatments have improved, many more persons with mental illnesses are able to live outside these hospitals. Some can live in the community without special assistance. Others need the services of a Board and Care Home. There are state agencies with responsibility, capability, and funds to assist individuals with mental illnesses who are not in state hospitals.

The needs of persons with mental illnesses vary greatly. Some need and receive the level of care given by a hospital. Others live with their families or live on their own in typical housing. In between, there are people who need the protective oversight of a Board and Care Home and others who only need a place that provides room and board. Just as there are varied needs, the states and local governments provide a range of types of assistance. Some persons with mental illnesses live in high quality Board and Care Homes with state financial assistance and supervision. Others live in marginal Board and Care Homes, similar to those described above for the elderly, using SSI funds or their own funds. Many live in facilities that do not provide personal care services.

When establishing Board and Care Homes in residential communities, there is always the possibility of community opposition. New Homes for persons with mental illnesses are more likely to experience this opposition.

Attitude Toward Current Fire Safety Requirements

We found a surprisingly consistent satisfaction with the current state fire regulations by the state officials we interviewed. Those who were using the Board and Care Chapter of the Life Safety Code liked it and some even praised it. (See Section, General Attitude toward the Board and Care Requirements on page 46, for more details regarding attitudes toward the Board and Care

¹⁶ In the Medicaid Home and Community-Based Waiver Program, a state may apply for a waiver from "certain statutory requirements to permit a state to cover [with Medicaid funds] personal care and other services (excluding room and board costs) for individuals who, without such services, would require institutional care in a Medicaid-certified institutional setting." Reference: Smith, G.A., Katz, R.E., Gettings, R.M., Federal Funding Inquiry: Medicaid Home and Community-Based Services for Persons with Developmental Disabilities: The Home and Community-Based Waiver Experience, National Association of State Mental Retardation Program Directors, 113 Oronoco St. Alexandria, VA 22314, September 1989, pp. 9,10.

Thus this program sometimes permits the use of Medicaid funds to provide care outside an "institutional setting" and hopefully at a lower cost than in an ICF/MR.

¹⁷ Reference: New Directions, November 1992, Vol. XXII, No. 11, pp. 3,4.

Occupancies Chapters of the Life Safety Code, including negative comments from some Fire Marshals.) However, those using other requirements were also satisfied. Our interpretation is that government officials tend to be happy with any set of rules that works, especially if the rules cover an item which is not of immediate concern or an item in which they are not expert.

Another explanation for the general high level of satisfaction is that people tend to accept the status quo and to distrust change. The old saying, "If it ain't broke, don't fix it," applies. Once a set of fire safety requirements has been in effect and enforced for several years, there is a tendency for all interested parties--providers, regulators, funding agencies, and advocacy groups--to adjust to the rules and become satisfied with them, especially if the level of fire protection is high.¹⁸ (If the level of protection is low, there may be pressure to raise it, especially after a fatal fire.) The problems in retrofitting buildings housing existing facilities to meet the requirements will have been solved one way or the other. A few years ago there was a concern that the cost of the proposed fire rules would cause providers to go out of business. We cannot determine how many providers did go out of business, but we detect an attitude among some regulators that those that did go out of business were marginal operations and that the board and care system was not significantly hurt by their loss.¹⁹ Those that survived should be concerned with current problems rather than historical ones. Also, some providers that had difficulty meeting strict requirements would not like to see the requirements decreased: that would decrease the cost for new competitors to open competing Homes.

On the other hand, we have found two important exceptions to the above generalizations. Respondents did raise their concerns about costs and, where the Board and Care requirements of the Life Safety Code are being used, the validity and/or reliability of the level of fire protection chosen, i.e., the assigned evacuation capability classification.

Those officials who have expressed concern about the cost of meeting the fire safety rules focussed on the problem of having a sufficient number of Homes to house all those needing care, especially citizens with disabilities relying solely on low SSI payments. (To avoid biasing the data on this issue, we did not raise the cost issue in our interviews.)

Some Impacts of Limited Funds

Limited Funds Impact Homes Differently

For purposes of understanding how the Board and Care system works, we can think of Homes as being of two types: Homes where the charges are set to cover the cost of providing the desired quality of service; and Homes where the quality of service is set by the level of the available financial resources. (Obviously, in any given Home, it may be a combination of both of these two

¹⁸ This conclusion is restricted to persons who fall inside the "system". Persons, clients, and providers, who cannot or will not operate within the confines of the system, might not endorse the current regulations--but, of course, they were not contacted as part of this study.

¹⁹ In some cases, providers that failed to meet the requirements stayed in business but either went (or stayed) "underground," or claimed they did not provide the personal care services that would classify their facility as a Board and Care Home. See Section on Falling Through the Cracks on page 19.

factors.) As explained above, Homes for persons with developmental disabilities tend to be of the first type, Homes for people who are frail and elderly tend to be of the second type, and Homes for persons with mental illnesses are of both types.

When the charges are set to cover the costs of providing service, the additional costs of upgrading fire safety are passed on to the residents or the person/agency paying the costs. If the additional costs do not exceed the ability to pay, the increased fire safety can be achieved with minimal disruption to the Home and its owners. In such facilities, upgrading or building to meet the requirements of the Board and Care Chapters is usually not a problem of cost. However, these will tend to be the better Homes and many of them would already have had a high level of fire safety when the requirements of the Board and Care Chapters were first required.

Economic Observations

The cost of fire protection hardware is only one part of the budget of a Board and Care Home. The capital cost may appear to be large. However, if the cost is amortized over a number of years, the annual cost would normally be a small portion of the annual budget. If the operator of the Home is a well financed corporation with the ability to borrow funds, then the annual cost is a meaningful concept. On the other hand, if the Board and Care Home is a small family activity--that is, a "Mom and Pop" operation--then the problem of obtaining the capital cost is of paramount concern and amortized cost is less relevant.

The cost of upgrading a given building to meet fire safety requirements is a fixed cost, independent of the services provided. However, the proportion of the budget allocated to meeting fire safety requirements is less in Homes that provide a high level of services. For example, some Homes serve the recovering victims of traumatic brain injuries. The residents are receiving intensive rehabilitation training which can be very expensive. The cost of fire safety is small compared to the cost of the staff that provides these rehabilitation services. It should not be surprising that in an interview with a person supervising a number of such Homes, for a large corporation, meeting fire safety requirements was not considered a problem. He believed many of his Homes were exceeding applicable fire safety requirements.

Many small Homes provide services to residents whose only source of funding is SSI payments. In such Homes the quality and quantity of service is limited by the level of the SSI payments. (The 1993 Federal guarantee level for SSI payments is \$434. Some states supplement this by varying amounts. New York gives a large supplement; in 1990, SSI recipients received a combined payment of \$791-\$821 per month.) Many of these Homes serving residents funded only by SSI payments are not run by corporations that can amortize costs over a number of years.

New economically marginal small Board and Care Homes are likely to be established in existing houses. Often an existing house is selected because it is determined to be cheaper to retrofit an existing dwelling than to construct a new building. Also, some prospective providers already own their own homes and are seeking a new or increased²⁰ source of income. The costs of upgrading buildings to meet fire safety requirements have major economic impacts.

²⁰ They may already be providing care to a few clients. Increasing the number of clients may change their occupancy classification to Board and Care.

Some have argued that many of these economically marginal Homes do not provide an adequate level of safety and care. On the other hand, others have argued that many of these Homes provide better care than any large facility can provide. Others state that only these family operated Homes can provide satisfactory care that the less affluent residents can afford. The cost of fire safety requirements does affect decisions regarding establishing such Homes and increases in fire safety requirements do affect decisions regarding whether to continue in business.

Impact of Insufficient Funds on Size and Availability of Board and Care Homes

However, just as there is a need for a minimal level of fire protection, there are legal requirements for a minimal level of the other services. When the cost of providing minimal services exceeds the SSI payment or the ability of the residents to pay, there are several possible consequences:

The less efficient providers will go out of business and the more efficient providers will expand to fill the gap.

A sufficient number of providers will go out of business that there will be a shortage of beds and some citizens with disabilities will not be able to find housing in regulated Homes. They may live in "underground" housing, they may become homeless, etc. This impact is discussed further in the Section, Falling Through the Cracks, on page 19.

Providers may increase the size (population) of their Homes by expanding existing Homes or moving to larger buildings. For example, we were told that in New York State a newly developed Home, with residents supported solely by SSI payments, needs to have at least 40 residents to be economically viable.

Providers may decrease the size (population) of their Homes to get below the size at which the rigorous regulations apply. For example, in jurisdictions that use the Life Safety Code without modification, the Board and Care fire regulations do not apply if the number of residents is three or fewer. In most jurisdictions that use one of the three Model Building Codes or an associated fire code, the Board and Care fire regulations in the applicable code do not apply if there are five or fewer residents.

The movement toward housing citizens with disabilities in small Group Homes instead of large institutions has been based on the assumption that better care can be provided in the smaller Homes. This study was focussed on fire safety and will not address the positive and negative consequences of small Homes being replaced by Homes with 40 residents. The downsizing of Homes to avoid regulations is obviously contrary to efforts to upgrade the safety of Homes through regulations--even if, in individual cases, a high quality of safety and of care is provided in the downsized Homes.

In some cases, the level of available funding is not clear cut. If the rates change, some residents may be able to afford the increase and others may not. The provider must make decisions regarding how much to increase his charges and how to decrease costs.

Several states are now requiring all Board and Care Homes to have automatic sprinklers as a fire safety feature. With new sprinkler technology, the cost of retrofitting existing buildings with sprinklers has been substantially decreased, leading to an increase in the number of jurisdictions requiring sprinklers. Despite the decrease in cost, many providers cannot afford the cost of retrofitting their Homes with sprinklers.²¹ Several states have programs that have permitted the state to pay for the installation of automatic sprinklers in some privately owned and operated Board and Care Homes. The states that have paid for such sprinklers include Ohio and New Hampshire. The existence of such programs partially substantiates the analysis above about the financial problems of the providers in meeting new requirements and implies that there is a concern by state officials about the availability of a sufficient number of Homes in which to place their citizens with disabilities. On the other hand, it also supports the attitude of some safety regulators that "If it is really needed, they will always come up with the money."²²

Other Types of Homes

There are a variety of facilities that, from a fire safety perspective, might be considered as Board and Care Homes. In each case, we would consider a specific facility to be a Board and Care Home if and only if the definition of Residential Board and Care Occupancy in the Life Safety Code would apply. It should be noted that there may be a group of facilities in a single program where some of the facilities might be regulated for fire safety using the Residential Board and Care Occupancies Chapter and other facilities in the same program might be regulated using other occupancy chapters. For example, some facilities, as described in the next paragraph, established by the Department of Veterans Affairs to assist homeless veterans might provide the services of a Board and Care Home and other facilities might better be classified as a Nursing Home. One could envision facilities that would be classified as Lodging and Boarding Houses, Hotels or Dormitories.

The Department of Veterans Affairs has three relatively new residential programs to address the needs of Veterans who are at high risk for homelessness, joblessness and institutionalization, including veterans who are homeless or living in shelters just prior to the time of admission into the residential program. These programs are referred to as the Therapeutic Residence Program, the Domiciliary Care for Homeless Veterans Program, and the Homeless Chronically Mentally Ill

²¹ We attempted to determine the cost of retrofitting small Board and Care Homes with sprinklers designed for small residences, i.e., sprinklers meeting the requirements of NFPA 13D. We found the costs to vary widely as is discussed in the section, AUTOMATIC SPRINKLER SYSTEMS, of this report. The information we received indicates that the cost for a minimal system in a former one family house would range from \$5000 to \$15,000.

²² The National Association of State Mental Retardation Program Directors has shown that sometimes, even when a program is really needed, the necessary funds to meet Federal statutory requirements may not be made available. Forty three states and the District of Columbia responded to a questionnaire about an early intervention program for infants and toddlers authorized under Part H of the Individuals With Disabilities Education Act. "An overwhelming majority of the respondents cited the lack of adequate state/local funding for early intervention services as the most important single barrier to meeting the statutory objectives of Part H." Reference: New Directions, op. cit. Feb 1991, Vol. 21, No. 2, p. 5.

Veterans Program.²³ The participants in these programs tend to have had a history of general psychiatric problems, alcohol abuse problems, drug abuse problems, or medical problems. A majority have had more than one of these problems. The programs address, as appropriate, these psychiatric, substance abuse and medical problems. There is also a social vocational rehabilitation component. While residents may stay in the residential portion of the program for a number of months, the programs are not designed to provide permanent domiciliary care.

New York State has developed homes to provide for citizens with AIDS. They had planned to use old hotels, old mansions, large private residences ("brownstones"), etc.; apply the "Prompt" requirements of the Board and Care Chapter; and house only residents who were fully capable from a fire safety standpoint. When the program was first started, they were able to obtain Federal Medicaid funding but the Medicaid rules were interpreted as requiring the buildings to meet the requirements in the Health Care Chapters of the Life Safety Code.

Some persons with disabilities who are not homeless may nonetheless be inappropriately and dangerously housed as illustrated by a fatal fire in a multi-use building where residents in need of personal care were housed in unsupervised apartments.²⁴

²³ References: (1) Leda, C., Rosenheck, R., and Medak, S., Preliminary Information on the Department of Veteran Affairs' Compensated Work Therapy/Therapeutic Residence Program, Northeast Program Evaluation Center, West Haven Veterans Affairs Medical Center, West Haven, Conn. 06516, May 4, 1992, Final Draft. (2) Leda, C., Rosenheck, R., Medak, S., and Olson, R., The Third Progress Report on the Department of Veteran Affairs' Domiciliary Care for Homeless Veterans Program, Northeast Program Evaluation Center, West Haven Veterans Affairs Medical Center, West Haven, Conn. 06516, June 21, 1991. (3) Rosenheck, R., Phil, P., Leda, C., Thompson, D., and Errera, P., Reaching Out: The Second Progress Report on the Veterans Administration Homeless Chronically Mentally Ill Veterans Program, Northeast Program Evaluation Center, West Haven Veterans Affairs Medical Center, West Haven, Conn. 06516, December 28, 1988. (4) Rosenheck, R., Gallup, P., Leda, C., Keating, S., Errera, P., The Fourth Report on the Department of Veterans Affairs Homeless Chronically Mentally Ill Veterans Program, Northeast Program Evaluation Center, West Haven Veterans Affairs Medical Center, West Haven, Conn. 06516, August 5, 1991.

²⁴ There was a fatal fire in a multistory building in Roanoke, Virginia. One floor of the building was occupied by a Board and Care Home. The other floors housed similar residents but did not provide the services, care and oversight of the Board and Care floor. The occupancy classification of the other floors could be called Dormitory or Residential Hotel. The fire and the fatalities were on a Dormitory floor. Some of the residents in the Dormitory floors were high functioning and some were even employed to work in the Board and Care Home. However, some of them had physical disabilities and were unable to use the stairs. On the other hand, we were told that all of the residents in the Board and Care Home could physically use the stairs. An employee made this a requirement for admission for fire safety reasons: the facility had a previous fatal fire. She was able to enforce this requirement because there was sufficient demand for a limited number of beds in the Board and Care Home floor of the building. It appears that some of the residents in the Dormitory would have been more appropriately placed in a Board and Care Home. For these residents, we were unable to determine whether they preferred the independence of living in the Dormitory or they were unable to find space in a conveniently located Board and Care Home at a price they were willing or able to pay.

Falling Through the Cracks

The regulation of Board and Care Homes appears to be based on the assumption that all those that need and want to be in Board and Care Homes are in Homes that meet the regulations or are in other acceptable housing--such as homes of family members--awaiting placement. However, this is not the case. Many citizens are living in unregulated Homes or are "homeless."

It is difficult to study illegal Board and Care Homes for obvious reasons. However, one author had the opportunity in 1992 to visit a number of Homes housing SSI recipients in a state that did not supplement the minimum Federal SSI payment. (The SSI payment was \$422 per month.) All the Homes visited were attempting to obtain licenses as required by a relatively new state law. His host informed him that there were many Board and Care Homes that did not meet the new state requirements and were not attempting to obtain licenses. In a conversation, the owner of one of the Homes visited, which was in the process of obtaining a license, mentioned that she had seriously considered not spending the money required to meet the licensing requirements and had considered going "underground."²⁵

One of the impressive facts learned during the visit to these Homes was that there were many residents in rural Board and Care Homes who previously had lived in the metropolitan area of the nearby major city. The project member was informed that there were insufficient Board and Care Home beds in the city. It was more difficult to provide the needed care for \$422 a month (\$434 a month in 1993) --the amount provided by SSI payments--in a city than in a rural area. In fact, as part of the visit, the author visited a rural farming community where board and care housing was a major "industry" in the community. The Homes were in such a rural area that not a single commercial building was observed, including gas stations and stores, during the tour of the widely separated Homes. We inquired of the mental health association official in the nearby city if there were sufficient beds (licensed and underground) in the rural area to meet the need and if not what happened to the people. He replied that they "live under the bridges."

One of the authors visited the site of a fire in a building housing the type of residents one expects to find in Board and Care Homes. There had been ten fatalities. The building had once housed a licensed Board and Care Home which lost its license. It appears that when the Home lost its license, some of the residents stayed in the building and continued to receive some services. The authors do not know why the facility was permitted to continue to operate. However, one newspaper reported the city "has at least 25-30 houses that operate as Adult Foster Care Homes despite losing their licenses,"²⁶ and the competing newspaper reported "10 of 15 adult foster care homes...remained open after the state revoked their licenses and ordered them to close."²⁷ A

²⁵ A major expense that most existing homes had in upgrading to meet the licensing requirements was the installation of an alarm system. A number of rural Homes all appeared to be using the same alarm company and paid about \$3500 each. This compares with \$2275 for an alarm system purchased in the nearby major city using competitive bidding. While the state requirements were based on the Life Safety Code, their required alarm/detection system was beyond that required by the Life Safety Code.

²⁶Reference: Detroit Free Press, June 4, 1992 page 1A.

²⁷ Reference: Detroit News, June 7, 1992, page 1A.

former Mental Health director was quoted as saying, "The problem is that there's no follow-up. Everyone will wring their hands and politicians will promise reforms, but lives will continue to be at risk until people want to step up and provide resources for proper care."²⁸ The City Council President was reported as saying the city had cut the number of building inspectors who check for violations at Boarding Homes like the one with the fire.²⁹ She summarized the situation, "The state isn't licensing new foster care facilities. People who live in these places have fallen through the cracks of regulation, and they have to go someplace."³⁰

²⁸ Reference: Detroit News, June 3, 1992, page 1A, 6A.

²⁹ Reference: Detroit News, June 3, 1992, page 7A.

³⁰ Reference: Detroit News, June 3, 1992, page 1A, 4A.

HOW MUCH FIRE SAFETY

Introduction

The level of fire safety that should be required in Board and Care Homes, and other residential arrangements for citizens with disabilities, is a policy decision. This document presents the major findings of a research study and as such should not recommend a level of safety. Nevertheless, the sponsors are supporting this research in the expectation that the results will provide assistance in setting the fire safety rules for housing citizens with disabilities. The project has been designed, and this report written, in an effort to provide information that will assist. The information provided includes not only technical information related to fire safety but other factors that would normally be considered in developing and adopting fire safety codes.

We assume that the goal is to provide the highest quality living arrangements possible for the target population with the available resources. Fire safety is an important factor in judging the quality of the living arrangements. Most if not all of the readers of this report should agree that it is impossible to have a high quality living arrangement in a "fire-trap." In addition, most would want a very high level of fire safety. Furthermore, the level of available resources is not fixed: tax rates can be raised or lowered, and tax revenue can be reallocated.³¹

In the following sections we will discuss some of the factors that relate to the proper level of fire safety.

Right to Risk

Many advocates for persons with disabilities are very concerned with their quality of life. The advocates recognize that efforts to provide residents with disabilities with a stimulating environment will, at the same time, increase their exposure to danger. They claim people with mental retardation and other citizens with disabilities have the "right to risk." All active people expose themselves to risk every time they travel, or mingle with people who might have communicable diseases. In this report, we limit the maximum severity of risks covered by the phrase and concept "right to risk" to the risks that most people accept for themselves and their own families.

Cost, Quality of Life, and Limited Resources

Firesafety in Board and Care Homes costs money. Sometimes additional staff must be hired. Upgrading or adding fire safety features to a building can be expensive. There appears to be near unanimous agreement that this is often money well spent. On the other hand, as discussed in other Sections of this report, funds are limited. As with all efforts to improve safety, there is a point of diminishing returns. One should not expect universal agreement regarding the point at which the costs outweigh the benefits. Nevertheless, codewriters must develop a consensus.

³¹ Not all residents of Board and Care Homes and alternative housing arrangements are supported by a government agency. However, a large portion of residents, not supported by government agencies, have limited funds available.

A realistic approach to the balance between cost, reduction of freedom and fire safety is expressed by Arthur E. Cote, Assistant Vice President and chief engineer for the National Fire Protection Association. "Safety depends on risk, and the degree of safety desired depends on how much we are willing to pay to eliminate the risk. The cost of eliminating certain risks is exorbitant, while the elimination of all risk is infeasible, even apart from cost. In addition, part of the cost of risk elimination is the reduction of freedom. Many aspects of safety systems have this effect as they come to bear on public acceptance of risk elimination."³² Most experts involved in code writing will agree with this statement. There is disagreement among experts as to what is a reasonable monetary cost and a reasonable reduction in freedom.

The Safety of Private Homes

Proponents of the right to risk might claim that it is justified to expose the residents of a Board and Care Home to the same level of risk as residents of typical homes and apartments, if the housing arrangement encourages a high quality of life. As is discussed in the Section, The Fire Safety Problems of Small Homes, on page 61, the safety record of private homes and apartments is considered neither good nor satisfactory by most fire safety experts. However, many private homes neither meet current codes nor have residents who follow good fire safety practices. Private homes that meet current codes and that have families following good safety practices have a better fire safety record.³³ The fire safety record of these homes is a reasonable goal for Board and Care Homes for small groups of citizens with disabilities.

Availability of Funds

Two of the authors of this report are members of the Board and Care Facilities Technical Committee and were members of its predecessor, the Board and Care Facilities Subcommittee of the Committee on the Safety to Life of the National Fire Protection Association. It is their observation that all committee members were concerned with financial realities, but there was an underlying assumption by some members--that has been verbalized--that government agencies can and do always come up with the necessary money. This assumption led these committee members to recommend strict standards that are apparently based on their judgement as to what is really needed and what is reasonable, without being limited by what is affordable.

There is some justification for this assumption. There never seems to be enough money to do all that is needed, and it is tempting to scrimp on fire safety and direct the available funds to the more immediate demands of the operation or to other programs. As the saying goes, "The squeaky wheel gets the grease."

On the other hand, one must recognize that, at this point in a time, most states and cities are having financial difficulties and are cutting expenditures (i.e. programs), even those jurisdictions

³² Reference: Cote, A. E., Will Firesafety Standards Survive in the 21st Century?, Fire Journal, July-August 1991, Vol. 85, No. 4, pp. 36-45.

³³ Cohn, B, Setting Life Safety Goals in Building Design, SFPE Engineering Seminar, National Fire Protection Association Fall Meeting, Montreal, Quebec, November 18, 1991.

that are raising taxes. For example, a headline in the Washington Post newspaper of July 2, 1991 reported:

Assistance to Disabled Falls Short
6,000 Md. Residents Wait for Services³⁴

The problems and impacts of limited funds is a recurring theme in this report.

Impact of Increasing Fire Safety Requirements

An increase in the fire safety requirements can have a major impact on the providers. It can also have an impact on residents in Homes and on agencies that fund the residents or otherwise have responsibility for the residents. This increase can come from new requirements or from improved enforcement of existing requirements. (It is interesting to note that when fire safety requirements are increased, there is a tendency to "grandfather" in existing facilities: that is, existing building are evaluated on the basis of the rules in effect when they were first approved.)³⁵

Fire Incident Record

The Administration on Aging participated in funding this project. During the project planning stage, the Administration on Aging requested that an additional task be performed regarding fire safety trends in Board and Care Homes. In partial fulfillment of this task, the National Fire Protection Association (NFPA) has submitted a report of a special analysis of fires in Board and Care Homes. This report is being published as a separate Contractor Grant Report by the National Institute of Standards and Technology.³⁶ The table on page 26 of this report entitled "Known Fatal Fires in Board and Care Homes" is largely based on the NFPA report.

Twenty years ago the fire safety community was generally unaware of the existence of Board and Care Homes as we now know them. Facilities providing the services of Board and Care Homes were considered as Nursing Homes or Boarding Homes depending on the characteristics of the particular facility and its residents. We reviewed some of the published fire reports between 1970 and 1977 and found some facilities that were classified as either Boarding Houses or Nursing Homes that appeared to be Board and Care Homes based on the information in the fire report. Our classification of the affected facilities as Board and Care Homes is a judgement call based on the best available information. In preparing the table of "Known Fatal Fires in Board and Care Homes," we included these fires as well as the fires reported in the NFPA report.

³⁴ Washington Post, Vol 114, No. 209, July 2, 1991, p. B1.

³⁵ The Life Safety Code was written so that Board and Care Homes meeting the requirements in the 1985 or 1988 Editions of the Code meet the requirements for existing in the 1991 Edition. This precludes the need for a grandfathering clause.

³⁶ Hall, John R., Special Analysis, U.S. Fires in "Board and Care" Homes, Matrix Display of Selected Fatal Fires, National Institute of Standards and Technology Contractor Grant Report No. NIST-GCR-93-627, April 1993.

The total number of fires is small from a statistical standpoint. Usually it is difficult to determine patterns with such limited data. The data below show a relatively high number of fatal fires around 1978 with 162 fatalities in the four years 1978-1981. This decreased to 39 in 1982-1985 and 29 in 1986-1989. However, there was an increase to 59 for the **three** years 1990 to 1992.³⁷ We could develop a list of possible reasons for this increase, but there is a reasonable chance that it is largely due to a combination of improved reporting and random fluctuation.

The data base does not include all fires: it may contain a larger percentage of the fires in the latter part of the decade of the 70's than the earlier part, as the data collection procedures were improved and fire investigators became aware of the new occupancy classification of Board and Care Homes--some Board and Care fires may have been reported as Boarding House and/or Health Care fires in addition to the ones we reclassified. This distinction is still a problem: the one fire listed for 1992 clearly operated as a Board and Care Home but was regulated as a Boarding House. See page 19 for more details on this situation.

The actual improvement in fire safety is probably even greater than it appears. The number of Board and Care Homes is generally assumed to have been continually growing, and we have been informed by several sources that the residents are becoming more disabled on the average. (On the other hand, some of the newer Homes have so few residents that they may no longer be called Board and Care Homes and might not be so classified in data bases.)

While the improvement coincides with the publication of the 1985 Edition of the Board and Care Chapter of the Life Safety Code, it cannot be claimed that the reduction is due to the Code. In the early part of the 1980's, some states enforced strict new laws and regulations requiring the upgrading of the fire safety in Board and Care Homes. New Jersey is a dramatic example: there were several major fires and the state increased the fire safety requirements before publication of the Board and Care Chapter. The safety record in New Jersey improved--we know of no recent fatalities.

A major goal in developing the precursor to Chapter 21 (the original Board and Care Occupancy Chapter in the 1985 Edition of the Code) was to have a set of fire safety requirements that would provide a high level of fire safety without unnecessary costs or unnecessary interference with the programs in the Home. The data and information collected in our project--including the NFPA report--indicate that adoption and enforcement of the Board and Care Chapter of the Life Safety Code does, in fact, provide a high level of fire safety without unnecessary costs or interference with the operation of the Home. There are, of course other codes, including the model building codes, that also provide a high level of protection. Since most of the listed fatal fires were in facilities that did not meet the requirements of the Life Safety Code or any other similarly rigorous code, and since a majority of Homes do meet such requirements, we can conclude that the Life Safety Code and other rigorous codes do provide a high level of safety when the Code is adopted and enforced.

Although most of the fatal fires with multiple fatalities were in Homes that did not meet any generally accepted level of fire protection for Board and Care Homes, there were at least two exceptions. These fatal fires were in facilities that we believe were required to meet the Life Safety

³⁷ Since there is sometimes a delay in learning about fires, it is possible that additional fires for 1992 will be entered into the data base.

Code but had deficiencies: one of the two had a sprinkler system that was not installed or not maintained properly; and the other had a combustibile ceiling, insufficient resident training and non complying fire drills, i.e., only staff participated in fire drills. Nevertheless, the majority of the fires with multiple fatalities were, and still are, in facilities that do not meet the Board and Care Occupancy requirements in any Edition of the Life Safety Code since 1985, or any other rigorous code.

It has been generally accepted among fire regulators that the fire record for Board and Care Homes has not been good.³⁸ It is clear that this poor record has been caused by the failure of many Board and Care Homes to meet any rigorous code, such as the Life Safety Code. Our study and analysis of known Board and Care Fires has not provided any technical information indicating that the Life Safety Code or the model building codes need to be made more rigorous. Adoption and enforcement of these codes is the obvious key.

³⁸ Lathrop, James K., Ed., Life Safety Code Handbook, National Fire Protection Association, Inc., Quincy, Mass., 1991, p. 683.

KNOWN FATAL FIRES IN BOARD AND CARE HOMES

Year	Number of Fires	Number of Deaths	Deaths per Fatal Fire*
1970**	1	31	31.0
1971	4	18	4.5
1972	4	34	8.5
1973	5	18	3.6
1974	1	2	2.0
1975	1	2	2.0
1976	2	6	3.0
1977	1	4	4.0
1978	6	20	3.3
1979	5	61	12.2
1980	5	34	6.8
1981	8	47	5.9
1982	1	3	3.0
1983	5	27	5.4
1984	2	7	3.5
1985	1	2	2.0
1986	7	20	3.1
1987	2	4	2.0
1988	1	2	2.0
1989	2	3	1.5
1990	9	34	3.7
1991	3	15	5.0
1992	1	10	10.0

* Since published fire reports tend to cover fires with many fatalities, our approach biases the Deaths per Fatal Fire in an upward direction.

** Based on a review of published reports of fatal fires, we have added additional fires from the decade of the 1970's to those appearing in this chart in the Interim Report of this project. Our classification of the affected facilities as Board and Care Homes is a judgement call based on the best available information.

TRENDS AND OTHER FACTORS THAT SHOULD AFFECT FIRE SAFETY IN BOARD AND CARE HOMES

Fire Safety Requirements

There is a long term trend to require higher levels of safety over time. There are several reasons for this including:

New technology permits upgrading fire safety at a reasonable cost.

Research, including studies of fatal fires, reveals (or helps substantiate the need for) changes in the regulations that would increase safety.

Some fire safety experts and some government officials believe that their role is to seek an ever higher level of safety.

There are two long term trends that are affecting fire safety requirements for all buildings, including Board and Care Homes: the increased use of smoke detectors and the increased use of automatic sprinklers.

Automatic Sprinklers are discussed in the Section AUTOMATIC SPRINKLER SYSTEMS on page 39 and the non fire related impact of their increased use is discussed in the Section on Some Impacts of Limited Funds on page 14. Smoke detectors are discussed in the next Section.

Smoke Detectors

About 20 years ago great strides were made in decreasing the cost of smoke detectors. Their use quickly became commonplace. Now, it is not a question of whether or not their use is required in Board and Care Homes but, rather, questions such as where in the facility they should be required, how they should be powered (i.e. are battery powered detectors permissible?) and how they should be interconnected. Research has shown that only a few detectors, properly placed, are required to significantly upgrade safety. Additional detectors, of course, will provide additional protection and the 1991 Edition of the Life Safety Code requires more detectors than earlier editions. Many experts believe that putting a single station detector in each bedroom will provide enough additional safety to justify the purchase price of the detectors, and the "costs" of more frequent false alarms. There is less agreement that the additional detectors in the bedrooms provide a significant increase in safety in facilities with quick response or residential sprinklers. The 1991 Edition of the Life Safety Code requires smoke detectors throughout new Board and Care Homes, including bedrooms. However, a controversial exception in the Code permits them to be omitted in the bedrooms of a small Board and Care Home if the building has fast response or residential type sprinkler heads in the bedrooms and a smoke detector system covering the common spaces and corridors.³⁹

³⁹ The 1991 Edition also permits the omission of some detectors outside the bedrooms if all bedrooms do have smoke detectors and the building has a sprinkler system using quick response or residential sprinklers.

The cost of installing extensive smoke detector systems and sprinkler systems is less when constructing a new building than when installing them in an existing building. As discussed in the Section, Additional Requirements Imposed by Jurisdictions or Agencies Using the Board and Care Chapters, on page 47, even without considering the improved safety, an operator may wish to install these systems in new buildings to avoid the risk of expensive retrofits in the future.

Medical Care

Several of our respondents commented on the trend of placing citizens who are both frail and elderly and others in Board and Care Homes rather than in Nursing Homes. See the discussion of OBRA-87 in the Section, Capabilities of the Residents, on page 31. Some experts applaud this trend because they believe that non institutional accommodations are superior to institutional ones and Nursing Homes are usually operated as institutions.

Some experts criticize the decision--largely stemming from Medicaid and Medicare regulations--to follow a medical model rather than a residential model in providing "nursing care". The Nursing Homes of 40 years ago largely provided the care we now provide in Board and Care Homes. (A study of fire reports of Nursing Home fires of twenty years ago indicates that most of the patients were receiving personal or custodial care rather than medical care.) These experts believe that placing citizens who need assistance with the activities of daily living in Board and Care Homes, rather than in Health Care facilities is an overdue correction of a serious error.⁴⁰

Nevertheless, it appears that in many cases a major motivation or goal is to save money--it is part of an effort to attack the "Health Care Crisis." Fire safety officials are aware of this motivation and are suspicious of efforts to apply residential fire safety requirements, and some officials resist these efforts.

Whatever the goal, some Board and Care Homes do have residents with more severe *health* problems than were anticipated when the Board and Care Occupancy requirements were first developed. Nevertheless, this study has not found any evidence (nor received any comments) that the more severe health problems of the residents make the Code any less applicable. However, the Life Safety Code clearly states that facilities providing medical treatment--as opposed to personal care with some transient medical care--are subject to the Health Care Occupancy Chapters.

In the Section, Distinguishing Between Health Care and Board and Care Occupancies, on page 51, we note that some patients in Nursing Homes are being placed in residential settings where the necessary nursing care is provided. From our standpoint these are experimental programs and it is too early to predict whether or not this will become a trend.⁴¹

⁴⁰ Tilson, David, The Role of Residential Care Facilities in Providing Long Term Care, 1993 Annual Conference, National Association of Residential Care Facilities, Arlington, VA, March 26, 1993. Unpublished.

⁴¹ A front page article in the Wall Street Journal, (Eastern Edition, December 4, 1992, Vol. 220, No. 111) highlighted this approach. This may be an indication that this will become a trend. The article may also help it become a trend. This approach was described at the 1993 Annual Conference of the National Association of Residential Care Facilities, March 27, 1993, by Cindy Hannum and Kathy

If these facilities, which are in residential settings, provide the **medical** services of a Nursing Home, they would be covered by the Health Care Occupancy Chapters of the Life Safety Code. These requirements are designed for large institutional buildings. Residential settings cannot meet the requirements in the chapters, including those requirements that have a questionable relationship to fire safety in residential buildings. For example, the New Health Care Occupancies Chapter requires a corridor to be at least six feet wide. Not only would it be impractical to have such a corridor in a small, retrofitted residential building, but its appearance would create the institutional ambience which placement of the person in a residential setting was designed to avoid. The fire safety problems of these facilities may be similar to the fire safety problems of small impractical Board and Care Homes. An argument can be made that the requirements for small impractical Board and Care Homes are appropriate for these small health care facilities in residential settings. The Health Care Chapters could be expanded accordingly, if the suggestion is found to have technical merit. The authors of this report are unaware of any effort to make such a change or to study the possibility, and they would anticipate considerable resistance.

Community Supported Living Arrangements⁴²

Some citizens live in their own apartments or houses (as owners or renters) even though they need some assistance to maintain the dignity and independence that comes from living in one's own home. The personal assistance may include any or all of the following examples: help in balancing a checkbook; training in fire safety including overnight supervision until training is completed; meals on wheels; and assistance in facing health, emotional or employment problems. The assistance may be provided around the clock but more often is provided on an as-needed basis, which may or may not be on a schedule. The person needing the assistance may be living alone; living with a spouse who also needs assistance; living with a roommate who is receiving a financial consideration for providing some of the needed support; or living with a roommate who is a friend, who is not considered as having a disability, and who is not responsible for providing assistance but probably does provide some anyway.

There is usually some social agency, public or private, that coordinates the providing of the assistance. The employees of this social agency may provide none, some, or all of the assistance needed. Some experts recommend that the social agency limit its involvement to coordination and that all direct services be provided by others.

There appears to be two major ways that a citizen can become involved in a such a living arrangement.

Labadie of the Oregon Department of Human Resources. The concern of the audience demonstrated that there is substantial interest in this approach.

⁴² There are a number of labels used for naming the housing arrangements described in this section. We use the title "Community Supported Living Arrangements" because that is the term used in Federal Legislation (OBRA-90, P.L. 101-508.) Other terms we have heard are also used with other meanings in other contexts.

A person or couple may be living independently until their abilities are diminished by aging, sickness, or accident. They may not wish to leave their homes and move to a Board and Care Home, enter a Nursing Home, or move in with their children, parents or other relative or friend. Instead, they may prefer to remain in their own home and contract for the services they need to remain living there.

A person may have been cared for in a Board and Care Home, a Nursing Home, or another type of institution. A social agency arranges for the person to move to their own apartment or house and arranges for the provision of the needed support that the person requires to live "independently."

Gary Smith's 1990 report "Supported Living: New Directions in Services to People with Developmental Disabilities"⁴³ discusses, in detail, the use of this new approach in providing care for citizens with developmental disabilities. Smith claims that Board and Care Homes of any size are basically institutions because they embrace the same service delivery principles: namely, "the application of 'care and treatment' in specialized facilities by paid professional and paraprofessional staff." One organization is responsible for all aspects of care, including room, board, and personal care. He describes an alternative approach where one or more citizens with disabilities are placed in normal housing and an individualized program of assistance is designed and provided. The assistance is often provided by a different person or organization than the landlord, or the agencies providing supervision and funding. Smith calls these combinations of housing and care "Supported Living Programs" or "Supported Living Arrangements." The Omnibus Budget Reconciliation Act of 1990 (OBRA-90: P.L. 101-508) calls them "Community Supported Living Arrangements." As recognition of this approach, but not a full commitment to fund them, the act permits a few selected states to support such arrangements with special Medicaid funding.⁴⁴

Such an approach sounds very expensive and, in fact, can be very expensive: Smith cites costs up to \$286 a day (i.e., over \$100,000 a year). However, he claims that the *average* cost is no greater than other more traditional approaches. In fact, he claims that, in some cases, using this approach can be a cost savings measure because each client receives only the personal care services he or she needs.

Smith documents in his report the success of programs based on his Supported Living Arrangements model in a number of states. Based on his report, we can assume that an increasing number of citizens with disabilities will be housed in Community Supported Living Arrangements.

Often a person with disabilities is placed in a Board and Care Home where he or she is trained in fire safety and other skills prior to placement in an independent living arrangement. In Community Supported Living Arrangements, based on the model in Smith's report, people with disabilities are moved into regular housing of the community before they are trained for independent living: it is

⁴³ Smith, G.A., Supported Living: New Directions in Services to People with Developmental Disabilities, National Association of State Mental Retardation Program Directors, 113 Oronoco St. Alexandria, VA 22314, November 1990, p. 11.

⁴⁴ The eight states selected are California, Colorado, Florida, Illinois, Maryland, Michigan, Rhode Island, and Wisconsin.

assumed that this training is more meaningful and relevant when conducted in Community Supported Living Arrangements rather than in a small Board and Care Home which Smith considers to be a small institution.

Programs to provide assistance to those wishing to remain in their own homes are more likely to evolve than to be planned and established. For example, an organization may be providing housing for aging but fully capable citizens, perhaps using federal subsidies from the Federal Department of Housing and Urban Development. As their tenants become older and less capable, they might provide some assistance for their tenants in obtaining services that the community provides, such as meals on wheels. The level of assistance might grow with time as their tenants continue to age. The landlords have conflicting goals. They want to permit their tenants to "age in place," and delay or avoid the emotionally painful move to a Board and Care Home, to their children's home or elsewhere. They also wish to maintain a group of healthy and attractive tenants so that they can attract a continuous flow of new tenants to fill vacancies. Those landlords, that are deeply concerned with having their tenants age in place, will provide or arrange for the necessary support services.

As with Board and Care Homes, the fire safety of these housing arrangements can be regulated by the appropriate fire safety agency, such as the Fire Marshal, and/or by the responsible Social Service Agency. Because of the small number of residents in each dwelling or apartment unit and the architecture of the units, one would anticipate that most regulators would apply the normal requirements for One and Two Family Homes, or the normal requirements for Apartment Houses. That is, there would be no additional requirements based on the disabilities of the residents. Fire safety regulations for these homes are discussed in the Section, FACILITIES TOO SMALL TO BE REGULATED AS BOARD AND CARE HOMES, on page 58.

Capabilities of the Residents

Ten years ago, when designing the precursor of the Board and Care requirements in the Life Safety Code, it appeared that the capabilities of the residents with developmental disabilities in a given Board and Care Home would normally either improve or remain rather stable. The residents were often receiving intensive training after years of living more passive lives. Now when addressing a wide range of Board and Care Homes, there is reason to expect a good percentage of Homes will tend to house residents that might become less capable, as a group, over time. This is especially true of Homes providing care for elderly citizens.

The Omnibus Budget Reconciliation Act of 1987 (OBRA-87), subtitle C of Title IV, contained sweeping changes in federal statutes governing Medicaid and Medicare-certified Nursing Homes. The changes impacting on this project are those which are designed to eliminate inappropriate Nursing Home placements involving persons with mental illness, mental retardation and related conditions. Each state is now required to establish Preadmission Screening and Resident Review (PASARR) programs for patients with mental retardation and mental illness to assure that new admissions to Nursing Homes and current patients in Nursing Homes do, in fact, need the level of care provided by such institutions. These rules apply to all patients in Nursing Homes with Medicare and Medicaid patients, including those patients with mental retardation or mental

illnesses who pay their own way.⁴⁵ The Health Care Financing Administration published its regulations in the November 30, 1992 issue (pages 56450-56514) of the Federal Register. It should be noted that this legislation is directed at the placement of people who have the disabilities of mental retardation and mental illness. Lakin stated that there were 65,538 patients in Nursing Homes with the primary diagnosis of mental retardation (or related conditions) or mental illness as estimated in the 1987 National Medical Expenditure Survey.⁴⁶ We can anticipate that current and future efforts to eliminate inappropriate Nursing Home placement will help to increase the number of Board and Care Home residents. These new residents are likely to have relatively severe disabilities.

We are being told that when Board and Care residents become less capable, the amount of deterioration necessary before transfer to a Nursing Home is increasing. From our vantage point we do not know how much of this is due to: 1. PASARR programs; 2. the scarcity of Nursing Home beds;⁴⁷ or 3. the desires of the family and providers to keep residents in a more familiar and stimulating environment, e.g. the concept of "aging in place". The important thing is that, over time, many Homes will be housing less capable residents.

The obvious solution is to build new facilities to meet the requirements for "Slow" or "Impractical to Evacuate" when the current or initial residents have a higher level of capability. However, this may not be a necessary or affordable approach when establishing a new small Home in an existing building, especially if the residents with disabilities are high functioning citizens with limited income. Furthermore, this approach means not taking advantage of some of the features of the Board and Care Chapters that permit a more homelike ambience and lower costs.

This trend toward Board and Care Homes housing less capable residents has been anticipated by some regulators and providers, especially where some regulators are concerned with the possibility of rapid deterioration of residents in Homes housing elderly persons. Some agencies use the Board and Care requirements in the Life Safety Code but add additional requirements or apply the

⁴⁵ Prior to OBRA-87, Medicaid regulations provided for physician certification and recertification of the need for care for all patients in health care facilities *who are supported by Medicaid*, including patients who are frail and elderly. Reference: Federal Register, Vol. 55, No. 57, March 23, 1990, p. 10952 and Code of Federal Regulations, 42 CFR, Ch. IV.

⁴⁶ Reference: Lakin, K.C., Prouty, R.W., White, C.C., Bruininks, R.H., and Hill, B.K., Intermediate Care Facilities for Persons with Mental Retardation (ICFs-MR): Program Utilization and Resident Characteristics, Report #31, Center for Residential and Community Services, University of Minnesota, Minneapolis, MN, March 1990, p. 69.

⁴⁷ We have received conflicting information about the availability of Nursing Home beds. We have been told that there is a deliberate effort to keep the number of beds below the demand, and we have been told that PASARR and other programs are causing a surplus of beds and making Nursing Homes unprofitable. A Certificate of Need is required before a new Nursing Home can be approved in order to prevent a surplus of beds. A person knowledgeable in the field advised us that some states are applying certificate of need requirements more vigorously than other states. In the states that are not vigorously applying the procedures, the law of supply and demand controls the number of beds and the less competitive Homes may be going out of business.

requirements for "Impractical." This is discussed in the Section, Additional Requirements Imposed by Jurisdictions or Agencies Using the Board and Care Chapters, on page 47.

Other Factors

There are two other factors and developments of such importance that we are addressing them separately in the next two chapters of this report, THE IMPACT OF CIVIL RIGHTS LEGISLATION and AUTOMATIC SPRINKLER SYSTEMS.

THE IMPACT OF CIVIL RIGHTS LEGISLATION

A "Reasonable" Level of Safety

The Life Safety Code states:

The purpose of this Code is to establish minimum requirements that will provide a reasonable degree of safety from fire in buildings and structures...The Code endeavors to avoid requirements that might involve unreasonable hardships or unnecessary inconvenience or interference with the normal use and occupancy of a building, but insists upon compliance with a minimum standard for firesafety consistent with the public interest. (Section 1-2 of 1991 Edition)

In our discussions with providers, regulators and others, there appears to be general agreement that Board and Care Homes should meet a minimum standard for fire safety and that the minimum standard should be not be unreasonably rigorous. Although most people we contacted indicated that they believed fire regulations should assure a high level of safety, there was less agreement on how much fire safety was a reasonable minimum. While many government officials and providers accepted the Life Safety Code as a reasonable minimum, there are some who believe it is too lenient and others who believe it is too stringent. (See Section, General Attitude Toward the Board and Care Chapters, on page 46.)

In determining what is a reasonable level of fire safety, one consideration is whether the fire safety requirements prevent citizens with disabilities from living in suitable housing or in housing of their choice. Just as fire safety authorities set minimum fire safety requirements for Hotels, they have the authority and responsibility for setting fire safety requirements for Board and Care Homes. There are many situations where the fire safety requirements prevent people with disabilities from living in the Board and Care Homes of their choice (or the choice of their guardian.) In some--but definitely not all--of these cases, knowledgeable and well meaning people believe that the fire safety requirements are either too stringent or too inflexible and that the person with the disability would be significantly better off if he or she were permitted to live in the selected Board and Care Home.

It is obviously impossible to develop a set of fire safety regulations that would satisfy every knowledgeable person in every application. Either some would complain that the requirements are too strict in some applications, or others would complain that the requirements are too lenient in some applications. A good code is likely to be subjected to both complaints. This fact of life does not prevent regulatory agencies from adopting fire safety regulations that most providers and advocates for persons with disabilities accept as fair and reasonable.

However, it is possible for fire safety regulations to be used to discourage the establishment of new Board and Care Homes. The authors cannot document that fire requirements have been used to discourage the establishment of new Board and Care Homes: we cannot judge the motives behind regulatory actions. However, we have heard such accusations and we will describe one relevant legal case in the next paragraph. There are two relatively recent Federal laws that prohibit discrimination against people with disabilities: the Fair Housing Amendments Act of 1988 and the

Americans with Disabilities Act of 1990.⁴⁸ Both of these laws can be used to challenge any regulations that appear to have been adopted for the purpose of discouraging the establishment of a new Board and Care Home. It is too early to confidently predict the broad effect of these new laws on the regulation of Board and Care Homes. While the authors would predict that these laws are likely to impact on those jurisdictions that have especially rigorous or inflexible requirements, the examples below illustrate the unpredictability of the effect of the laws.

Marbrunak v. City of Stow, Ohio

The Federal Fair Housing Act has been used to challenge the application of health and safety requirements to Board and Care Homes. In the case of *Marbrunak v. City of Stow, Ohio*,⁴⁹ four parents established a corporation to provide a permanent residence for their four daughters with developmental disabilities to live together as a family unit. The corporation established a "family consortium" which could be considered to be a type of Board and Care Home. The city required the building to have fire safety features that were significantly beyond the state requirements for a family consortium and significantly beyond the city requirements for a typical family residence. The families challenged the fire safety requirements, and the U.S. Department of Justice, on behalf of the Department of Housing and Urban Development, filed a brief as AMICUS CURIAE. The court ruled that the Fair Housing Act applied to this application of the fire rules, and that the challenged fire safety rules could not be applied.

Americans with Disabilities Act

The landmark Americans with Disabilities Act (ADA) was enacted on July 26, 1990, and the associated Federal Regulations were published one year later on July 26, 1991, with an effective date of January 26, 1992. It is too early to determine to what extent that law will affect fire regulations that restrict the access of citizens with disabilities to living in Board and Care Homes. However, we were informed of one situation where the state health department considered requiring all new Board and Care Homes to meet the requirements for Impractical based on the ADA. The agency apparently reasoned that the Home must never be in a position of rejecting an applicant with a disability because of the fire safety requirements. Homes meeting the requirements for Impractical need never refuse potential residents because of fire codes.⁵⁰ The

⁴⁸ Federal Fair Housing Act (Title VIII of the 1968 Civil Rights Act, as amended by the Fair Housing Amendments Act of 1988, 42 U. S. C. Sections 3601 et seq.) and Americans with Disabilities Act of 1990, Public Law 101-336.

⁴⁹ United States District Court for the Northern District of Ohio Eastern District, Case No. 5-90 CV 0925, *Marbrunak, Inc., Plaintiff, v. City of Stow, Ohio, Defendant*.

⁵⁰ We cannot comment on whether or not this is a proper application of the law when a new building is constructed to house the Board and Care Home. However, when the new Board and Care Home is in an existing building, this interpretation of ADA appears to be incorrect. The Federal Register states: "The ADA is geared to the future--its goal being that, over time, access will be the rule, rather than the exception. Thus, the Act only requires modest expenditures, of the type addressed in (Section) 36.304 of this part, to provide access to existing facilities not otherwise being altered, but requires all new construction and alterations to be accessible." (Section 36.304 requires removal of barriers "where such

proposed requirement was not adopted. Prior to the decision, the authority and obligation of the state to enforce the ADA was discussed.

Clackamas County Agreement

Enforcement of the Fair Housing Act by the United States Department of Housing and Urban Development (HUD) has led to Clackamas County in Oregon agreeing to enact and enforce fire safety regulations for Board and Care Homes that are no more rigorous than the regulations for other residential structures of similar size and characteristics. Our preliminary interpretation of this agreement was that the fire safety requirements in the Board and Care Chapters or the Lodging or Rooming House Chapter of the Life Safety Code cannot be applied to a Board and Care Home when the Home is located in a building of the size of a private home, even if the Home cannot be evacuated by the staff on duty.⁵¹ The Complaint concerned a change in septic tank requirements when a private residence was being converted to an Adult Foster Home. The County agreed to "not enact or enforce *any* regulations which have the effect of subjecting structures utilized as residences for disabled persons to health and safety requirements not required of all residential structures of similar size and similar characteristics." (Italics added.)⁵² In all our discussions with providers, advocates for persons with disabilities, and regulators, it had never been suggested or recommended that there not be special fire safety requirements for Board and Care Homes.⁵³ The authors believe that this Conciliation Agreement creates the potential for dangerous situations. We have found nothing in the Fair Housing Act or the associated Federal Regulations that we would interpret as prohibiting special fire safety requirements for Board and Care Homes and, therefore, would not expect to find many similar agreements in the future. Nevertheless, Clackamas County's Conciliation Agreement with HUD was a precedent that disturbed the authors and they believed it should not be ignored.

The project staff attempted to determine to what extent this agreement is a result of or consistent with HUD guidelines or official policies. We sought this information through a Freedom of Information Act request. The HUD response included two letters dated March 5, 1993 and May 12, 1993 to Bernard M. Levin from George L. Weidenfeller, Deputy General Counsel (Operations). His first letter stated: "I am advised by the Seattle Regional Office that the Department has no

removal is readily achievable, i.e., easily accomplishable and able to be carried out without much difficulty or expense.") See Federal Register, Vol. 56, No. 144, July 26, 1991 pp. 35544-35691, especially p.35574.

⁵¹ A "Housing Discrimination Complaint" to the U.S. Department of Housing and Urban Development (HUD) led to a Conciliation Agreement dated May 23, 1991 between HUD, the Complainant, and Clackamas County, Oregon. (HUD case number 10-91-0263-1.)

⁵² Conciliation Agreement dated May 23, 1991 between The United States Department of Housing and Urban Development (HUD), Independent Adult Care Providers (the Complainant), Clackamas County, Oregon. (HUD case number 10-91-0263-1)

⁵³ It has been suggested to the authors that the fire safety requirements for private residences might be properly applied to some small Board and Care Homes where the residents are all capable of self preservation.

information responsive to your request for HUD guidelines relating to the health and safety of board and care homes. Your reference to the provision relating to the health and safety requirements contained in the Conciliation Agreement between Independent Adult Care Providers and Clackamas County (Case No. 10-91-0263-1) reflects the agreement of the parties to that conciliation." In response to our comment that three officials of HUD signed on the signature page of the agreement, he stated in his second letter: "Unlike HUD rules, handbooks, or other written guidance or directives, conciliation agreements do not represent official HUD interpretations, guidelines or policy. Rather, they are negotiated instruments approved by the appropriate HUD officials resolving issues raised in an individual complaint. As a result, their value as precedent is extremely limited."

Mr. Weidenfeller also pointed out that the Conciliation Agreement states: "It is understood that this prohibition applies to the physical dwelling, and that the Respondent (County) may regulate the conduct of providers, and the provision of services by these providers." Mr. Weidenfeller interprets this provision as permitting the imposition of "appropriate protective health and safety requirements through the licensing process."

We have received conflicting information regarding the impact of this agreement on the adoption and enforcement of fire safety rules for Board and Care Homes by state agencies in Oregon. It has apparently discouraged some but not all state agencies from regulating fire safety in Board and Care Homes.

Special Characteristics of the Life Safety Code

Residents of Board and Care Homes usually live in such facilities because they have a disability or problem. Often the disability affects the ability of the resident to take timely and correct actions for self preservation in a fire emergency. If staff actions or resident training cannot fully compensate for this, it may be prudent to add expensive fire safety features to the building to help assure a satisfactory level of fire safety. However, it would be discriminatory to require the same additional fire safety features in a Home where the residents are fully capable of self preservation, or where the residents can quickly evacuate without staff assistance.

The Americans with Disabilities Act Handbook⁵⁴ states: "...any safety standard must be based on objective requirements rather than stereotypes or generalizations about the ability of persons with disabilities..." While the statement was not in the context of fire safety, one could expect that it also applies to fire safety. A similar criterion appears to have been applied to the Fair Housing Act. In the brief filed by the Department of Justice in *Marbrunak v. City of Stow*, they stated: "the City imposed expensive and onerous safety restrictions on Marbrunak without any investigation into the particular nature of the potential residents' disabilities without any evidence that such safety measures would be of benefit to the potential residents." The Life Safety Code requirements for Board and Care Occupancies were designed to limit the imposition of expensive fire safety features to those needed to provide a satisfactory level of safety after due consideration of those abilities and limitations of the residents related to evacuation in case of a fire.

⁵⁴ Reference: Americans with Disabilities Act Handbook, Published by the U.S. Equal Employment Opportunity Commission and the Department of Justice, U.S. Printing Office, October 1992, Appendix M, p. 13.

In the Life Safety Code there are different fire safety requirements for Homes that are classified as Prompt, Slow, and Impractical. The slower the anticipated evacuation time, the more fire safety features are required. When using the Life Safety Code, the relevant capabilities of the residents are used to determine the fire safety features that must be installed in the building. We know of no legal precedents but we anticipate it would be difficult to successfully claim that the fire regulations are discriminatory when the Life Safety Code is used properly.⁵⁵ On the other hand, if the requirements in the Life Safety Code are sufficient, then any set of more restrictive requirements might be challenged as unduly restricting the access of citizens with disabilities to affordable housing with personal care services. Therefore, the Board and Care requirements in the Life Safety Code might be an extremely valuable tool in fighting excessively restrictive requirements precisely because they have been designed to maintain a technically defensible level of risk across levels of impairment.

⁵⁵ It could, of course, be claimed that the Life Safety Code has discriminatory requirements (that is, requirements beyond those necessary to provide satisfactory fire safety) for all three evacuation capability classifications. These requirements are based on a proposal in a report prepared by the National Bureau of Standards (now called the National Institute of Standards and Technology). (Reference: Nelson, H.E., Levin, B.M., Shibe, A.J., Groner, N.E., Paulsen, R.L., Alvord, D.M., and Thorne, S.D., A Fire Safety Evaluation System for Board and Care Homes, National Institute of Standards and Technology Report No. NBSIR 83-2659, March 1983.) This report documents how the requirements were developed, including the participation and approval of experts who could be considered advocates for people with disabilities. Changes have been made over the years by the National Fire Protection Association using a set of procedures, carefully crafted for fairness and public involvement, that permitted the active participation of experts that could be considered advocates for people with disabilities. We know of no evidence or consensus that the Code fails to meet its objective of setting a minimum standard for firesafety consistent with the public interest. We do not anticipate successful challenges in court to the Life Safety Code as having discriminatory (i. e., overly severe) requirements for Board and Care Homes.

AUTOMATIC SPRINKLER SYSTEMS

Effectiveness of Sprinklers

Automatic sprinkler systems respond to the heat of a fire, put water on the fire automatically, and usually sound an alarm. Their great value in suppressing fires is clear and well accepted.

Traditional sprinkler heads (standard response sprinklers) respond only after being exposed to a significant amount of heat. It requires a rather substantial fire to generate this amount of heat and such a fire can injure or kill people near the fire before the sprinkler system activates. Therefore, it has been claimed that sprinklers protect property but not lives. On the other hand, sprinkler advocates point out that "Automatic sprinklers are particularly effective for life safety because they warn of the existence of fire and at the same time apply water to the burning area."⁵⁶ It always has been accepted that sprinklers are effective in protecting people who are remote from the original ignition.

Since 1980, a variety of fast response sprinkler heads have become commercially available. Activation of these sprinkler heads requires a much shorter exposure to heat than standard response sprinkler heads. Fast response heads can often respond before the fire seriously injures people in the room of fire origin and can even decrease the severity of the injuries to those in close proximity to the fire. It is generally agreed that an automatic sprinkler system, that uses the appropriate fast response sprinkler head, can provide significant life safety.

For many years the major standard for sprinkler systems was NFPA 13, Standard for the Installation of Sprinkler Systems, published by the National Fire Protection Association since 1896. This standard was designed for the protection of large buildings. Sprinkler systems, especially when installed with fast response sprinklers, designed to meet this standard can provide protection to all sizes of Board and Care Homes. However, the cost of such sprinkler systems is thousands of dollars per resident in small Board and Care Homes.

In 1973 "the NFPA Committee on Automatic Sprinklers directed its attention to the residential fire problem."⁵⁷ The National Fire Protection Association now publishes two standards designed for residential occupancies: NFPA 13D, Standard for the Installation of Sprinkler Systems in One and Two-Family Dwellings and Mobile Homes; and NFPA 13R, Standard for the Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height. Both standards use residential sprinklers which have fast response characteristics and other features that make them appropriate for use in residential buildings. NFPA 13D is designed to provide "a reasonable degree of fire safety" and NFPA 13R is designed to provide "a high, but not absolute, level of safety." (See Section A-1-2 of each standard.) Sprinkler systems based on these two standards should be much less expensive to install than traditional systems based on the NFPA 13 standard, but may not be as reliable in controlling the fire.

⁵⁶ Cote, A.E., and Linville, J.L., Fire Protection Handbook, National Fire Protection Association, Quincy, Mass., p. 5-128.

⁵⁷ Reference: Solomon, R.E., Automatic Sprinkler Systems Handbook, Fifth Edition, National Fire Protection Association, Quincy, Massachusetts, 1991. p.515.

Therefore, now it is easy to install sprinkler systems that, as compared to systems installed in the 1970's, are both more effective in saving lives and less expensive to install.

Cost of Residential Sprinkler Systems.

There is no question that residential sprinklers systems (i.e., those meeting NFPA 13D or NFPA 13R) *can* be much less expensive than traditional sprinkler systems (i.e., those meeting NFPA 13). However, we have contacted some providers who have actually installed sprinkler systems in their Small Board and Care Homes. They have given us information regarding the cost they have actually paid. They all had requested a system to meet the requirements of the Life Safety Code, that is, a NFPA 13D system. All report paying considerably more than the estimates we hear informally from sprinkler advocates; the estimates in Ruegg and Fuller, A Benefit-Cost Model of Residential Fire Sprinkler Systems,⁵⁸ and the estimates obtained by using Table 10 in Milke, J.A. and Bryan, J.L., Development of Cost Effective Techniques for Alleviating Water Supply Deficiencies in a Residential Sprinkler System.⁵⁹ Most providers were not reporting minor differences but, rather, prices that tended to be to several times the costs in the cited publications.

Based on our discussions with these providers and with others, we conclude that there appears to be a number of factors that might account for this difference:

The published estimates with the low costs appear to be for installing a large number of systems during the construction of new houses. Our reports of actual costs are for installation of a single system in an existing Board and Care Home. These costs would be considerably more for several reasons: 1. each installation required a separate design (and, where required, a separate approval by a government agency); 2. the labor costs for retrofitting an existing building with a sprinkler system should be much greater; 3. it is more efficient for an installer to install a large number of systems in a group of neighboring buildings, e.g., there could be cost savings in purchasing large numbers of sprinklers and large amounts of the plastic piping; and 4. the cost of making the sale would be less per sale but more per installation.

The installers (and the regulators that will approve the systems) have little experience with the standard. It is likely that the installers add a large sum for unanticipated costs, including time spent with regulators. It is also likely they add a sum to cover their learning costs.

In many locations, there are few companies that are willing to install residential sprinklers. We have reports of providers having difficulty finding even a single local company willing to install a residential sprinkler.

⁵⁸ Ruegg, R.T., and Fuller, S.K., A Benefit-Cost Model of Residential Fire Sprinkler Systems, NBS Technical Note 1203, 1984, National Institute of Standards and Technology, Gaithersburg, MD.

⁵⁹ Milke, J.A. and Bryan, J.L., Development of Cost Effective Techniques for Alleviating Water Supply Deficiencies in a Residential Sprinkler System, NBS-GCR-87-533, 1977, National Institute of Standards and Technology, Gaithersburg, MD.

The low cost claims are often for buildings that have access to a good municipal water system and the sprinkler system can be installed using the existing pipes supplying the building with water. Sometimes, it is necessary to install a new or additional pipe to the city water supply under or near the street (and pay another fee for connecting to the city water supply), or to augment the system supplying well water, e.g., provide a larger or new special storage tank.

Regulators sometimes add requirements beyond those in the published standard. That is, they require a more expensive system than that required by NFPA 13D. The additional requirements can range from: 1. more expensive valves; to 2. the preparation of a formal submission of the design of the sprinkler system for plans review and approval by the regulators.⁶⁰

A typical plumber can be trained to install the system defined by the two residential sprinkler standards. It is likely that many of the systems were installed by plumbers capable of installing more difficult systems. Their labor charges may be substantially higher.

The estimates were made years ago. There has been inflation since that time.

Therefore, the fear of unreasonable costs has been valid in many communities.

We anticipate that over the years the average cost of installing residential sprinkler systems will gradually decrease in many cities as the installers gain more experience and as there becomes more competition. The speed with which this happens in any community is partly a function of the number of installations in the local area. The increased use of sprinkler systems in new small Board and Care Homes will have some effect. In those communities where residential sprinklers are installed in other residences, the process will be accelerated. (The city of Vancouver in Canada is requiring residential sprinklers in all new houses.)⁶¹

On the other hand, there are a number of additional requirements that some local governments are adding that might help keep the cost high. NFPA 13D does not require the submission to a government agency of working plans (prepared primarily for the mechanics who do the on-the-job installation) and review by that agency of the system design basis; local agencies can require that review. Local licensing requirements can require that the work be performed by or under the close supervision of a very experienced mechanic. There may be only a few companies with such experienced employees and these companies may not be interested in low profit jobs. Local agencies can add hardware requirements to those in the code such as requiring sprinkler heads in

⁶⁰ One provider stated, "We retrofitted a number of homes (single family-style) in 4 different localities and reluctantly will try in 2 more localities. Costs seem to have more to do with 1) local interpretations by code officials, 2) lack of competitive process with installers ... State Fire Marshal, State Health Dept, local Fire Marshal & Installer disagreed from beginning to end (?) of installation creating major frustration, additional costs & equipment. Even before 13R, 13D requirements were unofficially upgraded to higher standards."

⁶¹ Pamplin, D.J., The Successful Implementation of a Municipal Sprinkler Program, National Fire Protection Association Fall Meeting, Montreal, Quebec, Nov. 17-20, 1991.

small closets. (NFPA 13D does not require sprinkler heads in small closets.) We assume that these additional requirements are added by officials who believe they are improving safety. An analysis of their cost-benefit is beyond the scope of this report.⁶² However, additional requirements do add to cost.

We have one specific report that illustrates and substantiates the thrust of the above discussion concerning reasons for the current high costs. A provider in San Antonio obtained two estimates for an automatic sprinkler system meeting the requirements of NFPA 13D. In the winter of 1991 a local contractor bid \$5,416 (including sales tax), while the local office of a national company, that usually installs large systems, bid \$14,620 (tax not included). The provider is happy with the work of the low bidder. We can assume that in San Antonio the cost has now come down.

Sprinkler Requirements in the Life Safety Code

The 1985 Edition of the Life Safety Code was the first edition to contain fire safety requirements specifically for Board and Care Homes. These requirements were developed over a period of years. During this development, the 1980 edition (and subsequent editions) of NFPA 13D were published. The first edition of NFPA 13R was not issued until 1989.

In the 1985 and 1988 Editions of the Life Safety Code, the only sprinkler requirement for small Board and Care Homes was for Homes rated as "Impractical." However, facilities having sprinkler systems do not need to install some of the fire safety features that other buildings must have. For example, most small facilities must have doors from sleeping rooms to hallways that are self-closing or automatic closing upon detection of smoke. (Section 21-3.3.6.6 of 1988 Edition.) Facilities with automatic sprinkler systems are not required to have such door closers.

The 1991 Edition of the Life Safety Code requires that all new Board and Care Occupancies have automatic sprinkler systems. There was a general consensus that this was a good and proper requirement for all new construction. On the other hand, there is considerable controversy about requiring the installation of sprinklers in private residences being converted to Board and Care Homes. Some experts believe that this requirement will discourage the development of new small Board and Care Homes for high functioning residents with limited income because of the added cost. Others claim that there often will not be any added cost, or only a minor added cost, because of the possible cost savings on other fire safety features when sprinklers are used.^{63 64}

⁶² It is our understanding that the field experience with sprinkler systems that meet NFPA 13D, without these extra requirements, has been generally good with one important exception. There was a fire with fatalities where it has been claimed that the sprinkler system failed to put the required amount of water on the fire and did not control the fire. This fire is discussed in: Klem, Thomas J., Board and Care Fire Claims Four, Fire Command, December 1990, pp. 13-15.

⁶³ The most common criticism of the Board and Care requirements in the Life Safety Code expressed to us is the need for bedroom doors to be self-closing or automatic closing. As stated earlier, this requirement does not apply to sprinklered buildings.

Developing a consensus on this issue is particularly difficult for three reasons:

There is disagreement on the cost of installing the sprinkler systems as described above.

The impact of the increased cost varies so greatly. In many cases the residents have significant income and the impact is slight. However, if the residents are poor--and many are--and if additional funds are not available, the added cost can be the difference between living in a regulated Home or in something less, which all sides to the controversy would disapprove.

Some are concerned from where the needed additional funds will come and if the funds will be available, while others do not believe that is a problem relevant to the discussion.

Agencies that believe that the 1991 Edition will cause too many problems can continue to use (or adopt) an earlier edition of the Code for all Board and Care Homes or just for small, new Homes in existing buildings. At least one provider organization, the National Association of Private Residential Resources, has asked the Health Care Financing Administration not to adopt the 1991 Edition.

There has not been sufficient time since the publication of the 1991 Edition for the full effect of this change to be manifested, and where there has been a meaningful effect, it is difficult to document the effect of this change. However, we have a report from one state that has adopted the 1991 Edition, and it is our understanding that there has been a cessation in the development of the very small Homes using existing housing stock. Furthermore, there has not been an increase in the construction of new buildings to fill the void. There were rumors of potential legislative actions to remedy the situation--presumably to eliminate the sprinkler requirement: there were no actions in the 1993 legislative session.

Anticipated Changes in the 1994 Life Safety Code

The National Fire Protection Association is midway in the process of preparing the 1994 Edition of the Life Safety Code. While the final version of the Code is still in flux, it appears likely that the 1994 Edition will contain two changes that can decrease the cost of establishing new Homes for 8 or fewer residents when the Home can qualify for the Prompt classification.

The requirement for sprinklers may be dropped for new small prompt Homes with 8 or fewer residents if the new Home is located in an existing residential structure that is being retrofitted for use as a Board and Care Home.

⁶⁴ The Board and Care Occupancy requirements in the 1991 Edition of the Life Safety Code were prepared by the Subcommittee on Board and Care Occupancies. Its submission did not require automatic sprinkler systems in small homes if the new Home is an existing building and if the Home is rated as Prompt or Slow. The Committee on the Safety to Life changed this so that all new Board and Care Homes are required by the Code to have automatic sprinkler systems. See the next Section, Anticipated Changes in the 1994 Life Safety Code, for possible changes in this requirement.

The requirement that stairways be enclosed may be dropped if all the following conditions are met: the Home is classified as Prompt; there are eight or fewer residents; the building is one or two stories in height; the building has an approved sprinkler system with quick response or residential sprinkler heads; there is a secondary means of escape from each sleeping room; and smoke detectors are installed on all levels.

If these two changes are approved, it will be easier to meet the fire safety requirements in the Code when establishing a small new Board and Care Home in an existing residential building if the residents are relatively competent.

USING THE LIFE SAFETY CODE

Use of the Code

The Board and Care requirements of the 1985 Edition of the Life Safety Code are used in most, if not all, states to determine if ICF/MR facilities meet the requirements for Federal funding. It is a HCFA requirement. This means that there are state officials in all states that are familiar with the Life Safety Code requirements. All Homes approved by the Department of Veterans Affairs must comply with the 1991 Edition of the Life Safety Code. Based on our data, it appears that at least some of the facilities housing clients with mental illnesses must meet the Life Safety Code's Board and Care requirements in over half the states. Similarly, it appears that at least some of the facilities housing frail elderly clients must meet the Life Safety Code's Board and Care requirements in over half the states.⁶⁵ Therefore, many states are in a position to make future decisions regarding use of the Board and Care requirements in the Life Safety Code based on first hand experience.

Variability in Resident Capabilities

The residents of Board and Care Homes vary greatly in their capabilities. Many residents are quite capable from a fire safety standpoint and can be trained to evacuate unassisted in a fire emergency, and to report to and stay at a designated location. Others need limited assistance and still others require a considerable amount of staff assistance.

Any single set of fire safety rules applied to all Homes of a given size will be either too strict for Homes with capable residents or too lenient for Homes with residents with severe disabilities, even if the rules are proper for some Homes. The developers of the Board and Care Chapters of the Life Safety Code were aware of this problem and they developed three sets of requirements for each size of Homes: one set for Homes that can be evacuated promptly, (say, within three minutes), one set for Homes that can be evacuated slowly, (say, within thirteen minutes) and one set for Homes that cannot be evacuated in a timely fashion with the anticipated minimum staff on duty. In order to use the Life Safety Code to evaluate the fire safety of a Board and Care Home, it is necessary to categorize the Home into one of three Evacuation Capability classifications: Prompt, Slow, or Impractical. More fire safety features are required when the Home is classified as Slow or Impractical. When the Board and Care requirements in the 1985 Edition were first proposed, there was much criticism of the need to determine the proper classification. (See "Attitude Toward Need to Determine Evacuation Capability on page 55.) On the other hand, this feature may preclude possible problems stemming from anti-discrimination legislation. (See THE IMPACT OF CIVIL RIGHTS LEGISLATION on page 34.)

⁶⁵ Often there is more than one state agency regulating the fire safety of Board and Care Homes housing people with developmental disabilities. This is also true for Board and Care Homes for people with other disabilities.

General Attitude toward the Board and Care Chapters

In the first Interim Report we reported on the opinions of State officials, mostly from social service agencies, regarding how the Board and Care Chapter in the 1985 and 1988 Editions was being applied in their state.⁶⁶ Twenty nine of 31 said that they had a positive opinion. (A positive attitude does not mean agreement with all aspects or details of the Code.) Only one said she had a negative opinion. The other respondent was neutral. The one respondent who had a negative attitude toward the Chapter was from a state agency that had recently adopted the Chapter but had not yet applied the Chapter to any operating facilities. She expected the administrative problems involved with handling the evacuation capability ratings to be a major problem and she believed that allowing up to 13 minutes to evacuate for the "Slow" classification did not make any sense. In a November 1992 follow-up phone call, she indicated that she no longer had a negative opinion.

Twenty of the 25 who expressed an opinion regarding the strictness of the requirements responded that the strictness was "okay" as is. One thought they were too strict and four wanted substantially more fire safety. One of the four was well known to the authors and he was firm in his views at that time. The other three were contacted in November 1992 and all three thought that the changes in the 1991 edition made the Code sufficiently rigorous; one even thought the added requirements might have made the Code too rigorous. (One of these three was the same respondent discussed in the previous paragraph who previously had voiced a negative opinion.) Some who thought the strictness of the requirements was okay did suggest specific changes.

We also queried officials in agencies not using the Chapter. Several officials stated their belief that their agency had not adopted the Board and Care Chapter partly because of the financial problems of upgrading current Homes. On the other hand, officials in other states commented that the Chapter did not provide sufficient safety. This information was obtained prior to publication of the 1991 Edition of the Code.

When the NFPA was considering the 1985 Edition of the Life Safety Code, there was strong criticism of the Residential Board and Care Chapter by some Fire Marshals. We surveyed state fire marshals to determine their current attitude toward the requirements in the Life Safety Code. Our results indicate that about one quarter of the Fire Marshals have a negative opinion of the requirements, about one quarter are neutral, and about half have a favorable opinion. About a quarter believe that the requirements need to be significantly increased, about three quarters believe they are okay as is, and one State Fire Marshal checked that he believes they need to be significantly decreased.⁶⁷ Please note that our special survey of fire marshals was conducted after publication of the 1991 Edition of the Code. The respondents were asked to indicate to which

⁶⁶ Because it is so new, we have not conducted a broad survey to determine the attitudes toward the 1991 Edition. However, there is significant concern about the new sprinkler requirements in the 1991 Edition for small homes being established in existing residences. See the discussion in a previous Section on Automatic Sprinkler Systems.

⁶⁷ One State Fire Marshal wrote, "This questionnaire is totally pro LSC, assuming that everyone is using it and is pleased with it. It is not a building code, so you cannot design and build to it, and the health care people have too much influence causing the LSC in many cases to be too permissive, not providing the protection these people need and deserve."

Edition of the Life Safety code their comments applied. Some of the comments refer to the 1985 Edition, some to the 1988 Edition, and some to the 1991 Edition; while some respondents did not indicate to which Edition they were referring. There did not appear to be any differences based on the Edition to which the comments were directed.

Additional Requirements Imposed by Jurisdictions or Agencies Using the Board and Care Chapters

The Life Safety Code is a model code. When a Federal, State or local agency adopts the Board and Care requirements in the Life Safety Code, it has the freedom and opportunity to adopt these requirements with any changes, modifications, or additions that it deems desirable. Few agencies adopt the Code without some modifications or additional requirements. In this section we will discuss several of the changes we have found.

An important feature of the Board and Care requirements in the Life Safety Code is that the Code considers the evacuation capability of the residents (with staff assistance) to evacuate the building *as a group* rather than considering the residents only as individuals. Therefore, one resident who needs considerable staff assistance might not disqualify the facility from a "Prompt" rating, provided there is sufficient staff available to meet his and all the other residents' evacuation needs. Several residents with the same disability level might result in a less favorable rating. When adding additional requirements, this characteristic of the Code (treating evacuation capability as a group characteristic) should not be overlooked.

A common change is the addition of a requirement for more portable fire extinguishers than required by the Board and Care Chapters. This change is an attempt to increase safety at a modest increase in cost. The amount of increased safety provided by these extinguishers is a subject of debate. Fire extinguishers have been used to extinguish small fires in Board and Care Homes where it is believed the fire would have grown and become dangerous if it were not extinguished early. On the other hand, the unsuccessful use of a fire extinguisher causes delays in undertaking other fire safety activities. As part of this project, we investigated a Nursing Home fire with multiple fatalities where the unsuccessful attempt to use a fire extinguisher affected the completion of other activities: some or all of the fatalities might have been prevented if the other activities had been undertaken more effectively.⁶⁸ In this study we found support for both sides of the debate; that is, we found no reason to change the Life Safety Code and no reason to discourage others from adding the requirements to their local codes.

The trend toward Board and Care Homes housing less capable residents has been anticipated by some regulators and providers, especially for Homes housing elderly residents. Regulators are also concerned with the possibility of rapid deterioration of the capabilities of residents. (The evacuation capability classification is usually reviewed annually by a government agency.) Some agencies require all Homes to meet the requirements for "Slow" or "Impractical to Evacuate" even

⁶⁸ The nurses and aides knew to close patient room doors. However, in the rush to evacuate the room of fire origin, the door to the room of fire origin and the doors of some other rooms were not closed. Roller latches probably contributed to the problem since there was a reported attempt to close doors that apparently remained open. Rapidly slamming doors with roller latches is not an effective way of closing them. If time had not been wasted trying to use the fire extinguisher, the door closing might have been performed more effectively.

when the Home can be promptly evacuated. For example, Alabama requires all Homes for the elderly to meet the requirements for "Impractical to Evacuate;" Texas requires all Personal Care Homes to meet the requirements for "Slow" or "Impractical to Evacuate." While, in some cases, their motivation may have been to have a higher level of fire safety, it does avoid the fire safety aspects of the problem caused by the deterioration of the capabilities of residents. It appears that in some cases this approach is reasonable and in other cases it unnecessarily interferes with the providing of affordable housing for citizens who need housing with personal care services.

If all new facilities, *including those in old private homes*, being converted to Board and Care Homes, are required to meet the requirements for "Impractical to Evacuate," the policy will substantially increase the difficulty of setting up new Homes.⁶⁹ On the other hand, permitting the use of the "Prompt" and "Slow" classifications in *existing buildings* to avoid the cost of expensive retrofits, should have less impact on the opening of new Homes.⁷⁰

Sometimes, the provider voluntarily builds to the higher set of requirements. This provides maximum flexibility in the use of the building (as opposed to flexibility in building design) and avoids the possibility of costly future retrofits: the cost of the extra fire safety features is much lower in new construction than in retrofits. Several respondents volunteered the information that if the state is involved in the decision, e.g., a state run facility, all new buildings (as opposed to new facilities in existing buildings) will meet the requirements for "Impractical." The purpose of this policy is to avoid expensive future retrofits if the capabilities of the resident population change. This conservative approach was anticipated when the Board and Care Chapter of the Life Safety Code was being developed and is not inconsistent with our interpretation of the intent of the Code.

From the providers' standpoint, using the more stringent requirements may be cost effective in some cases, even if there is additional initial cost and the value of the additional fire safety is not included in the analysis. The capabilities of the residents may change over time. Also, future regulations imposed on a facility might be more stringent. Although it is unlikely that more stringent requirements in the LSC for newly established facilities would be applied to existing facilities, state and local regulatory agencies are not limited to using the requirements in the LSC and could impose their own new requirements.

Some jurisdictions require automatic sprinkler systems in all Board and Care Homes, or in all new Board and Care Homes, in addition to the requirements of the 1985 and 1988 Editions of the Life Safety Code. It is generally accepted that an automatic sprinkler system significantly increases the fire safety of a Home and, starting with the 1991 Edition of the Life Safety Code, sprinklers are required in all new Board and Care Homes. The background, impacts, and controversial aspects

⁶⁹ An official in Idaho reports that they build all their ICFMR's to "Impractical to Evacuate" standards for the following reasons: they do not trust the Evacuation Difficulty Index which they must use to meet HCFA requirements; they are worried about changes in resident status; and they do not have to worry about transferring residents to maintain evacuation difficulty levels.

⁷⁰ It is anticipated that the 1994 edition of the Life Safety Code will not require sprinklers when existing buildings are retrofitted to establish a Home classified as "Prompt" with eight or fewer residents. If this change is adopted, the impact of the Code on the opening of new Homes will be less.

of this requirement were discussed in the Section on Sprinkler Requirements in the Life Safety Code on page 42.

The Health Care Financing Administration has adopted the 1985 Edition of the Life Safety Code by reference for Board and Care Homes called ICF/MR's. They have added a restriction that the evacuation capability be determined only by calculating the E-score.⁷¹

Applying Board and Care Requirements Only When All Residents are High Functioning

Some agencies have adopted the Board and Care Chapters only for Homes where all the occupants are high functioning. For example, in Tennessee, if any one of the residents in a Home requires physical assistance to evacuate, the fire safety of the Home is evaluated using the requirements for health care facilities. These requirements are more strict than the requirements for "Prompt" and "Slow" Board and Care Homes and *are not designed for the architectural features of small Homes*.⁷² This modification makes it much more difficult to meet the fire safety requirements in a small Home that can be evacuated in a timely fashion but where one or more residents has a physical disability that necessitates staff assistance in a fire emergency. The Board and Care requirements were designed for residents with all levels of disability. If the requirements in the Life Safety Code are sufficient, then the approach discussed in this paragraph unduly restricts the access of citizens with disabilities to housing with personal care services.

Fire Safety Evaluation System

The Board and Care requirements of the Life Safety Code permit the use of a specially designed Fire Safety Evaluation System (FSES) for Board and Care Homes. The purpose of this FSES is to permit the approval of Homes that do not meet all the specifications in the Chapter but that do have a combination of fire safety features that provide an equivalent level of safety. The use of the FSES can save significant amounts of money when converting existing buildings to Board and Care Homes when the 1985 or 1988 Editions of the Life Safety Code are used. Its use for new buildings does not provide much, if any, cost savings but it does provide a flexibility for potential innovative

⁷¹ The E-Score is determined by rating each resident on his or her need for assistance when evacuating. The staff is also rated for its availability. The ratio of the sum of the residents' ratings to the sum of the staff ratings is the basis for the E-Score.

⁷² It should be noted that when using the 1985 and later Editions of the Life Safety Code, the user is required to apply the Health Care Requirements for Custodial Care Facilities or Limited Care Facilities to large Board and Care Homes with an "Impractical to Evacuate" classification. For 1 and 2 story buildings, these requirements for Custodial Care Facilities and Limited Care Facilities are slightly more stringent than the requirements for Nursing Homes and for Hospitals in the Health Care Occupancies Chapters.

The requirements for small Board and Care Homes, which are "Impractical to Evacuate," are designed to provide a similar level of safety as for large facilities, but are tailored to the architectural features of typical small facilities.

Therefore, for large facilities, it makes little difference whether the requirements of the Board and Care Occupancies Chapter or the Health Care Occupancies Chapter are used. However, for small facilities, using the requirements in the Health Care Occupancies Chapters means applying to small buildings requirements designed for large buildings.

architectural designs that might enhance programs. One important potential use of the FSES, when using the 1985 and 1988 Editions of the Code, is to avoid the controversial requirement that all bedroom doors have either self-closing or automatic-closing features.

The 1991 Edition of the Life Safety Code requires all new facilities to be sprinklered. This new requirement has resulted in major changes in the corresponding Edition of the FSES.⁷³ In early editions of the FSES, the numerical scores needed to establish equivalency were the same for both new and existing facilities. However, in the corresponding edition of the FSES, the requirements for new facilities became far more stringent than for existing facilities. The requirements are now so stringent that a new small facility without sprinklers will fail the FSES, even if it receives the highest possible scores for all other fire safety features. A related consequence is that there are far fewer combinations of fire safety features that will pass the FSES. For these reasons, the FSES is now much less useful for evaluating any Board and Care Home classified as "new" -- including conversions. (The FSES will regain some of its former importance if a proposal to drop the sprinkler requirement for "Prompt" small facilities with eight or fewer residents is accepted for the 1994 Edition.)

We are finding that a few jurisdictions are using the FSES. However, a majority of the jurisdictions either do not permit its use or they permit but do not encourage its use in most situations. Nevertheless, it has been and should continue to be a valuable tool in special situations.

Incorrect Evacuation Plan

The fire safety requirements for Board and Care Homes in the Life Safety Code are based on the assumption that the residents will contribute to their own evacuation to the extent they are able. In most buildings rated as "Prompt" or "Slow," one can assume that the residents can assist significantly in their own evacuation. Even in some Homes rated as "Impractical," many of the residents can assist in their own evacuation. To take advantage of this capability, the residents in Board and Care Homes should be trained to evacuate to the extent they are able. They should fully participate in fire drills to the extent they are capable, (unless they have special health problems and are in facilities rated "Impractical"). This is clearly required in the Life Safety Code Section 31-7.3, Fire Exit Drills. (1985, 1988 and 1991 Editions.)

Fire Drills in Nursing Homes normally do not include the movement of patients. The Appendix to the Life Safety Code states, "Fundamentally, superior construction, early discovery and extinguishment of incipient fires, and prompt notification must be relied upon to reduce the occasion for evacuation of buildings of this class to a minimum." (Section A-31-4)

Most Board and Care Home providers are aware of the importance of training and drilling residents. In fact, fire drill training is often very intense in many Homes for persons with developmentally disabilities. However, some providers with Nursing Home backgrounds are unaware of the different fire drill requirements. We have become aware of only one such case, but

⁷³ NFPA 101M Alternative Approaches to Life Safety 1992, National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.

the improper drilling may have contributed to some of the fatalities in a Board and Care Home fire.

This hopefully is a rare problem but the potential risk it entails warrants special attention. We have carefully studied the wording in the Life Safety Code that covers this situation and have found it to be clear and unambiguous.⁷⁴ When we had an opportunity to suggest changes for the 1994 Edition, we did not suggest any change in the wording of the requirements in the body of the Code, but we did suggest adding information in the Appendix--which contains advice and guidance--to heighten awareness about the problem.

Distinguishing Between Health Care and Board and Care Occupancies

The Life Safety Code defines a "Residential Board and Care Occupancy" as "A building or part thereof that is used for the lodging and boarding of four or more residents, not related by blood or marriage to the owners or operators, to provide personal care services." It also states that personal care "means protective care of residents who do not require chronic or convalescent medical or nursing care ... Personal care may include ... supervision in the areas of nutrition and medication, and actual provision of transient medical care."⁷⁵

The Life Safety Code describes Health Care Occupancies as "those used for purposes such as medical or other treatment or care of persons suffering from physical or mental illness, disease or infirmity: for the care of infants, convalescents, or infirm aged persons...are occupied by persons

⁷⁴ Section 31-7.3, Fire Exit Drills, states: "Fire exit drills shall be conducted at least twelve times per year, four times a year on each shift. The drills may be announced in advance to the residents. The drills shall involve the actual evacuation of all residents to an assembly point as specified in the emergency plan and shall provide residents with experience in exiting through all exits required by the Code. Exits not used in any fire drill shall not be credited in meeting the requirements of this Code for board and care homes.

Exception No. 1: Actual exiting from windows shall not be required to meet the requirements of this section; opening the window and signaling for help shall be an acceptable alternative.

Exception No. 2: If the board and care home has an evacuation capability rating of "Impractical," those residents who cannot meaningfully assist in their own evacuation or who have special health problems need not actively participate in the drill. Section 31-4 applies in such instances."

⁷⁵ We were not informed of any problem in using the term transient medical care but the term is not really the best term to use. What is intended is that health related care may be provided by the staff of a Board and Care Home if no medical assessments or professional medical judgement, by the staff, is required for routine care. Therefore, ordinary care similar to that provided by a parent for a sick child or by an adult for an elderly disabled parent would be considered "transient" medical care.

who are mostly incapable of self-preservation because of age, physical or mental disability, or because of security measures not under the occupants' control."⁷⁶

A Limited Care Facility is a type of Health Care Occupancy. The Life Safety Code, 1988 and 1991 Editions, defines it as "A building or part thereof used on a 24-hour basis for the housing of four or more persons who are incapable of self preservation because of age, physical limitation due to accident or illness, or mental limitations such as mental retardation/developmental disability, mental illness, or chemical dependency."

The distinction between Health Care Occupancies and Board and Care Homes is not clear cut. It is clear that facilities that provide medical care, or medical treatment beyond transient medical care, are Health Care Occupancies. It is generally accepted that facilities that are training residents for independent living are Board and Care Homes. There are many situations in between where the Authority Having Jurisdiction must make the classification based on his or her interpretation of the distinction between the two occupancy classifications. We found a number of cases where the social service agency regulates the facility as a Board and Care Home, but the Health Care Occupancy requirements of the Life Safety Code are applied. That is, only for fire safety purposes is the facility considered a Health Care Facility.⁷⁷

On the other hand, there are programs being established to care for citizens with medical problems in a residential environment. The home-like ambience is designed to provide a higher quality of life than that found in traditional Nursing Homes. It has been claimed that the cost of providing care in these facilities is less than the cost of care in a traditional Nursing Home.⁷⁸ One of the authors visited one such facility. Each resident lived in a one room studio or efficiency apartment with cooking facilities. That is, the patient rooms were small pleasant apartments rather than sterile hospital type patient rooms. The hallways connecting the apartments were traditional upscale nursing home corridors, presumably meeting the requirements for a corridor in the Health Care Occupancy chapters of the Life Safety Code.

Extrapolating current trends one would expect in the future to find small residential buildings providing Nursing Home care. However, there are a number of factors that make it unlikely that very small Nursing Homes will be established in buildings similar to detached homes. There are

⁷⁶ In response to a suggestion by a project member, the appropriate NFPA committee has tentatively approved changing the definition of health care occupancy to include the following introductory phrase: Health care occupancies are those that provide medical care and treatment of persons..." This may help clarify the distinction between health care and board and care occupancies.

⁷⁷ This problem is also addressed in the BOCA National Building Code. The special Use Group I-1, which covers Board and Care Homes, is applied only when all residents are "physically able to respond to an emergency situation without personal assistance." Otherwise the Use Group for Nursing Homes is applied.

⁷⁸ Wall Street Journal, (Eastern Edition, December 4, 1992, Vol. 220, No. 111).

practical economic and supervisory reasons, especially staffing costs, as well as legal restrictions such as those imposed by building and fire codes.⁷⁹

In the past some patients in nursing homes had severe and progressive health problems but were not receiving care that requires or involves medical judgment by the caregiving staff. These citizens can be and are being provided care in Board and Care Homes. Advocates of such placements believe that Board and Care Homes can provide better care (i.e., more freedom and social stimulation) than Nursing Homes and at a lower cost. An example might be residents who exhibit the symptoms of Alzheimer's Disease. (Board and Care Homes can provide proper care for some but not all Alzheimer's patients.) Others question whether Board and Care Homes can provide the care required for any residents with significant health problems. The authors believe that each case must be decided on the physical and medical needs of the resident and one should not expect agreement when resolving individual cases. Nevertheless, the Board and Care Occupancy requirements in the Life Safety Code were designed to provide safety in fire emergencies for Board and Care Homes with such residents.⁸⁰ However, the Board and Care Chapters were not specifically designed for facilities housing residents where there are security measures not under the residents' control, e.g., confinement to locked rooms: health care requirements must be used for the fire safety of these facilities.

Many Board and Care Homes are more deeply involved in the giving of medicine than merely its supervision. Presumably the staff gives medicine to residents in the same way a mother might give medicine to her sick child or the mother might medicate herself. For example, intellectually alert people with diabetes inject themselves with insulin. Similarly, it would not be unusual for a staff member of a Board and Care Home to inject a diabetic resident with insulin. (Insulin injections are easier to administer than some other injections.) While we have found cases where Board and Care Homes are required to meet the Health Care Occupancy requirements of the Life Safety Code, we have not found any cases where the administration of medicines was the determining factor.

⁷⁹ The Life Safety Code could be modified to accommodate to this possibility by adding a modified version of the requirements for small impractical Board and Care Occupancies to the Health Care Occupancy chapters. Such a change is unlikely in the foreseeable future.

⁸⁰ When a facility with 17 or more residents is rated as "Impractical" the Life Safety Code requires that the facility meet the requirements for a Limited Care facility in the Health Care Occupancy chapters. (The 1985 Edition uses the requirements for Custodial Care Facilities.) Therefore, for large facilities which cannot be evacuated in a timely fashion, the requirements are similar, whether or not the facility is classified as a Board and Care Home or a Health Care Occupancy. However, for a small facility, applying the Health Care Chapters means that fire safety requirements designed for a large building are being applied to a small building, and the fire safety requirements force the building to have an institutional rather than a homelike ambience, e.g. corridors must be at least six feet wide. Many experts consider the homelike ambience to be very important.

Difficulty of Mastering the Code

The Life Safety Code is a large document--the 1991 Edition is 296 large pages of small print. In addition, it makes reference to numerous other standards and technical documents. To properly inspect a building, the regulatory official must fully understand the parts of the Life Safety Code that apply to that building. Furthermore, he or she must understand the applicable parts of other standards that are incorporated into the Life Safety Code requirements by reference. Learning the Code is a difficult task. It takes much training and considerable experience. Once the Code is learned, it is easy to forget many of the details unless the official continues to work with the Code.

One respondent claimed that the Board and Care Occupancy Chapters are the most difficult to learn and apply. Some of this difficulty is probably a direct consequence of a desire of the code writers to meet the needs of the providers. First, the Code contains many exceptions that are included to avoid unnecessary expense or unnecessary features that might affect the operation of the home. Secondly, the Code is constructed to provide the operators flexibility in meeting the requirements. For example, there is a requirement that bedroom doors have closers which either: 1, is a substantial expense if the closers only operate in a fire situation; or 2, is a nuisance if the doors are continually closed. These closers are not required if the building has an automatic sprinkler system, that is, there is an exception to this requirement in sprinklered buildings. This is only one of many exceptions. The large number of exceptions makes the Code difficult to use, but dropping these exceptions would make the Code less useful.

Another factor making the Chapters harder to learn is the fact that there is a separate set of requirements for each combination of size of facility and evacuation capability rating.

A major concern expressed to us, by providers, was the quality of the inspections. When an error is made by an inspector, it can result in unnecessary additional costs to the provider. The provider may consider these costs to be very expensive. In many cases the manager of the Home has limited knowledge of the Code and cannot afford an independent expert. He or she is in no position to question--much less challenge--the inspector. He or she has little choice but to follow the directives of the inspector.

Providers have reported cases of alleged errors made by inspectors. In one case, the provider complained that \$17,000 was spent to upgrade the safety of a small Board and Care Home before it was determined that the upgrading was not required by the applicable code.

In some situations where more than one agency inspected the same facilities, there was criticism by some inspectors regarding the quality of the inspections, i.e., the accuracy of the applications of the requirements, by the other agency.

A common complaint by providers was that new inspectors required additional fire safety features in Homes that had passed previous annual inspections by other inspectors. (If the requirements had, in fact, changed, the providers were not informed.)

One supervisor of inspectors in a rural state discussed his difficulty in maintaining a staff of properly trained inspectors. One of the authors of this report suggested that the less experienced surveyors specialize in one or two occupancies so that they would not have to work with the whole Code; for example, one surveyor might inspect Board and Care Homes and possibly, one or two

other occupancies. He stated that he had considered this, but the inspectors would have to cover too large a territory to obtain a sufficient number of buildings to inspect--travel time would be excessive.

The solution to these problems is not obvious. Efforts to make the Code unambiguous made the language very precise, very detailed, and hard to learn, at first. However, to the extent that the ambiguity has been avoided, it makes it easier to apply and it results in less need for learning the approved interpretations of ambiguous items.⁸¹ Similarly, efforts to make the Code flexible made it longer and, therefore, there is more to learn.

Guide to the Board and Care Provisions in the 1991 Edition of the Life Safety Code

In view of the complexity of the Code, one of the goals of this project was to develop a guide that could be used by those providers that are not knowledgeable about fire safety codes and regulations. Such providers must eventually rely on the advice of experts. However, they need a guide that will give them a simple explanation of the requirements in the Board and Care Chapters and advice on how they should proceed in preparing their facilities to meet the requirements in the Chapters. The guide should help them understand the type of professional assistance they will need. This guide, authored by Dr. Norman E. Groner, will be distributed as a separate document.⁸²

Attitude Toward Need to Determine Evacuation Capability

The need to determine the "evacuation capability" of the home is a major concern to officials when adopting the Board and Care requirements in the Life Safety Code. This is a novel feature in the Board and Care Occupancies requirements of the Code. Homes are classified as "Prompt", "Slow", or "Impractical to Evacuate". The Life Safety Code provides for several alternative procedures that may be used to determine the evacuation capability. In the past, officials have expressed concern about the feasibility and validity of the procedures. The Code permits the authority having jurisdiction to select from among several alternatives the procedure or procedures to be used. Most officials we have interviewed expressed general satisfaction with the procedure they have selected. Based on the fact that it works to the satisfaction of a number of officials, there is good evidence that the approach is feasible.⁸³ However, there is a small but important minority that expressed

⁸¹ A well respected state official involved in building codes stated that "case law" goes against the grain. "The code is supposed to tell you in advance what you are supposed to do." Reference: Richard T. Conrad, Moderator, Seminar Transcript, The Americans with Disabilities Act Fair Housing Accessibility Guidelines, Understanding the Implications, National Conference of States on Building Codes and Standards, Inc., Herndon, Virginia, August 12, 1991.

⁸² Reference: Groner, Norman E., A Guide to Board and Care Fire Safety Requirements in the 1991 Edition of the *Life Safety Code*, National Institute of Standards and Technology Report No. NIST-GCR-93-629, May 1993.

⁸³ An official from Louisiana not only liked the concept of different requirements for different levels of occupant capability but informed us that Louisiana used that approach prior to the development of the Board and Care Chapter.

concern regarding the validity of the classifications--the responding officials did not trust the classifications.

There was a general satisfaction by government officials with the way that the use of the Board and Care Chapter was working in their jurisdictions. However, in some cases the state modified the requirements so that it was not necessary to address the problem of classifying the Homes. See Sections, Additional Requirements Imposed by Jurisdictions or Agencies Using the Board and Care Chapters, and, Applying Board and Care Requirements Only When All Residents are High Functioning, on pages 47 and 49 respectively.

In the 1992 Interim Report, we reported all Homes in Maryland are classified as "Slow" until there is evidence that another classification is more appropriate. Reasons for performing a full evaluation include: 1, a request by the provider for a "Prompt" classification and 2, the observation by the inspector that the residents appear to be less capable than residents of typical Board and Care Homes. Since that report we found agencies in other states using variations of this approach. This approach is consistent with Section A-23-1.3 of the Appendix to the Life Safety Code. "...evacuation capability should be considered slow if the following conditions are met: (a) All residents are able to travel to centralized dining facilities without continuous staff assistance, and (b) There is continuous staffing whenever there are residents in the facility."

We cannot predict the response we would have received from the officials in these jurisdictions if they had been forced to work with a system that required differentially classifying all Homes.

One respondent from a State Fire Marshal's Office expressed concern that providers transfer residents just before announced inspections so that they can continue to be rated as "Prompt" (or "Slow") although at other times the facility would not meet the established criteria. Fortunately, we received only one such comment.

Determining Evacuation Capability

The need to determine the "evacuation capability" of each Board and Care Home was a novel feature when the Board and Care Chapter was first published in the 1985 edition of the Life Safety Code. From the time the concept was first proposed there has been concern about the validity of the classifications.

The Board and Care Chapters of the Life Safety Code specify several methods that may be used to determine the Evacuation Capability of a Board and Care Home. The two that are used most frequently are: timed fire drills; and calculation of the E-Score. Since the most dangerous time for a fire is when the residents are asleep, the fire drills should be conducted late at night or early in the morning while the residents are asleep. The designers of the Code were concerned that late night fire drills might not be acceptable because of potential difficulties in verifying the drill times if regulators are not present at the drill. There were also concerns about the anticipated variability in occupant behavior and evacuation times from drill to drill. The E-Score was developed as an alternate method, recognizing that it had its own set of potential problems.

The following comment was provided by the Office of a State Fire Marshal. It shows how one agency has addressed the weaknesses of the two approaches. While the system outlined is unique, the attitudes stated and implied are typical of the attitudes expressed to us in our phone interviews.

Note that, despite their reservations about the accuracy of the E-scores, they still use them to some extent.

Determinations are made by Fire Marshal Inspectors, using both E-score and monitoring fire drills. They prefer fire drills because they get a more accurate determination of evacuation capability. Fire drills are used to verify the accuracy of E-scores in homes for mentally and/or physically disabled persons when the following occurs:

- 1) The E-score evaluation comes out prompt;
- 2) The E-score evaluation comes out slow; prior rating was prompt; and
- 3) Randomly, to check procedures & training for emergency evacuation.

The office has a policy that owners may request a fire drill if the home was previously rated prompt but the current E-score came out slow. They also hold fire drills in most of the homes that rate prompt. They have learned that the E-score evaluation can be inaccurate for various reasons:

- 1) Dependent upon judgment of the Inspector or the House Manager.
- 2) False fire drill records.

Fire drills, unannounced, are held between 10 p.m. and 6 a.m. for either random checks or reevaluation of E-score.

Problems Discussed Elsewhere in this Report

The cost of residential sprinkler systems have usually been much greater than the costs predicted. See Section, Cost of Residential Sprinkler Systems, on page 40.

FACILITIES TOO SMALL TO BE REGULATED AS BOARD AND CARE HOMES

Background

Usually there are more fire safety requirements for large buildings than for small buildings serving the same function. For example, the Life Safety Code has more requirements for Hotels than for Lodging or Rooming Houses (which can be considered to be Hotels with 16 or fewer guests.) Similarly, there are more requirements for Apartment Buildings than for One- and Two-Family Dwellings. Several of the reasons for this follow. In large buildings, distances to exits tend to be larger: it takes longer to evacuate. The likelihood of an unwanted fire in a large building is greater because there are more sources of potential fire, including more people. The probability that the fire danger is caused by a stranger is greater. The potential workload for the fire department is greater in a large building: it takes the fire department more time to assemble a large force than a small one. The maximum potential property loss varies with the size of the building. Finally and probably most important, there is more public concern for a fatal incident that takes a large number of lives than for one that takes a small number of lives: this is well accepted also in transportation safety--almost nothing is spared to avoid a crash of a large passenger plane.

In this section, we address the question of the proper combination of fire protection features for residences housing citizens with disabilities that are now treated by the major model codes as One- and Two-Family Dwellings. This includes small Board and Care Homes, Foster Care, Community Supported Living Arrangements, and Independent Living.

We have found that many officials appear not to be concerned that this is a significant problem, i.e., they did not raise the issue and, in a few cases, they did not express concern when directly asked.⁸⁴ However, it is likely that the number of such facilities will increase and there is the possibility that there will be future recommendations that the fire safety of these facilities be upgraded. Therefore, it is appropriate that this study address the issue.

Board and Care Homes for Four and Five Residents.

When the Life Safety Code is applied, Board and Care Homes with four or five residents must meet the requirements in the Board and Care Chapters. When most Building Codes are applied, Board and Care Homes with four or five residents must meet the One- and Two-Family Dwellings requirements which are less strict than Board and Care regulations. However, the requirements of most Building Codes for Board and Care Homes, with six to sixteen residents, are generally more strict than the Board and Care requirements in the Life Safety Code for facilities with a similar number of high functioning residents.

⁸⁴ One State Fire Marshal responded, "...We have not had a problem using Chapter 22 for such 3 client or less Board and Care Homes, and feel it reasonable to allow occupancies with up to three clients to follow these lenient rules. Our biggest problem currently is other state licensing agencies, as well as board and care operators themselves, pushing for a modification to the 85 LSC to allow up to 5 clients to be considered not board and care. The ... OSFM favors keeping the number as defined by chapter 21, 85 LSC -- 4 or more clients = board and care. However, we receive constant complaints that classifying homes with 5 clients the same as 15 clients is unfair!"

Most private residences will not meet the requirements in the Board and Care Chapters of the Life Safety Code and there would be costs to retrofit the buildings to meet these requirements when they are converted to Board and Care Homes. Sometimes these costs will be quite high compared to the monthly receipts of the facility. The writers of the Board and Care requirements in the Life Safety Code were aware of this and concluded that these costs were justified by the need for a high level of fire safety. In general, it appears that there is a consensus among those using the Life Safety Code that these requirements and the associated costs are appropriate. One notable exception relates to a specific requirement; there are a number of knowledgeable people who disagree with the new requirement in the 1991 Edition that sprinklers should be installed when new Board and Care Homes are established in existing residences. See Section on Sprinkler Requirements in the Life Safety Code on page 42. On the other hand, there are some who recommend that the Life Safety Code requirements for Board and Care Homes be upgraded.

Facilities With Three or Fewer Residents

There are many different types of housing arrangements for groups of three or fewer citizens who need personal care. We describe these housing arrangements below. It should be noted that the labels discussed below are not always used as they are in this section. For example, we found foster homes with more than three residents, although in this section we restrict the use of the term to homes with three or fewer clients.

Foster Care. In this report we call foster care the housing arrangement where care is provided in a family home to one to three persons with disabilities who are not related to the care providers. The amount of care required is such that one person can provide all the necessary care and still perform household chores. The prototype is a family situation where a foster child lives as a member of the family.

Independent Living. One or more people with disabilities live in an apartment or house. What distinguishes these residential settings from typical residences is that a government or private agency had accepted responsibility for the welfare of the clients prior to their move to the residence and had placed the clients in the residence as part of a program to provide them with housing in a non-institutional environment. The residents may have signed the lease themselves or they may have subleased from a government agency or private organization. They may have temporarily received some support services when they first moved in.

Community Supported Living Arrangements. This is similar to independent living except that the residents are provided with some form of personal care services in their home. This form of housing is discussed in the Section, Community Supported Living Arrangements, on page 29.

Board and Care Home. Some facilities for three or less cannot be distinguished from a small Board and Care Home (i.e., a home for four or more) except for the number of residents and, presumably, the size of the building. One motivation for having such a small facility is that it may be subjected to fewer regulations. On the other hand, the money saved by fewer regulations may make it financially possible to have the benefits of a very small Home. Many experts believe strongly in the benefits of a very small Home.

It is normally not difficult to classify a facility into one of the above categories after a visit to the facility. On the other hand, it would be difficult to develop a set of rules that could be used to classify housing arrangements into these different categories for regulatory purposes. Furthermore, one cannot classify facilities based on their name, the name of the funding agency, or the name of the funding program. (For example, there was a multiple fatality fire in Texas in a six resident facility that was funded by a foster care program.)⁸⁵ Therefore, the problem of classifying these housing arrangements would make it difficult to have different rules for the different types.

Foster Care

There is general agreement that when a husband and wife with no children take a high functioning person with disabilities into their home, i.e., provide foster care, the fire safety of their home does not differ from a home with parents and children. As the number of disabled persons receiving care increases, and/or the severity of the disabilities increases, the similarity between the Foster Care Home and a typical family home decreases. If the needed care is normally provided by one person, who also does the household chores, the foster home is similar to that of a typical family home which might have infants and/or family members with disabilities living in the home: the risk of injury or fatality in a serious fire also would be similar.

Independent Living and Community Supported Living Arrangements

Until recently, one could assume that citizens with disabilities, placed in a typical residential setting by a government or private agency, were well trained in the proper actions to take, i.e., evacuation, in fire emergencies. The risk of injury or fatality in a serious fire would have been similar to that of a typical family or perhaps even less, since normally the residents would have been given extensive training. However, Community Supported Living Arrangements include arrangements where residents are placed in their own house or apartment prior to training in fire safety and independent living--fire safety training is given after they move into the residential setting. Health and safety might be assured by the temporary or permanent use of caregivers, who provide the necessary supervision until the resident can respond properly to a fire emergency.⁸⁶ It can be argued that, with the small number of residents--usually one or two--and the presence of caregivers, the fire safety of these homes is at least as good as in typical dwellings: a sufficient number of caregivers should be present to assure a rapid evacuation if the home is evaluated as a One- and Two-Family Dwelling; and fire evacuation training is likely to be started as soon as the residents move in.

One fatal fire has come to our attention where two married people with physical disabilities were unable to evacuate and caregivers were not in the residence at night when the fire started. It is our

⁸⁵ San Antonio Express News, March 25, 1991, p. 1-A.

⁸⁶ Properly conducted programs to establish independent living and community supported living arrangements will follow the model described and provide twenty-four hour supervision until the residents are properly trained to respond to a fire emergency. However, there is of course no automatic guarantee that any specific program will follow this model.

impression that the residents had physical disabilities, were fully aware of the risk, and chose to accept the risk.⁸⁷

Board and Care Homes

The Life Safety Code requires Board and Care Homes with three or fewer residents to meet the requirements for One- and Two- Family Dwellings or for Apartment Buildings, as appropriate. (Many building codes apply the requirements for One and Two Family Dwellings to Board and Care Homes with five or fewer residents.) Board and Care Homes normally provide 24 hour supervision whenever residents are in the Home. If there are two or three residents who are high functioning and trained, and a trained staff member, a rapid evacuation should be anticipated. If the residents require substantial assistance to evacuate, a building meeting the One- and Two-Family Dwelling requirements may not provide a safe exit route for a sufficiently long period of time. While the Code limits application of the Board and Care Chapters to Homes with four or more residents, agencies adopting the Code can apply the Code to smaller Homes. We were told by one state agency that it informally applies the Board and Care Chapters to Homes with two and three residents and the agency has received no complaints.

The Fire Safety Problem of Small Homes

Many experts believe that the general population is not satisfactorily safe from fire in their own homes. There are numerous and varied programs underway to cut the terrible toll of injuries and fatalities from fires in private residences. Many of them emphasize fire prevention. Others are directed at youthful firesetters. Still others are directed at upgrading the fire safety of older homes. In a few locations, sprinklers are required in all newly constructed homes.

Fire statistics indicate that over a ten year period, average citizens have about two chances in ten thousand to die in their own home from fire. "For those 65 years of age and older, the fire fatality rates are more than twice the national average. For those 75 years of age and older, these rates jump to three times the national average."⁸⁸ As is well known, the fire record for young children is also considerably poorer than for young adults.

Foster homes meeting current codes for One- and Two-Family Dwellings may have a better fire safety record than the current national average for private homes, especially if efforts are made to

⁸⁷ These two victims were apparently of normal intelligence and presumably fully understood the risks involved. The situation is less clear when the people involved are cognitively impaired. Advocates for persons with disabilities claim that people with mental retardation have a right to risk in order to have a better quality of life. We believe that most of these advocates would not take the responsibility for placing people with disabilities in a residence with the level of risk that these two people accepted. The concept of right to risk as used in this paper does not include permitting clients to accept unusual risks if they cannot fully understand the meaning and possible consequences of this risk. However, responsible adults can accept additional risks for themselves whether it be skydiving or the risks these victims accepted.

⁸⁸ Reference: John S. Petraglia, "Fire and the Aging of America", Fire Journal, March/April 1991, Vol. 85, Number 2, p. 37.

assure fire safety.⁸⁹ Many existing private homes do not meet current codes for One- and Two-Family Dwellings: the windows may not be usable (they may even have bars to exclude intruders), the upstairs windows may be more than 20 feet above ground level, there may not be operating smoke detectors, or the walls may not meet the flame spread requirements for Class C interior finish. Private homes usually cannot be inspected for fire hazards by government agencies without the permission of the residents. None of these problems are applicable to a living arrangement that is in a residence meeting current codes for One- and Two-Family Dwellings and that is subject to protective oversight by a social service agency. In other words, if there is the legal authority to meaningfully regulate the fire safety of these living arrangements, the residences can be required to meet the requirements of the Codes for One- and Two-Family Dwellings (or Apartment Houses), can be inspected for fire hazards, and can be required to provide the residents with fire safety training. If the residents are trained in fire safety, we can expect the residences to be safer, in general, than the average home despite the disabilities of the residents.⁹⁰

Fire Safety Regulation of These Living Arrangements

As discussed above, the Life Safety Code and the model Building Codes contain requirements for One- and Two-Family Dwellings and Apartment Buildings that can be applied to living arrangements for three or fewer residents with disabilities. While it is obvious that one can hypothesize living arrangements for which these requirements would be inadequate, we did not find much interest in changing the codes.

As discussed in the Section, Difficulty of Mastering the Code, on page 54, those who are responsible for inspecting buildings for code compliance have a difficult assignment because building and fire codes are so difficult to master. We did not find a desire to add to the difficulty of enforcing the Codes. We would expect great resistance to any significant *expansion* of the codes to address only the fire safety of citizens with disabilities in living arrangements with three or fewer residents with disabilities. In some cases, this resistance would decrease if additional funding was made available to the regulatory agency. In addition, the resistance should decrease if a very strong case were made for the need for such an expansion.

We discussed above the fact that it would be difficult to develop a set of rules that could be used to classify housing arrangements into categories for which there would be different fire safety requirements.

We found that the staff of social service agencies were generally concerned about all aspects of the welfare of their clients, including fire safety. If they were to become involved with a living arrangement that required special attention to fire safety, they would normally seek out and

⁸⁹ We do not wish to imply that the foster home is likely to have a higher level of safety than a *code complying* dwelling with only healthy, alert, safety conscious young adults. However, many dwelling units have families with children or elderly people, or the residents have characteristics that increase the fire danger, such as alcoholism.

⁹⁰ This conclusion is based in part on the authors observations of fire drills in a number of Board and Care Homes. Of course, this level of fire safety can only be assured if proper attention is paid to fire safety by all responsible parties.

respond to suggestions by the fire authority, even if the fire authority had no power to enforce its suggestions. If there were no inspection by a fire authority, in many cases they would recognize the need and seek professional help in developing a fire safe environment in these special situations. The guide⁹¹ we have prepared explains the Board and Care provisions in the Life Safety Code, and will alert the reader to the need for possible additional fire safety features in special situations when the number of residents with disabilities is three or fewer.

It would be premature to recommend additional fire safety features that might be appropriate in these special situations--the additional fire safety features would depend upon the characteristics of the facility, including the building, the staff and the residents. For many housing arrangements, the One- and Two- Family Dwelling requirements would be sufficient. Where a higher level of fire protection appears to be needed, one could anticipate two alternative courses of action. First, the requirements of the Board and Care Chapters of the Life Safety Code could be applied.⁹² Alternatively, the additional requirement of a residential sprinkler, meeting NFPA 13D, could be added to the requirements for a One- or Two-Family Dwelling; we anticipate that this will be the more frequently employed alternative.

⁹¹ Reference: Groner, Norman E., A Guide to Board and Care Fire Safety Requirements in the 1991 Edition of the *Life Safety Code*, National Institute of Standards and Technology Report No. NIST-GCR-93-629, May 1993.

⁹² The Life Safety Code clearly states that it considers Board and Care Homes to have four or more residents. Nevertheless, any regulatory agency can apply the Life Safety Code as it deems appropriate.

SUMMARY AND CONCLUSIONS

The regulation of board and care occupancies for fire safety does indeed pose a difficult and unique challenge. Protection of vulnerable citizens from injury or death from fire is critically important. Yet funds, both public and private, are not unlimited, and the money spent on fire safety is not available for other important uses which often are more visible and pressing. The complexity of the board and care occupancy type also adds to the challenge: residents may vary greatly in their disability levels; their abilities may change over time; and facilities are architecturally very diverse. The imposition and enforcement of fire safety regulations are also complex: several different agencies at various political levels can be involved in the regulation of a single facility. Providers must deal with a large set of government regulations designed to assure that residents live in a pleasant, supportive, stimulating, safe and healthful environment. Fire safety regulations are typically only a small portion of the total set of these regulations.

A major goal in developing the Board and Care Occupancy Chapters in the Life Safety Code was to have a set of fire safety requirements that would provide a high level of fire safety without unnecessary costs or unnecessary interference with the programs in the Home. A major purpose of this project was to ascertain to what extent this goal has been achieved.

The Code appears to provide a high level of safety, i.e., a level of safety comparable to the fire safety provided by other occupancies. Contrary to a popular misconception, the fire record of facilities meeting the Life Safety Code, or any other rigorous code, is good. This occupancy has had a poor fire record but the major fires that caused this record were in buildings that did not meet the Board and Care Occupancy requirements in the Life Safety Code. Adoption and enforcement of rigorous fire safety requirements are necessary to improve the record. We asked fire experts and Board and Care Home regulators for their opinion of whether the Life Safety Code provided adequate safety, and the general response was that it did provide a satisfactory level of safety. On the other hand, some people we contacted disagreed strongly, and some jurisdictions have added extra requirements or restricted the use of the Board and Care Occupancy chapters to Homes with residents who could evacuate without physical assistance. This study found neither technical information nor a consensus among experts that would support generally increasing the current requirements in the Life Safety Code.

We have discovered that it is important not just to know that the Life Safety Code Board and Care provisions are required by a jurisdiction or agency, but to know *how* they are being applied. Additional requirements imposed by agencies or jurisdictions can effectively eliminate some of the options allowed by the Code and thus limit one of its important features -- flexibility.

A distinguishing characteristic of the Board and Care Chapters of the Life Safety Code is this flexibility of the requirements. There are different requirements depending on the capability of the residents to evacuate after required training. There are many exceptions that essentially permit one fire safety feature to be substituted for another. This flexibility makes it easier and less expensive to retrofit buildings to be safe Board and Care Homes. The flexibility increases the opportunities for persons with disabilities to live safely in pleasant, homelike surroundings.

However, this same flexibility makes the Code more difficult to learn and apply. Inspectors need to be well trained and should have frequent experience doing inspections of Board and Care Homes so they do not forget details between inspections and require time to refresh their

memories. Efforts are continuing to improve the wording of the Code and to provide better support materials. More errors in enforcement can be expected when a code is difficult to learn and use. Similarly, operators need to rely more on regulators and other experts than on their own understanding of the Code. The flexibility clearly has some good consequences and some bad. The authors conclude that the benefits significantly outweigh the problems.

The Life Safety Code permits the use of a Fire Safety Evaluation System to evaluate the fire safety of a Home that fails to meet one or more specifications in the Code. It permits different combinations of fire safety features in addition to the combination required by the Code itself. Use of the Fire Safety Evaluation System is not encouraged by many regulatory agencies. Its value has been decreased in more recent editions of the code because of the increased number of permitted exceptions and because of the sprinkler requirement for all new facilities in the 1991 Edition. Nevertheless, it has been and should continue to be a valuable tool in special situations. We are unaware of it being used with new construction. It, of course, adds to both the flexibility and complexity of the Code.

Board and Care Homes provide personal care rather than health care. While any care would inevitably involve some medical care, such as the care a parent provides to a temporarily sick child, Board and Care Homes are neither prepared nor authorized to provide care that requires medical judgement. There is a policy in many government agencies to avoid or prevent the placement of citizens with physical or mental limitations in nursing homes unless they require the medical services of a nursing home. This is resulting in the placement of residents with more severe limitations in Board and Care Homes. Since the Board and Care requirements in the Life Safety Code include a set of requirements for facilities that cannot be evacuated in a timely fashion by the staff, this trend does not affect the applicability of the requirements.

Some residents of Board and Care Homes are affluent and can afford to live in high quality facilities. Many residents, however, have very limited incomes. For example, a large number of citizens with disabilities live on payments from the Supplemental Security Income (SSI) program of the Social Security Administration. In many states these payments are \$434 per month. Even in areas with low costs, these citizens can afford to live only in marginal facilities. If there are an insufficient number of providers willing and able to provide satisfactory service to these people for \$434 per month, then some people with disabilities will not find care in a legally operating Board and Care Home. They may find care in illegally operating facilities that are not required to meet any fire safety or health requirements, or they may find housing in a setting that does not provide the care that they need, such as an old hotel. A number of state officials expressed concern about the availability of a sufficient number of satisfactory Board and Care Homes in parts of their states. In other locations there is a surplus of licensed Homes. While no one suggests skimping on fire safety, there is concern about the cost of additional new requirements.

A novel feature in the Board and Care Chapters of the Life Safety Code is the concept of different levels of evacuation capability and the attendant different levels of fire protection features required. There had been considerable concern that regulatory agencies would have difficulty classifying Homes into the proper category. We found that many state agencies developed their own procedures for making this determination which were consistent with the flexible requirements in the Code. There was general satisfaction with the procedures adopted and they were considered workable. Although there was some concern with the validity of the results, especially the possibility of cheating by the providers, there was general acceptance of the approach.

The Americans for Disabilities Act and the Fair Housing Act both can be used to challenge safety regulations that may be used to discriminate against citizens with disabilities. A regulation that applies extra requirements based on the fact that the residents are labeled as disabled can be challenged as being discriminatory. The regulation must be based on objective requirements rather than stereotypes or generalizations. The Life Safety Code requirements for Board and Care Occupancies--especially the requirement to classify Homes by evacuation capability--address those abilities and limitations of the residents related to evacuation in case of a fire. Therefore, they limit the imposition of expensive fire safety features to those needed to provide a satisfactory level of safety. If the requirements in the Life Safety Code are sufficient, then any more rigorous set of requirements may be subject to challenge as unduly restricting the access of citizens with disabilities to housing with personal care services.

The Life Safety Code Board and Care requirements provide a high level of safety and at the same time allow for cost savings as compared with using the requirements for Health Care Occupancies. This is especially true for facilities with a mix of residents and staff that allows for a timely evacuation in the event of fire. To the extent consistent with a high level of fire safety, the Board and Care requirements permit the use of buildings with the architectural features of a residential building. Use of the Code can facilitate the opportunities for persons with disabilities to live safely in pleasant, homelike surroundings.

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