

Analysis of US Child Care Safety Regulations

ABSTRACT

Background: With 1.9 million US children cared for in organized group child care, the safety of these children is a public health concern. In the absence of federal policy, each state has developed its own day care safety regulations.

Methods: After creating a set of 36 criteria from three sets of national guidelines, we assessed the safety regulations of 45 states. With a mailed survey of state day care regulatory personnel, we examined the processes of formulating and implementing safety policy in 47 states.

Results: For 24 of the 36 items, more than half the states' regulations were below the criteria or failed to mention the topic. Most notable is the inattention to playground safety, choking hazards, and firearms.

Conclusion: The uneven quality of regulations may be a reflection of a regulatory process that is fragmented, with many different groups sharing authority and with limited involvement of injury prevention specialists. (*Am J Public Health*. 1991; 81:981-985)

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Introduction

According to data from the winter of 1984-85, 1.9 million United States children of working mothers were cared for in organized group day care, and an additional three million received regular care in private homes other than their own.¹

The importance of injuries to preschoolers is well-documented,²⁻⁴ as are the patterns of some specific injury problems including poisoning,^{5,6} aspiration,^{7,8} falls,² drowning,⁹ electrical shocks,¹⁰ scalds and burns,¹¹ and injuries associated with playgrounds¹² and firearms.^{13,14} Only a few studies have examined injury in US day care settings.¹⁵⁻²¹ In the most comprehensive report to date, Sacks, *et al.*¹⁵ found that 58 percent of all day care center injuries result from falls. Falls from playground equipment account for 48 percent of serious injuries, with the playground surface an important determinant of injury severity.

Despite the large numbers of children in organized child care, the incidence of childhood injury, and several legislative efforts, no federal day care regulations exist except for centers on military bases (70,000 children) and for Head Start programs (489,000 children).^{16,17} Instead, each state formulates and enforces its own regulations. State day care regulations address many issues including disease transmission, hygiene, provision of nutritious and safe foods, provision of an environment which facilitates the child's mental, physical, and emotional growth, as well as injury prevention.

Our goal was to assess the content of state safety regulations and document how they are established and enforced.

Methods

The study consisted of three elements: 1) development of the set of model criteria to assess the regulations; 2) content analysis of the regulations; and 3) a questionnaire documenting day care regulatory processes in the states.

The reference criteria were drawn from three sets of nationally recognized guidelines: Massachusetts' Department of Public Health, *Safe Daycare: A Teacher's Guide for Creating Safe Environments for Preschool Children*¹⁰; American Academy of Pediatrics (AAP) *Health in Daycare: A Manual for Health Professionals*²⁴; National Academy of Early Childhood Programs, *Accreditation Criteria and Procedures*.²³ From a combined list of 130 injury-related criteria, 36 specific items were selected by a panel of four injury specialists including three of the authors plus one independent reviewer. Selections were based on individual judgments of the panelists about the potential importance of the injury problem for young children but with an aim of including a diverse, if limited, set of categories. We specifically focused on regulations addressing environmental features of the facilities and center procedures rather than issues such as staff hiring and training practices or staff:child

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ratios because the relationship between staffing patterns and injury potential is less well documented.

Content Analysis

The content analysis consisted of a comparison of each state's regulations to the 36 items. Each was rated as: 1) exceeding the criterion; 2) meeting the criterion; 3) being below the criterion; 4) not mentioning the content area; or 5) referring to other state regulations not specific to day care and not available to us (e.g. state building or fire codes). In the context of this study, we refer to day care as defined by the American Academy of Pediatrics²⁴ as "care, supervision, and guidance of a child or children, unaccompanied by parent or other legal custodian, on a regular basis, for periods of less than 24 hours." The content analysis, however, was restricted to analysis of regulations pertinent to day care center facilities. We excluded consideration of regulations specific to family day care as defined by the AAP; that is, "situations in which fewer than six children are cared for in the caregiver's home."²⁴ None of the criteria chosen delineated differences for specific age groups, although several of the criteria referred to issues specific to an age group (e.g. regulations about cribs).

Questionnaire

The questionnaire about the regulatory process and compliance was sent to the state agency responsible for regulating child day care at the same time the regulations were requested, by letter, from each state. The 15-item self-administered survey addressed the development and monitoring of safety regulations. Nonrespondents were phoned five weeks after the initial mailing and reminded of the survey.

Results

Analysis of Regulation Content

Regulations were obtained from 45 states and examined in comparison to the 36 criteria. Evaluations of the regulations, grouped by category, are presented in Table 1, demonstrating the proportion of states by whether each regulation exceeds, meets, or is below the criterion or if the topic is referred to in another code or not mentioned.

There were only five of the criteria (13.9 percent) that at least half the states

met whereas 15 of the 36 items (41.7 percent) were not mentioned by half or more of the states.

For certain topics such as fire prevention, the state regulations frequently did not list specific requirements but referred to building codes or other state policies. Consequently, comparison to the criteria was impossible. For four of the six standards addressing fire and burn prevention, over half the states referred to other documents. At least 10 percent of the states referred to other regulations for swimming and wading pools, elevated areas, right hand descending stair railings, and motor vehicle passenger restraint.

Surprisingly, no state specified maximum heights for playground equipment, 96 percent neglected to mention playground surfacing, and 91 percent did not specify an eight-foot clearance between playground equipment.

There also were gaps in addressing indoor hazards. For example, 62 percent of the states were below the criterion in their restriction of objects that might cause choking, and no state specifically mentioned the most common causes of choking: hot dogs, peanuts, and grapes.^{6,7} Only 26 percent of the states met the criterion for proper storage of poisonous substances, and a mere 11 percent specified that facilities not allow loaded firearms.

Although 55 percent of the states met or exceeded the criterion for tap water temperature, 38 percent failed to mention the issue. Eighty percent failed to meet the criterion that no free-standing space heaters be used.

Although 82 percent of states required that facilities have a first aid kit at the center at all times, only 18 percent required that at least one staff member be certified in cardiopulmonary resuscitation (CPR).

Subsequent to this analysis, the American Public Health Association (APHA) and the American Academy of Pediatrics (AAP) have drafted joint standards for child day care policy, including safety.²⁶ All of the 36 items included in our analysis are included in the AAP/APHA guidelines. For three of the 36 items, the AAP/APHA recommendations were more stringent than those used in this analysis, while for six others the AAP/APHA recommendations were slightly less stringent. For example, our analysis included a criterion that poisonous substances and medicines be kept in locked storage; the corresponding AAP/APHA guidelines indicated that there be "inaccessibility" of these substances.

The standards for Head Start programs were last revised in 1975 and indicate that if facilities meet or exceed state or local licensing requirements for fire, health, and safety this will "be accepted as prima facie compliance."²⁷ Our review of the 17 Head Start standards pertaining to safety indicated that none was more rigorous than the 36 criteria we considered.

Analysis of Perspectives on the Regulatory Process

Survey responses were received from 47 states (missing are Florida, Louisiana, and Maryland). Only four states required that injury prevention specialists be involved in developing regulations, although 16 states reported that injury prevention specialists are "routinely involved."

Safety regulation compliance by child day care centers was perceived to be good, with ratings of "better than average" reported by respondents from 26 states (55 percent). In contrast, compliance on the part of family day care homes was perceived to be "better than average" in 16 states (34 percent).

Respondents in 23 states indicated that at least one center had been closed in the prior year for safety violations and 19 reported that at least one family day care home had been closed. The types and number of inspections conducted by states varied widely. Types of inspections conducted included fire, gas pipe, sanitation, licensing, and routing monitoring; number of inspections per facility per year ranged from zero to six. Twenty-four respondents indicated that child day care centers in their states were inspected, on average, one or fewer times per year (e.g. every other year).

Those responsible for inspecting the facilities vary by state, with the jurisdiction for inspection shared by seven different types of groups or agencies. In some states, several different agencies were indicated as being responsible for development and/or enforcement of the regulations. In addition, respondents suggested that improvements were needed in: training for licensing and enforcement personnel; transportation policies; and attention to pets, electrical hazards, lead paint, and playground surfacing.

Discussion

Several limitations in the research should be noted. The content analysis was restricted to 36 specific day care center standards and to the 45 states providing

TABLE 1—Proportion of States by Level of Adherence to Criteria (n = 45)*

Criteria	Level of Adherence				
	Exceeds Criterion	Meets Criterion	Below Criterion	Topic not Mentioned	Refers to Other Code
<i>Outdoor Hazards</i>					
Wading pools emptied when not in use	2.2	24.4	11.1	44.5	17.8
All pools should be fenced & gates locked	6.7	20.0	17.8	24.4	31.1
Fences, natural barriers around play areas near busy streets, unsafe areas	0.0	73.3	6.7	20.0	0.0
Play equipment anchored, anchors below ground, no exposed concrete	0.0	6.6	35.6	57.8	0.0
At least 8 feet between all playground equipment	0.0	0.0	8.8	91.2	0.0
Maximum height of playground equipment 6 feet	0.0	0.0	0.0	100.0	0.0
8 inches or more of a resilient surface under playground equipment	0.0	0.0	33.3	66.7	0.0
Continuous maintenance of loose play surface materials	0.0	2.2	2.2	95.6	0.0
Flexible, light-weight, non-cutting swing seats	0.0	4.4	0.0	95.6	0.0
<i>Structure of Facility</i>					
Window openings limited to six inches	0.0	4.4	4.4	91.2	0.0
Elevated areas (landings, balconies, porches) provided with railings, adaptations, or approved safety gates	0.0	37.8	13.3	35.6	13.3
Right hand descending railing secured at child height	2.2	0.0	37.8	48.9	11.1
Above ground windows accessible to children must be constructed, adjusted, or adapted with window stops, screens, or grills	0.0	20.0	31.1	46.7	2.2
<i>Indoor Hazards</i>					
Non-metallic, tight-fitting caps in electric receptacles that are not in service in areas where young children are in care	0.0	55.5	0.0	44.5	0.0
Crib sides always up, in locked position when occupied	0.0	4.4	6.7	88.9	0.0
Toys, furnishings and equipment should be non-toxic, lead-free	0.0	48.9	33.3	17.8	0.0
Toys, furnishings and equipment should be free of rust, splinters and sharp corners	0.0	64.5	22.2	13.3	0.0
Toys, furnishings and equipment should be free from objects small enough to swallow	2.2	35.6	4.4	57.8	0.0
No peanuts, chunks of hot dogs, grapes	0.0	0.0	0.0	100.0	0.0
All potentially poisonous or hazardous substances kept in locked storage space, inaccessible to children	0.0	24.5	62.2	13.3	0.0
Rx/Non Rx medications kept in a designated locked place, inaccessible to children	0.0	28.9	60.0	8.9	2.2
No loaded gun permitted in child care facility	8.9	2.2	8.9	80.0	0.0
<i>Fire/Burn Prevention</i>					
Fire/Smoke Detector provided	2.2	37.8	2.2	0.0	57.8
Fire/Smoke Detector tested monthly (weekly)	2.2	6.7	2.2	17.8	71.1
Fire extinguishers provided	0.0	42.3	4.4	2.2	51.1
Fire extinguishers tested monthly (not specified)	0.0	4.4	15.6	15.6	64.4
Free standing space heaters should not be used	0.0	20.0	17.8	60.0	2.2
Hot water temperature should not exceed 120 degrees F at outlet	22.2	33.3	6.7	37.8	0.0
<i>Emergency Procedures</i>					
First Aid Kit in center at all times, wherever, whenever children are in care	0.0	82.2	8.9	8.9	0.0
At least one staff person on premises who is currently certified in CPR	2.2	15.6	8.9	73.3	0.0
<i>Supervision</i>					
Adult supervision of children at all times	0.0	91.1	8.9	0.0	0.0
No infant left unattended while bathing	0.0	11.1	0.0	88.9	0.0
<i>Safety Education</i>					
Safety education for parents	0.0	0.0	0.0	100.0	0.0
Safety education for children	0.0	4.4	2.2	93.4	0.0
<i>Transportation</i>					
All vehicle passengers seated in seats with suitable restraint system	0.0	22.2	31.1	26.7	20.0

*Data from the following jurisdictions were either not received or were not usable: Florida, Kansas, Louisiana, Maryland, Nevada and Washington, D.C.

documents. A separate analysis is needed to address the standards for the large population in family day care homes. The survey also was limited in several ways: only one representative responded from each state, and the role of these respondents may differ among states; anonymity was impossible, potentially reducing candor; and judgments of compliance were based on respondents' recall of "usual" practices which may vary widely. In addition, the scarcity of epidemiologic data about injuries occurring in day care facilities necessitates inferring, to a certain extent, that injury risks are similar to those documented for the total population of children under age five.

Nevertheless, the study does suggest the need for attention to a number of issues associated with the content, development, and monitoring of safety regulations for child care. The analysis revealed some important gaps in the regulations including inattention to playground design, firearms, and choking hazards. Given that playgrounds are the site of most reported injuries in day care centers, this oversight is especially noteworthy. Furthermore, six of the 36 standards studied were mentioned as covered under regulations other than those specific to day care by at least 20 percent of the states. It is impossible, in the context of this analysis, to assess the adequacy of those other regulations. References to other codes or standards, particularly those pertaining to fire and burn prevention, may be overlooked or misunderstood depending upon the communication and coordination among regulatory bodies or the extent to which the regulations are well-publicized. For example, knowledge about vehicle restraint laws may be more common than fire safety codes. In other instances, the failure to address an issue (e.g. firearms) may be based on the presumption that the issue is covered by other laws, a presumption that may or may not be true.

The deficiencies in the regulations reflect an inadequate regulatory process. As has been demonstrated with child automobile restraint policies, the lack of federal regulations results in diverse and inadequate state laws.²⁸ In the states, jurisdiction for day care safety is diffuse, with little input from injury prevention specialists. Furthermore, the relationship between regulations and the licensing process is variable among the states. Many of the regulations cannot be assessed until after a facility opens (e.g. supervision practices). Consequently, the role of inspection and relicensure may have more

significance than initial licensing procedures and could benefit from further study. Interestingly, none of the national guidelines used as the basis of this analysis addressed the issue of inspection processes; however, the AAP/APHA guidelines²⁶ do include recommendations about inspections.

With large numbers of children in out-of-home-care other than day care centers, specific consideration of safety in family day care homes is essential. This requires attention to the delicate balance between access to affordable care on the one hand and, on the other, to the different hazards such as firearms that may be more prevalent in the home environment.

In the absence of a federal commitment, safety in child day care will remain dependent upon state actions. These efforts may be facilitated by the performance standards produced by the American Academy of Pediatrics and the American Public Health Association.²⁶ However helpful, they should not substitute for carefully constructed policy initiatives, preferably at the federal level, based on sound injury research. □

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Women Who Are Most at Risk for AIDS Perceive It Least, Say Loyola Researchers

Two Loyola University Chicago researchers have found that women who are most at risk for HIV are the least likely to perceive themselves as being at risk. They also discovered that women who are at a high risk are no more likely to be tested than those who are at a low risk.

Although other researchers had long suspected both of these facts, the Loyola team was the first to document it.

Of the 320 women surveyed, an almost equal number of minority and nonminority women indicated that they engaged in high-risk behavior. However, significantly fewer high-risk minority women agreed with statements such as "I am concerned that I will get AIDS" and "I am concerned that someone I know will get AIDS" than did high-risk nonminority women.

The research was performed last winter by Seth Kalichman, PhD, assistant professor of psychology at Loyola, and doctoral student Tricia Hunter.

"The message about the methods of AIDS transmittal clearly does not seem to be reaching high-risk minority women," said Kalichman. "Surprisingly, most of the women we surveyed had seen mass transit ads on AIDS prevention. We're hypothesizing that the ads may be lacking in cultural relevance since they did not get the desired response."

To gather information about women's perceived risk for AIDS, Kalichman and Hunter chose a unique and highly effec-

tive location. The pair approached local women of assorted ages, races, and socioeconomic classes at various public transportation sites in downtown Chicago and asked them to fill out anonymous surveys on AIDS.

"We had a cooperation rate of 93%," said Kalichman. "We didn't know what sort of reaction we would get, and the response exceeded all of our expectations."

The Loyola researchers gave participants who completed the survey a flyer that explained the purpose of the project, gave their university telephone number for more information, and, most importantly, according to Kalichman, provided the correct answers to the survey.

Along with the debriefing sheet, the researchers handed out cards from the Chicago Board of Health which explained where the women could go to have AIDS testing done.

Kalichman and Hunter attribute a large part of their success to the fact that they approached the women during non-rush hour periods when they were simply waiting for public transportation to arrive. But more than once, women passed up a ride to finish the Loyola-funded survey—proof, the researchers think, of the women's own interest in the subject.

Because so many men asked to participate in the survey (which was restricted to women only), Loyola hopes to follow up with a second survey which will collect information about men's perceived AIDS risk.