

A DESCRIPTIVE ANALYSIS OF TOBACCO USE POLICIES AMONG
SELECT FAMILY DAY HOMES IN VIRGINIA

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(ABSTRACT)

Environmental tobacco smoke (ETS) has been well established as a danger to children. Exposure to secondhand smoke can cause coughing and wheezing, bronchitis, pneumonia, ear infections, asthma, and sudden infant death syndrome (SIDS). Childhood exposure to ETS may also increase the risk of developing leukemia and lymphoma in childhood (Mitchell, 1997) as well as developing lung cancer as an adult (Glantz, 1992). Despite the great strides recently made in the implementation of regulatory measures to safeguard children from ETS in public places like schools, there remains significant concern regarding children's exposure at home and in their out-of-home care facilities (Ashley and Ferrence, 1998, Jarvis, 2000). In 1996, the Centers for Disease Control and Prevention estimated that there were 336,749 Virginia youth exposed to ETS in the home (State Tobacco Control Highlights, 1999).

The purpose of this study was to ascertain the number of family day home providers who allow smoking in their home and/or those that have some type of smoking policy. The sample consisted of 746 licensed, registered or locally approved family day home providers through the Department of Social Services. Of these childcare providers, 81.5% (n=608) completed a questionnaire about their tobacco use policy and its effects.

An overwhelming majority (94.7% n=605) of providers reported having a tobacco use policy in their family day home. Most of the providers, 67.6% (n=432) indicated that smoking was allowed outdoors only while 26.3% (n=168) noted that smoking was not allowed anywhere at any time, indoor or outdoor. Other policy specifics and background information are discussed in the study. The implications of these findings and recommendations for future training and educational programs for family day home providers are also reviewed.

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Chapter I

INTRODUCTION

Problem

Exposure to secondhand smoke, or environmental tobacco smoke (ETS), poses serious health risks to children. Children's bodies are small and their lungs are not completely developed which puts them at a particularly high risk for developing certain health problems as a result of such exposure. Exposure to ETS contributes to millions of cases of diseases and disability each year as well as to thousands of deaths of American children (Aligne, 1997). In children, secondhand smoke can cause coughing and wheezing, bronchitis, pneumonia, ear infections, asthma, and sudden infant death syndrome (SIDS). Childhood exposure to ETS may also increase the risk of developing leukemia and lymphoma in childhood (Mitchell, 1997) as well as developing lung cancer as an adult (Glantz, 1992). For a child who spends one hour in the care of a smoking adult (with the windows closed), it is as if the child smoked three cigarettes (Hammond, 1996).

These problems create a tremendous financial burden for the public health care system. The estimated health care costs for tobacco-related pediatric illnesses are \$4.6 billion annually. In addition, these conditions generate millions of dollars in loss of life costs. "In fact, more young children are killed by parental smoking than by all unintentional injuries combined," (Aligne, 1997, Lewit, 1995).

Despite the great strides recently made in the implementation of regulatory measures to safeguard children from ETS in public places like schools, there remains significant concern regarding children's exposure at home and in their out-of-home care facilities (Ashley and Ferrence, 1998, Jarvis, 2000). Data from a 1996 study indicated that twenty-two per cent of U.S. children and adolescents under age 18 years were exposed to secondhand smoke in their homes (CDC, 1997). In 1996, the Centers for Disease Control and Prevention estimated that there were 336,749 Virginia youth exposed to ETS in the home (State Tobacco Control Highlights, 1999).

Legislation to ban smoking in homes is unlikely, however emphasis can be placed on the role that childcare providers can play in the reduction of children's exposure to

ETS. Currently in Virginia, legislation that prohibits smoking in childcare facilities extends only to non-residential settings. According to the Virginia Indoor Clean Air Act, Section 15.2-2801 of the *Code of Virginia*:

Smoking is prohibited in the interior of a child day center licensed pursuant to §63.1-196 that is not also used for residential purposes. The proprietor...shall post signs conspicuous to public view stating “No Smoking.” Any person failing to post such signs may be subject to a civil penalty of not more than twenty-five dollars. No person shall smoke in a designated no-smoking area and any person who continues to smoke in such area after having been asked to refrain from smoking may be subject to a civil penalty of not more than twenty-five dollars.

According to the Virginia Department of Social Services (DSS), there is no law or regulation that prohibits smoking in residential childcare facilities, otherwise known as family day homes. Because of the serious health effects related to repeated exposure to ETS, efforts are needed to determine the number of family day home providers that allow smoking at any time.

Purpose

The purpose of this study was to determine the number of family day home providers who allow smoking in their home and/or those that have some type of smoking policy.

Research Questions

1. What is the range of smoking policies (i.e. smoking allowed indoor, outdoor, designated areas only, at any time, only when children aren't present) among family day homes?
2. Are there significant differences among policies between the groups of providers (licensed, registered, local agency approved)?
3. Has the policy or change in policy affected the health of the children in these facilities?
4. Is the policy communicated effectively to parents and employees (i.e. are signs posted, is it written)?
5. Does the facility receive complaints regarding secondhand smoke?
6. Do family day home providers have all of the information they need regarding smoking and smoking policies?

Significance

There is little research available on the role that a family day home plays in a child's exposure to secondhand smoke. This information could have far-reaching policy implications since Virginia law affects only licensed childcare centers that are not also used for residential purposes. For this reason, it is important to determine the amount of exposure that children face in home-based care facilities where the law does not apply.

In addition the Tobacco Use Control Program of the Virginia Department of Health, which is funded by the National Tobacco Control Program (NTCP) of the Centers for Disease Control, is interested in gathering this policy information. This data collection project complies with the ETS goal set forth by the NTCP, which is to eliminate exposure to ETS. The suggested strategy for the state program is to gather data on public places that have tobacco-free policies. This data will be used by the Department of Health to plan future programs and services with regard to secondhand smoke education and clean indoor air policies.

The Virginia Department of Social Services is also interested in learning more about the prevalence of smoking policies among their day home providers. The DSS is unaware of the number of providers that permit smoking in their home and/or those that enlist the use of a smoking policy because smoking is not regulated by their agency or state law.

Limitations

One limitation of this study was its failure to include all family day home providers in the Commonwealth of Virginia. The only listing available of such providers was that from the Department of Social Services including those that are voluntarily licensed, registered or approved by the local DSS agencies. However, this list is not exhaustive. There are many residential childcare providers in Virginia who do not pursue licensure or registration and who are unable to be contacted. These providers were therefore excluded from participation in this study. For the purposes of this study, it was necessary to rely on the DSS for the only uniform list of family day home providers. Therefore, the population to which this information can be applied is limited to the individuals included in the DSS listing.

A second limitation of this study was its reliance on self-report for policy information. Participants were asked to share their policy information confidentially on the written questionnaires or over the telephone with the data collectors. Participants may have underestimated or exaggerated the stringency of their policies for a variety of reasons. Since these participants work with the DSS for licensure/registration, they may have feared disciplinary action from the agency. However unfounded this reasoning may be, it had the potential to bias participant response. In an attempt to offset some of the potential bias of self-report, the participants were informed of the study's confidentiality and were ensured that their individual family day home would not be associated with their responses or the results.

A third potential limitation was the use of written questionnaires for participants who may use English as a second language and/or may have low-literacy levels. The questionnaire was rated 59.2 out of 100 on the Flesch Reading Ease scale. Most standard documents rate between 60-70 with the higher scores being easier. The questionnaire was rated 7.6 on the Flesch-Kincaid grade level scale. This tool may be difficult for individuals with a reading level of seventh grade or lower. In addition, the verbal questionnaire conducted via telephone may have been difficult to interpret for those speaking English as a second language.

A fourth limitation was the failure to conduct sound reliability tests on the instrument due to the time constraints set forth by the funding source, the Tobacco Use Control Program of the Virginia Department of Health.

Assumptions:

- all participants were accurately identified by the DSS as family day home care providers,
- all participant responses were generated by the actual individuals whose name was identified by the DSS mailing list,
- all participants understood the questions, and
- all participants responded honestly.

Delimitations:

- the results of this study apply only to those individuals whose names were selected by the DSS as family day home providers.

Definition of Terms

The following definitions are offered in order to clarify terms used in this study:

1. Environmental Tobacco Smoke (ETS) or secondhand smoke is side stream smoke that comes from exhaled smoke as well as the lighted end of a cigarette, cigar or pipe.
2. Smoking policy is the written or unwritten rules and regulations governing smoking activity in one's family day home.
3. Enforce is to carry out one's policy effectively.
4. Family day home providers are those individuals who are licensed or registered with the Virginia Department of Social Services or those approved by the local Department of Social Services as childcare providers. Private home childcare is considered an arrangement for children where, during the absence of a parent or guardian, a person assumes the responsibility for the supervision, protection, and well being of a child under the age of 13 in their own home, for less than a twenty-four hour period.
5. Licensed family day homes provide care for up to twelve children, excluding the provider's own children or children residing in the home, in a private home that is licensed by the Virginia Department of Social Services. These homes must maintain compliance with the requirements of the DSS publication *Minimum Standards for Licensed Family Day Homes* and are inspected twice per year by the Virginia Department of Social Services.
6. Voluntarily registered family day homes serve up to five children excluding the provider's own children or children residing in the home, and has registered with an organization that is under contract with the Virginia Department of Social Services. These homes must comply with the conditions found in the DSS publication *Voluntary Registration of Family Day Homes: Requirements for Providers*. The Virginia Department of Social Services contracts with an approved agency to conduct random checks on 10% of these homes that are not on the USDA ChildCare Food Program and 20% of all homes.

7. Local agency approved family day homes meet care-giving standards set by the State Board of Social Services for use by local department of social services. They can serve up to five children, excluding the provider's own children or children residing in the home. The purpose of local agency approval is to assist local agency clients with available childcare. There is no rule forbidding the provider to care for children other than local agency clients.
8. Otitis media (OM) is defined as a middle-ear infection and is the most commonly diagnosed childhood disease.
9. Tympanostomy tubes are the surgically implanted middle-ear tubes for recurrent otitis media.
10. Lower respiratory tract infections are infectious diseases of the larynx, trachea, and bronchi. Examples include bronchitis and pneumonia.
11. Bronchitis is the respiratory illness characterized by a persistent cough, burning chest pain or soreness of the chest, and occasionally shortness of breath. Can lead to pneumonia.
12. Pneumonia is a lung infection characterized by high fever, chills, chest pain, cough and respiratory distress.
13. Sudden Infant Death Syndrome (SIDS) is the sudden and unexpected death of an infant.
14. Asthma is a chronic lung disease that causes episodes of wheezing, coughing and shortness of breath.
15. USDA ChildCare Food Program is part of the National School Lunch Act and reimburses childcare providers for nutritious meals served to children under the age of 13 in their care.

Chapter II

REVIEW OF RELATED LITERATURE

Through an examination of related literature, supporting evidence exists in the following three topic areas related to children's exposure to environmental tobacco smoke and clean indoor air policies: 1) the etiology of children's illnesses related to ETS exposure, 2) the established need for clean indoor air policies, and 3) trends in current policies in homes, cars, and residential childcare facilities.

Etiology of Children's Illnesses

In 1993, The Environmental Protection Agency (EPA) released a scientific risk assessment document that classified secondhand smoke as a known human (Group A) carcinogen and determined that exposure to ETS causes serious health effects in children. Infants and young children whose parents smoke are among the most seriously affected by exposure to secondhand smoke, being at increased risk of lower respiratory tract infections such as pneumonia and bronchitis.

A study by Holberg, Wright, Martinez, Morgan and Taussig (1993) supports these findings in children during the first three years of life. This study found that the presence of a smoking caregiver is a significant independent risk factor for the development of lower respiratory infections (LRI) in children. Specifically in the third year of life, the risk of wheezing LRI among children in the presence of a smoking caregiver was more than threefold compared with those children in another residential setting.

In a study by C. Petersson (1994), it was determined that children under 18 months of age in families where at least one parent was a smoker received more antibiotics for respiratory tract infections than children of non-smokers. In addition, higher consumption of physician consultation and antibiotics was observed among children with smoking mothers. Further evidence is shown in an epidemiological study of 1129 children in Poland. Jedrychowski and Flak (1997) found strong evidence that children exposed to ETS in their homes were more susceptible to acute respiratory tract illnesses than unexposed children were.

The EPA estimates that between nine and twelve million American children less than five years of age are exposed to ETS in their homes. The Department of Health and Human Services Healthy People 2010 objectives estimated in 1999 that 27% of children

aged 6 and younger lived in a household where someone smoked inside the house at least four days during the previous week. The goal for 2010 is to reduce that number to 10%.

As a result of this exposure to ETS, the EPA estimates that passive smoking is responsible for between 150,000 and 300,000 lower respiratory tract infections in infants and children under 18 months of age annually, resulting in between 7,500 and 15,000 hospitalizations each year. Children exposed to secondhand smoke are also more likely to have reduced lung function and symptoms of respiratory irritation like coughing, excess phlegm production, and wheezing. Passive smoking can lead to a buildup of fluid in the middle ear, the most common cause of hospitalization of children for an operation.

Numerous studies demonstrate a relationship between middle ear infections, otitis media, and exposure to ETS. A study by R. Etzel (1985) of 132 children found that exposed children had more episodes of otitis media between 6 and 24 months of age than did the unexposed children. It was also determined that the average duration of otitis media was longer for exposed children than for unexposed children. M. Zoler (1999) found that tobacco smoke exposure is one of the most powerful risk factors for tympanostomy tubes in a group of more than 350 infants followed up prospectively.

Asthmatic children are especially at risk for respiratory problems and hospitalizations as a result of exposure to ETS. The EPA estimates that between 200,000 and 1,000,000 asthmatic children have their condition worsened by exposure to secondhand smoke. Passive smoking may also cause thousands of non-asthmatic children to develop the condition each year. In a study by Chilmonczyk, Salmun, Megathlin, Neveux, Palomki, Knight, Pulkkinen and Haddow (1993), further evidence was found of an association between exposure to ETS and pulmonary morbidity in children with asthma. Urine cotinine levels were measured in 199 children with asthma and the children's parents answered questions about each child's exposure to ETS. Medical records were also reviewed for documented acute exacerbations of asthma during the preceding year. Urine cotinine levels increased with reported exposure, as did acute exacerbations of the condition.

Studies released since the EPA's 1993 Risk Assessment have also found increasing evidence of a causal relationship with Sudden Infant Death Syndrome (SIDS) (EPA). A 1993 report from the California Environmental Protection Agency states that

recent epidemiological studies have demonstrated that postnatal ETS exposure is an independent risk factor for SIDS. The California report also draws similar conclusions regarding the developmental and respiratory effects that are causally associated with ETS exposure. It cites that there is sufficient evidence of a causal relationship between ETS exposure and low birth weight, SIDS, acute lower respiratory tract infections, asthma induction and exacerbation, chronic respiratory symptoms and middle ear infections in children.

A. Charlton published a review in 1994 of nearly 200 research papers published worldwide that assessed the weight of evidence for various health risks of passive smoking on children. The review concluded “there is now sufficient evidence that health problems in children are related to exposure to ETS in the home and daycare centers” (Charlton, 1994). The author suggests that exposure to ETS should be noted on pediatric patients’ problem lists and addressed at each visit.

As previously noted, The Department of Health and Human Services Healthy People 2010 objectives estimated in 1999 that 27% of children aged 6 and younger lived in a household where someone smoked inside the house at least four days during the previous week. The goal for 2010 is to reduce that number to 10%. Due to this prevalence information, children have been identified as a population subgroup at increased risk for exposure to ETS. These numbers confirm the importance of smoking in the home in determining the extent to which children involuntarily inhale the tobacco smoke of others. The Surgeon General’s 1986 report on the health consequences of involuntary smoking and the U.S. Environmental Protection Agency’s 1993 report on the respiratory health effects of passive smoking confirm the risks associated with children’s exposure to ETS. Numerous additional studies follow that support the need for clean indoor air policies within the home and/or childcare setting.

Need for Clean Indoor Air Policies

Children are more likely than adults to suffer health effects of ETS exposure and the home has been identified as the most important site of such exposure (Ashley and Ferrence 1998, Bakoula, Kafritsa, Kavadias, Haley and Matsaniotis, 1997, Jordaan, Ehrlick, and Potter 1999). Because this study examines residential childcare facilities, it is important to review ETS control measures with relation to children and to the home.

A study by Ashley and Ferrence (1998) concludes that in the U.S. numerous social, economic, legal and political factors contribute to a lower level of support for ETS control measures in homes compared with workplaces and public places. The authors write, “it is now clear that ETS control in home environments must be a priority on the public health agenda,” (1998).

Bakoula, Kafritsa, Kavadias, Haley and Matsaniotis (1997) studied the individual, family and environmental factors that may modify exposure of children to ETS. The study concludes that several household-related factors affect exposure to ETS and this exposure can be reduced by about one-third by simple precautions taken by smoking parents.

R. Davis (1998) suggests that children are more prone to illness from ETS because they have a higher respiratory rate than adults do and because some ETS-associated conditions occur primarily at young ages. He suggests that education, regulation, legislation and litigation are strategies that can protect non-smokers. Education is cited as an important strategy since areas like private homes are difficult to control through legislation. Davis also suggests that since children cannot protect themselves when exposed to ETS, public policies are needed to protect them.

In response to the 1999 California EPA report, Carol Browner, (Godshall, 1999) administrator for the U.S. Environmental Protection Agency states that the report “confirms the U.S. EPA’s position that secondhand smoke poses major health risk.” She goes on to say “...we again call on all parents to protect their children from exposure to secondhand cigarette smoke whenever possible.” This report confirms the serious health risks caused by ETS and finds that simple control measures can protect nonsmokers.

An editorial by Ferrence and Ashley (2000) goes further to propose that regulatory measures to protect children from ETS in day care settings, schools and public places do not address their main source of exposure – their homes. The authors suggest other strategies be put in place to reduce children’s exposure to ETS. They also conclude that the findings of Hovell, Zakarain, Wahlgreen and Matt (2000) show the potential of more focused techniques that impact smoking parents directly, through counseling. Ferrence and Ashley (2000) suggest that health professionals should intervene in cases where children are exposed to ETS. Physicians should be prepared to give parents

advice and recommendations regarding ETS and children as well as smoking cessation help for those parents who want to quit.

A study by Jarvis et al (2000) reports that much of the reduction in exposure among English children aged 11-15 that occurred between 1988 and 1998 was due to reduced prevalence of parental smoking, as well as reduced smoking in the home. Thus public education and programs directed at reducing exposure in the home need to be combined with policies and programs for the public aimed at preventing smoking and encouraging smokers to quit.

A study by Ashley, Cohen, Ferrence, Bull, Bondy, Poland and Pederson (1998) concludes that attitudes about smoking in the home have changed. Data from a population-based survey of adults in Ontario, Canada were analyzed. Between 1992 and 1996, the percentage of respondents who agreed that parents spending time at home with small children should not smoke increased from 51% to 70%. In 1996, 34% of the homes surveyed were smoke-free. The smoke-free homes were associated with nonsmoking respondents and with the presence of children and no daily smokers in the home. Only 20% of homes with children and any daily smokers were smoke-free. The authors conclude that efforts are needed to assist parents in reducing children's exposure to ETS in the home.

Trends in Current Policies

A paper by Norman, Ribisi, Howard-Pitney and Ammann Howard (1999) addresses the question of whether individuals who are most in need of household and car smoking bans such as individuals with children living at home or who have many friends who smoke, are the ones who have them. The authors concluded (1999) that efforts are needed to increase home and car smoking bans for nonsmokers who have friends who smoke and smokers with children living at home.

Dr. Karen Emmons, (Greider, 1998) an associate professor of health and social behavior at the Harvard School of Public Health offers several strategies to help reduce a child's exposure to smoke. One way is to smoke outdoors and ask others to do the same. Another strategy is to never smoke while playing with or holding a child or when in an enclosed space with a child. Also, she suggests that parents avoid the smoking section in restaurants and insure that your childcare center is smoke-free.

A study by Beiner, Cullen, Di, and Hammond (1997) demonstrates that household smoking restrictions can substantially reduce the health risks experienced by adolescents living with adult smokers. According to the authors (1997), 53% of teens that lived with smokers reported no smoking restrictions for family members. The teens' reported hours of exposure at home were associated with the number of adult smokers in the household ($p < 0.001$). The study also suggests that since younger children probably spend more time at home than adolescents, their ETS exposure may be even higher. In addition, since the risk to youth is proportional to their exposure, the study indicates that instituting restrictions in the household could substantially reduce health risks to children who live with smokers.

Currently there are numerous states that prohibit smoking in residential childcare settings. In 1994, Minnesota enacted a state law that prohibits smoking in licensed day care centers and family homes/family day care centers during its hours of operation (Department of Health, Prohibitions, Minnesota State Statutes, 1993). According to a children's advocacy group about 40 per cent of Minnesota homes that provide licensed childcare include at least one smoker. Childcare providers who violate the smoking ban can lose their license (Haga, 1994).

Smoking is also prohibited by the state of Massachusetts in family day care centers, group childcare, and school-aged day care centers (Crimes Against Public Health, General Laws of Massachusetts). The Massachusetts tobacco control program targets childcare providers with educational materials for adults and children regarding the importance of a smoke-free environment. Similarly, the state of Indiana prohibits smoking in any public building licensed as a childcare center, childcare home or registered as a childcare ministry (Clean Indoor Air Law, Indiana Code, 1993).

California State law prohibits smoking in licensed family day care homes during hours of operation as a part of the state's labor code. Fines associated with violation range from \$100 for the first violation to \$500 for the third and subsequent violations (Labor Code, California).

Washington prohibits smoking in any home or facility caring for children when the child is present and in motor vehicles transporting children when the licensee transports the child (Prohibited Substances, Washington Administrative Code, 1990). The

law goes further to specify that smoking is allowed on the premises outdoors, away from the building where the child is not present. Utah has one of the most stringent codes with relation to tobacco use in family childcare settings. Tobacco use in any form is prohibited anywhere on the premises of licensed family childcare homes and child care centers. Smoking is also prohibited in vehicles at all times when children are in the vehicle (Licensed Family Child Care, Utah Administrative Code Rule, 1999).

The national trend toward the control of ETS exposure is evident when in 1998-1999, 79% of worksites with 50 or more employees have formal smoking policies that prohibited or limited smoking to separately ventilated areas. The Pro-Children Act of 1994 bans smoking in all public schools that receive federal funding. The Healthy People 2010 objectives include the reduction of exposure to ETS as an objective and highlights schools and homes as venues for change. The Centers for Disease Control also recommends that parents ensure that their child's school and day care programs are smoke-free. Internationally, there is a growing recognition of the need to focus on the prevention of ETS exposure in children (Jordaan, Ehrlich, and Potter 1999).

Summary

Collectively, these findings indicate the broad based understanding of the need for tobacco control policies in family day homes. The health conditions caused and worsened by exposure to ETS are many. These adverse effects have significant public health and economic impacts making it no longer allowable to ignore the childcare setting as a source of exposure to ETS.

The literature outlines much information regarding ETS exposure in the home but does not thoroughly address the issue of exposure in family day homes. Very little is known about family day home policies in areas where state law does not prohibit smoking in such facilities. There has not previously been an assessment of such policies in Virginia. Further inquiry is needed to determine the incidence of policies among Virginia family day homes. This study will therefore utilize a descriptive analysis to obtain this baseline data.

Chapter III

METHODOLOGY

Sample

The Training and Development Coordinator of the Division of Licensing Programs at the DSS generated the statewide lists of licensed, registered and locally approved family day home providers in Virginia. These listings are updated periodically by the DSS and represent all current DSS-recognized day home providers throughout Virginia. The providers on this list fall into one of three categories:

- Licensed family day homes
- Voluntarily registered family day homes
- Local agency approved family day homes.

Licensed family day homes provide care for as many as twelve children, excluding the provider's own children or children residing in the home, in a private home that is licensed by the Virginia Department of Social Services. These homes must maintain compliance with the DSS publication *Minimum Standards for Licensed Family Day Homes* and are inspected twice per year by the Virginia DSS. The list of licensed providers from DSS totaled 1120 individuals which is 25% of the total list.

Voluntarily registered family day homes serve up to five children excluding the provider's own children or children residing in the home, and have registered with an organization that is under contract with the Virginia Department of Social Services. These homes must comply with the DSS publication *Voluntary Registration of Family Day Homes: Requirements for Providers*. Random checks are performed by a Virginia DSS approved contract agency on 10% of these homes that are not on the USDA ChildCare Food Program. The Virginia DSS itself randomly checks 20% of all of these homes. The list of voluntarily registered providers from DSS totaled 1858 individuals which is 15% of the total list.

Local agency approved family day homes meet care-giving standards as set by the State Board of Social Services for use by the local departments of social services. They can serve up to five children, excluding the provider's own children or children residing

in the home. The purpose of local agency approved providers is to assist local DSS agency clients with available childcare. There is no rule however, forbidding the provider to care for children other than local agency clients. These homes are monitored by the local DSS agencies. The list of local agency approved providers totaled approximately 4500 individuals, which made up 60% of the total list.

Regions

First, the state of Virginia was divided into quadrants – North, Central, East and West. This geographical division was made to ensure that each quadrant contained approximately the same number of health districts, based on population in those areas. In doing so, a fairly equal distribution of family day homes was created for each quadrant. The breakdown is as follows (Appendix A contains a complete listing of health districts included in each region and per cent of providers per region):

North quadrant - nine health districts

Central quadrant - ten health districts

East quadrant - nine health districts

West quadrant - seven health districts.

The Department of Social Services determined that there were 7478 family day home providers in Virginia. These include licensed, voluntarily registered and local agency approved providers. It was estimated by the DSS that approximately 37.3% (n=2789) of all voluntarily registered, licensed and locally approved childcare day home providers were located in the north, 25.7% (n=1922) in central, 9.6% (n=718) in west and 27.4% (n=2049) in east quadrants respectively.

The funding source for this data collection project was the Tobacco Use Control Program of the Virginia Department of Health. This group has several program goals, one of which is the elimination of exposure to ETS. Under this program goal, one objective was to determine the number of public places that have a tobacco-free policy. The Tobacco Use Control Program selected family day homes as one venue to include in a study that measures the existence of tobacco-free policies. Such policy information had not previously been gathered from family day homes.

A 10% stratified random sample was then drawn among the three types of providers (licensed, registered, and locally approved) across the strata as follows: North

n= 319, Central n= 172, West n= 78 and East n= 177 for a total sample of 746 providers. The sample drawn was proportional to the number of providers in each classification in each region (Appendix A). Of the sample, 608 responses were returned resulting in an 81.5% response rate.

Instrumentation

A panel of experts was assembled to draft a list of questions to be included in the data collection instrument. The committee consisted of: a university professor from Virginia Polytechnic Institute and State University who specializes in substance abuse prevention and evaluation, a doctoral student and public health faculty member at East Tennessee State University, a Master's student in health promotion, and two directors from the Tobacco Use Control Program at the Virginia Department of Health. These individuals designed the questions to capture information from the subjects in three subject areas: background information, specific policy information, and the policy's effects. The Tobacco Use Control Program of the Virginia Department of Health determined the specific questions in each category. A copy of the instrument can be found in Appendix B.

The questions in the background information section asked the age range and number of children in the individual's care, race/ethnicity, and differentiation among providers (licensed, registered, local agency approved).

Policy questions pertained to the procedures and/or assumptions under which each day home operates with relation to smoking behavior in their facility. These questions included information on whether or not a policy was in effect at the day home, if the policy was written or unwritten, a definition of the policy, the timeline of implementation, the use of any signs to display the policy, as well as enforcement and compliance. If the day home had a policy, there were additional questions that highlighted its effects on their employees, the children in their care and the children's parents.

A total of 40-items were eventually used on the questionnaire. To get to this number from the original pool of questions, the questionnaire underwent several cycles of review by the panel of experts. When the questionnaire met with approval from the Tobacco Use Control Program, it was then piloted as a telephone questionnaire with 16 family day

home providers. After the questionnaire was piloted, it was reviewed and revised and then submitted to the Tobacco Use Control Program and the panel of experts for final review. Their comments and feedback were incorporated and a final revision was made. The Tobacco Control Program and the panel of experts were then satisfied with the instrument and face validity was established.

The Training and Development Coordinator at the DSS recommended that the questionnaire not be administered to providers over the phone due to the time and attention it would take away from the children in their care. She suggested that the instrument be mailed instead. In response to this, the questionnaire was converted to a mail survey. Due to limited funds and time constraints the mail survey was not piloted. A reliability coefficient was not determined for the instrument.

Prior to mailing, the questionnaire was examined for readability and literacy level according to the grammar and readability tools found in Microsoft Word. The final draft of the questionnaire was rated 59.2 on a 100-point Flesch-Reading Ease scale. Higher scores indicate easier readability and most standard documents are rated between 60-70. The questionnaire was rated 7.6 on the Flesch-Kincaid reading grade level scale. Most documents should aim for the 7th-8th grade reading level according to the grammar tool in Microsoft Word.

Methods

A total of three mailings were sent to each randomly selected participant. First, the instrument was mailed with a cover letter (Appendix C) to each subject with an established deadline for response. This initial mailing included a postage-paid, self-addressed envelope for the returned questionnaires. Three weeks after the initial mailing a reminder postcard was sent to all participants. A third mailing was sent two weeks after the second as a reminder. Follow-up calls were made to those subjects (n=10) who had not responded by the deadline. Of these, only two were contacted and responded to questions. These subjects were given the questionnaire over the telephone and the research staff recorded their responses.

Data Analysis

All data were collected and transcribed from questionnaires or telephone interview sheets and typed into an SPSS data file. From this file, frequencies and proportions of

responses were calculated for each variable on the questionnaire. In addition, cross tabulations were performed on the following variables: classification of center and length of operation, region and policy regarding smokeless tobacco use, additional employees and policy description, enforcement clause and policy description, region and the need for additional information. These cross tabulations were performed to determine if there were any relationships between these variables. In addition to gathering background information, analyses were performed on each of the research questions.

Chapter IV

RESULTS AND DISCUSSION

In the following tables and charts, the data found in this study and its analysis are presented. They are broken into four sections 1) background information, 2) research questions 3) specific policy information and 4) policy's effects. The data presented here are based on 608 returned questionnaires. Rounding error, multiple responses or missing data may account for some categories variable responses to add up to more or less than 608.

Background Information

The regional breakdown of family day home providers who participated showed a fairly equal distribution of responses from around the state. Questionnaires were mailed to 746 individuals with 81.5% (n=608) being returned. Of these, 29.1% (n=177) day homes were from the north quadrant, 26% (n=158) from the east quadrant, 21.8% (n=139) from the central quadrant and 21.0% (n=134) from the west quadrant (Table 1).

Table 1

Regional Breakdown of Participating Family Day Homes

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	North	177	27.7	29.1	29.1
	East	158	24.7	26.0	55.1
	Central	139	21.8	22.9	78.0
	West	134	21.0	22.0	100.0
	Total	608	95.2	100.0	

Of the participating day homes, 23.8% (n=152) reported being a licensed provider, 32.2% (n=206) reported being registered, and 18.9% (n=121) reported being approved by their local DSS agency. Fifteen and a half percent (n=99) of respondents indicated more than one classification for their center on the questionnaire (Table 2). This may be due to confusion over the classification terminology used on the questionnaire. Many of these respondents may be unaware of the official classification given to their center by the DSS. Some day home providers may not fully understand or

be familiar with the differences between categories. Three respondents indicated that they did not know or were unsure of their classification.

Eighty-three per cent of providers (n=532) reported that their family day home has been in operation for more than 36 months. Sixty-two per cent of respondents (n=398) when asked about additional employees indicated that they employ someone in addition to themselves at their family day home. Most of these respondents (99.7% n=397) reported having one employee. Two hundred seventy four of those reporting an additional employee indicated that this employee was female. One hundred twenty-four did not report the gender of their employee. Of the respondents (n=365), 57.1% indicated employing one female at their family day home in addition to themselves. Other findings include:

- 93.1% (n=595) of respondents reported no insurance policies offered to employees with a rate structure based on smoking status.
- 41.8% (n=267) of respondents classified themselves as European American/White and 18.5% (n=118) of respondents classified themselves as African American/Black. 39.7% (n=254) of day home providers did not indicate a response for the race/ethnicity question.
- 37.9% (n=217) of family day home providers reported not having all of the information they need regarding smoking and smoking policies in residential childcare centers (Table 3).
- 20.5% (n=131) of respondents requested additional information about smoking and smoking policies and 10.6% (n=68) would be interested in additional training regarding tobacco use policies.

Table 2

Classification of Family Day Homes

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid				
Licensed	152	23.8	26.2	26.2
Registered	206	32.2	35.5	61.6
Local agency approved	121	18.9	20.8	82.4
Do not know/not sure	3	.5	.5	83.0
Multiple responses	99	15.5	17.0	100.0
Total	581	90.9	100.0	

Table 3

Additional Information Needed

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	356	55.7	62.1	62.1
	No	217	34.0	37.9	100.0
	Total	573	89.7	100.0	

Research Questions

In response to the initial research questions, the following results were found:

1. What is the range of smoking policies (i.e. smoking allowed indoor, outdoor, designated areas only, at any time, only when children aren't present) among family day-homes?

Ninety-five per cent (n=605) reported having a smoking policy. Sixty-one and a half per cent (n=393) indicated that the policy had been in effect since the beginning of the operation of their day home while 32.2% (n=207) reported having a policy for more than 36 months. Sixty-seven per cent (n=432) of day home providers reported that they allow smoking outdoors only while 26.3% (n=168) noted that smoking is not allowed anywhere at any time, indoor or outdoor.

2. Are there significant differences among policies between the groups of providers (licensed, registered, local agency approved)?

This was difficult to determine from the study due to the fact that some providers (n=99) indicated multiple responses when asked to identify the category of their day home. This is discussed in background information and may be due to confusion over the classification terminology used on the questionnaire. Many of these respondents may be unaware of the official classification given to their center by the DSS and/or may not fully understand the differences between categories.

3. Has the policy or change in policy affected the health of the children in these facilities?

Only 67 respondents (10.5%) reported that they noticed a change in the children's health. Most providers (n=518) indicated that the policy had always been in effect and as result they were unable to make any determination regarding a change in the children's health. Thus the study was not successful in gleaning any insight into the impact that a smoking policy had on the health of the children in these facilities.

4. Is the policy communicated effectively to parents and employees (i.e. are signs posted, is it written)? Of those providers who responded, (n=594), 93% communicate their smoking policies to parents and most of those, 92.8% (n=593), indicated that they do so verbally.

5. Does the facility receive complaints regarding secondhand smoke?

All respondents (n=582) indicated that they have not received complaints about secondhand smoke.

6. Do family day home providers have all of the information they need regarding smoking and smoking policies?

Thirty-four per cent (n=217) of providers reported that they did not have all of the information they need. Twenty-one per cent (n=131) requested more information and 10.6% (n=68) reported interest in additional training.

Specific Policy Information

As shown in Table 4, 94.7% of reporting family day home providers noted having a smoking policy. Of those, 32.2% (n=207) indicated that it had been in effect for more than 36 months with 61.5% (n=393) indicated that it has been in effect since the inception of their day home. Of the policies reported 67.6% (n=432) of providers allow smoking only outdoors while 26.3% do not allow smoking anywhere on the premises at any time, indoors or outdoors (Figure 1). One hundred per cent (n=608) of providers indicated that smoking is not allowed in their house during non-childcare hours.

As shown in Figure 2, most providers (63.7% n=407) report that they do not have non-smoking signs posted in their day home. Of those reporting the use of signs 17.7% (n=189) indicate that their signs are handwritten while 11.9% report the use of a printed sign. Other policy specifics are as follows:

- 69% (n=441) of policies do not cover the use of smokeless tobacco.
- Very few policies (1.4% n=9) have been changed since implementation.

- Of the 594 respondents, 100% reported having communicated their policy to the parents of the children in their care. Of 593 respondents, 100% indicated that they communicated the policy verbally.
- 85% (n=543) reported giving parents no notice before the policy went into effect. 2.8% reported less than one week, 3% reported 1-3 weeks and .9% reported 4-8 weeks. Of the few respondents (n=35), 100% indicated that they did not give their employees any notice before their policy went into effect.
- All 592 respondents indicated that they informed potential clients/parents of children about their smoking policy.
- All respondents (n=587) indicated that their smoking policy is enforced. Ninety-two percent of 595 respondents (n=549) indicated that their policy did not contain an enforcement clause which provides consequences for violation of the policy.
- All 592 respondents reported that parents are required to comply with their policy while at their home. Six hundred two respondents indicated that visitors must also comply.

Table 4

Is There a Smoking Policy?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	605	94.7	100.0	100.0
Total		605	100.0		

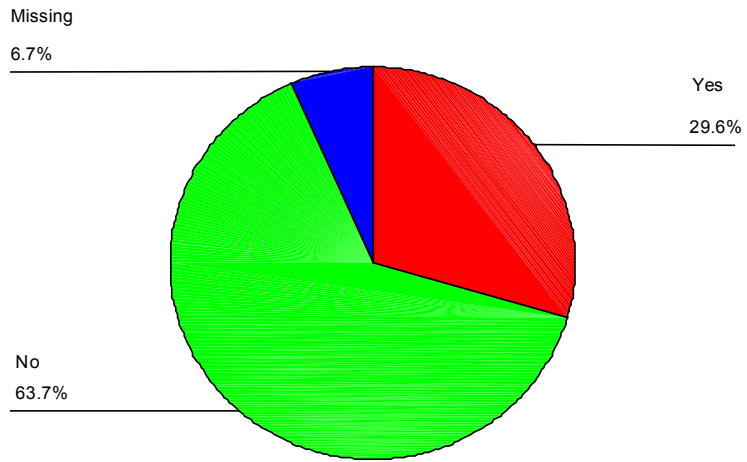


Figure 1: Are Signs Posted

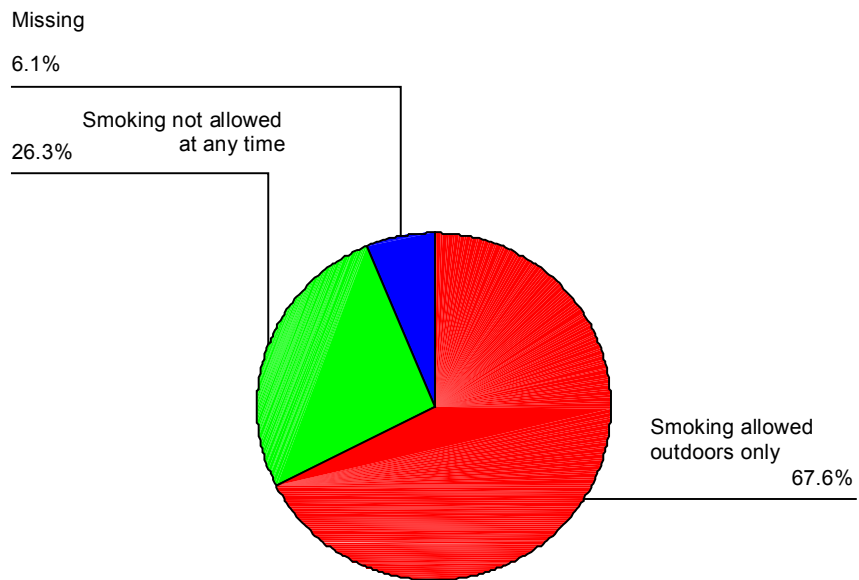


Figure 2: Policy Description

Policy's Effects

Five hundred eighty-two respondents indicated that they have not received complaints about secondhand smoke from the parents of the children in their care. In addition, 598 providers indicated that they had never had a parent remove a child from their care due to their smoking policy. The providers were also asked if they had noticed any changes in the health (number of asthma, flu or respiratory problems) among the children in their care. This question was designed to capture feedback on the overt signs and symptoms of the health of the children. The respondents were not expected to comment on the children's health status from a clinical standpoint. However, 81.1% (n=518) of respondents indicated that the question was not applicable to them because their smoking policy had always been in effect and thus were not able to compare the before and after effects of the policy. Therefore this study was not able to adequately measure the impact that the smoking policies in these facilities had on the children's health.

The following additional analyses were performed to determine whether there were relationships between the following variables: classification of center and length of operation, region and policy regarding smokeless tobacco use, additional employees and policy description, enforcement clause and policy description, region and the need for additional information (Tables 5-9).

Table 5

Classification of Center * Length of Operation Crosstabulation

		Length of Operation					Total
		7-12 months	13-24 months	25-36 months	More than 36 months	Do not know/not sure	
Classification of Center	licensed	Count	2	6	10	134	152
		% of Total	.3%	1.0%	1.7%	23.1%	26.2%
	registered	Count	9	4	16	176	206
		% of Total	1.5%	.7%	2.8%	30.3%	35.5%
	local agency approved	Count		7	8	104	121
		% of Total		1.2%	1.4%	17.9%	20.8%
	do not know/not sure	Count				3	3
		% of Total				.5%	.5%
	multiple responses	Count			6	93	99
		% of Total			1.0%	16.0%	17.0%
Total	Count	11	17	40	510	581	
	% of Total	1.9%	2.9%	6.9%	87.8%	100.0%	

Table 6

Region * Does Policy Cover Other Tobacco Products Crosstabulation

		Does Policy Cover Other Tobacco Products		Total	
		Yes	No		
Region	North	Count	33	144	177
		% of Total	5.4%	23.7%	29.1%
	East	Count	17	141	158
		% of Total	2.8%	23.2%	26.0%
Central	Count	72	67	139	
	% of Total	11.8%	11.0%	22.9%	
West	Count	45	89	134	
	% of Total	7.4%	14.6%	22.0%	
Total	Count	167	441	608	
	% of Total	27.5%	72.5%	100.0%	

Table 7

Are There Other Employees * Policy Description Crosstabulation

		Policy Description		Total	
		Smoking allowed outdoors only	Smoking not allowed anywhere at any time indoor or outdoor		
Are There Other Employees	yes	Count	278	120	398
		% within Are there other employees	69.8%	30.2%	100.0%
		% within Policy description	64.4%	71.4%	66.3%
		% of Total	46.3%	20.0%	66.3%
	no	Count	154	48	202
		% within Are there other employees	76.2%	23.8%	100.0%
		% within Policy description	35.6%	28.6%	33.7%
		% of Total	25.7%	8.0%	33.7%
Total		Count	432	168	600
		% within Are there other employees	72.0%	28.0%	100.0%
		% within Policy description	100.0%	100.0%	100.0%
		% of Total	72.0%	28.0%	100.0%

Table 8

Is There an Enforcement Clause * Policy Description Crosstabulation

		Policy description		Total	
		Smoking allowed outdoors only	Smoking not allowed anywhere at any time indoor or outdoor		
Is There an Enforcement Clause	yes	Count	41	5	46
		% within Is there an enforcement clause	89.1%	10.9%	100.0%
		% within Policy description	9.7%	3.0%	7.8%
		% of Total	7.0%	.9%	7.8%
	no	Count	382	159	541
		% within Is there an enforcement clause	70.6%	29.4%	100.0%
		% within Policy description	90.3%	97.0%	92.2%
		% of Total	65.1%	27.1%	92.2%
Total		Count	423	164	587
		% within Is there an enforcement clause	72.1%	27.9%	100.0%
		% within Policy description	100.0%	100.0%	100.0%
		% of Total	72.1%	27.9%	100.0%

Table 9

Region * Do You Have All the Information You Need Crosstabulation

		Do You Have All the Information You Need		Total	
		yes	no		
Region	North	Count	81	96	177
		% within Region	45.8%	54.2%	100.0%
		% within Do you have all the info you need	22.8%	44.2%	30.9%
		% of Total	14.1%	16.8%	30.9%
	East	Count	87	62	149
		% within Region	58.4%	41.6%	100.0%
		% within Do you have all the info you need	24.4%	28.6%	26.0%
		% of Total	15.2%	10.8%	26.0%
	Central	Count	95	20	115
		% within Region	82.6%	17.4%	100.0%
		% within Do you have all the info you need	26.7%	9.2%	20.1%
		% of Total	16.6%	3.5%	20.1%
	West	Count	93	39	132
		% within Region	70.5%	29.5%	100.0%
		% within Do you have all the info you need	26.1%	18.0%	23.0%
		% of Total	16.2%	6.8%	23.0%
Total	Count		356	217	573
	% within Region		62.1%	37.9%	100.0%
	% within Do you have all the info you need		100.0%	100.0%	100.0%
	% of Total		62.1%	37.9%	100.0%

Discussion

The results of this study provide much insight into the tobacco use policies of family day homes in Virginia. It is worthwhile to note the overwhelming prevalence of policies (94.7% n=605) reported by day home providers and the stern policy descriptions. These results exceed the expected percentage of smoking policies as well as the expected stringency of policies estimated by the Virginia Department of Health, Tobacco Use Control Programs. It was assumed by the staff of the Tobacco Use Control Program that only about 75% of these facilities would report being smoke free due to the current smoking prevalence of 22.9% among adults in Virginia according to the Centers for Disease Control.

The program staff also expected that there would be few defined policies because of the non-commercial nature of these residential childcare facilities. These expectations were only estimates because this group had not previously been surveyed. There may be

a difference between the reported and actual policies because the study relied on self-report. Future research is needed to confirm the reported policy statements.

The reported policies appear to be longstanding and with very few changes since implementation. These findings are interesting due to the lack of regulatory measures placed on the providers to enact such a policy. It is assumed that the providers have chosen their own policy very early on in the operation of their day home. The fact that most providers verbally communicate the policy to the children's parents is also encouraging for the Tobacco Use Control Program. This action by the day home providers indicates a level of responsibility and commitment on their part to make their policies known to parents.

Although most providers did not report an enforcement clause, they did indicate that their policies are enforced. This may mean that few problems arise due to their policy and/or the children's parents typically agree with their policy. The providers seem to be very conscientious in disclosing their policy specifics to potential clients as well. One of the more important findings is the fact that all of the participants (n=608) do not allow smoking in their home when children are not present yet 67.7% (n=432) allow smoking outside. This may explain the dramatic difference between what would seem to be a high percentage of homes with non-smokers relative to the overall smoking prevalence in Virginia which is 22.9% of the adult population. Perhaps these individuals encourage smokers who live in their residence to smoke outdoors or they may represent a larger percentage of non-smokers than in the general population.

Although many of the providers report the use of non-smoking signs, many of these signs are hand-written with some that are pre-printed. This finding is not surprising due to the informal structure of these home-based childcare centers.

The policies' effects are difficult to measure by this study due to the longevity of the policies. Since most providers reported having always had the policy, any changes in children's health could not be gauged before and after policy implementation. In addition, since all of the respondents reported prohibiting smoking indoors (n=600), none admitted to having a child removed from their care as a result of their policy or lack thereof, nor did any respondents indicate that they have received complaints about ETS.

It should be noted that “smoking policy” was not specifically defined on the questionnaire and was subject to individual interpretation. Although a policy for most worksites consists of a specific written outline of procedures and protocol that guides administration, in these private home-based childcare settings, a policy may have been more broadly defined as any plan that guides decision-making. This may be another reason why the reported prevalence of smoking policies was higher than expected.

The results shown for background information also present some interesting facts. Although more family day homes exist in Northern and Eastern Virginia, the respondents were fairly equally distributed among all four quadrants. These providers reported having few employees if any and of those most were female. Most reported not having insurance offered for their employees. Again, these findings are expected given the nature of the day home operation.

Most respondents indicated their race as either European American/White or African American/Black. Many (n=254) chose not to respond to this question so it is unclear what other racial/ethnic groups were included in this study.

It appears that a significant percentage of the providers do not feel they have all of the information they need regarding smoking and smoking policies. Of 299 respondents, 43.8% requested more information. Of 488 respondents, only 68 respondents reported interest in additional training. This questionnaire may have been the first opportunity for these providers to examine and evaluate the smoking policy in their day home. They may feel that they could benefit from additional education about the issue.

In fact, several respondents chose to include comments on their questionnaire about their policies. Some of these comments were “There has never been smoking here,” “Smoking not allowed,” “There is no smoking at all here. It is a Christian home,” “I don’t allow smoking. You should talk to parents.” In addition several respondents mailed in copies of their policies and signs.

Further, it is clear that the majority of providers in each classification reported having operated their family day home for more than 36 months (Table 5) although many providers (n=99) indicated multiple responses when asked to classify their day home. These findings indicate that there is not a great difference in the length of operation among the categories of providers. Due to the fact that most respondents reported having

a smoking policy since the inception of their family day home, it can be concluded that the policies have been in effect for more than three years in most of the licensed, registered and locally approved day homes in this sample.

The results from Table 6 show that most providers report that their smoking policy does not cover the use of smokeless tobacco. Respondents from the Central and West regions reported slightly higher percentages than their counterparts in the North and East with relation to policies that include smokeless tobacco. The respondents in the Central and West regions may include smokeless tobacco in their policy due to an estimated higher prevalence of smokeless tobacco use in the rural areas.

Table 7 displays some additional differences in policies among providers who employ other staff verses those who do not. The majority of respondents (72.0%) report that they allow smoking outdoors but of that percentage most (46.3%) are those providers who employ additional staff. This may be due to the fact that some employees may be smokers and are allowed to smoke on breaks outdoors. Overall, there were more respondents indicating that smoking is allowed outdoors (n=432) than those who prohibit smoking at all times (n=168).

Table 8 indicates that although very few respondents indicate having an enforcement clause (n=46), many more providers who allow smoking outdoors appear to have such a clause (n=41) verses those who prohibit smoking entirely (n=5). The majority however (92.2%), indicate no enforcement clause.

Table 9 indicates that of the respondents from the North (n=177), a greater percentage reported not having all of the information they need regarding smoking and smoking policies. In the three other regions the majority of respondents reported that they did in fact have all of the information they needed.

The results previously outlined do not take into consideration the seven questions that received a non-response. These questions are discussed below:

- *Do you employ people who use tobacco products? If yes, how many employees use tobacco?*

Although a majority (62.3% n=398) of day home providers reported having employees other than themselves, the balance chose not to respond to these questions perhaps for a variety of reasons. The providers may have been reluctant to share that information

about their employees with the researchers and/or the DSS or Department of Health for income/taxation purposes. They may have preferred to protect their employees' confidentiality or they simply may not have known about their employees' smoking behaviors.

- *What changes have been made to your policy?*

Most providers (91.5% n=585) indicated that there had been no changes to their policy since implementation. On the other hand, 1.4% (n=9) of respondents indicated there had been a change in their policy but chose not to report the specific changes made.

- *Is the policy communicated to all employees at least annually?*

Due to the nature of these childcare facilities, there may not be a formal training process or set of procedures followed by the staff. This informal work environment may be the reason for the non-response to this question. Participants may have also found the question confusing or unclear.

- *Do your employees observe the smoking policy during work hours? During breaks?*

These questions may also be a case where the providers chose to keep their employees behaviors confidential.

- *How many times per month do you receive complaints about secondhand smoke from the parents of the children in your care?*

This question was a follow-up to the previously asked question regarding complaints about smoke from parents. Five hundred eighty-two respondents indicated that they do not receive complaints about secondhand smoke making this follow-up question not applicable to them.

Collectively, these findings indicate that a majority of family day home providers have tobacco use policies in place and in fact do not allow smoking indoors. This conclusion supports the ever-growing trend toward clean indoor air policies. These facts may also suggest that, in Virginia, the majority of children's exposure to ETS may occur in their place of residence as opposed to their place of day home care.

Chapter V

SUMMARY CONCLUSIONS AND RECOMMENDATIONS

Summary

The purpose of this study was to ascertain the number of family day home providers who allow smoking in their home and/or those that have some type of smoking policy. In order to assess this information, a questionnaire was developed and distributed to licensed, registered and locally approved family day home providers. The questionnaire included background information, policy specifics and the effects of the policy. Frequencies were calculated for each questionnaire item and cross tabulation tests were performed on several sets of factors.

Conclusions

Based on the results of this study, the following conclusions were drawn:

1. The range of smoking policies among family day home providers is fairly limited. Most report having a policy that permits smoking outdoors only and some report that they prohibit smoking entirely, at all times indoor and outdoor.
2. The differences among policies between the groups of providers were not sufficiently determined by this study due to multiple responses for that variable.
3. The study was unable to properly measure any effect that the policies or change in policies has had on the health of the children in these facilities. Most respondents reported that their policies had always been in effect and therefore any health impact was difficult to determine.
4. The policies in day homes are communicated to parents verbally and with the limited use of signs. Potential clients are also uniformly informed about the policies. Much is still unclear about tobacco use among employees, if the policy is communicated to employees and if the employees observe the policy during work hours and breaks.
5. These providers report receiving no complaints about secondhand smoke.
6. Many of these providers do not have all of the information they need regarding smoking and smoking policies. Some requested information and training on the issues surrounding ETS and smoking policies.

Recommendations

Based on the conduct of this study, the following recommendations are offered in three areas: Future research, Department of Social Services, Department of Health, Overall.

Future Research

It is unclear from this study the rate of tobacco use among the employees of these family day homes. It would be of interest to know if the employees are made aware of the policy as well as if they comply during work hours and breaks. A follow-up study could examine these factors. A future study could enlist the use of face-to-face interviews as an additional methodological approach to measure policy information. This method would ensure that those with lower literacy levels and/or those that speak English as a second language would be included in the study.

The interviews could also potentially serve as a check and balance for the reported information since a site visit would be conducted at that time and any residual secondhand smoke would most likely be detected. This type of one-on-one interview format would be helpful in formalizing the reporting process and articulating the providers' policy statements. In addition, it would be useful in confirming the providers' classification (licensed, registered, local agency approved) with the DSS rather than having the respondents indicate this status themselves.

In the future, educational campaigns and similar studies could be expanded to include childcare providers that are not licensed, registered, or locally approved by the DSS. These individuals may represent a group with fewer tobacco use policies in use and may not be as dedicated to providing clean indoor air for children.

This study could also be expanded beyond policy information to determine to what extent ETS is present in family day homes by inquiring about the owner/operator's tobacco use and/or the number of smokers in the household.

Department of Social Services

A great deal of useful information was obtained through this study, much of which will be helpful to the Departments of Health and Social Services in future program planning. Although DSS does not currently have a formal policy prohibiting smoking in family day homes it could be easily implemented if in fact, as this study found, the

majority of providers already have an informal policy of their own. Smoking policy information could be readily added to application forms and licensure/registration materials and could make the use of such formal policies more consistent among providers. This study concluded a high prevalence of policies among the selected sample but much is still unknown about the day home providers who were not surveyed. Such formal policies could reaffirm the need to protect children from ETS exposure in family day homes and could improve the health of the children in these facilities.

Due to the seemingly overwhelming prevalence of tobacco use policies among this sample of residential childcare facilities, the Clean Indoor Air Act of Virginia could also be adapted to include family day homes as a venue where smoking is prohibited. Since the majority of these providers already utilize a policy and since commercial childcare facilities are covered under the current law, an addition to the state code or to the DSS policy to include family day homes would seem like a natural step in creating healthy childcare environments throughout Virginia.

Department of Health

The Department of Health could implement an educational campaign for family day home providers that would cover the dangers of children's exposure to secondhand smoke, policy suggestions and methods for informing employees about policy information. These methods could help the providers further articulate their policy and even communicate it more fully in writing to parents and employees. In addition, small signs could be developed for the providers and distributed through training events or DSS mailings. It would also be fitting to utilize these providers as advocates or catalysts for parent education regarding ETS. As childcare providers these individuals have the role of supervising, protecting and ensuring the overall well being of the children in their care. As they look after the children's physical care, it seems appropriate that they consider the effects of a child's exposure to ETS in the home and car.

Overall

Since tobacco use policies appear so prevalent among family day home providers it seems that more resources should be devoted to empowering these individuals to advocate for the health of the children in their care and to impact private and public policies that support clean indoor air. This group may have been overlooked in the past

because of its non-commercial nature and its operation in private homes however they represent a critical avenue through which parents could be reached about the importance of policies that protect children from ETS.

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Appendix A: Regional Breakdown of Family Day Homes

Region/ Health District	Licensed 25% (N=1120, n=150)	Registered 15% (N=1858, n=90)	Locally Approved* 60% (N=~4500, n=360)
North	(n=73) 48.92%	(n=14) 16.34%	(n=168) 46.7%
1. Alexandria			
2. Arlington			
3. Central Shenandoah			
4. Fairfax			
5. Lord Fairfax			
6. Loudoun			
7. Prince William			
8. Rappahannock			
9. Rappahannock Rapidan			
Central	(n=36) 23.79%	(n=30) 32.95%	(n=73) 20.25%
1. Central Virginia			
2. Chesterfield			
3. Crater			
4. Danville			
5. Hanover			
6. Henrico			
7. Piedmont			
8. Richmond			
9. Southside			
10. Thomas Jefferson			
West	(n=17) 11.09%	(n=6) 6.61%	(n=40) 11.11%
1. Alleghany/Roanoke Co.			
2. Cumberland Plateau			
3. Lenowisco			
4. Mt. Rogers			
5. New River			
6. Roanoke			
7. West Piedmont			
East	(n=24) 16.20%	(n=40) 44.11%	(n=79) 21.94%
1. Chesapeake			
2. Eastern Shore			
3. Hampton			
4. Norfolk			
5. Peninsula			
6. Portsmouth			
7. Three Rivers			
8. Virginia Beach			
9. Western Tidewater			

**Local agency approved numbers are from an outdated file of 5174 homes, not the most recent file of 4500. However, the regional breakdown is estimated to be approximately the same.

Appendix B: Instrument

1. How long have you operated your childcare center?
 - <a> **0-6 months**
 - **7-12 months**
 - <c> **13-24 months**
 - <d> **25-36 months**
 - <e> **More than 36 months**
 - <f> **Do not know / not sure**

2. Do you employ any one other than yourself?
 - <a> **Yes**
 - **No**
 - <c> **Do not know / not sure**

- 2a. **If no, skip to question # 6**

3. How many employees do you have?
 - <a> _____ #
 - **Do not know / not sure**

4. How many of the employees at your childcare center are female?
 - <a> _____ #
 - **Do not know / not sure**

5. Do you employ people who use tobacco products?
 - <a> **Yes**
 - **No**
 - <c> **Do not know / not sure**

- 5a. **If yes, how many employees use tobacco?**
 - <a> _____ #
 - **Do not know / not sure**

6. Does your childcare center have a smoking policy?
 - <a> **Yes (please send a copy of your policy back with the survey)**
 - **No**
 - <c> **Do not know / not sure**

If your childcare center does NOT have a smoking policy, skip to question # 23.

7. Does that policy also cover the use of other tobacco products like chewing tobacco, using snuff, or dipping?
 - <a> **Yes**
 - **No**
 - <c> **Do not know / not sure**

8. How long has your policy been in effect?
- <a> 0-6 months
 - 7-12 months
 - <c> 13-24 months
 - <d> 25-36 months
 - <e> More than 36 months
 - <f> As long as you've been operating your childcare center
 - <g> Do not know / not sure
9. Since you implemented your tobacco use policy, have you noticed any changes in the number of asthma, flu, or respiratory problems among the children in your care?
- <a> Yes – Circle one:
- | |
|-----------------|
| Increase |
| Decrease |
- No
 - <c> Do not know / not sure
 - <d> Not applicable (it has always has been the policy)
10. Have changes been made to the policy since it was implemented?
- <a> Yes
 - No
 - <c> Do not know / not sure
- 10a. If yes, what changes were made?
- <a> Increase nonsmoking area
 - Decrease nonsmoking area
 - <c> Do not know / not sure
 - <d> Other _____
11. Has the policy been communicated to the parents of enrolled children?
- <a> Yes
 - No
 - <c> Do not know / not sure
- 11a. If yes, how was the policy communicated to the parents?
- <a> Verbally
 - Written
 - <c> Do not know / not sure
12. How much notice did you give the parents before the new policy went into effect?
- <a> None
 - Less than one week
 - <c> 1 – 3 weeks
 - <d> 4 – 8 weeks
 - <e> More than 8 weeks
 - <f> Do not know / not sure

13. Do you inform potential clients/parents of children about your smoking policy?
<a> **Yes**
 No
<c> **Do not know / not sure**
14. Is there an enforcement clause in your smoking policy, which provides consequences for violation of the policy?
<a> **Yes**
 No
<c> **Do not know / not sure**
15. Is your smoking policy enforced?
<a> **Yes**
 No
<c> **Do not know / not sure**
16. Are parents of the children in your center required to comply with the smoking policy while at your home?
<a> **Yes**
 No
<c> **Do not know / not sure**
17. Have any parents removed their children from your care due to the smoking policy?
<a> **Yes**
 No
<c> **Do not know / not sure**
18. Are visitors required to comply with policy?
<a> **Yes**
 No
<c> **Do not know / not sure**
- ❖ **If you do not have any employees, skip to question # 24.**
19. How much notice did you give the employees before the new policy went into effect?
<a> **None**
 Less than one week
<c> **1 – 3 weeks**
<d> **4 – 8 weeks**
<e> **More than 8 weeks**
<f> **Do not know / not sure**
20. Is the policy communicated to all employees at least annually?
<a> **Yes**
 No
<c> **Do not know / not sure**
21. Do your employees observe the smoking policy during work hours?
<a> **Yes**
 No
<c> **Do not know / not sure**

22. Do your employees observe the smoking policy during breaks?
- <a> **Yes**
 - **No**
 - <c> **Do not know / not sure**
23. Does your childcare center offer any employee insurance policies with a rate structure based on smoking status?
- <a> **Yes**
 - **No**
 - <c> **Do not know / not sure**
24. Do you allow smoking in your house during non-childcare hours?
- <a> **Yes**
 - **No**
 - <c> **Do not know / not sure**
25. Which of the following statements best describes the policy about smoking?
- <a> **Smoking is allowed everywhere at all times, indoors and outdoors**
 - **Smoking is allowed outdoors only**
 - <c> **Smoking is allowed in designated indoor areas at all times**
 - <d> **Smoking is allowed in designated indoor areas only when children are not present**
 - <e> **Smoking is allowed anywhere indoors only when children are not present**
 - <f> **Smoking is not allowed anywhere at any time indoors or outdoors**
 - <g> **Other _____**
26. Are any nonsmoking signs posted in your center?
- <a> **Yes**
 - **No**
 - <c> **Do not know / not sure**
- 26a. **If yes**, what types of sign(s) are posted?
- <a> **Pictorial representation**
 - **Printed "NO Smoking"**
 - <c> **Hand Written signs**
 - <d> **Other _____**
 - <e> **Do not know / not sure**
27. Do you receive complaints about smoke from the parents of the children in your childcare?
- <a> **Yes**
 - **No**
 - <c> **Do not know / not sure**

- 27a. **If yes**, how many times per month do you receive complaints about secondhand smoke from the parents?
- <a> 0-5**
 - 6-10**
 - <c> 11-15**
 - <d> 16 or more**
 - <e> Do not know / not sure**
28. How many children are enrolled in your center?
- <a> _____ #**
 - Do not know / not sure**
29. What is the age range of the children?
- <a> _____ to _____**
 - Do not know / not sure**
30. How many children at your childcare center are...
- ___ European American / White**
 - ___ African American / Black**
 - ___ Hispanic**
 - ___ Asian**
 - ___ Other please specify: _____**
 - <f> Do not know / not sure**
31. As the chief owner/operator of your childcare center would you classify yourself as...
- <a> European American / White**
 - African American / Black**
 - <c> Hispanic**
 - <d> Asian**
 - <e> Other please specify: _____**
 - <f> Do not know / not sure**
32. Is your childcare center...
- <a> Licensed**
 - Registered**
 - <c> Local Agency Approved**
 - <d> Do not know / not sure**
33. Do you have all of the information you need regarding smoking and smoking policies in residential childcare centers?
- <a> Yes**
 - No**
 - <c> Do not know / not sure**

34. **If no**, can we send you some information regarding smoking and smoking policies?

<a> Yes – What is your address?

** No**

<c> Do not know / not sure

35. Would your childcare center be interested in additional training regarding tobacco use policies?

<a> Yes

** No**

<c> Do not know / not sure

Appendix C: Cover Letter

July 5, 2000

Dear childcare provider,

The Health Promotion Program at Virginia Tech is currently conducting a study of tobacco use policies among in-home childcare centers throughout the Commonwealth. Your home has been randomly selected to participate in this study from the Department of Social Services list of family day home providers.

Enclosed you will find a short questionnaire regarding tobacco use at your family day home. Please read each question and enter your response on the answer sheet. Your participation in the study is vital so please make every effort to complete and return the questionnaire promptly. A postage-paid return envelope has been included. Your responses will be anonymous and used for research purposes only. All questionnaires should be returned by Tuesday, August 1, 2000.

We appreciate your cooperation and look forward to gaining new insight into the tobacco use policies among family day homes in Virginia. If you have any questions or concerns about the questionnaire, please call me at 540-231-8284.

Sincerely,

Charles R. Baffi, Ph.D.
Program Coordinator

JENNIFER DOTSON MARTIN

Personal Information

Born to Loyd P. and Lois F. Dotson January 29, 1974 in Roanoke, Virginia
Married Matthew Campbell Martin May 16, 1998

Education

Bachelor's of Science in Health Education, August 1995
Virginia Polytechnic Institute and State University, Blacksburg, Virginia
Minor: Psychology Concentration: Women's Studies
Major QCA: 3.7 / 4.0 Overall QCA: 3.0 / 4.0

Master's of Science in Health and Physical Education, December 2000
Virginia Polytechnic Institute and State University, Blacksburg, Virginia
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QCA: 4.0

Professional Experience

Health Educator, Virginia Department of Health
November 1996 – present

Serve as Field Coordinator for Tobacco Use Control Programs for Western Virginia. Assist four local coalitions in the development and implementation of site-specific programs. Aid coalitions in member recruitment, media advocacy and budget management. Provide technical assistance and consultation to partnering agencies, analyze policies upon request and document summaries of activities and their related data. Train middle school teachers in the *Life Skills Training* substance abuse prevention curriculum. Train adults and teens in the *Teens Against Tobacco Use* peer education program.

Presentations

“Youth Education,” *ASSIST Informational Exchange Conference*, Bethesda, Maryland, March 16, 1999: workshop.

“Community Based Approaches for Strengthening Youth and Families: The Energy of Youth Coalitions,” *Virginia Department of Social Services Community Resource Conference*, Virginia Beach, Virginia, May 18, 1999: workshop.

“Make Yours A Fresh Start Family – A Program Evaluation,” *11th World Conference on Tobacco or Health*, Chicago, Illinois, August 7, 2000: poster session.