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Children's Secondhand Smoke Exposure in Private Homes and Cars: An Ethical Analysis

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Secondhand smoke (SHS) exposure is a known cause of disease among nonsmokers, contributing to lung cancer, heart disease, and sudden infant death syndrome, as well as other diseases. In response to the growing body of scientific literature linking SHS with serious diseases, many countries, states, and cities have established policies mandating smoke-free public spaces. Yet thousands of children remain unprotected from exposure to SHS in private homes and cars.

New initiatives targeting SHS in these spaces have raised ethical questions about imposing constraints on pri-

mate behavior. We reviewed legislation and court cases related to such initiatives and used a principlist approach to analyze the ethical implications of policies banning smoking in private cars and homes in which children are present. (*Am J Public Health*. 2008; 98:2140–2145. doi:10.2105/AJPH.2007.130856)

SECONDHAND SMOKE (SHS) IS defined as a mixture of sidestream smoke from the end of a burning cigarette and exhaled mainstream smoke. The US surgeon general concluded in 1986 that SHS exposure causes disease among nonsmokers.¹ Since then,

additional evidence has shown that SHS causes lung cancer, respiratory tract injury, heart disease, and sudden infant death syndrome.² More than 50 carcinogens have been identified in SHS.² Inhaled fresh sidestream smoke is also about 4 times more toxic than mainstream smoke.³ Yet thousands of children remain unprotected from involuntary exposures to SHS from adult smoking.²

We explored the ethical dimensions of SHS exposure in children when the exposure occurs in private homes and cars. We reviewed the significance of the problem, considered legislation and court cases related to

children's SHS exposure in private domains, and analyzed the ethical implications of policies restricting smoking in private cars and homes in which children are present.

SIGNIFICANCE

It has been estimated that 22%² of children younger than 18 years and 40% of children younger than 5 years in the United States live with an individual who smokes.⁴ Infants and young children are more exposed to SHS in homes than in other places, because they spend more time at home.⁵ Children also are particularly vulnerable to the deleterious effects of



SHS because of their smaller, immature, and developing organs. SHS has been associated with many detrimental health effects in children, including sudden infant death syndrome, otitis media, bronchitis, asthma, and pneumonia.^{6,7} Slower lung development and greater risk of lower respiratory infections also are associated with SHS exposure in children.⁸ A study evaluating lung function in 20 000 school children in 9 countries of Europe and North America found that both smoking during pregnancy and postnatal childhood SHS exposure had harmful effects on children's lung function.⁹

Direct medical costs of SHS exposure among US children total approximately \$4.6 billion per year.¹⁰ Among children younger than 18 months, 150 000 to 300 000 cases of bronchitis and pneumonia develop annually as a result of SHS.⁸ In the United States, more than 200 000 annual episodes of childhood asthma are directly attributable to parental smoking.¹¹ Because many illnesses are never officially reported, and reported cases are not always linked to SHS exposure, these figures likely underestimate the actual number of SHS-related illnesses. Not surprisingly, children who are exposed to household tobacco smoke also miss more school days per year than do children who live in smoke-free homes,⁷ representing an additional burden on children who may be struggling with school for other socioeconomic reasons.

Children in vulnerable populations are at greatest risk for SHS exposure. Non-Hispanic Black children are more likely to live with a smoker than are White

children.¹² Sixty-eight percent of children in families with annual incomes under \$10 000 experience regular household SHS exposure, compared with 36% of children in families with incomes greater than \$40 000. Similarly, children of less-educated mothers are more likely to be exposed to SHS than are children with more-educated mothers.¹² Blacks and persons with low income are also more likely to be exposed to SHS in the home than are other groups.² This suggests that SHS exposure is also a contributor to health disparities.

SECONDHAND SMOKE POLICIES

Public Spaces

Creating smoke-free public spaces has been identified as an effective way to reduce SHS exposure and its disease consequences.^{13,14} Thus, smoking restrictions in workplaces and public areas have been implemented throughout North America.⁵ Starting with legislation in Minnesota in 1975, smoke-free or clean indoor air laws have been undertaken by numerous state and local governments.¹⁵ By 1999, all 50 US states and the District of Columbia had some public smoking restrictions.¹⁵ Currently, 15 states have comprehensive "smoke-free" laws, and 26 states have "smoke-free" laws in some cities and counties.¹⁶ The California Air Resources Board lists SHS as a toxic air contaminant, formally identifying it as an airborne toxic substance that may cause or contribute to death or serious illness.¹¹ Over a decade ago, the US Environmental Protection Agency classified SHS as a class A

human carcinogen, and estimated that it caused approximately 3000 lung cancer deaths per year among adult nonsmokers.¹⁷

Private Spaces

Although scientific evidence provides a strong rationale for protecting children against SHS in private spaces, America's traditions of individualism and autonomy present formidable barriers to effectively reducing SHS exposure in private homes and cars. Traditionally, Americans draw a sharp distinction between private and public realms.¹⁸ The section of the 14th Amendment to the United States Constitution which states "nor shall any state deprive any person of life, liberty, or property, without due process of the law"¹⁹ expressly protects personal freedoms. However, the US Supreme Court, when considering the constitutionality of smoking restrictions, has previously determined that there is no fundamental "right to smoke." This means smoking restrictions are subject only to low-level scrutiny by the law.²⁰

Regulation can override zones of individual privacy to protect health and well-being. For example, existing laws protect children from physical and sexual abuse and provide for mandatory infant restraint, seatbelts, and helmets. From a legal perspective, parents have a right to raise children without government interference, except when there is action or inaction that places the children at real risk of serious harm. Ethicists suggest that

Parents or guardians have the moral and legal responsibility to act in the child's best interest.

When questions arise regarding conflicts of interest or the wisdom of the parents' or guardians' choices, the scope of their authority may require legal limitation.^{21(p20)}

Parents who choose to smoke in their children's presence, it can be reasonably asserted, are not acting in their children's best interest.²⁰

Regulation involving cars. Cars are nonpublic spaces in which children may be exposed to SHS. The first study to measure SHS in cars under real driving conditions showed that smoking a single cigarette for just 5 minutes could prove harmful to vulnerable groups, including children.²² Legislation banning smoking in cars with young children present was adopted in Arkansas (Act 13, 2006) and Louisiana (Act 838, 2006), and most recently in California (SB 7). Legislation banning smoking in cars with children has been introduced but not yet finally passed or signed into law, in the District of Columbia (B17-0096), Kansas (SB250), Maryland (SB629), Massachusetts (HB2070), New Jersey (S2641), Pennsylvania (HB1303), Rhode Island (HB5209), South Carolina (H3253), and Tennessee (SB0696/HB441).²³

Regulation involving homes. The primary place in which involuntary SHS exposure still occurs is now the home. Unlike SHS in public areas, SHS in private homes remains largely unregulated,^{2,24} although the 2006 US surgeon general's report suggests voluntary home smoking restrictions.² In fact, children are still provided less legal protection from parental SHS exposure than from public SHS.⁵ However, several recent initiatives for smoke-free



multiunit housing could indirectly provide children with further protection. For example, the city of Belmont, California, recently passed an ordinance prohibiting SHS in multiunit residence common areas and in some multiunit residences.²⁵

Precedent exists within the family court system for protecting children from SHS. The role of family courts is to advocate for the best interests and welfare of the children involved. Courts have been receptive to information about SHS exposure, particularly when a child suffers from a chronic respiratory illness such as asthma.²⁰ The courts' ability to determine the significance of SHS in the absence of chronic illness appears more ambiguous. Without specific health information regarding SHS, judges may give more weight to their own personal beliefs about smoking.²⁰

In *Lizzio v Lizzio*,²⁰ the court reversed a custody determination of an asthmatic child based solely on the smoking status of the parents, one of whom refused to provide a smoke-free environment for the asthmatic child. This case demonstrated that SHS was a factor that could be considered in determining a child's health, safety, and welfare. In this and similar cases, most court decisions favor custody arrangements that provide protection from SHS to children with respiratory illnesses.^{20–26}

The landmark case of *Johnita MD v David DD* was the first to consider a healthy child's request to be in a smoke-free environment. After weighing medical and scientific research regarding the lifetime effects of SHS, the New York Supreme Court ultimately

determined that the 13-year-old child had a right to be in a smoke-free environment and ruled that neither parent could smoke in the home or car when the child was present.²⁰

In another court case, *re Julie Anne*, the trial judge initiated a thorough review of the SHS literature, after determining that both parents were smoking in front of a healthy child. The court found SHS to be a significant danger to children, because it can cause or worsen serious health problems. The court suggested that family courts have a duty to protect children from SHS.²⁰

In 2004, the state of Oklahoma passed HB1734 as an amendment to an existing child custody law.²⁷ The law does not specifically mention smoking or SHS. Yet, according to an amendment coauthor, the language stating that children need to be protected from any "foreseeable risk of harm" was deliberately crafted to cover SHS in private homes (Richard Barnes, JD, written communication, October 27, 2006). In theory, this language opened the door for children to be protected from tobacco smoke. However, the only area in which the law has been enforced effectively is in foster care homes, which are now required to be smoke free. To date, there has been no known enforcement of the legislation in private, non-foster care homes (Richard Barnes, JD, written communication, October 27, 2006).

The preceding discussion shows that the issue of children's SHS exposure in private spaces is on the policy agenda on several

fronts. However, there has been little formal analysis of how ethical principles might apply in balancing the responsibilities of society, state, and individual adults in relation to this issue.

ETHICAL ANALYSIS

Principlism

Principlism is an ethical decisionmaking framework that emphasizes analyzing ethical issues according to the principles of autonomy, nonmaleficence, beneficence, and justice.²⁸ Beauchamp and Childress describe principlism as a model derived from a common morality that guides action, yet leaves room for judgment in specific cases.²⁹ We drew on this approach to examine SHS regulation in private arenas. We focused on adults in close proximity to children. Although most children's SHS exposure is likely from parental smoking, we assumed that all adults in society have at least weak obligations to protect children and strong obligations to avoid harming them.

In relation to children's SHS exposure, we saw at least 3 possible policy alternatives: (1) to act to restrict adult smoking in children's presence; (2) to force adults who smoke in the presence of children into cessation programs; and (3) to take no action to restrict adult smoking around children. Using a principlist approach, we considered those options.

Autonomy vs Nonmaleficence

Beauchamp and Childress describe autonomy as the possession of liberty and agency, or "the personal rule of the self that is free from both controlling

interferences by others and from personal limitations that prevent meaningful choice"^{29(p121)} An autonomous person acts with intention, understanding, and without being influenced by a controlling agent. Nonmaleficence is the principle of "do no harm." The issue of children's exposure to SHS sets adults' autonomy to smoke against their duty to act out of nonmaleficence to children. Whereas autonomy focuses on individual rights and arguments against interference, nonmaleficence calls for adults to protect children from harm.²⁹

Autonomy. Is the adult who is smoking in the presence of children acting with intention, understanding, and without being controlled? If the answer is yes and the adult is deemed autonomous, smoking around a child may be interpreted as a malicious choice by the adult to engage in an act harmful to the child. Such exercise of autonomy can be reasonably overruled by regulation in the interest of protecting children, a vulnerable and dependent group of individuals who are not autonomous and, therefore, are not able to act to protect their own interests. Furthermore, restricting adult smoking in the presence of children constrains adult autonomy only intermittently, whereas the effects of SHS can last a lifetime. On this basis, nonmaleficence and beneficence toward children trump respect for adult autonomy.

Perhaps the adult is regarded as smoking without full intention, understanding, and control. It is possible that the adult has impaired understanding of the



impact of SHS on children, in which case more-effective adult-level education is indicated. The third criterion defining autonomy—acting without being influenced by a controlling agent—is particularly relevant here. Arguably, a person addicted to nicotine is not free from a controlling influence (albeit, this influence is an addictive drug and not a human agent) and is, therefore, not truly autonomous. On this analysis, the adult may be regarded as someone who needs help from society. Interventions assisting directly or indirectly by increasing knowledge or treating addiction, whether via government regulation, health education, or incentive programs, may actually assist individuals in establishing or recovering authentic autonomy. From a public policy perspective, however, even though the addicted person does not possess full autonomy, to force addicted smokers to accept treatment (as opposed to encouraging treatment) would be unjustifiable, because it would constitute a further weakening of autonomy. Regulating adult smoking for the sake of protecting children must, therefore, be regarded as distinct from forcing adults to quit smoking.

Nonmaleficence. Although autonomy and nonmaleficence are not necessarily opposing ethical principles, the issue of protecting children from SHS in private spaces exemplifies these principles potentially standing in opposition. It is helpful to clarify that the difference between nonmaleficence and beneficence hinges on intended action. Nonmaleficence obliges one to not inflict evil or

harm, whereas beneficence implies a duty to prevent or remove evil or harm, and to promote good.²⁹ Adequate parenting requires both nonmaleficence (don't beat your child) and beneficence (vaccinate your child). Given the knowledge that SHS exposure places children at increased risk for preventable morbidity and mortality, restricting adult smoking in private spaces in which children are present may be regarded as an act of nonmaleficence.

However, lack of knowledge, lack of resources, and economic or psychosocial burdens may challenge the definition of many adult behaviors, including smoking, as maleficent or nonbeneficent. For example, a single parent addicted to nicotine and in early recovery from heroin addiction who lives in public housing with smoke-free common areas, located in a neighborhood with high rates of violent crime, may decide that smoking inside with the window open is safer for her young children than risking the trek to find a place to smoke outside. This journey might expose her family to neglect or violence, or expose the mother to drugs during her still-tenuous recovery. In some cases, therefore, it may be argued that the immediacy of addressing other injurious factors, including the context within which adult smoking occurs, may take precedence. The principlist approach allows for such judgments in individual cases.

Justice

The preceding example calls attention to how the principle of justice is also relevant to this issue.

Smoke-free policies for public spaces have become commonplace, yet they are more likely to protect adults frequenting workplaces and other public spaces than they are to protect children. From a justice perspective, should children not be entitled to equivalent protections? Furthermore, the increasing concentration of tobacco addiction among poorer, less educated, and minority populations, and the disproportionately high levels of tobacco marketing that they experience,³⁰ suggest that poorer children are more likely to experience SHS exposure. The principle of justice calls on us to address all forms of social health disadvantage. Policies to protect children from SHS could, therefore, be seen as addressing injustice in at least 2 ways: by addressing inequity between adults and children in existing protections and by addressing the concentration of SHS exposure among children who experience multiple forms of social disadvantage. Some have argued that justice should be the primary focus of public health activity.³¹

Paternalism or Beneficence

It could be argued that instituting policies restricting adult smoking in private spaces would constitute unwarranted paternalism by the state. Central to the concept of paternalism is *who* decides what is good. Under paternalism, one party, either because of greater knowledge in a particular field or a better sense of what is “good,” is considered the “expert.” This expertise leads to decision-making power in situations that involve an outcome for someone else.³² Clearly, both the state and

individual adults have some level of obligation to act out of paternalism when needed to protect children. Given the scientific evidence of the harm that SHS exposure represents to children, and the evidence that it is occurring, it is difficult to argue that taking no action would be ethically justifiable. However, paternalism can impinge upon autonomy, so actions must be carefully considered.

Paternalism and beneficence have traditionally been viewed as similar, particularly when applied to the field of medicine. As defined previously, beneficence is centered on the pursuit to do good. Historically, a physician who knows more about a rare disease than his or her patient would be seen as both paternalistic and beneficent when recommending treatment. However, ethicists have argued that, in fact, it is the beneficent duty of health care practitioners to facilitate restoration of patients' autonomy, moving the locus of control from doctor to patient.³²

On this analysis, even if an adult smoking near children is considered autonomous, temporary and intermittent restriction of autonomy is justified, because the harm from thus restricting an adult's smoking behavior is outweighed by the harm that SHS may cause a child. The restriction represents an act of beneficence to protect the child. If the adult is regarded as *not* fully autonomous because of a lack of knowledge or because of addiction, then the restriction is likewise justified, and the argument that autonomy is breached does not hold. In addition, a regulation restricting smoking may serve as an impetus for the adult



to increase his or her knowledge regarding SHS, and to move toward smoking cessation, representing restoration of true autonomy.

Forcing adults to stop smoking as a way to address children's SHS exposure would constitute an unjustifiably paternalistic approach (in addition to being impractical to carry out) because SHS produced by adult smoking outside children's presence cannot be said to directly harm them. Policymakers, public health officials, and others involved in SHS issues should, therefore, ensure that policies and programs aimed at protecting children in private spaces focus on the beneficent outcome of decreased SHS exposure, rather than a paternalistic insistence on adult smoking cessation. Restricting smoking by adults in cars or homes in which children are present is the most ethically justifiable position, minimizing paternalism, while respecting autonomy and emphasizing nonmaleficence toward children.

Conclusions

The issue of parental smoking in private domains is ethically complex and could be analyzed with several different ethical frameworks. A narrative ethical analysis, for example, might better illustrate cases, such as that of the previously described woman who lives in public housing, that may justify modifications to a principle-based policy.²⁸ However, a principlist approach is best suited for policy considerations that must necessarily apply relatively uniformly across multiple contexts.

Analogous to the process of regulating public SHS, policy for private domains may serve most effectively to enhance changes in social norms. Creating a norm of unacceptability for childhood SHS exposure poses no threat to adult autonomy. Similar to existing SHS policies for public spaces, such policies would be largely self-enforcing, relying on change in the community norm. In fact, at least 1 study suggests that, in countries in which smoke-free public places are the norm, there is strong public support for regulating smoking in cars carrying children.³²

Childhood SHS exposure in private spaces should also be considered an intervention priority in pediatric and public health settings, despite the ethical complexities. Utilizing a supportive approach that maximizes parents' innate desire for nonmaleficence toward their children may assist parents with restoration of autonomy, motivate cessation, and thereby reduce or eliminate adult contributions to children's SHS exposure. Other adults in close contact with children, such as grandparents or other family members, should likewise be educated about the risks that SHS poses for children.

Our analysis has considered some of the tensions between ethical principles that inform consideration of the issue of children's SHS exposure in private spaces. As this discussion suggests, insofar as the state has an interest in protecting children's health and welfare, temporarily restraining adult autonomy through SHS restrictions to protect children in private spaces is clearly justifiable under

the principles of beneficence and nonmaleficence and may be called for by the principle of justice as well. Such policies would be ethically similar to others that aim to protect children, such as seatbelt and car seat laws. Thus, there is ethical support for mandating that smoking be stopped in private spaces in which children will be exposed. ■

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J.A. Jarvie conceptualized the paper, conducted the research, and prepared drafts. R.E. Malone supervised the project, provided materials, assisted with analysis, and revised drafts.

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