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Smoke-free Vehicles When Children are Present

The right to privacy is an important tenet of the American way of life. But certainly, when children are harmed from exposure to the class A carcinogen secondhand smoke (SHS), then public health and safety take precedence over smoking around children. Smoke-free vehicles ensure that clean air is maintained within the vehicle, to fulfill a child's need to breathe healthful, clean air. Here is background information to support such a position.

I. JURISDICTIONS THAT BAN SMOKING IN VEHICLES WITH CHILDREN

United States:

- Arkansas – under age 14, in effect March 30, 2011, amended prior law from July 21, 2006 for under age 6 or 60 pounds in weight
- California – under age 18, in effect January 2008
- Loma Linda, CA – under age 18, in effect July 24, 2008
- Martinez, CA – under age 18, in effect June 5, 2009
- Rohnert Park, CA – under age 18, in effect May 28, 2009
- Monroe County (unincorporated cities), Indiana – under age 14, in effect April 8, 2009
- Hawaii County, Hawaii – under age 18, in effect August 8, 2010
- Louisiana – under age 13, in effect August 2006
- Maine – under age 16, in effect September 1, 2008
- Bangor, Maine – under age 18, in effect January 19, 2007
- Keyport, New Jersey – under age 18, enacted April 2007
- West Long Branch, New Jersey - under age 18, enacted June 20, 2007
- Oregon – under age 18, in effect January 1, 2014
- Rockland County, New York – under age 18, enacted June 15, 2007
- Utah, - age 15 or younger, signed into law March 28, 2013

Canada:

- Alberta, under age 18, in effect January 1, 2013
- Athabasca, Alberta, under age 18, effective March 2011
- Okotoks, Alberta, under age 16, in effect September 1, 2008
- Leduc, Alberta, under age 18, in effect July 2, 2011
- Medicine Hat, Alberta, under age 16, in effect September 1, 2011
- British Columbia, under age 16, in effect April 7, 2009
- Surrey, British Columbia, under age 19, in effect July 31, 2008
- Richmond, British Columbia, under age 19, in effect November 30, 2008
- White Rock, British Columbia, under age 16, in effect November 1, 2008
- Manitoba, under age 16, in effect July 15, 2010
- New Brunswick, under age 16, effective January 1, 2010
- Newfoundland – under age 16, in effect May 31, 2011
- Nova Scotia, under age 19, in effect April 1, 2008
- Wolfville, Nova Scotia, under age 19, broader definition of smoking, in effect January 1, 2008
- Ontario, Canada – under age 16, in effect January 21, 2009
- Prince Edward Island, under age 19, effective September 15, 2009
- Saskatchewan, under age 16, effective October 1, 2010

- Yukon Territory – under age 18, in effect May 15, 2008

Other:

- UAE – under age 12, in effect January 21, 2014
- Australian Capital Territory (ACT), under age 16, enacted 10/11, effective 5/1/12
- New South Wales, Australia, under 16 effective July 1, 2009
- South Australia – under age 16, enacted May, 2007
- Queensland, Australia, under age 16, effective January 1, 2010
- Victoria, Australia – under age 18, in effect on January 2010
- Western Australia, under age 17, effective September 23, 2010.
- Bahrain, private cars with accompanying children, April 13, 2009
- Cyprus – under age 16, in effect since 2004
- France – under age 16, October, 2011
- Mauritius, while carrying passengers, 2008
- Puerto Rico – under age 13, in effect in March 2, 2007
- South Africa – under age 12, in effect September, 2009
- Tasmania – under age 18, in effect January, 2008

II. JURISDICTIONS THAT HAVE INTRODUCED SIMILAR LEGISLATION

United States:

- Arizona, under age 16, HB2076 failed to pass
- Augusta, Georgia, under age 14, introduced February 2012
- Connecticut, 6 and under or less than 60 lbs., introduced 1/14/13 and referred to Joint Committee on Transportation
- Illinois HB2939 introduced in 2013 session, but held in the Rules Committee and session ended May 31, 2013 (prior bill HB889, 8 and under; failed to pass in 2010). In 2013, Rep. Marcus Evans introduced nonbonding House Resolution 146 (recommends no smoking in cars with children under 13 years old); HR146 passed the House Committee on April 10, 2013, and passed the full House on May 2, 2013; no further steps needed.
- Indiana, under 13, HB1056 referred to Committee on Judiciary, January 2008, withdrawn and reintroduced (same bill number)
- Kentucky, HB216, under age 17
- Maryland, (under 8) SB30 passed Senate March 2013, moved to House.
- Massachusetts, 12 and under HB3475 under 18, HB3233 Failed to pass
- Michigan, age 4 and under, HB5418 (2007), printed bill filed November 8, 2007.
- Mississippi, under age 17, SB2016 (referred to Judiciary Committee B, Public Health and Welfare on 1/12/2012)
- Nassau County, New York, under 18
- New Jersey, under age 16, S475 and A1591 introduced January 12, 2010. Primary offense, \$100 penalty, and fines to be deposited in the state's Smoking Cessation Fund, to be established upon passage of the bill (Senator Raymond Lesniak and Assemblymen Scalera and DeAngelo). Originally, S366 introduced May 10, 2007 and A2597 introduced May 5, 2008, and both referred to Senate and Assembly Health and Senior Services during that original session.
- New York State, under age 14, introduced February 2012
- North Dakota (under 16) HB2070 – failed to pass House February, 2011 again after previously failing April 1, 2009
- Ohio (under age 6), SB27 introduced February 2012
- Pennsylvania, HB359, age 8 and under, referred to Committee on Transportation on February 11, 2009. Failed to pass in 2010
- Rhode Island, SB209 (all minors) passed to Committee for further study
- South Carolina, H3202 age 6 or younger, S215 under age 10, S292 child restraint requirements, filed for 2011 session
- Tennessee, age 8 and under, HB0727 proposed March 2008, off noticed on April 1, 2009. Failed to pass in 2010
- Vermont, two bills, under age 13 and under age 18
- Virginia, under age 13, Assembly bill introduced for 2013 session
- Washington State, age 18 for House bill and Senate 5016 introduced 2011

Canadian Provinces:

- Labrador, under age 16, introduced December 13, 2010

Other:

- Capital Territory, Australia, under age 16
- Finland, under age 18
- Guam, Bill 188, under age 18
- Ireland
- Jersey, UK
- UK – Passed in The House of Lords so moves to the House of Commons (2/2014)
- Rome (reported 12/1/09)

III. JURISDICTIONS THAT BAN SMOKING WHEN TRANSPORTING FOSTER CHILDREN

- 18 states ban smoking in cars that transport foster children: Alaska, Arizona, California, Colorado, Iowa, Kansas, Indiana, Maine, Maryland, Montana, New Jersey (all resource family children), Oklahoma, Oregon, Pennsylvania, Texas, Vermont, Washington and Wyoming. Maine also bans smoking in a vehicle within 12 hours of transporting a foster child. In addition, Arizona bans foster parents from smoking in ANY enclosed area with a foster child, implying a car, any public or private place.
- Monterey, San Luis Obispo, and Santa Cruz counties in California ban smoking in both foster care homes and cars that transport foster children. San Luis Obispo also bans smoking within 20 feet of the child in all other places that the foster parent controls; and cars that transport the children must be smoke-free for a minimum of 12 hours before a child enters.
- Alberta, Canada's policy bans smoking in cars transporting foster children (Section 10.23 of Alberta's Children's Services Enhancement Act Policy Manual)
- United Kingdom communities that ban smoking in both foster care homes and cars include Sheffield, Redbridge, Barnsley and Rotherham.

IV. REASONS TO SUPPORT SMOKE-FREE VEHICLES WHEN CHILDREN ARE PRESENT

- Ethical/Moral: The government has an obligation and responsibility to ensure that children are in safe and healthful environments. Secondhand smoke, a class A carcinogen, causes many health problems for children.
- Practical: Children are not able to communicate, and not free to leave a car that is smoke-filled. Some are infants or toddlers that cannot communicate that the smoking is harming them, other than to cough, exhibit respiratory distress, and show other symptoms. Older children and teens, who can communicate verbally, but may not speak up, for fear of parental admonishment or peer pressure.
- In Practice: Child custody determinations can require no smoking in cars when transporting children.
- Complimentary: Laws require child seats in vehicles for health and safety reasons, similar to protecting children from secondhand smoke in vehicles.
- Reasonable: Smoke-free car laws do not require a parent to quit smoking, just to forego smoking in the car.
- Consistency: Children are taught in school and by other public education that smoking and secondhand smoke are harmful. Allowing smoking around children in cars sends inconsistent messages to children.
- Economic: Children who are exposed to secondhand smoke in cars may have increased medical and healthcare costs that are paid for by government. Smoking inside a vehicle

reduces the resale value of those vehicles.

- Similarity to other restrictions on drivers' behaviors that are required for public health and safety: prohibitions on driving while impaired by alcohol or other causes, requirements that seat belts be used.

V. SUPPORTING DATA FOR SMOKEFREE VEHICLES WHEN CHILDREN ARE PRESENT

A. Health studies and conclusions

- On July 23, 2013, the University of Michigan released the survey results of their C.S. Mott Children's Hospital National Poll on Children's Health at <http://mottnpch.org/reports-surveys/broad-public-support-banning-smoking-vehicles-kids-present>. The poll surveyed U.S. adults on whether children should be protected from secondhand smoke in cars, in homes and in public places where children are permitted. The results are:
 - 82% of American adults support banning smoking in cars when children younger than 13 years old are present; 60% of adult current smokers support it; 84% of adult former smokers support it.
 - 87% support banning smoking at businesses that allow children
 - 75% support banning smoking in homes where there are children with asthma or other lung diseases.
- In January 2013, the *Journal of Health Economics* published the study, "Do smoke-free car laws work? Evidence from a quasi-experiment". Author Hai V. Nguyen at the University of Toronto concluded that legislation that bans smoking in cars reduces exposure to second-hand smoke inside cars for children.
http://www.njgasp.org/do_smoke-free_car_laws_work_01-2013.pdf

A study published November 2012 in *Tobacco Control* found that the mean level of secondhand smoke exposure to children riding in cars with smokers is larger than concentrations measured in bars and restaurants, areas designated as non-smoking in most states. The authors calculate that spending even a short amount of time inside a car with a smoker will make a significant difference to a child's level of harmful pollutants. The news article headlined "Just 10 Minutes in a Car With a Smoker Boosts Harmful Pollutants by up to 30%". The study supports restricting secondhand smoke exposure in vehicles, especially when carrying children.

www.njgasp.org/ScienceDaily_kids_in_cars_study_TobCntlJrnl_Nov-21-12.pdf
<http://tobaccocontrol.bmj.com/content/early/2012/10/16/tobaccocontrol-2012-050531>

- A news article from Consumer Reports Health reviews a study conducted by British researchers which found that even with windows open or air conditioning on, air pollution levels exceeded WHO's guidelines. The study which has been released online by *Tobacco Control* and will be printed in a later publication concluded:

PM_{2.5} concentrations in cars where smoking takes place are high and greatly exceed international indoor air quality guidance values. Children exposed to these levels of fine particulate are likely to suffer ill-health effects. There are increasing numbers of countries legislating against smoking in cars and such measures may be appropriate to prevent the exposure of children to these high levels of secondhand smoke.

http://www.njgasp.org/Health_Drivers_smoking_high_level_of_shs_10-15-12.pdf
<http://tobaccocontrol.bmj.com/content/early/2012/01/04/tobaccocontrol-2011-050197.short>
- A study published April 2011 in *Archives of Pediatrics and Adolescent Medicine* found a correlation between secondhand smoke exposure and mental illness in children, including major depressive disorder, generalized anxiety disorder, panic disorder, attention-deficit/hyperactivity disorder, and conduct disorder.
<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3075798/>
- A study conducted by the Institute for Environmental Health (CIEH), presented at a conference in Cardiff, Wales on March 29, 2011, found that children who get into cars up to an hour after an adult has smoked cigarettes are at risk of health problems in later life, even if

the windows were open when smoking in the car. 'Parents should know that the only way to protect children from the negative effects of smoking in a car is not to smoke in it at all', shared Julie Barrett of CIEH. The study looked at cars belonging to a mother and two sets of grandparents who are smokers transporting children in their cars; they would not smoke while children were present in their cars, but would smoke before picking them up or when they were not present. The study showed that high levels of particulate matter peaked at 1,600 micrograms per cubic metre while a cigarette was being smoked, decreasing an hour later falling to 200 microgram per cubic meter; however the US Environmental Protection Agency regards exposure to PM levels of over 40 in a 24-hour period as unhealthy, and any figure more than 250 as hazardous to health. Researchers concluded that children who ride in vehicles during the 'danger period' could develop a range of breathing illnesses and lung disorders in later life. Tests on the amount of smoke present in cars were performed by fitting a measuring device to child seats in the back of different sized cars. The study took into account other factors such as whether the car was moving or if the windows were open.

Study: http://www.cieh.org/uploadedFiles/Furniture/media/09_Elaine_Clark.pdf

CIEH press release: <http://www.cieh.org/media/media3.aspx?id=36034>

News story: <http://www.dailymail.co.uk/news/article-1371421/Children-risk-cigarette-smoke-cars-hour-parents-light-up.html#ixzz1L7OTvP87>

- A 2009 Johns Hopkins University study tested the air in 22 vehicles for a 24-hour period. At the end of the sampling period with 17 smokers and five non-smokers, airborne nicotine was analyzed by gas chromatography. After adjustment for vehicle size, window opening, air conditioning and sampling time, there was a 1.96-fold increase (95% CI 1.43 to 2.67) in air nicotine concentrations per cigarette smoked. Air nicotine concentrations in motor vehicles were much higher than air nicotine concentrations generally measured in public or private indoor places, and even higher than concentrations measured in restaurants and bars. These high levels of exposure to SHS support the need for education measures and legislation that regulate smoking in motor vehicles when passengers, especially children, are present. To read the study *Secondhand tobacco smoke concentrations in motor vehicles*, Tobacco Control, August 25, 2009 go to <http://www.njgasp.org/2009TobaccoControl-Jonesetal.pdf>.
- A Stanford University study published in the August 2007 *Journal of Exposure Science & Environmental Epidemiology* confirmed that people in cars with smokers are exposed to harmful levels of second-hand smoke particles. Co-author Wayne Ott said "...even with a car's windows open, smoke particle concentrations were higher than the levels he measured in California bars during studies in the mid-1990s before the state banned smoking in taverns." This was an extensive study that measured pollutant levels in cars at different speeds and with different interior air flows.
<http://news.stanford.edu/news/2007/september12/smokecar-091207.html>
<http://tobaccosmoke.exposurescience.org/secondhand-smoke-in-motor-vehicles>
- The U.S. Surgeon General on June 27, 2006, issued The Health Consequences of Involuntary Exposure to Tobacco Smoke. The section on Secondhand Smoke Exposure in the Home concluded that smoke-free rules in vehicles and homes can reduce secondhand smoke exposure among children and nonsmoking adults. (See Section IV, for additional conclusions from the U.S. Surgeon General, on secondhand smoke exposure to children.)
<http://www.surgeongeneral.gov/library/reports/secondhandsmoke/factsheet4.html>
- A 2006 Harvard School of Public Health study tested the air during 45 driving trials with a smoker smoking at different times along an hour-long route. The secondhand smoke level was 272 micrograms per cubic meter when the driver's window was opened slightly, and 51 micrograms when the windows were wide open. Both levels exceeded the Environmental Protection Agency's Air Quality Index, which states that levels greater than 40 micrograms are unhealthy for sensitive people, which can include children, and levels greater than 250 micrograms are hazardous to everyone. "There is the argument that even exposure for very short periods of time, perhaps even 10 seconds, can precipitate asthmatic episodes in children." Measuring Air Quality to Protect Children from Secondhand Smoke in Cars, *American Journal of Preventive Medicine* 2006;31(5).
- A 2006 University of Waterloo and Roswell Park Cancer Institute study published in *Nicotine & Tobacco Research* tested the air during 30 minute driving trials, with a smoker smoking during those intervals. Exposure levels measured inside the cars exceeded background levels, at times rising to greater than 5900 micrograms per cubic meter in cars with the least airflow and exceeding 75 micrograms in cars with the greatest airflow.
http://www.njgasp.org/NRT_Sendzik_et_al_smoking_in_cars_6-2009.pdf

- A 2006 New Zealand study by the Wellington School of Medicine, "found being in a car with a smoker was equivalent to sitting in a smoky bar, even with the smoker's car window fully wound down." The exposure levels of secondhand smoke measured up to 2,926 micrograms per cubic meter when the windows were up, and were 199 micrograms when the window was down. http://www.njgasp.org/NZMJ_Edwards_hazaradus_AQ_smoking_in_cars_10-2006.pdf
- A New Zealand study that observed 16,055 vehicles found that, in cars that had a person smoking, 23.7% had other occupants being exposed to secondhand smoke, and that smoking in cars appeared to occur at a higher rate in deprived populations. Observed smoking in cars: a method and differences by socioeconomic area. *Tobacco Control* 2006;15:409-411.
- A 2006 Australian study found that exposing 14 year old asthmatics to secondhand smoke in cars doubled their risk of wheezing. *The Medical Journal of Australia* 2007; Volume 186, No. 6, p. 322, March 19, 2007. www.ashaust.org.au/lv3/Lv3informationparents.htm
- A 2005 study of 1,770 parents and guardians in New Jersey and New York found that children were exposed to secondhand smoke in more than 50% of family cars and 40% of homes, despite health warnings about the hazards of secondhand smoke. *Families, Systems & Health, Spring 2005* (published by the American Psychological Association). Medical Research News, April 5, 2005.

B. Public support for protecting children from secondhand smoke in vehicles

- In New Jersey, The Star Ledger Editorial Board points out the public support for smokefree vehicles when carrying children. Their October 26, 2013 editorial starts out stating, "Nearly 90 percent of Americans would ban smoking in cars with children 13 and younger, including 60 percent of smokers" and concludes, "Adults have a right to smoke in their own vehicles. But when children are present, the freedom to fill a car with smoke should take a back seat." http://www.njgasp.org/StarLedger_sf_cars_kids_editorial_10-26-13.pdf
- In September 2011, more than 15,000 people in Wales submitted a petition calling for government action, and the latest poll, published in July 2011 shows 83% of Welsh adults support a ban on smoking in cars with children, with 65% of them strongly supporting it. <http://www.google.com/hostednews/ukpress/article/ALeqM5iCUieZxGOSvVDaaUslyjGvUCvF7g?docId=N0223251315310098329A>
- In December 2010, The American Lung Association in Minnesota contracted with the Public Health Law Center to publish "Kids, Cars and Cigarettes: A Policy Overview". Pollution levels generated by secondhand smoke in vehicles reach concentrations far greater than in many other smoking environments, generating a need for legislation to protect children. http://www.njgasp.org/PHLC_policy_paper_12-1-10.pdf
- Even smokers support a ban of smoking in cars with kids. In a study published June 21, 2010 in the *European Journal of Public Health*, the majority of U.S. smokers' support bans (60%). The other 3 countries studied had a higher level of support including Australia (83%), UK (75%) and Canada (74%). <http://eurpub.oxfordjournals.org/content/early/2010/07/14/eurpub.ckq097.abstract>
- 89% of 588 people surveyed online from 2007-2008, by the Queensland (Australia Health), supported a ban on smoking in cars with children present. <http://www.cabinet.qld.gov.au/MMS/StatementDisplaySingle.aspx?id=58227>
- 73% of 1,015 Arkansas voters surveyed, support a ban on smoking in cars with kids, as per an Arkansas Department of Health study conducted in January 2008. *Arkansas DOH – Act 13 Awareness Research, 2008 Final Report, January 2008*.
- 82% of 2,032 Canadians polled support banning smoking in cars when children are present. 69% of smokers polled, also wanted smoking banned in cars when children are present. National poll conducted by the Canadian Cancer Society from December 2007 – January 2008.
- An Ontario survey of 1314 residents found that 81% of nonsmokers and 66% of smokers support for banning smoking in vehicles with children under 18. 2007 Ontario Tobacco-Free Network survey. "Our results show substantial and increasing public support in Ontario for banning smoking in motor vehicles carrying children." The Smoke-Free Ontario Act: Extend Protection to Children in Vehicles. *The Ontario Tobacco Research Unit Update*, August 2006.
- A western Australian survey found support for banning smoking in vehicles with children under 18: 87% of nonsmokers, and 80% of smokers supported protection. "Enforcement of legislation banning smoking in vehicles would be far easier than enforcing such legislation in homes, following precedents such as policing of seat belt, baby restraints, etc." Is there public

support for banning smoking in motor vehicles? *Tobacco Control*;15(1):71. Less than 5% of 3000 people surveyed (smokers and nonsmokers) by the Cancer Council Victoria found it acceptable to smoke in a car with a child present.

www.theage.com.au/news/national/smoking-ban-sought-in-cars/2007/07/24/1185043115567.html

C. Economic Impact

- A July 2008 study published in *Tobacco Induced Diseases* found that smokers' cars have lower asking prices than comparable nonsmokers' cars. Given a particular Kelley Blue Book value and model of car, "the value decreased by 7.7% if it had been smoked in compared to a car that was smokefree." http://www.njgasp.org/TID_Matt_tobacco_used_cars_TID_2008.pdf
- Vehicles are devalued from the smell, discoloring and scorch marks in the ashtray caused from smoking within the vehicle, according to British Car Auction's Public Relations manager. <http://www.motorstoday.co.uk/SMOKEDIN-CARS-WORTH-LESS-SAYS-BCA.2020.news>

VI. CONCLUSIONS AND RECOMMENDATIONS OF HEALTH AUTHORITIES

- The U.S. Centers for Disease Control and Prevention encourages against exposure of children to any secondhand smoke (SHS) and advises "Make your home and car *completely* smoke-free. Opening a window does not protect you or your child from secondhand smoke." <http://www.cdc.gov/features/smoke-freelaws/index.html?mobile=nocontent>
- Canadian Medical Association, at their 2007 annual general meeting held in Vancouver in August, approved of a recommendation to call for a nationwide ban on smoking in cars that transport children.
- The U.S. Surgeon General issued his report on June 27, 2006, entitled, *The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General, U.S. Department of Health and Human Services*. The section on Secondhand Smoke Exposure in the Home concluded that Although secondhand smoke exposure among children has declined over the past 15 years, children remain more heavily exposed to secondhand smoke than adults.
 - Almost 60 percent of U.S. children aged 3-11 years—or almost 22 million children—are exposed to secondhand smoke.
 - About 25 percent of children aged 3-11 years live with at least one smoker, as compared to only about 7 percent of nonsmoking adults.

Smoke-free rules in vehicles and homes can reduce secondhand smoke exposure among children and nonsmoking adults. Some studies indicate that these rules can also help smokers quit and can reduce the risk of adolescents becoming smokers.

- "The home remains the most serious venue for secondhand smoke exposure." Ch. 10, p. 350. <http://surgeongeneral.gov/library/secondhandsmoke/report/chapter10.pdf>
- "... the home tends to be a greater source of secondhand smoke exposure than the workplace." Ch. 5, p. 170. <http://surgeongeneral.gov/library/secondhandsmoke/report/chapter5.pdf>
- U.S. Surgeon General's June 2006 report lists the health effects of ETS on sudden infant death syndrome, preterm delivery, low birth weight, and childhood cancer risks. Ch. 5, pp. 242-243.
- U.S. Surgeon General's June 2006 report also lists the reasons to have smokefree homes: to protect children from ETS, protect pregnant women, protect nonsmoking adults in the home, especially those with health conditions, to set a good example for children, etc. Ch. 10, p. 616.

- The U.S. Surgeon General website: Fact Sheet #4 lists the most recent data on how ETS affects children (updated on June 27, 2006; excellent resource; see last page of this document for copy).
<http://www.surgeongeneral.gov/library/secondhandsmoke/factsheets/factsheet4.html>
- Published studies show the harmful effects of ETS on children:
 - *Circulation: Cardiovascular Quality and Outcomes, A Journal published by the American Heart Association*, March 2010. Children exposed to secondhand smoke between ages 8 to 13 are more likely to show thickening of blood vessel walls, a precursor to hardening and clogging of arteries. Children exposed to the most SHS had higher levels of apolipoprotein B, which contributes to "bad" cholesterol, another heart disease risk factor. The findings suggest that children should not be exposed to SHS at any level; even small amounts of SHS exposure may be harmful for blood vessels. The researchers concluded that children need to be provided with a smokefree environment.
http://www.njgasp.org/Kallio_2009_study-SHS_increasing_risk_of_childhood_arterial_blockage.pdf
 - *Pediatrics Journal*, January 2009. Study by Professor Jonathan Winickoff, Center for Child and Adolescent Health Policy, Massachusetts General Hospital in Boston, surveyed 1,500 households to assess health beliefs of adults regarding thirdhand smoke exposure of children and whether smokers and nonsmokers differ in those beliefs. The study found that increasing awareness of how third-hand smoke harms the health of children may encourage home smoking bans. It also will be important to incorporate knowledge about third-hand smoke contamination into current tobacco control campaigns, programs, and routine clinical practice. Professor Winickoff is also concerned about new mothers who smoke, saying: 'When you're near your baby, even if you are not smoking, the child comes into contact with those toxins. And if you breastfeed, the toxins will transfer to your baby in the breast milk.' See press release on study at
<http://www.massgeneral.org/about/pressrelease.aspx?id=1091>.

The study referenced the dangers from third-hand smoke that lingers beyond extinguishing a cigarette or cigar, on upholstery, carpeting, clothing, hair, skin, etc. The concern is that carcinogens and toxins in third-hand smoke may affect brain development in babies and young children. Young children crawl on carpeting and suck on clothing, upholstery, skin, etc. that has third-hand smoke residue. See NY Times January 3, 2009 news clip is at http://njgasp.org/third-hand_smoke_2009.pdf, and Daily Mail news clip at <http://www.dailymail.co.uk/health/article-1211825/How-cigarette-smoke-carpet-harm-baby.html>

- Matt, G.E., Quintana, P.J.E., Hovell, M.F., Bernert, J.T., Song, S., Novianti, N., Juarez, T., Flora, J., Gehrman, C., Garcia, M. and Larson, S. Households contaminated by environmental tobacco smoke: sources of infant exposures. *Tobacco Control*, 13:29-37, 2004. Parents who smoke outside the home still subject their children to passive smoking. San Diego State University researchers studied 49 households, and found that secondhand smoke can contaminate a house even if cigarettes are smoked outside. Nicotine, a major ingredient of secondhand smoke, can be detected in the dust and air inside the homes of smokers who deliberately go outside for a puff. Children in such homes have up to eight times more nicotine in their bodies than the offspring of non-smokers. Moreover, nicotine levels in babies who live in houses where people smoke outside are much higher than in babies who live with non-smokers.

Babies who live with smokers may be exposed to contaminated particles from secondhand smoke in several ways. First, infants may inhale the smoke from a cigarette or the exhaled air from a smoker. Even if cigarettes are not smoked near a baby, cigarette fumes may contaminate dust that settles in carpets, on toy and furniture surfaces and on the floor. Because babies spend a lot of time crawling on the floor and put toys in the mouths, they are especially at risk to ingest this contaminated dust. Smokers may also contaminate their homes by bringing in clothing exposed to smoke. Cited from <http://faculty.washington.edu/chudler/shs.html>. Although all smoking was outdoors, children had nicotine in their hair and urine, and mothers who smoked away from their children were found to have nearly as much nicotine on their hands as smokers who made no special effort. Cited from http://www.thestressoflife.com/smoking_outside_may_not_protect .htm.

- *Pediatrics Journal*, Volume 117, Number 5, May 2006 – Environmental Tobacco Smoke Exposure: Prevalence and Mechanisms of Causation of Infections in Children. The report concluded that ETS plays a role in causing infections in children.
<http://pediatrics.aappublications.org/cgi/content/abstract/117/5/1745>
- *American Journal of Respiratory and Critical Care Medicine*, June 2006. Study by Medical University in Vienna, Austria, studied more than 20,000 children, and concluded that “exposure to cigarette smoke before and after birth impairs their lung function and that parental smoking remains a serious public health issue.”
<http://ajrccm.atsjournals.org/cgi/content/short/173/11/1255>
- *American Journal of Respiratory and Critical Care Medicine*, August 2006. Study by UC Davis shows how ETS damages babies’ lungs. This study was done with rhesus macaque monkeys.
http://www.news.ucdavis.edu/search/printable_news.lasso?id=7836&table=news
- *Clinical Infectious Diseases*, Vo. 42, April 1, 2006. This Ben Gurion University study showed that children who live with smokers carry Streptococcus pneumonia more often than children in smokefree homes.
<http://www.journals.uchicago.edu/CID/journal/issues/v42n7/37523/37523.web.pdf#search=%22streptococcus%20smoking%22>
- Prior to the most recent Surgeon General’s report, other recognized health authorities have documented the hazards of secondhand smoke effects on children:
 - 1986 U.S. Surgeon General’s report that cites the EPA findings. “The children of parents who smoke, compared with the children of nonsmoking parents, have an increased frequency of respiratory infections, increased respiratory symptoms, and slightly smaller rates of increase in lung function as the lungs mature.” Cited in the 2006 U.S. Surgeon General’s Report, Ch. 10, p. 571.
 - July 1997 study published in *Archives of Pediatrics and Adolescent Medicine* shows that parental smoking kills at least 6,200 children per year, and causes 5.4 million serious ailments such as ear infection and asthma. <http://archpedi.ama-assn.org/cgi/content/abstract/151/7/648>
 - The California Dept. of Health Services 2001 report states that, “recent data also suggest that smokefree homes are associated with lower smoking initiation rates in adolescents, even in homes where parents smoke.” Gilpin, E.A.; Emery, S.L.; Farkas, A.J.; Distefan, J.M.; White, M.M.; Pierce, J.P., “The California Tobacco Control Program: a decade of progress, results from the California Tobacco Survey, 1990-1999 - final report,” Sacramento: California Department of Health Services, Tobacco Control Section (TCS) La Jolla: University of California, San Diego, December 26, 2001, footnote 9. <http://www.no-smoke.org/document.php?id=262>
 - Ontario Medical Association’s 2004 Position Paper, *Exposure to second-hand smoke: Are we protecting our kids?* “The OMA recommends that caregivers should not be permitted to smoke in vehicles while transporting children, and that the provincial government takes steps to ensure the protection of children from SHS while traveling in vehicles through legislation banning the use of tobacco inside vehicles used to transport children.” (page 6)

VII. JUDICIAL NOTICE OF THE HARMFUL EFFECTS OF SECONDHAND SMOKE

Since the harmful effects of SHS are well documented by health authorities, some courts have taken judicial notice of SHS, especially in child custody matters. Giving judicial notice means that the court no longer considers it a question of fact; the hazards of SHS to children are deemed to be an undisputed fact.

In many of these cases, the courts rely on the veracity of the source of the information, which is usually a governmental public health organization. In fact, the U.S. Supreme Court has held that: “the views of public health authorities, such as the U.S. Public Health Service, CDC, and the National Institutes of Health, are of special weight and authority.” See *Bragdon v. Abbott*, 524 U.S. 624, 650, 118 S.Ct. 2196, 2211 (1998)(emphasis added).

Consequently, many courts now consider a parent's smoking when making child timesharing decisions. <http://www.digitaljournal.com/pr/674876>.

Several examples of child custody cases that granted judicial notice on SHS are found in a *British Medical Journal* research paper entitled *Lawsuits and Secondhand Smoke*, by Edward L. Sweda, Jr., Senior Attorney, Tobacco Control Resource Center, Northeastern University School of Law, Boston, MA. http://tc.bmjournals.com/cgi/content/full/13/suppl_1/i61. Two examples are:

- *In Re. Julie Anne, A Minor Child*, 121 Ohio Misc. 2d 20 (Ohio Court of Common Pleas 2002), the court wrote a thorough analysis on why it granted judicial notice relating to facts that ETS effects are harmful, dating back to the World Health Organization, from 1989. It concluded that, "The overwhelming authoritative scientific evidence leads to the inescapable conclusion that a family court that fails to issue court orders restraining people from smoking in the presence of children under its jurisdiction is failing the children whom the law has entrusted to its care." The court granted a restraining order that the parents not allow any person, including themselves, to smoke tobacco in the presence of their child. <http://216.239.51.104/search?q=cache:KpLG7XusSpoJ:www.sconet.state.oh.us/rod/documents/98/2002/2002-ohio-4489.doc+%22judicial+notice%22+ets+harm&hl=en>
- *In re. Guardianship of a Minor Child*, Probate and Family Court Dept., No. 01P1072 (Hampden (MA) Division, 2003), the paternal grandparents of a seven-year-old child were appointed as the child's guardians. The court granted the maternal grandmother's request to remove the paternal grandparents as guardians, and appoint her instead, on the grounds that the child "is constantly exposed to dangers of secondhand smoke" while in the guardians' home. The court took "judicial notice of current research that shows second-hand smoke or environmental tobacco smoke (ETS) can cause respiratory problems, including asthma and reactive airway disease, in children" and made a finding that exposing this child "to a smoking environment is contrary to his best interest".

VIII. SHS EXPOSURE AS A FACTOR IN NEW JERSEY CHILD CUSTODY MATTERS

New Jersey Family Courts are required to review a checklist when determining child custody and visitation matters, to determine what is "in the best interest of the child". One category on that checklist concerns the health and welfare of the child. New Jersey courts have decided that whether a parent or grandparent smokes is a factor in determining child custody and visitation.

New Jersey courts set two precedent-setting cases, that are relied upon by other courts:

- In 1994, *Unger v. Unger* modified a consent order and required that smoking be stopped in the home or vehicle when the children were present, with no one smoking in the home or vehicle at least 10 hours before the children were present. *Unger v. Unger*, 644 A.2d 691, 9.4 TPLR 2.145, 63 U.S.L.W. 2132 (Sup. Ct. Ch. Div. 1994), NJ Super. Ct., Burlington Cty., Chancery Division, No. FM-03-103-93, (1994).
- In 2003, the judge in *Montufar v. Montufar* ordered the mother to keep the child free of all secondhand smoke in the mother's home, car and the grandparent's home. *Montufar v. Montufar*, No. FM-04-02187-89 (Camden Cty. (NJ) Ct. 1993).

New Jersey State Statute *N.J.S.A. 9:2-4* on child custody refers to the checklist for determining custody and visitation. See Notes of Decisions #8.5 "Health and Safety", which states that a court may consider the effects of environmental tobacco smoke in custody determinations, citing the *Unger v. Unger*.