

CDC Study Full of Holes

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Several newspapers and other news sources have recently reported that a study published by the Centers for Disease Control (CDC) has warned about the health dangers of living in the suburbs. Public health officials, the study says, must support smart growth in order to promote a healthy, productive population.

In fact, the study is NOT a CDC report and was probably written without the official endorsement or even knowledge of the CDC. Instead, the report was published by SprawlWatch Clearinghouse, a smart-growth group. The report, "Creating a Healthy Environment: The Impact of the Built Environment on Public Health," can be downloaded at <http://www.sprawlwatch.org/health.pdf>.

The report lists the authors as Dr. Richard Jackson and Chris Kochtitzky, both of whom work for the CDC. The report's cover prominently displays the words "Centers for Disease Control and Prevention" underneath the author's names. While this indicates their affiliation, many news sources have misconstrued it to mean that CDC published the report. The report's true publisher, SprawlWatch, has done nothing to correct this error and has obviously enjoyed a great media success.

Of the two authors, one is primarily an urban planner who works for CDC as an associate director for policy and planning. The other is a medical doctor who works for CDC in an administrative capacity.

These two people may have written the report with the best of intentions. But the report is as unscientific as anything ever published by smart-growth groups. It is full of logical fallacies and inconsistencies. Most important, it fails to document any of its claims.

The report's thesis is that suburbs are a public health menace and that smart-growth is the public health solution. The report's fundamental fallacy is the old "design myth" held dear by many architects and urban planners. This is the myth that "we shape our cities and then our cities shape us," in other words, that urban design determines how we live and that better design can make us live better.

The specific claims made in the report are that:

1. Suburban sprawl leads to more toxic air pollution. But the report cites no evidence that this is true. In fact, dense, congested cities contain more air pollution hazards than the suburbs.

2. Suburban sprawl leads to obesity. But the report cites no evidence that this is true. In fact, rising incomes are more responsible for obesity and changing exercise habits.
3. Suburban sprawl is dangerous for pedestrians and bicyclists. But the report cites no evidence that this is true. In fact, the high traffic levels in congested cities are much more dangerous for pedestrians and bicyclists than the suburbs.
4. Suburban sprawl is dangerous for elderly and disabled people. Again, the report fails to tie the mobility problems of elderly and disabled people to the suburbs. There is no reason to think that smart growth is needed to solve these problems.
5. Suburban sprawl is bad for water quality.

None of these claims are proven in the report and mainly are easily falsified.

1. The health effects of air pollution are a function of how many miles people drive, the congested conditions in which they drive, and the concentration of driving and pollution. The report points out that suburbanites tend to drive more than city dwellers and so concludes that suburbs lead to more toxic air pollution.

In fact, differences in driving between the suburbs and the cities are in large part attributable to differences in family size, income, and other factors. Forcing suburban families to live in smart-growth densities will not necessary reduce their driving.

More important, the other two factors affecting air pollution -- congestion and concentration -- are much worse in cities than in suburbs. To minimize the health risks of air pollution, we would be much better off moving the residents of dense cities to low-density suburbs than in densifying the suburbs.

In practice, air pollution is declining not because of changes in urban form but because of improved technology. The best way to reduce air pollution is at the tailpipe, not the ignition key. Although Americans drive three times as much today as they did in 1970, total automotive pollution is roughly two-thirds less than it was in 1970. Further improvements are easily possible at modest cost.

2. Obesity is getting worse in the U.S., says the report, and suburbs are the cause. While the report cites statistics indicating that Americans walked or bicycled more in the past than they do today, it fails to show that these changes are in any way due to suburban environments.

In fact, increases in auto driving are largely due to increases in incomes. Government policies aimed at increasing poverty in America will do more to increase walking and

cycling than policies aimed at reshaping the suburbs. While few would seriously propose such policies, the reality is that the anti-auto, anti-suburb policies promoted by SprawlWatch and this report in particular will help to impoverish many Americans. This is simply due to the fact that automobiles have given people access to better jobs, and without autos people's incomes will decline.

3. Pedestrians and bicyclists, says the report, suffer from 13 percent of all traffic fatalities. However, the report makes no attempt to record what share of pedestrian fatalities is in the suburbs vs. in the cities.

The report does note that there are "strong associations" between "the risk for pedestrian injuries and high traffic volume." While many suburban highways have high traffic volume, these roads tend to have wide lanes and are often paralleled by low-trafficked routes. By comparison, the streets in dense cities tend to have narrow shoulders for bicycles, poor alternate routes, and pose high risks for pedestrians.

The report particularly focuses on the dangers of the suburbs to children, again without citing any data. Local suburban streets tend to be broad and, since most people park in garages or driveways, clear of parked cars. This gives motorists a clear view of children or others in the streets. In contrast, most urban streets are clogged with parked cars, creating a dangerous situation for children who may dash out between to parked cars in front of moving vehicles.

"The risk for injury to children living in neighborhoods with the highest traffic volumes was 13 times that of children living in the least-busy areas," the report says. This clearly argues for more suburban neighborhoods, where traffic volumes are low, rather than for urban neighborhoods. Yet the writers somehow draw the opposite conclusion.

4. Elderly and disabled people do suffer from mobility problems. Many of these people choose to live in neighborhoods that are designed to alleviate these problems. The report focuses on the fact that some neighborhoods lack curb cuts for wheelchairs or bus shelters for bus stops. While some of these barriers can be easily eliminated, there is no reason to think that applying smart growth -- high-density housing, mixed-use developments, high-density transit service -- throughout the suburbs is either necessary or sufficient to address the mobility problems of the elderly and disabled.

5. "Uncontrolled growth" is supposed to be detrimental for water quality, says the report. "In urbanized areas, rainfall that once filtered slowly downhill becomes surface runoff. It flows across compacted earth and impervious man-made surfaces." This changes water flows and means that pollutants directly enter streams rather than being filtered by the soil.

All of these things are true. Yet once again the claim that suburbs are the problem is wrong. Cities have a much higher percentage of impervious surface than the suburbs. The percentage of land covered by streets in auto-oriented suburbs tends to be at least a third less than the share of cities built before the auto. Suburbs with homes on half-acre lots have much larger areas of pervious grass and soil than urban apartments or homes on one-eighth or one-sixteenth acre lots.

As salmon biologists have realized in the Pacific Northwest, the solution to water quality problems is low-density development -- "sprawl" -- not smart growth (see Vanishing Automobile update #21).

In addition to the above issues, the report briefly mentions other public health problems supposedly caused by the suburbs. In almost every case, the real problem is in dense inner cities, not the suburbs.

- The report refers to crime in public housing developments that lack surrounding greenspace, a clear argument for suburban housing.
- The report refers to the urban heat island effect of large expanses of concrete and asphalt, another clear argument for low-density housing.
- In a particularly specious argument, the report says blames the construction of urban schools on former toxic dumps on rich people who have moved to the suburbs leaving urban school districts too poor to build anywhere else. As Anthony Downs has discovered, however, there is no relation between "sprawl" and the concentration of urban poverty (see Vanishing Automobile, pp. 214-16, <http://www.fanniemaefoundation.org/research/policy/pdf/HDP104/HDP104/downs.pdf>).

In short, the report fails to show that any of the problems it attributes to the suburbs are really caused by the suburbs. In most cases, if the problems are caused by urban form at all, they are more due to dense cities than low-density suburbs.

Yet the report concludes that public health officials should become active in urban planning and provide planners "with the public health arguments they need to support 'smart-growth' designs and initiatives."

It is one thing for public health officials to encourage people to exercise more. Where evidence shows that sidewalks are safer for pedestrians, it may also make sense for public health officials to encourage sidewalks. But it is quite another thing for public health officials to make a wholesale endorsement of smart growth based on murky and undocumented claims that it is safer than low-density suburban development.

Smart-growth opponents should make certain that local news sources and public health officials understand that:

- This report is not endorsed by the CDC and is not backed up by any scientific evidence;
- Smart growth creates more air pollution, not less;
- There is no evidence that smart growth will reduce obesity;
- There is no evidence that smart growth makes for less dangerous environments for pedestrians and cyclists, and some evidence to the contrary;
- The solution to water quality problems is low-density development, not smart growth.

CDC Program on Land Use and Public Health

Supplemental update first distributed 3 December 2001

The above update described the Sprawlwatch report as a "fake CDC" study. It turns out that the CDC does have a program that has related land use, transportation, and public health, the "Active Community Environments" program. According to this program's web page <http://www.cdc.gov/nccdphp/dnpa/aces.htm>, the program aims to promote walking and cycling.

The program has published two reports, "How Land Use and Transportation Systems Impact Public Health: A Literature Review," and "How Land Use and Transportation Systems Impact Public Health: An Annotated Bibliography." These reports can be downloaded at <http://www.cdc.gov/nccdphp/dnpa/pdf/aces-workingpaper1.pdf> and <http://www.cdc.gov/nccdphp/dnpa/pdf/aces-workingpaper2.pdf>.

Although the reports can be downloaded from the CDC web site, they actually say that they were published by the Georgia Institute of Technology. The title page contains the statement that "The content does not necessarily reflect the official views or policies of the Centers for Disease Control and Prevention or the Georgia Institute of Technology."

Unlike the authors of the Sprawlwatch study, the authors of the GIT reports, Lawrence Frank and Peter Engelke, are not doctors but urban planners affiliated with the Georgia Institute of Technology city planning school. Though report 1 is described as a "literature review," it is clear that they only reviewed the literature that supports their view. For example,

- They cite Newman and Kenworthy's claim that miles driven is related to density, based on the fact that Americans drive more than Europeans, without citing UC Irving economist Charles Lave's response that differences between American and

European driving are mostly income related. (Lave, "Cars and Demographics, Access, Fall, 1992)

- They cite Sierra Club activist John Holtzclaw's study claiming that Americans in high-density neighborhoods drive less than Americans in low-density neighborhoods without citing MIT planner Paul Schimik's finding that differences in neighborhood driving are almost entirely explained by income and family size. (Schimik, "Household Motor Vehicle Ownership and Use: How Much Does Residential Density Matter?" Transportation Research Board, 1996).

They do mention USC planners/real estate experts Genevieve Giuliano's and Harry Richardson's responses that densities would have to be hugely increased to have any effect at all. But they dismiss this problem by citing, again, Holtzclaw.

The problem with Holtzclaw's study is that people are likely to choose the neighborhood they live in based on whether or not they want to drive. If they want to drive, they choose a low-density, auto-friendly neighborhood. If not, they choose a denser, transit-intense neighborhood.

If Holtzclaw's claim that density determines driving were true, then differences in driving among urban areas would be strongly correlated with urban area densities. People may express their preference to drive or not drive when they choose their neighborhoods, but they are less likely to choose the urban area they reside in based on their driving preferences. Thus, the preference question is less important and density becomes more important.

American urban areas range in density from little more than 600 people per square mile to nearly 6,000 people per square mile. Yet there is almost no correlation between density and miles of driving or commute mode. Thus, it is reasonable to conclude that the differences in driving levels found by Holtzclaw are based largely on preferences, not urban form.

For example, the 1990 census found that 94.6 percent of commuters drove or rode autos to work in the nation's least dense urban area, while 90.3 percent drove in the densest urban area. This is not good news for planners who want to increase their urban area's density.

The Executive Summary of the literature review quotes Benjamin Franklin as saying:

To get the bad customs of a country changed and the new ones, thought better, introduced, it is necessary first to remove the prejudices of the people, enlighten their ignorance, and convince them that their interests will be promoted by the proposed changes; and this is not the work of a day.

This is a call for public health officials to join in propaganda campaigns to convince the public to support government action on environmental and social issues. Scientists in the past have stayed out of political debates. Yet today more and more scientists appear willing to stretch the truth to raise public attention over problems that they believe to exist, even when they can't prove those problems are real.

For example, one of the assertions in the Sprawlwatch report is that American children are getting more obese and that this is somehow related to suburban driving. It turns out to be true that an "epidemic" of child obesity has emerged in the past two decades. Yet the cause is not the suburbs: no information in the Sprawlwatch report or any other study ever indicated that suburban children are more obese than urban ones.

Instead, according to an article on San Francisco public radio station KQED's *California Report* on November 30, 2001, the cause appears to be the hysteria raised over missing and abducted children in the 1980s. Before this campaign, the vast majority of school children walked to school. After it, two out of three are driven to school by their parents. Densifying the suburbs is not going to fix this.

Moreover, child obesity is a problem in Canada (<http://www.greenestcity.org/walk/ReasonsToWalk.pdf>), Britain (http://www.bupa.co.uk/healthy_living/children/c_obesity/), and even India (<http://www.clinic-2000.com/childhood.htm>), which can hardly be accused of low-density sprawl. In these and other countries, the problem is blamed in part on kids not walking to school.

"Either they travel by bus, rickshaw, auto or they get dropped at the school over a motorcycle or by a car by one of the family members," says the Indian web page. Since Canada and Britain each have more aggressive smart-growth programs than the U.S., we are not likely to cure child obesity through smart growth.

This is not to say that CDC's concerns for walking and obesity are not valid. It is no doubt true that more pedestrian-friendly and bicycle-friendly designs could help make exercise a little more common. But such designs do not need to be auto-hostile, which is the real goal of many smart-growth advocates.

In conclusion, it appears that the CDC has funded and is distributing an unscientific report that rehashes old claims that urban form influences travel habits. While that report states that it is not the official view of CDC, it is clearly the goal of sprawl opponents that it becomes the official view of CDC and other public health agencies.

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