

“people who are directly or indirectly affiliated with stakeholders that are not happy with us,” such as the pesticide and meat industries. Straif concedes, however, that it’s less than ideal that IARC often announces its findings first in a relatively brief scientific summary, followed months later by the full monograph.

Further complicating IARC’s communications effort is the distinction, often not appreciated by the public, between hazard and risk. An exposure is a cancer hazard if it can cause the disease under some circumstances; the risk is how likely one is to get cancer if exposed. Although IARC uses the word “risk” in monograph titles, a preamble cautions that the agency’s aim is to “identify cancer hazards even when risks are very low at current exposure levels,” because new uses could increase exposures.

But looking only at hazard has downsides. For one, it is very hard to prove that something will never cause cancer. Indeed, IARC has classified just one compound—caprolactam, a nylon precursor—as “probably not carcinogenic.” And critics note IARC has no “not carcinogenic” category. Straif says that’s also because IARC reviews prioritize substances suspected of carcinogenicity.

The classification is confusing for consumers because the different categories say nothing about how dangerous a substance is—only about how sure the agency is that there is a danger. IARC places smoking and processed meat in the same category, for instance, despite smoking’s vastly higher risks. “People end up worrying about the wrong things and concluding that everything causes cancer, so why bother to stop smoking?” Kabat says.

Scientifically, the focus on hazard is outdated, Hensel adds, in part because the world is full of carcinogenic substances that are harmless at low levels. IARC’s Straif says there often isn’t enough scientific evidence to quantify the risk. But when there is, the agency “does try to move in that direction,” he says.

In the meantime, scientists are bracing for more high-impact IARC pronouncements. The agency plans to produce monographs on controversial substances such as the cooking byproduct acrylamide and the plastic component bisphenole A. Hensel, for one, fears that IARC’s seemingly black and white verdicts will lead to further politicization of regulatory debates.

At least the report about very hot drinks—although perhaps not particularly helpful—didn’t play into a political issue, Pharoah says. “It’s hard to see a big downside,” he says, “to telling people to leave their tea to cool for 5 minutes.” ■

PUBLIC HEALTH

California approves publicly funded gun research center

University of California to run \$5 million center that could tap state’s extensive database on firearm transfers

By Emily Underwood

For 2 decades, firearm advocates in Congress have blocked taxpayer-funded research into the causes and consequences of gun violence, which kills more people in the United States than in any other developed nation. Last week, California’s state legislature bucked that trend, voting to establish the nation’s first publicly funded center for studying gun violence.

The new California Firearm Violence Research Center will be run by the University of California (UC) system. Its lean budget—\$1 million per year over the next 5 years—will likely preclude large-scale studies, but backers hope it will demonstrate the value of publicly funded gun research and perhaps help build support in Congress for a similar federal effort. The 16 June vote to create the center poses “a very stark” contrast to the continuing gridlock in Congress, says epidemiologist Garen Wintemute, who studies firearm violence at UC Davis. Last fall, he worked with state Senator Lois Wolk (D) to develop plans for the center.

Coincidentally, the California vote came just 4 days after a gunman killed 49 people and injured 53 at a gay nightclub in Orlando, Florida, sparking renewed debate in Congress over proposals to impose new federal rules on gun purchases. Events like the Orlando massacre—one of the country’s worst mass shootings—“leave us searching for answers,” Wolk said in a statement. “We know that using real data and scientific methods, our best researchers can help policy makers get past the politics and find real answers to this public health crisis.”

“This shows the kind of thing states can do” in the absence of federal action, says David Hemenway, a health policy researcher at Harvard University. In 1996,

the National Rifle Association and other groups successfully lobbied Congress to stifle federally funded gun research. Led by then-Representative Jay Dickey (R-AR), lawmakers barred the U.S. Centers for Disease Control and Prevention from funding any activity that would “advocate or promote gun control” and eliminated a \$2.5 million pot of money for gun-related studies.

Dickey, now retired, has since reversed his position and advocates for more gun research. But the lack of public funding means that few young scientists are drawn to the field, says

Wintemute, who has spent more than \$1 million of his own funds to sustain his research.

The new center will focus on interdisciplinary research “to provide the scientific evidence upon which to base sound firearm violence prevention policies and programs,” according to Wolk. “You name it, we need to know about it,” says Hemenway, citing the need for more information on everything from firearm training and gun thefts to their role in suicide and homicide.

Wintemute adds that the center could enable a small team of researchers to examine California’s unique data set on statewide gun transfers and other firearm-related activities. One pressing question, he says, is why California’s annual fatalities from gun violence have dropped by roughly 20% since 2000, even as the nationwide rate has not changed. “We don’t know why that is,” Wintemute says. “Are we doing something right? Or are we not doing something wrong that other [states] are?”

The location of the new center is not yet “locked in,” but Wintemute believes UC Davis is the most likely candidate. And he hopes the state funding will help researchers attract additional money from private donors. ■

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Lois Wolk, California legislator

Science

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