

When SCIENCE doesn't make sense

When asked why he robbed banks, the legendary Willie Sutton replied, "Because that's where the money is!" One is tempted to interpret Dr Glantz's plea for a sequel to ASSIST in much the same light: in the United States, the National Institutes of Health are "where the money is", and the largest single share of it is in the vaults of the NCI. I have no quarrel with Glantz's proposition that more tobacco control research is needed; nor do I

disagree with him that well-funded, state-based tobacco control activities may be effective deterrents to smoking. But I do differ with him in concluding that NCI should follow ASSIST with yet another large-scale population-based programme involving multiple states and tens or hundreds of millions of dollars.

Intentionally or otherwise, Glantz's commentary omits important history explaining

the origins and purpose of ASSIST. Indeed, the naïve reader of the commentary will be forgiven for not appreciating that ASSIST is not and never was a research project. To the contrary, ASSIST was designed to serve as a *demonstration* project, intended to demonstrate the *application* of tobacco control interventions researched (and presumably shown to be effective) in an earlier project, COMMIT, the Community Intervention Trial for Smoking Cessation, designed to reduce heavy smoking.¹⁴ The origins of ASSIST lay in an ambitious five-phase cancer control research model developed by NCI to carry a research theme from basic research through to readiness to apply research findings nationwide.¹⁵ ASSIST represented the last of the five phases, "Demonstration and Implementation", intended to spur dissemination of findings into practice in the broader health services and health policy communities.

For a variety of non-scientific reasons, ASSIST was pushed into existence prematurely, before the results of COMMIT were known. As it turns out, COMMIT failed to achieve its primary research objective: heavy smoking did not decline significantly more in the experimental communities than in the non-intervention comparison communities.^{16, 17} Thus, had NCI adhered to its original scientific design, in which ASSIST would follow success in COMMIT, ASSIST would never have seen the light of day.

But ASSIST did see the light of day. And according to one analysis, ASSIST states have experienced a decline in per capita cigarette consumption 7% greater than that in non-ASSIST states.¹⁸ If this relationship is causal (other explanations come readily to mind), this surely represents a monumentally important achievement, one that should be reproduced in the remainder of the states, with dissemination to other countries as well. But herein lie two essential reasons why more large-scale, population-based NCI research is not the appropriate mechanism for following up on the success of ASSIST. First, no-one knows how to design an effective sequel that would have the fundamental community-intervention tobacco control characteristics of ASSIST and yet be amenable to investigating the kinds of research questions that Glantz poses.

Second, the early evidence, cited by Glantz, indicates that ASSIST is succeeding in its demonstration and dissemination objectives. This raises the question of whether NCI funding is needed to promote large-scale, population-based tobacco control interventions; indeed, it begs the question of whether strictly experimental community intervention research could work in the present environment. Other states, and indeed other national programmes (CDC's IMPACT programmes and the Robert Wood Johnson Foundation's SmokeLess States programme), are following the lead of ASSIST in developing state-based community interventions; Glantz tells us that ASSIST was the model for these new programmes. Led by Glantz's home state of California, a few states have developed sub-

stantial state-financed programmes that have been documented to decrease smoking.¹⁹ Other states, already including Mississippi and Florida, stand poised to receive millions of dollars for tobacco control as a result of successful legal actions against the tobacco industry.

If congressional tobacco control legislation now under consideration is adopted, all states will have ample resources to conduct aggressive and (one would hope) innovative tobacco control programmes. If such legislation is not adopted, one can indeed make a case that the federal government should be subsidising the further development of state-based programmes. But mounting such programmes should not be the responsibility of the NCI, an organisation dedicated to biomedical and health research. Rather, this should be done under the auspices of the Centers for Disease Control and Prevention, the nation's leading organisation responsible for monitoring and improving the health of the public. CDC likely would need a significant infusion of new resources to fulfill this role. But ceding it to the NCI simply because that's where the money is would not represent government budgeting at its finest. The questionable logic aside, we would incur a large opportunity cost in terms of other forms of research not undertaken, such as the small-scale investigator-initiated bench and behavioural research that Glantz acknowledges as important and worthy of NCI support.

This brings us full circle. Glantz is correct that important community-intervention research questions remain. Clearly, the more effectively and efficiently state-based funding is deployed, the more the scourge of tobacco will be contained. The form that community-intervention tobacco control research can and should take now, however, is precisely that at which Glantz himself has excelled: evaluation of the multitude of natural experiments that arise as a result of the burgeoning business of population-based tobacco control.^{19, 20} Such research is not necessarily expensive, because it exploits the numerous opportunities for evaluation presented by a world actively engaged in programmatic efforts to combat our modern plague of tobacco-produced disease. NCI has a clear obligation to support such investigation, precisely because it is important and potentially very valuable health research. NCI support of such research would be consistent with its path-breaking history of encouraging behavioural research germane to tobacco control²¹ and with its recent initiative in the domain of tobacco policy research.²² A wonderful example of well-conceived, important tobacco policy research is Glantz's recent study of the economic implications of smoke-free restaurant and bar ordinances,²⁰ which NCI funded.

Supporting research on the effects of tobacco control and funding tobacco control *per se* are two different activities that should be kept distinct. Given the remarkable recent history of the development of state-based programmes, described by Glantz, we are well beyond the point at which we can or should attempt to construct state-based interventions

as scientifically designed controlled trials. COMMIT, the most touted such intervention to date, fell short in this endeavour several years ago. ASSIST, IMPACT, and the Smoke-Less States programme have taken us past it.

Glantz does not draw the line between the funding of tobacco control activities *per se* and support of research on its consequences. His proposed SCIENCE programme comprises large-scale interventions and evaluation research. I heartily endorse the latter. Given our current understanding of the limitations of community intervention research,^{23 24} and the expanding dissemination of tobacco control programmes, I find the former indefensible. When it comes to funding tobacco control evaluation research, we should hold NCI's feet to the fire. We will burn ourselves, however, if we hold NCI responsible for footing the bill for more population-based, large-scale tobacco control programmes.

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