Health Policy in Stroke: Translating What We Know Into What We Do

David B. Matchar, MD

Health policy is often perceived (sometimes correctly) as an arcane pursuit of politicians, lobbyists, and assorted governmental bureaucrats. More correctly, health policy is an activity that is fundamental to the clinical enterprise. It is the decisions of health policy makers that determine what medical services will be reimbursed, mandated, or otherwise promoted and what services will be rejected for payment, proscribed, or otherwise inhibited.

Health policy is practiced at the level of clinical practice organizations and professional societies (in the form of guidelines or practice improvement efforts) or by legislative or regulatory entities (in the form of new training programs, insurance structures, legal requirements, and so on). Whether at the level of clinical policy or public policy, it is generally agreed that health policy should be driven by the best scientific evidence. The challenge for those decision makers who create health policy is to draw on a broad range of evidence and not merely the literature on what works (ie, what has a biological effect). This broader evidence base addresses (1) whether that effect relates to a health outcome that people care about; (2) whether the outcome is worth the cost; and (3) whether it is feasible to provide the interventions that improve outcomes in real-world settings.

One may argue that health policy research in stroke is some years behind efforts in other medical conditions (notably cardiac disease, cancer, and AIDS). However, the field is making notable progress. Below, several studies published in 2002 are cited to illustrate recent work in important domains in health policy in stroke (outcomes that people care about, value, and implementation of effective interventions).

Outcomes

In personal decision making, people care primarily about health outcomes (often denoted by quality of life). In policy decision making, people also care about resource use (in economic terms, opportunity costs or the cost of failing to use the resources in other, more valuable, ways).

Stroke is well documented to impact quality of life in all domains. Recent evidence from a registry study in Kansas City reinforces this general conclusion.1 More importantly, by comparing a new stroke outcome measure, the Stroke Impact Scale, the investigators demonstrated that individuals who are highly recovered by conventional measures continue to have significant residual disability. The insidious impact of stroke on health is mirrored by its impact on cost. Based on a large longitudinal study of people >70 years of age, a self-reported stroke is associated with substantially greater use of informal care (provided by family and friends) compared with individuals who did not have stroke.2 Moreover, a higher volume of informal care was required even if the patient reported no stroke-related health problems.

From a health policy perspective, the implications are clear. The apparent burden of stroke is the tip of an iceberg. Stroke deserves the attention of policy makers.

Value

It is conceptually trivial to define a measure of the value of an intervention aimed at preventing or treating stroke compared with its alternative. The measure of value is generally expressed as the incremental cost-effectiveness ratio—the ratio of the extra cost required by the intervention compared with its alternative and the extra health achieved. What is less trivial is to assess these costs and health outcomes and to use the resulting measure of value to make a policy judgment.

A recent publication underscores the difficulties in translating research evidence into uncontroversial value statements. In a review of several studies purporting to calculate the cost-effectiveness of carotid endarterectomy and associated imaging studies, Benade et al3 noted inconsistent conclusions and attributed discrepancies primarily to dissimilar methodologies.

Although previous research suggests that the magnitude of the health and economic burden of stroke conspire to make modestly effective interventions a good value for money,4 a compelling health policy case for particular interventions can only be made through the prudent application of standard principles and methods of health economics and health care cost accounting.

Implementation

Clinical trials document that stroke can be prevented with measures such as anticoagulation for atrial fibrillation5 and acute stroke patients can significantly benefit from organized stroke care,6 yet such approaches are not uniformly applied.

The issue of improving acute stroke management is of special policy interest. Organized care requires system-level changes, yet reimbursement (especially under capitated pay-
ment) may discourage this form of practice improvement, and the demand for the necessary individuals with specific training could easily outstrip the supply.

In this context, two recent articles provide grist for the practice improvement mill. Evans et al.\(^7\) reexamined data from a previously published trial of 3 different ways of organizing stroke care and noted that individuals with large-vessel stroke seem to have better outcomes when cared for on a stroke unit compared with a general medical ward with specialist stroke team support. The same benefit was not seen for patients with lacunar stroke. As a subgroup analysis, the study provides an intriguing hypothesis. If supported by subsequent research, this could provide a rationale for allocating patients to a more expensive form of care. On the other hand, it remains to be seen if this or a similar allocation approach will lead to cost savings or rather will increased costs because of the inefficiency of operating a small stroke unit.

To improve the effectiveness and efficiency of rehabilitation after stroke, Sulch et al.\(^8\) developed and evaluated an integrated care pathway added to usual care provided in a rehabilitation unit. This randomized controlled trial indicated that such an addition was not beneficial and, in some ways, may have been worse. The investigators speculated that their rehabilitation unit may not have been broken and perhaps did not require fixing; they suggest, conversely, that practice improvement efforts are only likely to help when there are documented problems.

### The Future of Health Policy Research in Stroke

Given that we now have a range of validated health outcome measures for stroke, it is important to focus new studies on better understanding the burden of stroke. This is important as a descriptive exercise; more importantly, this information will help address the policy-relevant question of what we can really save by preventing a stroke or diminishing its severity.

Stroke policy studies in general, and cost effectiveness studies in particular, need to be performed according to standard economic techniques.\(^9\) This must be done with an appreciation for the fact that stroke presents an especially complex decision-making problem involving multiple competing risks, expensive and possibly dangerous interventions, and salient outcomes in both the short term and the long term. Thus, in addition to reinforcing analytic standards in studies accepted for publication, it is important to encourage efforts to better understand how and why economic analyses, which seem to be similarly reasonable, result in dissimilar conclusions.

Successful implementation of practices judged effective and a good value is the ultimate challenge for health policy research. This certainly will require a better understanding of issues such as what is the magic in the organized stroke care box. Perhaps the answer is not a panacea but rather something more mundane like a toolbox of proven practice improvement strategies that can be tailored to suit local resources and constraints.

Some health policy questions are practically testable using experimental or quasieperimental research designs (the latter including approaches such as before and after studies or cohort studies with concurrent controls). Other health policy questions (notably many questions of cost-effectiveness) require the development of “what if” models based on simple spreadsheets or complex simulations. Whatever the analytic approach, an overarching issue in health policy is to satisfy the decision-making needs of the policy maker. No doubt, it is time to better understand who these people are and what they want.

### References


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