

more concerned about the potential impact on public health.⁵ The medical community must become more aggressively involved in combating future global environmental problems.

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[One of the authors responds to Kue Young:]

Global average surface temperature is an established climatologic metric to describe global warming (or cooling).^{1,2} Further information is available in the assessment of Working Group I of the Intergovernmental Panel on Climate Change.³

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Choice of antihypertensives after acute ischemic stroke

Andrea Semplicini and Lorenzo Calò address the thorny issue of managing hypertension in the setting of acute ischemic stroke.¹ They emphasize the importance of selecting rapidly reversible agents “in case neurologic signs and symptoms worsen with the blood pressure reduction.” They also mention the recommendations of both the American Stroke Association and the European Stroke Initiative in selecting an appropriate pharmacologic agent, either labetalol or sodium nitroprusside.

Labetalol given intravenously has an onset time of 5 minutes, a peak effect at 20–30 minutes and a duration of action of 3–6 hours.² In contrast, sodium nitroprusside has an onset time of less than 1 minute, a peak effect at 1–2 minutes and a duration of effect of 2–5 minutes.² Given these differences, is there really a role for labetalol (or any other agent, save intravenous nitroglycerin if acute myocardial ischemia is a concern) in a setting where the ability to rapidly titrate the drug to effect is of serious import?

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[The authors respond:]

We did not discuss the relative merits of labetalol and sodium nitroprusside in our article,¹ and thank Seamus Donaghy for pointing out the differences in duration of action between these 2 drugs.

It is true that labetalol has a longer duration of action than nitroprusside, but for the treatment of patients with acute stroke, we rely more on the fact that the onset of therapeutic effect is similar (in the range of a few minutes). Therefore, it is safe to start with a small (20 mg) intravenous bolus of labetalol, check if the desired blood pressure is achieved within 20–30 minutes and, if not, administer another bolus. In this way, it is possible to achieve a gradual reduction in blood pressure, without the risk of a too-rapid rise in blood pressure when the drug effect decreases.

Other considerations limit the use of nitroprusside: it requires continuous blood pressure monitoring (because of its short duration of action), it has toxic effects, and it is not readily available in many institutions.

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Rehabilitation and acute stroke care

Quality-of-care indicators provide an important framework for developing consistent high-quality care. The commentary by Patrice Lindsay and associates¹ provides a framework for acute stroke care but fails to address the necessary link to rehabilitation services.

Although rehabilitation is acknowledged in the article's online appendix as an important component of stroke care,² the lack of a specific indicator addressing this link during acute care diminishes the importance of timely assessment of rehabilitation needs.

There exists strong evidence that interdisciplinary stroke rehabilitation leads to better functional outcome than does usual care.³ Although there is less evidence regarding the timing of rehabilitation, the need for such services must be determined during acute care to avoid missing this important component of overall stroke care.

We therefore propose that an additional indicator be included for optimal stroke care: timely assessment for rehabilitation when appropriate.

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[Two of the authors and a colleague respond:]

We agree with the comments of Andrew Dawson and colleagues. In fact, organized care in an inpatient stroke unit — which includes early mobilization and rehabilitation — is the first key indicator in our paper¹ and is effective in improving outcomes after stroke.^{1,2} We recognize that there is an overemphasis in the literature on hyperacute stroke treatments relative to the benefits of several rehabilitation therapies, which apply for the majority of stroke survivors.

The Canadian Stroke Quality of Care Study, from which the acute care indicators emerged, is an ongoing multiphase study. Our goal is to build a comprehensive evaluation framework

that measures patients' access to appropriate stroke care, according to their particular symptoms, as well as the flow of patients receiving such care. This model will include indicators that reflect care within each sector along the continuum of care; more importantly, the current work will build the critical indicators reflecting true integration between the points along the continuum, including transition from acute care to rehabilitation, and from rehabilitation to community care and recovery.

We and many other researchers are at work on the development of stroke rehabilitation indicators. This research suggests that tools such as the Functional Independence Measure, the Barthel Score and the Orpington Score may be used to facilitate referral and to measure the transition between acute care and rehabilitation, but the ideal tools for tracking patients from inpatient care into the community are still unclear.

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Are children with type 1 diabetes immunocompromised?

In their clinical report of a 4-year-old child with leukemia and an enlarging arm lesion that proved to have been caused by an opportunistic fungus, Ahmed Mater and associates¹ state that “[these i]nfections generally occur in immunocompromised patients with conditions such as neutropenia, diabetes or hematologic malignant disease.”¹ This statement implies that all patients with type 1 or type 2 diabetes mellitus are immunocompromised. Our interest is children (up to 18 years of age) with type 1 diabetes, and we challenge the accuracy of the statement in this context.

Mater and associates¹ cite 2 papers^{2,3} that listed “diabetes,” specifically diabetes complicated by ketoacidosis, as a risk factor for opportunistic infections. However, those articles did not provide evidence to support this claim in children with type 1 diabetes. Is there any evidence to show increased rates of infection or prolonged recovery from infection in children with type 1 diabetes? In-vitro data have demonstrated impaired immune function due to hyperglycemia and/or hypoinsulinemia in association with type 1 diabetes.^{4,5} However, those studies did not show that the differences in cell-mediated and humoral immune function translate into significant morbidity or mortality in the clinical setting. In fact, the humoral response to influenza vaccine in patients with type 1 diabetes is no different from that of controls with respect to protection rates.⁶ The incidence of candidal infection is greater