accuracy of the cause-of-death section in the death certificates. [3] Our findings are based on stroke as the underlying cause of death (principal diagnosis) suggesting that the mortality rate may be an underestimation of the actual stroke mortality rate. On the other hand, death certificates may overestimate the number of deaths from stroke, as stroke may be given as the cause of death when there are numerous co-morbidities and the actual reason for dying is uncertain. This limitation might particularly be the case in the elderly age group.

Due to methodological limitations an unknown number of patients with fatal and non-fatal strokes may have remained unrecorded. In our opinion, provided that these limitations are kept in mind, the analysis of data of hospital discharge statistics and cause of death statistics permits monitoring of trends in stroke morbidity and in-hospital case fatality in Switzerland where population-based registries for diseases such as stroke are lacking.

In order to be able to estimate the overall stroke event rate more accurately, a record linkage method combining both hospital discharge statistics and cause of death databases by using date of birth, sex and zip code would be desirable.

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Cheyne-Stokes respiration

I read with interest the article by Professor Randerath [1]. Some points need to be clarified. Firstly, not only heart failure but also acute ischaemic stroke and brain tumour can cause Cheyne-Stokes respiration. [2] In one study, such abnormal breathing can be found in 53% of patients with ischaemic stroke, unrelated to the location of infarction. [3] Lastly, apart from the therapeutic options provided in the article, I believe that removing the causes e.g., brain tumour should be considered as the treatment of Cheyne-Stokes respiration.

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Author's reply

Dear Dr. Kittisupamongkol,

Thank you very much for your interest in the paper "Therapeutical options for the treatment of Cheyne-Stokes respiration" and your helpful comments, which I fully agree with. There is no doubt that treatment of the underlying disease is always the first therapeutic approach. However, the focus of the review was the discussion of the most recent proceedings in positive pressure application. Therefore, it may be added that there are insufficient data on the treatment in patients with stroke or brain tumours with these devices.

Winfried Randerath