



Figure: Incidence of dengue cases in Brazil from 1990 to 2015
Data from Ministry of Health, Brazil.¹

thermonebulisation as an attempt to control the adult vector; despite serious concerns regarding Malathion.⁴

The Revolving Fund for Strategic Public Health Supplies in the Pan American Health Organization has prioritised the purchase of pesticides. The prescribed model of implementation is centralised, vertical, and does not consider the steep social gradient where clusters of microcephaly areis found in poor outskirts of cities, where sanitary conditions are bad. Although official data point out that 92% of urban households in Brazil were connected to public water in 2010, there are 3 983 329 unserved households,⁵ and intermittent water supply, forcing the population to store water for everyday consumption, and favouring mosquito breeding. And only 28% of rural households are connected to public water.⁵

The approach applied so far by the Government uses large resources on inefficient or unsafe vector control methods, instead of improving urban infrastructure and environmental sanitation, with a stable supply of potable water. Relying on a chemical war against the vector tends to pacify the population with false security, while a broad programme for better sanitary urban conditions could generate social mobilisation and

co-responsibility of the population. Improvement of sanitary conditions is a long-term investment in population health, while pesticide use will have to be repeated. The Brazilian Association of Collective Health calls to stop the use of chemical products against *A aegypti*, especially in household water reservoirs, and prioritise sanitary measures.

We declare no competing interests.

**Lia Giraldo da Silva Augusto, Aline M Gurgel, André M Costa, Finn Diderichsen, Francisco A Lacaz, Gabriel Parra-Henao, Raguél M Rigotto, Rubens Nodari, Solange L Santos*
lgiraldo@uol.com.br

Universidade de Pernambuco, Recife, Pernambuco, Brazil (LGdSA); Oswaldo Cruz Foundation, Fortaleza, Ceará, Brazil (AMG); Oswaldo Cruz Foundation, Recife, Pernambuco, Brazil (AMC); University of Copenhagen, Copenhagen, Denmark (FD); Federal University of São Paulo, São Paulo, Brazil (FAL); Cooperative University of Colombia, Santa Marta, Colombia (GP-H); Federal University of Ceará, Fortaleza, Ceará, Brazil (RMR); Federal University of Santa Catarina, Santa Catarina, Brazil (RN); and Federal University of Pernambuco, Recife, Brazil (SLS)

- 1 Ministry of Health (Brazil). Information System on Diseases of Compulsory Declaration. Incidence of dengue cases and deaths number in Brazil from 1990 to 2015. 2016. <http://portalsaude.saude.gov.br/index.php/situacao-epidemiologica-dados-dengue> (accessed Feb 14, 2016, in Portuguese).
- 2 Maciel-de-Freitas R, Valle D. Challenges encountered using standard vector control measures for dengue in Boa Vista, Brazil. *Bull World Health Organ* 2014; **92**: 685–89.
- 3 Crow JF. Genetics of insect resistance to chemicals. *Annu Rev Entomol* 1957; **2**: 227–46.

- 4 International Agency for Research on Cancer (IARC). Malathion. IARC Monographs 112-07. 2015. <http://monographs.iarc.fr/ENG/Monographs/vol112/mono112-07.pdf> (accessed Feb 9, 2016).
- 5 Sampaio AD, Moraes LRS. Limitações à universalização dos serviços públicos de abastecimento de água em localidades rurais: estudo a partir de quatro tipos de prestadores no Estado da Bahia, Brasil. *Rev Eletrônica Gestão e Tecnol Ambient* 2014; **2**: 138–51.

Time to recognise countries' preferences in HIV control

While *The Lancet* stated that the new WHO antiretroviral therapy (ART) guidelines are ambitious,¹ Granich and Williams (Jan 2, p 27) called for the implementation of a “test-and-treat strategy” to achieve the goals of the 90-90-90 target and epidemic control.² They stated that this strategy fits within the global budget and implied that countries' HIV budgets should be first and foremost spent on putting all individuals with HIV on ART. However, their suggestions overlooked HIV control preferences at the country level, where goals other than epidemic control might also be considered important.

In 2013–14, we supported a provincial AIDS commission—consisting of a wide range of funding agencies and stakeholders—in Indonesia to define their 5 year HIV control strategy. Through an intensive deliberative process, the commission concluded that besides epidemic control, interventions for stigma reduction and mitigation were also important and should be implemented.³

We argue that the international debate on guidelines for HIV control should better reflect the context at the country level. The debate should acknowledge that countries may deviate from spending budgets on the test-and-treat approach for their

own good reasons. At the same time, it should recognise the need to support countries in making difficult decisions—eg, the identification of goals in HIV control, the trade-offs between these goals, and the selection of interventions that contribute to achieving these goals. Only then can it be judged whether a country's decision to spend less than 50% of their HIV budget on testing and ART is justified.

We declare no competing interests.

*Noor Tromp, Rozar Prawiranegara, Adiatma Siregar, Maarten Paul Maria Jansen, Rob Baltussen
Noor.Tromp@radboudumc.nl

Radboud University Medical Center, Radboud Institute for Health Sciences, Nijmegen, NL-6500 HB, Netherlands (NT, MPMJ, RB); and TB-HIV Research Center, Faculty of Medicine (RP), and Faculty of Economics and Business (AS), Padjadjaran University, Bandung, Indonesia

- 1 The Lancet. HIV: the question is not when to treat, but how to treat. *Lancet* 2015; **386**: 1420.
- 2 Granich R, Williams B. HIV treatment: time to lean forward. *Lancet* 2016; **387**: 27.
- 3 Tromp N, Prawiranegara R, Siregar A, et al. Towards participatory and evidence-based resource allocation decisions for AIDS funding in Indonesia. Radboudumc working paper. http://www.niche1.nl/resources/content/publication_file_168_noor_progress_report.pdf (accessed Feb 19, 2016).

Mindfulness-based cognitive therapy for depression

The Article by Willem Kuyken and colleagues¹ about the effectiveness of mindfulness-based cognitive therapy (MBCT) in prevention of depressive relapses is highly relevant for clinical practice and justifies MBCT as a clinically relevant alternative to maintenance antidepressant medication. We speculate that the design of the study might have biased the results against even stronger measurable effects of MBCT. In the study, general practitioners were recommended to start medication tapering after

week 6 of MBCT—so tapering and MBCT treatment obviously overlapped to some extent. Since evidence is accumulating that withdrawal symptoms after discontinuation of selective serotonin reuptake inhibitors (SSRIs) are more detrimental and prolonged than assumed (up to 1 year),² we suggest that the discontinuation process might have interfered with the therapeutic effects of MBCT. In a systematic review,² gradual tapering did not eliminate withdrawal reactions. We do not know what the predominant class of medication was in the study by Kuyken and colleagues,¹ but it seems likely that SSRIs were involved to a large extent. Thus, we argue that, by consecutively undertaking medication tapering followed by a longer washout period before starting MBCT, even stronger effects of MBCT might be observed. In other studies, responders to cognitive behavioral therapy showed relapse rates of 39% in the 68 weeks after psychotherapy and 68% after discontinuation of medication;³ therefore, the discontinuation syndrome might explain the relatively high relapse rate of 44% in Kuyken and colleagues' study of MBCT.

We declare no competing interests.

*Dieter Riemann, Elisabeth Hertenstein, Elisabeth Schramm
dieter.riemann@uniklinik-freiburg.de

Department of Clinical Psychology and Psychophysiology, Centre for Mental Disorders, University Hospital Freiburg, Freiburg, Germany

- 1 Kuyken W, Hayes R, Barrett B, et al. Effectiveness and cost-effectiveness of mindfulness-based cognitive therapy compared with maintenance antidepressant treatment in the prevention of depressive relapse or recurrence (PREVENT): a randomised controlled trial. *Lancet* 2015; **386**: 63–73.
- 2 Fava GA, Gatti A, Belaise C, et al. Withdrawal symptoms after selective serotonin reuptake inhibitor discontinuation: a systematic review. *Psychother Psychosom* 2015; **84**: 72–81.
- 3 Vittengl JR, Clark LA, Dunn TW, et al. Reducing relapse and recurrence in unipolar depression: a comparative meta-analysis of cognitive-behavioral therapy's effects. *J Consult Clin Psychol* 2007; **75**: 475–88.

Changing oral vaccine to inactivated polio vaccine might increase mortality

We, the undersigned, write as physicians and scientists committed to optimising the beneficial effects of vaccines to reduce infant mortality worldwide. In settings with high childhood mortality, live vaccines such as oral polio vaccine (OPV), BCG vaccine, and measles vaccine might have heterologous (non-specific) effects that reduce mortality from diseases other than poliomyelitis, tuberculosis, and measles, respectively, whereas inactivated vaccines might increase all-cause mortality.¹ The importance of these effects is controversial. In 2014, the WHO Special Advisory Group of Experts (SAGE) reviewed the evidence regarding the non-specific effects of vaccines and concluded that further research is warranted.²

On average, about 75 cases of vaccine-associated paralytic poliomyelitis are reported each year worldwide, and WHO has suggested that OPV be gradually replaced by inactivated polio vaccine (IPV) to reduce the number of such cases.³ Results from a randomised trial⁴ in 2015 suggest that OPV might have beneficial non-specific effects that reduce all-cause mortality by 17%, possibly to a greater extent in boys than in girls, whereas previous evidence suggests that IPV increases all-cause mortality by 10%.⁵ Consequently, the proposed change from OPV to IPV might lead to increased all-cause mortality through loss of the beneficial non-specific effects of the live vaccine, and adverse non-specific effects of the inactivated vaccine.^{4,5} Replacement of OPV with IPV could translate to approximately 4000 deaths for each case of vaccine-associated paralytic poliomyelitis prevented, and might cause more than 300 000 additional deaths each year.

In view of the possible effects on all-cause mortality, more data need