World Restart a Heart initiative: all citizens of the world can save a life

Sudden cardiac arrest is the third leading cause of death in industrialised nations, resulting in more than 700 000 deaths in Europe and the USA annually.[1] After cardiac arrest, the brain can survive for 3–5 min, which could be the minimum time that emergency medical services take to arrive. Consequently, the most important way to improve survival is the instigation of early bystander cardiopulmonary resuscitation (CPR).[2] Bystander CPR increases survival by two to four times, which is much better than with any other intervention by emergency medical services or hospital staff.[2–4] This finding explains why the focus of successful management of people after cardiac arrest has shifted to the out-of-hospital setting.[3,4] The proportion of cardiac arrests in which a bystander attempts CPR, however, differs substantially worldwide, ranging from 5–20% in most countries to more than 60–80% in a few countries.[3,5] If, in all countries, bystanders attempted CPR in at least 50% of cardiac arrests, hundreds of thousands of lives could be saved worldwide every year.[4,5] To achieve this goal, the International Liaison Committee on Resuscitation launches the World Restart a Heart (WRAH) initiative on Oct 16, 2018, with the motto "All citizens of the world can save a life" (figure). With the WRAH initiative, the European Restart a Heart Day, which was established in 2012 by the European Resuscitation Council with the support of 400 Members of the European Parliament, goes global, whereas similar initiatives have been developed in parallel around the world.[5] The primary goal of the WRAH initiative is to empower as many bystanders as possible, including non-professionals, to do chest compressions. With the help of local, national, and international activities on and around Oct 16, 2018, and in subsequent years, the message will go out to policy makers that all citizens of the world can indeed save a life, and that people should be equipped with the simple skills that are necessary to do this lifesaving act, ideally through mandatory training programmes in schools.

Figure: **The logo of the International Liaison Committee on Resuscitation World Restart a Heart initiative**
This logo can and should be used for all associated activities around the world.

BWB is supported by the European Resuscitation Council Research NET. AL declares no competing interests.

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Prevalence and control of hypertension

Jiapeng Lu and colleagues (Dec 9, 2017, p 2549)[1] elegantly showed that uncontrolled blood pressure was highly prevalent in China, although resources to control hypertension were limited.[1] As in other studies assessing the prevalence of hypertension,[2] controlled hypertension was defined as a blood pressure of 140/90 mm Hg or more, irrespective of age and cardiovascular risk. However, several guidelines, including those from WHO, recommend prescribing a blood pressure-lowering treatment only if cardiovascular risk is high (eg, 10-year risk of fatal or non-fatal cardiovascular event ≥20%) or blood pressure is very high (eg, ≥160/100 mm Hg).[2] When using an approach based on cardiovascular risk, many young or middle-aged adults (aged <40 years) with moderately increased blood pressure will not be eligible for antihypertensive medication. Hence, despite a blood pressure of 140/90 mm Hg or more, the hypertension in these people might not be considered uncontrolled. The prevalence of people eligible for hypertension treatment, the prevalence of uncontrolled hypertension, and the resources needed to treat hypertension will, therefore, largely differ depending on whether national guidelines advise treatment above a specific blood pressure (eg, ≥140/90 mm Hg) or on the basis of cardiovascular risk.[3,4] Irrespective of which strategy is best,[5] we suggest that all studies reporting the prevalence of uncontrolled hypertension, and the resources needed to address the burden, explicitly state whether they refer to a risk factor approach, a cardiovascular risk approach, or a mix of both, to help interpret the results and better guide policy.

We declare no competing interests.

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For more on the **WRAH initiative** see http://www.ilcor.org/wrah

For more on **European Restart a Heart Day** see http://erc.edu/about/restart

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Authors' reply

We appreciate the Correspondence by Pascal Bovet and Arnaud Chiolero about our study of the prevalence, awareness, treatment, and control of hypertension in China.[1] They suggest that for all studies reporting the prevalence of uncontrolled hypertension, and the resources needed to address the burden, authors should explicitly state whether referring to a risk factor approach, a cardiovascular risk approach, or a mix of both so as to help interpret the results and guide policy.

As stated in the Methods section of our Article, we clearly defined controlled and treated hypertension. Controlled hypertension was defined as an average systolic blood pressure of less than 140 mm Hg and an average diastolic blood pressure of less than 90 mm Hg over two readings in people with hypertension, which is consistent with the definition in both the eighth Joint National Committee guideline[2] and Chinese guideline.[3] Treated hypertension was defined as current use of antihypertensive medication among patients with hypertension. We did not address the issue of the percentage of people who should be treated and were not. Such an assessment, as suggested, might use various approaches to determine eligibility for pharmacological treatment. For example, the Chinese guideline states that blood pressure, cardiovascular risk (eg, age, smoking, lipid profile, family history, etc), target-organ damage (eg, left ventricular hypertrophy, abnormal ECG, increased artery intima-media thickness, etc), and complications (eg, stroke, myocardial infarction, kidney disease, etc) should be considered to decide the eligibility for antihypertension medications.[3] It is impractical to collect this many indicators from each participant, to assess the eligibility for treatment, in a large scale population-based screening study. However, we did highlight that many people treated with a single medication had blood pressures that were not considered controlled. Quality metrics that report undertreatment and overtreatment of hypertension are needed. These measures, as suggested, would need to incorporate consideration of the approach to defining the denominator of people who should receive treatment.

We declare no competing interests.

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VLCD for weight loss and remission of type 2 diabetes?

In the DiRECT trial, Michael Lean and colleagues (Feb 10, p 541)[1] report diabetes remission after very low calorie diets (VLCDs). Numerous studies of VLCDs have shown diabetes improvement and remission, but much of the effect, as this trial confirms, is correlated to weight loss.[2] Unfortunately, weight loss from VLCD with behavioural therapy has proven to be unsustainable in 1-year to 5-year follow-up studies.[3] Metabolic adaptation driving regain in response to caloric restriction is well documented, supporting the paradigm that weight regain after VLCD is more related to energy regulatory mechanisms than willpower.[4,5] Although the authors do not report the average percent regain, it can be estimated to be 20% (reported initial mean weight loss was 14·5 kg and mean regain at 1 year was 2·9 kg), calling into question the durability of the outcomes.

Given disease heterogeneity, there might be a subgroup of long-term VLCD responders that warrant phenotyping. Notably, study participants at baseline were non-insulin dependent, more than two-thirds were diet controlled or on monotherapy, and the mean HbA_{1c} was 7·7% or 60 mmol/mol. A comparison of responders to non-responders would help elucidate whether mild disease or use of glucagon-like peptide-1 agonists or sodium-glucose co-transporter-2 inhibitors with known anti-obesity effects were related to remission. Previous studies have shown VLCD plus anti-obesity medication is superior to VLCD alone.[6]

Although the study's 1-year results are confirmatory in their diabetes