Denying obesity?

Like global warming, the problem of obesity can be denied. Indeed, perhaps with any social crisis, someone will want to challenge the accepted science and provoke a defence from the scientists. Today it is obesity, with Arnaud Chiolero and Fred Paccaud asking in this issue of *EJPH* if the obesity epidemic is a booga booga (variously defined as a religious ritual or a frightening, imaginary creature).¹

Well, it is neither an empty ritual nor an imaginary threat. The figures Chiolero and Paccaud themselves quote (300 million obese adults in the world) are high enough to cause real fear, and are likely to underestimate the current situation. With Brazil, China, India and other populous states showing rapidly rising obesity prevalence, we can expect global numbers to exceed 400 million this year,² and with child obesity prevalence rising rapidly in the 1990s and early 2000s, adult obesity levels are not likely to decline for decades to come.

Chiolero and Paccaud ask if this is a true epidemic, as the obesity prevalence levels are not ‘temporarily of high prevalence’ nor is there ‘an impending danger and a large number of victims’. How many more victims do we need? The high numbers do not have to be temporary to define an epidemic, surely, as we have seen the HIV-AIDS figures in Southern Africa going steadily upwards for 20 years, and the disease is certainly an epidemic in the region.

As for the impending danger, this is the key of their argument. Does obesity represent a danger? Chiolero and Paccaud slip a little from obesity into overweight, where the degree of danger is obviously less, on an individual basis, although the effect of large numbers of people being overweight can be expected to have some impact on health service costs and economic productivity. Chiolero and Paccaud acknowledge diabetes to be clearly linked to weight status, but otherwise cast doubt that other disease outcomes, such as cardiovascular diseases, are really linked to obesity after all, given that cardiovascular disease (CVD) mortality has been declining while obesity has been rising. They also speak of the ‘healthy obese’.

To talk of the ‘healthy obese’ is to muddle individual disease manifestation with population health risk. We can have a healthy HIV-AIDS carrier, surviving up to 20 years, but no one would willingly volunteer to be infected with HIV to see if they were one of the (relatively) lucky ones.

Regarding cardiovascular disease, Chiolero and Paccaud need to take care with their counterfactuals. A decline in mortality has been accompanied by numerous changes besides a rise in obesity. The largest single reason for the decline in mortality is treatment: in most developed countries we now keep our CVD patients alive through a variety of interventions. The number of patients admitted to and leaving hospital suffering various CVD conditions has been rising dramatically: in the European Union there were some 581 cases per 100 000 population in 1990, rising by ~20% to 686 per 100 000 in 2005.³ For stroke a similar rise was seen, from 319 to 397 per 100 000 in the same period.

Nor does treatment explain the changing statistics alone. A careful analysis of the changing trends in cardiovascular disease rates in the USA in the period 1980–2000⁴ suggests that the decline in coronary heart disease mortality rates were in part (47%) accounted for by improved treatment rates and in part (44%) accounted for by changes in risk factors including lower cholesterol (24%), lower blood pressure (20%), reduced smoking (12%) and improved physical activity (5%). Crucially, Chiolero and Paccaud found that these improvements were ‘offset’ by rising Body Mass Index (8%) and diabetes (10%). In other words, the improvements in cardiovascular disease we have seen in the last two decades would have been even better were it not for the obesity epidemic.

Lastly, Chiolero and Paccaud want less modelling of the epidemic. They criticize modelling for offering only one alternative scenario—if all obesity were eliminated—but let Chiolero and Paccaud come to any scientific meeting on modelling of obesity and they would see that a variety of possible scenarios are being modelled, including those which ask what the consequences would be of meeting policymakers’ targets for obesity reduction.

How else are policymakers to get an informed idea of the results of setting targets, if not from modelling? How should policymakers even choose a target they think ought to be achieved? Policymakers ask for modelling of different prospects, and they are well aware that the results are only estimates, the best available, nothing more and nothing less.

Public health researchers have available very few tools to diagnose the causes of societies’ troubles and identify possible solutions. But without mapping, modelling and the science of epidemics, public health professionals would be impotent and the public’s health would be a lot worse than it is.

**References**


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The obesity pandemic. Is it bad or worse?

The Chiolero and Paccaud¹ viewpoint article appears to have two main messages: (i) the seriousness of obesity as a public health problem is exaggerated and this exaggeration has negative consequences; and (ii) we need more research to study the causes, consequences and solutions of the obesity pandemic. We will react on both these issues.
The seriousness of obesity

Some 30 years ago, George Bray¹ identified obesity as a major public health problem. Like the pandemic itself, since then the evidence supporting that view has only increased, both in quantity and quality. There is no doubt that an obesity pandemic is among us in the sense that it is ‘occurring over a wide geographic area and affecting an exceptional high proportion of the population’ (Meriam Webster online Dictionary). And, like Chiolero and Paccaud themselves clearly describe, obesity does have severe consequences in terms of risk of diabetes and disabilities. Such consequences alone warrant an intensive public health approach to curbing the pandemic. Additionally, the evidence that obesity increases risk for certain cancers, cardiovascular diseases and mental health, and that obesity is associated with reduced quality of life and increased absence from work is compelling.² Obesity is not the only and sufficient cause for these conditions, and if other important risk factors are modified successfully, a lower incidence of, for example, cardiovascular disease can be observed despite increasing obesity rates. Such lower incidence is no evidence to show that obesity is an important risk factor.

Communicating that obesity is pandemic and has important consequences for health and quality of life is not booga, booga, i.e. ‘a way to scare the living piss out of someone in a comedic fashion’, or ‘a noise that people use to scare each other’. Rather, it is presenting the best available scientific evidence. We agree with the authors that the popular media coverage of obesity issues is very extensive, not always accurate, and therefore not necessarily helpful, but the same can be argued as related to most important public health issues, with ‘swine flu’ as a topical example.

The authors also claim that the attention obesity gets has negative consequences, i.e. that ‘the noise about obesity’ has fuelled obsession about body weight and a dieting epidemic and they suggest that shifting the body mass index (BMI) distribution towards lower values could lead to excess mortality because of the U-shaped relation between BMI and mortality. We were surprised that in a viewpoint article in which the authors argue for better evidence regarding the causes, consequences and solutions for the obesity pandemic, their suggested negative consequences are not backed-up by relevant references to scientific research. The evidence that the growing attention for obesity has fuelled obsession about body weight is, to our knowledge, not at all strong, and there is good evidence that a significant proportion of the community were concerned about body weight and shape >20 years ago, thus long before there was any public discussion about an obesity epidemic.³

We strongly argue that the obesity pandemic does need a preventive, public health-oriented approach because obesity treatment is most often not successful in the longer term and the negative consequences of obesity are only partially reversible. Such a preventive approach should not be aimed at weight loss, but at weight management and maintenance, i.e. on avoidance of further weight gain, among people who are not yet obese. Such an approach should endorse healthful behavioural nutrition and physical activity, and could shift the BMI distribution to lower levels by preventing that people gain too much unnecessary weight over the years, and improve health and fitness beyond weight management alone. Such an approach will not likely lead to increased mortality, because the U-shaped relation between BMI and mortality does certainly not necessarily mean that a population decrease in mean BMI leads to a higher prevalence of very low body weights related to increased mortality. In fact, it has been argued that a population-preventive approach for curbing the obesity epidemic endorsing healthful nutrition and physical activity behaviours instead of weight loss could contribute to prevention of eating disorders and body weight obsessions.⁴

More research is necessary

The second main message that we derived from this viewpoint paper is that more and better research is necessary. We could not agree more. But we believe that such research should focus on indentifying the important and modifiable personal and environmental drivers and determinants of unnecessary weight gain that should inform intervention development, as well as, on evaluation of the reach, (cost) effectiveness, adoption, implementation and maintenance of such interventions,⁵ rather than on further disentangling the health consequences of obesity to find out if obesity is bad or worse.

References