



**Sylvia R. Karasu M.D.**

The Gravity of Weight

# Of Epidemic Proportions: The Primary Colors of Obesity

A metaphor by any other name: the obesity epidemic

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Epidemics can create overwhelming fear

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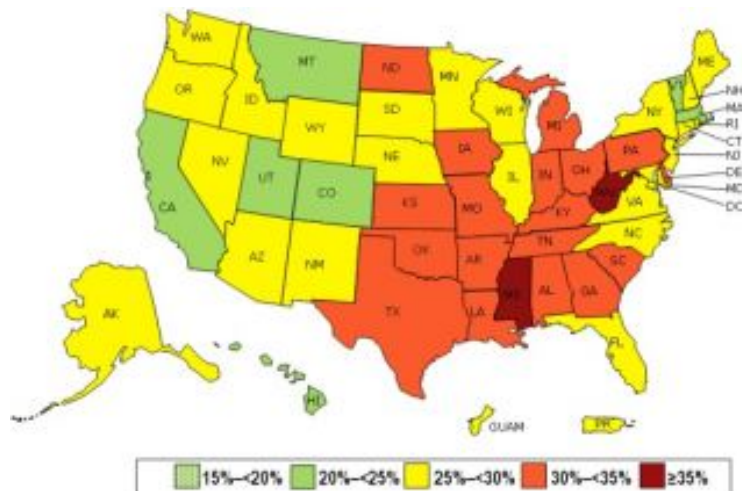
Even the color red connotes fear.

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There are vivid, graphic descriptions, both historical and literary, of epidemics spreading throughout an entire population. In Fifth Century B.C. Athens, for example, the great historian of the Peloponnesian War, Thucydides, described a highly contagious disease that decimated much of the Athenian population. Over the span of about five years, this disease killed as many as 100,000 people or about 25% of the city's population, including the famous statesman Pericles. Despite Thucydides' meticulous description of victims' symptoms, medical historians still cannot agree on whether the disease was smallpox, typhus or even, as one researcher had suggested back in 1996, Ebola! One of the most famous literary descriptions of an epidemic is found in Albert Camus's gripping novel *The Plague*, where the seemingly minor occurrence of Dr. Rieux's inadvertently stepping on something squishy--one "dead rat lying in the middle of the landing"--signaled the epidemic's inauspicious beginning.

Recent hysteria about the potentially highly contagious spread of deadly Ebola from localized regions in Africa to the U.S. made me reflect on the concept of "epidemic" and its applicability in describing the burgeoning rates of obesity. The word "epidemic" comes from the Greek "upon" and "people." According to

Porta's *Dictionary of Epidemiology*, an epidemic is the "occurrence in a community or region of cases of an illness, specific health-related behavior, or other health-related events clearly in excess of normal expectancy." The number of cases that indicate the presence of an epidemic can vary, depending on such factors as the vector involved, as well as the size and type of population exposed, and the time and place where the epidemic occurs. A "pandemic," another word used to describe the increasing prevalence of obesity, indicates an epidemic that has spread worldwide.



Source: Public Domain, Behavioral Risk Factor Surveillance System, CDC

In his 1992 book *Explaining Epidemics*, Charles Rosenberg notes that we use the word "epidemic" in many ways that are mostly metaphorical and often to connote the "emotional urgency" and "dramatic intensity" typically characteristic of an epidemic. For Rosenberg, a "true epidemic" has a "unity of time and place." It is "an event, not a trend" and is a "social phenomenon" calling for an immediate response. Further, out of overwhelming anxiety, people often want to explain the susceptibility of others in order to reassure themselves they are immune: they look for

behaviors in themselves and others that are seen as under individual control and then often "blame the victim" morally and socially. This was certainly the case in the initial phase of the AIDS epidemic. In fact, says Rosenberg, "Epidemics have always provided occasion for retrospective moral judgment." He further explains that the public only acknowledges an epidemic's existence when its presence becomes unavoidable. Once there is public acknowledgment, though, there is often pressure for the community to act to control the epidemic. With obesity, we are now somewhere between "blaming the victim" and insisting the community do something to control the situation. An epidemic, though, often ends quietly, with a whimper, as it were, rather than a bang, as incidence returns to previous levels in the population.

Isabel Fletcher, in a recent 2014 article in *Sociology of Health and Illness*, suggests that it was the adoption between the 1970s and 1990s of Body Mass Index (BMI) as a standard that defined and measured obesity and overweight that "was crucial in the framing of obesity as an epidemic." Fletcher notes that this standardization created easily obtainable "large data sets" that could now track population-level changes in body weight. In other words, researchers could now tally prevalence rates. Several researchers, such as J.E. Oliver, have suggested that the Center for Disease Control (CDC) contributed to labeling obesity an epidemic when it created its now infamous Powerpoint presentation in the 1990s. The slides graphically demonstrated the increasing prevalence of obesity in the U.S., as defined by BMI levels, by designating those states with the highest levels of obesity in the inflammatory primary colors of red and yellow, as if there were a hot zone of spreading infection. Most recent rates from the CDC's website for 2013 indicate 23

states with a prevalence of obesity between 25 and 30% and 18 states with a prevalence of between 30 and 35% of the population. Two states--Mississippi and West Virginia--have a prevalence greater than 35%.

Several years ago, researcher Katherine Flegal of the CDC, in the *International Journal of Epidemiology*, wrote about the concept of the obesity “epidemic.” She noted that population samples in U.S. were first compiled in the early 1960s, i.e., the National Health and Nutrition Examination Survey (NHANES). Researchers found that from this first sample to 1980, when the second NHANES was conducted, there was little change, but by the third survey in the late 1980s to early 1990s, there were “unanticipated increases” in BMI in the U.S. population that was “difficult to explain.” These rates have generally continued to increase over the years though there may be some recent stabilization in some segments of the population. The increases in prevalence made Flegal question whether obesity qualifies as an epidemic: two aspects of the concept, though--a high prevalence and a rapid spread--“clearly fit the general definition.” Flegal emphasized, though, that it was not a totally new observation to find a high prevalence of overweight in the U.S.: even in that first national survey, for example, in the early 60s, 45% of the population was overweight. Flegal’s conclusion is that the word “epidemic” has “some drawbacks as a descriptor” since there is no specific quantitative definition. She also clarifies that the word “masks” some aspects of obesity, such as the endemic (i.e., constant presence within a population) nature of overweight in the population in general, the sustained upward trends in weight that is associated with economic development, the controversies regarding long-term deleterious health effects with different levels of weight, and even the difficulties in defining the end to an epidemic with regard to obesity. Nevertheless, she says, obesity does have some characteristics of an epidemic in its “surprising and unexpected increases.” In a recent 2014 article in the journal *Circulation*, Dr. David Katz has called rates of obesity “more correctly” “hyperendemic.”

*Bottom line:* Whether obesity fits the definition of a classic epidemic remains a matter of dispute, but the hype surrounding the use of the word does keep it importantly in the public’s attention.

*Final note:* I have avoided any discussion of the disease nature of obesity. For more on the controversy of obesity as a disease, please see my previous academic blog on disease mongering and the medicalization of weight: <http://bit.ly/1vzZpql>.



One dead rat was the beginning of the epidemic in Camus's "The Plague."

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## About the Author



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**In Print:** *The Gravity of Weight: A Clinical Guide to Weight Loss and Maintenance*

**Online:** my own website

