
Abstract

Waterborne disease outbreaks are still a common occurrence in the United States. In the five years from 2000 through 2004, 63 outbreaks of infectious (or presumed infectious) intestinal disease linked to drinking water were reported. Of these outbreaks 25 were associated with independent systems, 22 with community systems and 25 with non community systems. Given that the vast majority of people in the US take their water almost exclusively from community systems, non community and independent systems would appear to pose a substantially greater risk to health for each consumer. There are a number of problems with the reporting system that CDC has or is addressing, including premise plumbing as a site, for example. There is evidence from the United Kingdom that very small systems may pose a significantly greater risk to their consumers than do larger systems.

Detected outbreaks probably represents only a small proportion of all disease attributable to drinking water and national estimates of waterborne disease burden do not highlight potential inequalities that may be associated with small and very small community and non-community systems.

In the United States and associated territories it is estimated that there are about 150,000 small and very small systems (i.e. with <3,300 and <500 users, respectively) serving approximately 40,000,000 consumers. It is not known what burden of disease may be attributable to these systems, and if there is significant disease burden, how best such disease may be reduced. This paper reports a study done in small and very small drinking water systems in Puerto Rico by the authors with the primary aim of assessing both the microbiological water quality of those systems and the efficacy of educating users in improving that quality. In addition the burden of diarrheal disease attributable to inadequate drinking water quality was estimated for systems with and without the intervention. [1-11]