



## Household drinking water: Assessment of microbiological contamination between source and point of use

Tambekar DH, Dhote SV and Shinde GM

Post Graduate Department of Microbiology, Sant Gadge Baba Amravati University,  
Amravati, 444602 (India)  
Email: [diliptambekar@rediffmail.com](mailto:diliptambekar@rediffmail.com)

### Article Info

Received: 10-04-2016,

Revised: 17-06-2016,

Accepted: 26-06-2016

### Keywords:

Household drinking water, waterborne diseases, personal and domestic hygiene, Storage container, Awareness

### Abstract

Microbial contamination of drinking water has the potential to cause large outbreaks of waterborne diseases. This study is carried out to find the association of socioeconomic status, water storage and handling practices, hygienic condition of the house and surrounding and awareness about the waterborne diseases on household drinking water. Total 200 samples (fresh and residual water) of household drinking water were collected from 200 families in different areas of low income groups in Amravati city. These water samples were subjected to bacteriological analysis and residual water found to be 48% contaminated after use. The study reported that small families, high socioeconomic status, proper method of collection of water, selection of earthenware container with tap, daily washing of storage container and dipper, proper lid on storage container, use of long handle dipper, washing hands before collecting water, maintaining personal, domestic and surrounding hygiene and by increasing awareness about the waterborne diseases prevents the contamination of household drinking water and water borne diseases. Thus it needs to increase the socioeconomic status, hygienic behavior to prevent water borne diseases. Thus, study concluded that poor hygiene behaviours such as improper method of storage, handling and serving, deteriorates the quality of drinking water which can be improved by imparting water hygiene behaviour education to families .

### INTRODUCTION

Water related diseases are the most common cause of deaths. The paucity of clean water for domestic use has led to the increase in the number of deaths in both the urban and rural parts of developing economies. The WHO estimates that there are 2.2 million deaths from diarrhoeal diseases every year in the world, and out of 1.8 million deaths occurred in low income groups, most of them among children, and that 65% of these deaths could be prevented by water hygiene and sanitation interventions (WHO, 2004). And in India, 80% of the infection diseases such as typhoid, cholera, dysentery, and infectious hepatitis etc. are due to

contaminated water (WHO 2009; Liu *et al.*, 2012). Nearly 4.1% of the global burden of illness is attributed to water, sanitation and hygiene (Pruss *et al.*, 2002).

Most of the water supplied in the urban areas are protected and treated water but still there can be contamination during supply, collection, storage and serving. The reasons for contamination in drinking water in houses may be due to personal and domestic inadequate and unsanitary storage condition that allowed, for the introduction and proliferation of disease causing microbes (Ganesh *et al.*, 2011). Personal and domestic hygiene practices