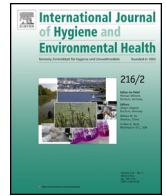




Contents lists available at [ScienceDirect](#)

International Journal of Hygiene and Environmental Health

journal homepage: www.elsevier.com/locate/ijheh



Monitoring drinking water, sanitation, and hygiene in non-household settings: Priorities for policy and practice

Ryan Cronk^a, Tom Slaymaker^b, Jamie Bartram^{a,*}

^a The Water Institute, University of North Carolina at Chapel Hill, United States

^b WaterAid UK, London, United Kingdom

ARTICLE INFO

Article history:

Received 7 September 2014
Received in revised form 16 February 2015
Accepted 4 March 2015

Keywords:

Health care facilities
Monitoring and evaluation
Post-2015 Sustainable Development Goals (SDGs)
Schools
Typology
Workplaces

ABSTRACT

Inadequate drinking water, sanitation, and hygiene (WaSH) in non-household settings, such as schools, health care facilities, and workplaces impacts the health, education, welfare, and productivity of populations, particularly in low and middle-income countries. There is limited knowledge on the status of WaSH in such settings. To address this gap, we reviewed international standards, international and national actors, and monitoring initiatives; developed the first typology of non-household settings; and assessed the viability of monitoring. Based on setting characteristics, non-household settings include six types: schools, health care facilities, workplaces, temporary use settings, mass gatherings, and dislocated populations. To-date national governments and international actors have focused monitoring of non-household settings on schools and health care facilities with comparatively little attention given to other settings such as workplaces and markets. Nationally representative facility surveys and national management information systems are the primary monitoring mechanisms. Data suggest that WaSH coverage is generally poor and often lower than in corresponding household settings. Definitions, indicators, and data sources are underdeveloped and not always comparable between countries. While not all countries monitor non-household settings, examples are available from countries on most continents suggesting that systematic monitoring is achievable. Monitoring WaSH in schools and health care facilities is most viable. Monitoring WaSH in other non-household settings would be viable with: technical support from local and national actors in addition to international organizations such as WHO and UNICEF; national prioritization through policy and financing; and including WaSH indicators into monitoring initiatives to improve cost-effectiveness. International consultations on targets and indicators for global monitoring of WaSH post-2015 identified non-household settings as a priority. National and international monitoring systems will be important to better understand status, trends, to identify priorities and target resources accordingly, and to improve accountability for progressive improvements in WaSH in non-household settings.

© 2015 Elsevier GmbH. All rights reserved.

Abbreviations: EMIS, Educational Management Information System; DESSAP, District Level Environmental Strategies and Action Plan; GLAAS, UN-Water Global Analysis and Assessment of Sanitation and Drinking-Water; HCF, health care facility; HMIS, Health Management Information System; JMP, WHO/UNICEF Joint Monitoring Programme; MDG, Millennium Development Goals; NGO, non-governmental organization; SARA, Service Availability and Readiness Assessment; SDI, Service Delivery Indicators; SPA, Service Provision Assessment; UN, United Nations; UNESCO, United Nations Education, Scientific and Cultural Organization; UNICEF, United Nations Children's Fund; WaSH, water, sanitation, and hygiene; WHO, World Health Organization.

* Corresponding author at: 135 Dauer Drive, CB# 7431, Chapel Hill, NC 27599, United States. Tel.: +1 919 966 2480; fax: +1 919 966 7911.

E-mail address: jbartram@unc.edu (J. Bartram).

<http://dx.doi.org/10.1016/j.ijheh.2015.03.003>

1438-4639/© 2015 Elsevier GmbH. All rights reserved.

Introduction

Inadequate drinking water, sanitation, and hygiene (WaSH) in non-household settings, such as schools, health care facilities, and workplaces impacts the health, education, welfare, and productivity of populations, particularly in low- and middle-income countries. These impacts disproportionately affect certain types of people. For example, a lack of gender separated toilets at schools impacts attendance of girls (Adukia, 2013). Disabled persons make up 15% of the global population (WHO, 2011a) and face physical and social barriers related to accessing WaSH, potentially preventing them from attending school, gaining employment, and using public services and amenities (Groce et al., 2011). Vulnerable populations such as immuno-compromised persons, expectant mothers, and infants frequent health care facilities (HCF) where they are

often exposed to inadequate WaSH and environmental conditions (Allegranzi et al., 2011). Improper management of human excreta from sick patients in HCF poses a potential public health hazard to people in the HCF and nearby communities. Transmission of infectious disease in non-household settings may have the potential to cause larger epidemics as compared to household settings (Cairncross et al., 1996).

Despite their importance, non-household settings have not been included in international WaSH monitoring to-date (Bartram, 2008). Millennium Development Goal (MDG) Target 7c, which aims to “halve the proportion of people without access to water and sanitation” between 1990 and 2015, is only applied to household settings. The 2014 UN-Water GLAAS report, a biannual survey, identified less than one third of 94 countries have policies, plans, and coverage targets in place for schools and health care facilities (WHO, 2014). However, WaSH in non-household settings has gained increased attention from the international development and public health communities (Bradley and Bartram, 2013). The UN Special Rapporteur on the human right to safe drinking water and sanitation has identified the provision of drinking water, sanitation, and hygiene (WaSH) in non-household settings as an important means for advancing human rights (UN Special Rapporteur on the Human Right to Safe Drinking Water and Sanitation, 2012). Other stakeholders have identified the provision of WaSH in schools and health care facilities as priorities (UNICEF, 2012; WHO, 2015). Expanding coverage to unserved non-household settings and monitoring the services provided are important development objectives post-2015.

National and international monitoring of WaSH in non-household settings is important to inform policy and investment strategies, to benchmark service quality, and to measure, compare and report progress among countries (Bradley and Bartram, 2013). However, there is limited knowledge on the status of WaSH in non-household settings and the evidence for monitoring. To address this gap, we conducted a review of WaSH in non-household settings, developed a typology of settings and assessed the viability of monitoring by examining evidence, international standards, national and international actors, and available monitoring initiatives.

Methods

A list of search terms associated with non-household settings were developed through literature searches and consultation with experts on the WHO/UNICEF Joint Monitoring Programme (JMP) post-2015 working groups for water, sanitation, hygiene and equity and non-discrimination. We reviewed PubMed and Google Scholar, using the terms “drinking water,” “sanitation,” and “hygiene” in combination with search terms associated with non-household settings (Table 1) and terms related to monitoring, evaluation, policy, guidelines, best practice, and standards. Using the same terms, we searched for and reviewed gray literature publications and associated data sets from United Nations (UN) specialized agencies, bilateral and multilateral donors, non-governmental organizations (NGOs), national governments, networks such as the International Household Survey Network and the International Health Facility Assessment Network, and research institutions such as the Institute for Health Metrics and Evaluation.

Based on attributes of settings identified through the literature search, we developed a typology to organize and evaluate non-household settings. A typology is collectively exhaustive, where all settings are assigned a type, and mutually exclusive, where each setting is only part of one type (Bailey, 1994). The attributes used to develop the typology include populations who use the settings

(e.g. children, sick people, working adults), length of exposure to inadequate WaSH while in the setting (e.g. temporary use throughout a lifetime), total population affected (e.g. sum of people using each facility) and additional risk factors that are specific to each setting (e.g. large temporary gathering, involuntarily relocated to the setting, absence of alternative facilities).

Results

Typology for settings and monitoring initiatives

No other non-household settings-based typology was discovered through the course of conducting this review. Six setting types are identified: schools, health care facilities, workplaces, temporary use settings, mass gatherings, and dislocated populations. Table 2a lists non-household settings organized by the typology with examples, the population multiplier, and definitions of settings from literature. The population multiplier is the sum of people using an individual facility (e.g. the number of students and teachers at a primary school). Collecting a population multiplier for individual facilities in addition to WaSH indicators allows for the creation of a population-based estimate of coverage (e.g. national coverage statistics) rather than a facility-based estimate. Table 2b lists, for each setting, the principal international actor(s) (those with a formal mandate), principal national actor(s), available international standards and/or guidelines, and any systematic reviews conducted for the setting that describe the evidence related to health and/or non-health related outcomes from WaSH. National and international actors are those that provide support for policy, guidelines, standards, monitoring, evaluation, and practice.

We define public WaSH facilities to be those that are not attached or affiliated with one of the other settings described in this typology and include places such as standalone facilities in parks, slums, and other publicly accessible spaces. Shared facilities, such as household or community shared sanitation facilities, are not considered public since their use is restricted to certain households.

Characteristics of non-household monitoring initiatives that collect WaSH data are grouped by national and sub-national initiatives in Table 3. Sub-national initiatives include local government monitoring, surveys that cover regions of a country, and program/project monitoring.

Nationally representative monitoring initiatives

For school monitoring, national Ministries of Education frequently use Educational Management Information Systems (EMIS) designed by the United Nations Education, Scientific and Cultural Organization (UNESCO) for use by developing countries (Table 3) (Carrizo et al., 2003). To collect data for EMIS, a census is distributed by the Ministry of Education annually to schools, generally all schools, including public and private and both primary and secondary. A principal, head teacher, or district official completes the census for each school and the resulting data are aggregated nationally in a database by the Ministry of Education (UNICEF, 2011). UNESCO provides recommended questions for the questionnaires but they are customizable to reflect national conditions (Carrizo et al., 2003).

EMIS censuses generally contain few WaSH indicators. The census instrument typically includes questions on the number of students per toilet, the availability of separate sanitation facilities for boys and girls, and access to an improved drinking water source on or near the school campus (UNICEF, 2011). Because the

Download English Version:

<https://daneshyari.com/en/article/5854571>

Download Persian Version:

<https://daneshyari.com/article/5854571>

[Daneshyari.com](https://daneshyari.com)