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Access to Safe Water, Sanitation and Hygiene

We, Medsin, recognise the importance of access to safe water, sanitation and hygiene (WaSH). The inadequate provision of these utilities has widespread and often serious consequences, ranging from infection and social burden, to mortality. Therefore, poor and unsatisfactory access to WaSH facilities is a global issue of utmost importance.

Summary

This policy document will discuss water, sanitation and hygiene in turn, to ensure clarity. We will address the need to ensure sustainable, accessible, clean water. When discussing sanitation, the problems of open defecation and the lack of access to toilets in certain parts of the world will be explored. With hygiene, we will address good hygiene practices, such as handwashing with soap, that maintain health and prevent disease transmission.

Medsin recognises the importance of WaSH and appreciates how vital students and youth action can be in improving WaSH for all. Adequate WaSH is a social determinant of health, so therefore it is vital that Medsin addresses and works on this topic.

Introduction

Despite the poor health and inequality WaSH inaccessibility can cause, it also indirectly affects other areas of inequality such as food security and nutrition, HIV/AIDS, education and poverty in general (1). According to the UN's Human Development Report, lack of WaSH results in Sub-Saharan African countries incurring annual losses which are equivalent to 5% of GDP. This amount is more than the entire continent receives in development aid (2). Investments in WaSH can produce multifold returns to many individuals, communities and countries, and can pave the way to reducing global inequalities. As former UN Secretary-General, Ban Ki-Moon stated: "every dollar invested in water and sanitation leads to [US] \$4 in economic returns" (3).

Main Text

1.0 The United Nations and WaSH

The United Nations (UN) Millennium Development Goals (MDG), established in 2000, aimed to halve the proportion of the population without access to safe drinking and sanitation (4). This was achieved in relation to water, however the sanitation component of the target was not achieved. Hygiene was not included in the goal (5). The UN Sustainable Development Goals (SDGs) to end poverty, fight inequalities and tackle climate change by 2030, were established in 2015 and adopted by more than 150 world leaders. Goal Six was created to achieve 'access to clean water and sanitation for all' (6). Today 88% of all deaths from diarrheal diseases is attributed to inadequate access to WaSH (7). These target areas of water, sanitation and hygiene are so inexplicably linked that all must be targeted together and achieved together to create sustainable change.

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2.0 Improving Accessibility to Clean Water

Despite meeting the MDG for water, globally 780 million people still do not have access to an improved water source (8). Furthermore, over 40% of the world's population is still affected by water scarcity; a number that is only predicted to rise (9). The inaccessibility of clean water is an inequality with serious and dangerous consequences (see 2.1, 2.2, 2.3). Climate change resilient solutions such as solar power water pumps and rainwater harvesting have been suggested. These solutions can help people survive droughts, and avoid famine and hygiene issues that arise from insufficient access to clean water.

2.1 Dehydration and Famine

85% of the world's population live in the driest half of the planet (10). This water scarcity limits the amount of drinking water and water that is available for crops. The resulting dehydration and famine can result in a range of morbidities and also increase the risk of mortality. Around 1 in 10 people globally do not have access to an improved water source, defined by the World Health Organisation (WHO) and United Nations International Children's Emergency Fund (UNICEF) as 'a source constructed to provide the water source protection from outside contamination, particularly faecal matter' (11). In communities where clean water is scarce or unavailable, 'unimproved' water sources are the only choice. The unclean water often leads to a range of water-borne diseases such as cholera.

A variety of groups from international institutions to charities have come forward to provide some solutions to clean water accessibility. Solutions have focussed on providing information and equipment for household water treatment such as chlorination, boiling or membrane filtration and also providing safe containers for water (12).

2.2 Water for Hygiene and Healthcare

Notably, water has uses outside of consumption and agriculture. Without sufficient clean water, washing clothes and dishes becomes a difficult task (13). When the water supply is outside a home, it has been found that less water is used when washing clothes and dishes, compared to when the water supply is inside the house (14). Individuals in these countries often have to make the choice between personal hygiene and water for consumption. Both are necessary for prevention of ill-health. Furthermore, it has been found that a reduced water supply negatively impacts the efficiency of healthcare facilities, therefore impacting the healthcare of the local population (15).

The Sphere Handbook, which provides the Humanitarian Charter and Minimum Standards in Humanitarian Response for organisations, recommends that "each household has at least two clean water collecting containers of 10-20 litres" and there

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are "appropriate water collection and storage facilities" (16). Practices such as these can ensure that individuals in water-scarce countries continually have access to clean water.

2.3 Social Burden

Besides the obvious health benefits safe water accessibility provides, the the social burden of water inaccessibility is important to consider. The UN estimates that sub-Saharan Africa loses 40 billion hours every year to collect water (17). Reducing this time burden allows more time for other activities, such as work or education, which allows individuals to earn a living and also boost the economy in which they live. These societal benefits of improved water accessibility are important to consider as they afford individuals a degree of social mobility, working to reduce the cycle of poverty. Despite initial investments, economic benefits occur downstream, for example increased productivity and growth, as discussed above. This has benefits in the long term, because as a result of the issues discussed above, to do nothing to improve safe water accessibility would be more expensive in the long term.

3.0 Sanitation

3.1 Lack of Access to Toilets and Open Defecation

Today, around 1.8 billion people globally use a source of drinking water that is contaminated with faeces (18). This faecal contamination increases the spread of infection and disease, and increases the risk for mortality. This contamination can occur due to a lack of adequate toilet or latrine facilities; 2.4 billion people lack access to these basic sanitation services (19). Due to the lack of adequate provision, people practice open defecation. This can also cause environmental problems when the runoff pollutes rivers and lakes (20). Open defecation also carries a significant safety risk from disturbing wildlife and the resulting injuries and the fear of having to walk far away from the house at night (21)(22). The dignity of women is also put at risk here, as they often feel like they can only relieve themselves in the night, when darkness provides them with necessary privacy (23).

The provision of toilets has been found to improve local economy. On World Toilet Day 2016, former UN Secretary-General Ban Ki-Moon said "Toilets play a crucial role in creating a strong economy. A lack of toilets at work and at home has severe consequences, including poor health leading to absenteeism, reduced concentration, exhaustion, and decreased productivity" (24).

4.0 Hygiene

4.1 Infection

Hygiene has a large impact on health. Respiratory infections and diarrhoeal diseases have been found to be the biggest killers of young children in developing countries, of which the transmission can be reduced with handwashing (25). More than 800 children die every day from diarrhoeal diseases linked to poor hygiene and it has been found

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that the single most significant intervention is handwashing with soap (26)(27). Handwashing with soap also reduces the transmission of skin and eye infections (28). Overall, it has been estimated that handwashing with soap alone could prevent 0.5 – 1.4 million deaths per year (29). Handwashing is particularly effective because it breaks the cycle of transmission, in which hands act as vectors for transmission (30).

4.2 Economic Impact of Poor Hygiene

Disease transmission also has an important economic effect as 17% of workplace deaths are caused by disease transmission that could have been avoided with proper hygiene. This is approximated to cost US\$260 billion every year due to poor sanitation and unsafe water (31).

4.3 Education and Accessibility

Hygiene practices are an important aspect of WaSH that does not necessarily need to be taught; sometimes the lack of equipment is the only problem (32). Where access to soap is limited or unsustainable, ash can be used as a suitable replacement (33). The provision of materials is also important to consider with displaced people who may be in situations where access to soap is limited and maintenance of hygiene is difficult.

Education about the importance of handwashing with cleansing materials, either soap or ash, is important. Trials in Bangladesh and Zimbabwe have found that handwashing with soap is more effective at reducing faecal bacteria on hands than handwashing with only water, and educating individuals with this information is invaluable (34). Numerous methods of education have been used in the past, including texting, leaflets, posters, television, radio. More interpersonal methods such as home visits, discussion groups and demonstrations are also used, particularly in situations of disease outbreak (35).

Medsin Stance and Strategy

As future leaders in global health, Medsin members have a responsibility to reduce the health inequalities that so disproportionately affect certain parts of the global population. This change can be brought about through clinical practice, research, education and advocacy.

As students, there exists a certain authority that must be used for positive change. It is our duty to advocate for others and enact the change that must occur to achieve sustainable development, especially when this change will reduce the significant burden that currently weighs on the global community.

Medsin endorses;

- the UN 2015 Sustainable Development Goals including Goal Six "Clean Water and Sanitation"

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Affirms;

- the necessity to improve accessibility and quality of WaSH utilities
- the necessity to improve education of good WaSH practices

Recommendations

1. Medsin branches to:
 - a. Raise awareness on the importance of WaSH practices
 - b. Educate its students, staff and others from the local community on WaSH
 - c. Advocate on behalf of those who do not have sufficient access to WaSH practices
2. Medsin members to:
 - a. Promote education and advocacy efforts to increase awareness, access and quality of WaSH facilities
 - b. Effectively communicate the importance of WaSH, WaSH-related risks and possible preventative actions to communities using appropriate channels of communication.
 - c. Advocate for the development of WaSH facilities both in the UK and overseas.

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