Handwashing in the post-2015 era: the equity case and the measurement challenge

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What is ‘hygiene’?

“The science concerned with the maintenance of health”

“Clean or healthy practices or thinking”

Handwashing
Bathing
Washing dishes
Sweeping the house
Wearing footwear
Disposing feces
Disinfecting drinking water

British Dictionary

Commonly applied definitions

Handwashing with soap
Food hygiene
Menstrual hygiene management

JMP Hygiene Working Group
Making a case for handwashing: the child survival, education, and equity agendas
Handwashing: the equity perspective

Percentage of households observed to have soap for handwashing anywhere in the dwelling, MICS, 2009-2013
Percentage of households observed to have soap for handwashing anywhere in the dwelling, by wealth quintile, MICS, 2009-2013, Africa and the Middle East
Percentage of households observed to have a handwashing place with soap and water, MICS and DHS, 2009-2013
Percentage of households observed to have a handwashing place with soap and water, by wealth quintile, MICS and DHS, 2009-2013, South/East Asia and the Pacific
Opportunities to improve handwashing do exist worldwide, even where materials are widely available.

<table>
<thead>
<tr>
<th>Region</th>
<th># studies</th>
<th>Prevalence of handwashing with soap (%) (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>13</td>
<td>14 (11,18)</td>
</tr>
<tr>
<td>Americas HI</td>
<td>7</td>
<td>49 (33, 65)</td>
</tr>
<tr>
<td>Americas LMI</td>
<td>2</td>
<td>16 (7, 33)</td>
</tr>
<tr>
<td>Eastern Mediterranean HI</td>
<td>-</td>
<td>44 (34, 57)</td>
</tr>
<tr>
<td>Eastern Mediterranean LMI</td>
<td>-</td>
<td>15 (9, 24)</td>
</tr>
<tr>
<td>Europe HI</td>
<td>5</td>
<td>44 (29, 56)</td>
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<tr>
<td>Europe LMI</td>
<td>1</td>
<td>15 (6, 30)</td>
</tr>
<tr>
<td>South-East Asia</td>
<td>11</td>
<td>17 (7, 36)</td>
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<tr>
<td>Western Pacific HI</td>
<td>2</td>
<td>43 (25, 57)</td>
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<tr>
<td>Western Pacific LMI</td>
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<td>13 (6, 25)</td>
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<tr>
<td><strong>World</strong></td>
<td><strong>43</strong></td>
<td><strong>19 (8, 39)</strong></td>
</tr>
</tbody>
</table>

Freeman, TMIH, 2014
Measuring handwashing

- Self-report
- Structured observation
- Video observation

Behavior at recommended times

- Handwashing demonstration
- Soap consumption
- Accelerometer-embedded soap
- Use of cleansing agent

Proxies of handwashing behavior

- Presence of soap anywhere in the home
- Soap and water at a handwashing place
- Hand microbiology
- Observed hand cleanliness
The future *could* look just a bit ‘cleaner’….

Sustainable Development Goal 6: Ensure availability and sustainable management of water and sanitation for all.

**Target 6.2**

By 2030, achieve access to **adequate and equitable** sanitation and **hygiene** for all, and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations.
Potential handwashing-related indicators

- Percentage of population with basic hand washing facilities in the home
- Percentage of pupils enrolled in early childhood development programs providing basic drinking water, adequate sanitation and adequate hygiene services
- Percentage of beneficiaries using hospitals, health facilities, and clinics providing basic drinking water, adequate sanitation, and adequate hygiene

Access to soap and water at hand washing facilities in the home, using WHO-UNICEF JMP definitions
Moving the equity needle for handwashing: $P_4 + R$

**Policy**

Handwashing-related policies are few and far between. Universal access to handwashing facilities can only be achieved if regulations are enacted and matched by enforcement.

**Prioritization**

All stakeholders must uphold the need for improved hygiene as a core public health and well-being function. Unfunded mandates will not do.

**Pricing**

Affordable options are needed to facilitate handwashing with soap for all.

**Promotion**

While infrastructures can be mandated, individual behaviors cannot. Efforts to change behavior must target those at highest risk of hygiene-preventable disease.

**Research**

Changing behavior is difficult. We need to understand better how to foster habits, how to change social norms, and which interventions work.
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