



EMORY  
ROLLINS  
SCHOOL OF  
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HEALTH

CGSW  
Center for Global Safe WASH

Leading and  
Learning in WASH

# Facilitating Evidence-Based Solutions for WASH in HCF

Presented by Lindsay Denny, MPH  
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GE Foundation

# WHO/UNICEF Report: Status of WASH in HCF (2015)

- Describes the status of WASH in HCF in low and middle income countries.
- Concluded that in light of the little data currently available, further is needed in order to determine where resources should be directed.
- Report can be found on on the WHO/UNICEF WASH in HCF website: [washinhcf.org](http://washinhcf.org)







# Reported Global Coverage of WASH in Healthcare Facilities

- 38% do not have an **improved water source** within 500 meters.
- 35% do not have water and soap for **handwashing**.
- 19% do not have **improved sanitation**.
- 42% do not have adequate systems for safe disposal of **healthcare waste**.



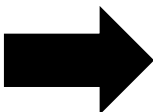
# JMP's WASH in HCF Core Indicators (2016)\*

Indicator	Definition
 <b>Water</b>	Water from an improved source is available on premises.
 <b>Sanitation</b>	Improved sanitation facilities are available and usable, separated for patients and staff, separated for women and allowing menstrual hygiene management, and meeting the needs of people with limited mobility.
 <b>Hand Hygiene</b>	Hand hygiene materials, either a basin with water and soap or alcohol hand rub, are available at points of care and toilets.
 <b>Health Care Waste</b>	Waste is safely segregated into at least three bins in the consultation area and sharps and infectious wastes are treated and disposed of safely.

\*only for outpatient setting

Source: WHO/UNICEF Joint Monitoring Programme for water supply and sanitation. "Expert Group Meeting on Monitoring WASH in Health Care Facilities in the Sustainable Development Goals." 2016

# JMP's Recommended Service Ladder\*



Water	Sanitation	Hand hygiene	Health care waste
Advanced service <i>To be defined at national level</i>	Advanced service <i>To be defined at national level</i>	Advanced service <i>To be defined at national level</i>	Advanced service <i>To be defined at national level</i>
<b>Basic service</b> Water from an improved source <sup>5</sup> is available on premises.	<b>Basic service</b> Improved sanitation facilities <sup>6</sup> are available and usable, separated for patients and staff, separated for women and allowing menstrual hygiene management, and meeting the needs of people with limited mobility.	<b>Basic service</b> Hand hygiene materials, either a basin with water and soap or alcohol hand rub, are available at points of care and toilets.	<b>Basic service</b> Waste is safely segregated into at least three bins in the consultation area and sharps and infectious wastes are treated and disposed of safely.
<b>Limited service</b> Water from an improved source is available off-premises or an improved water source is on site but water is not available.	<b>Limited service</b> Improved sanitation facilities are present but are not usable, or do not meet the needs of specific groups (staff, women, people with limited mobility).	<b>Limited service</b> Hand hygiene materials are available at some, but not all, points of care and toilets.	<b>Limited service</b> Waste is segregated but not disposed of safely, or bins are in place but not used effectively.
<b>Unimproved/No facility</b> Unprotected dug well or spring, surface water source; or there is no water source at the facility.	<b>Unimproved/No facility</b> Pit latrines without a slab or platform, hanging latrines and bucket latrines, or there are no toilets or latrines at the facility.	<b>Unimproved/No facility</b> Hand hygiene stations are absent or present but without soap or water.	<b>Unimproved/No service</b> Waste is not segregated or safely treated and disposed.

\*only for outpatient setting

Source: WHO/UNICEF Joint Monitoring Programme for water supply and sanitation. "Expert Group Meeting on Monitoring WASH in Health Care Facilities in the Sustainable Development Goals." 2016



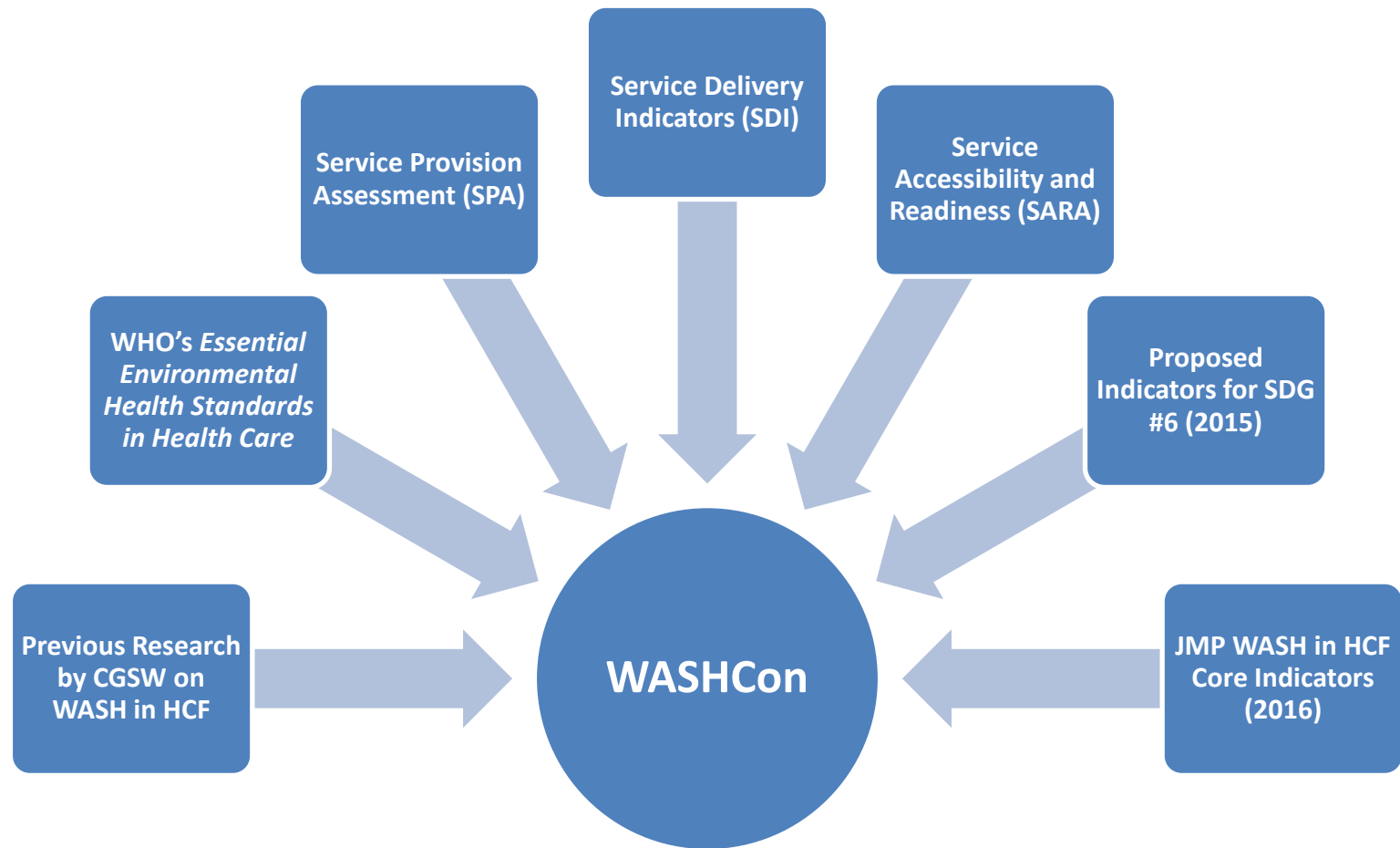
# Emory's Objective

The adoption of the JMP core indicators necessitates better and more comprehensive tools to **assess WASH conditions** in healthcare facilities, **measure sustainability**, and **track improvements**.

To meet this need, the Center for Global Safe WASH at Emory University developed the **WASH Conditions Assessment Tool**, known as **WASHCon**.



To develop the tool, Emory drew from and adapted survey questions from the following guidelines, tools, and monitoring mechanisms:








# The Purpose of WASHCon:





1. Develop a **comprehensive overview** of the status of WASH conditions in a given HCF.
2. Provide real-time data to inform and **prioritize programmatic activities** to improve WASH in HCF.
3. Contribute to the **evidence base for advocacy and action** in the area of WASH in HCF.



# WASHCon Domains






Domains/Sub-Domains		JMP Definition
 <p>Water Supply</p> <ul style="list-style-type: none"> <li>• Access &amp; Source</li> <li>• Quality</li> <li>• Quantity</li> </ul>	<p>Water from an improved source is available on premises.</p>	
 <p>Sanitation Facilities</p> <ul style="list-style-type: none"> <li>• Access</li> <li>• Quality</li> <li>• Quantity</li> </ul>	<p>Improved sanitation facilities are available and usable, separated for patients and staff, separated for women and allowing menstrual hygiene management, and meeting the needs of people with limited mobility.</p>	
 <p>Handwashing Facilities</p>	<p>Hand hygiene materials, either a basin with water and soap or alcohol hand rub, are available at points of care and toilets.</p>	
 <p>Cleaning Routines</p> <ul style="list-style-type: none"> <li>• Equipment &amp; Supplies</li> <li>• Cleaning Practices</li> </ul>	<p>Facilities where all toilets, floors and surfaces are cleaned, with water or detergent, at least once a day or when soiled.</p>	
 <p>Waste Management</p> <ul style="list-style-type: none"> <li>• Segregation</li> <li>• Disposal</li> </ul>	<p>Waste is safely segregated into at least three bins in the consultation area and sharps and infectious wastes are treated and disposed of safely.</p>	

# JMP Core Indicators

Indicator	Definition
 <b>Water</b>	Water from an improved source is available on premises.
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# WASHCon Domains

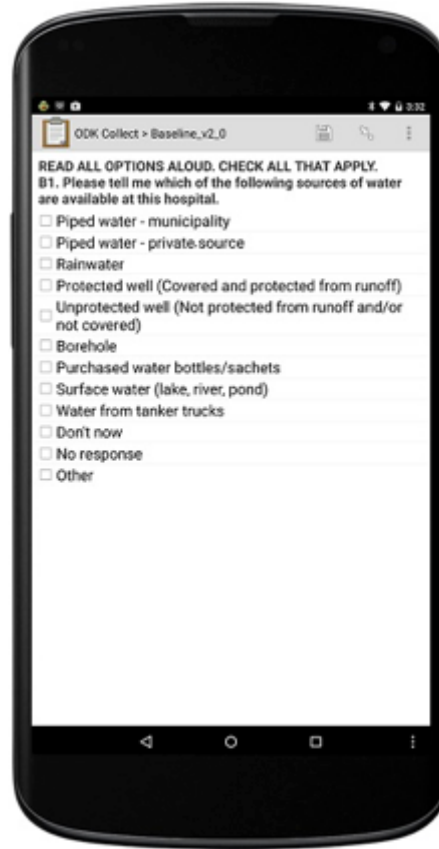
Domains/Sub-Domains		JMP Definition
 <p>Water Supply</p> <ul style="list-style-type: none"> <li>• Access &amp; Source</li> <li>• Quality</li> <li>• Quantity</li> </ul>	<p>Water from an improved source is available on premises.</p>	
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 <p>Handwashing Facilities</p>	<p>Hand hygiene materials, either a basin with water and soap or alcohol hand rub, are available at points of care and toilets.</p>	
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 <p>Waste Management</p> <ul style="list-style-type: none"> <li>• Segregation</li> <li>• Disposal</li> </ul>	<p>Waste is safely segregated into at least three bins in the consultation area and sharps and infectious wastes are treated and disposed of safely.</p>	

# WASHCon Methods

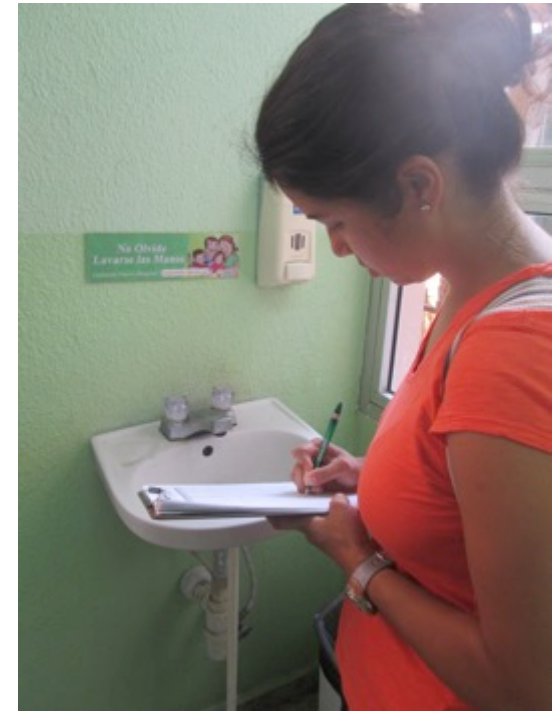
The tool employs three methods of data collection:

- Surveys
- Facility observation checklists
- Water sampling

The assessment takes approximately 1.5 to 3 hours at per hospital with 1-2 enumerators



Tool is administered on a mobile device



Piloting observation checklist

# Methods

The tool divided into five sections:

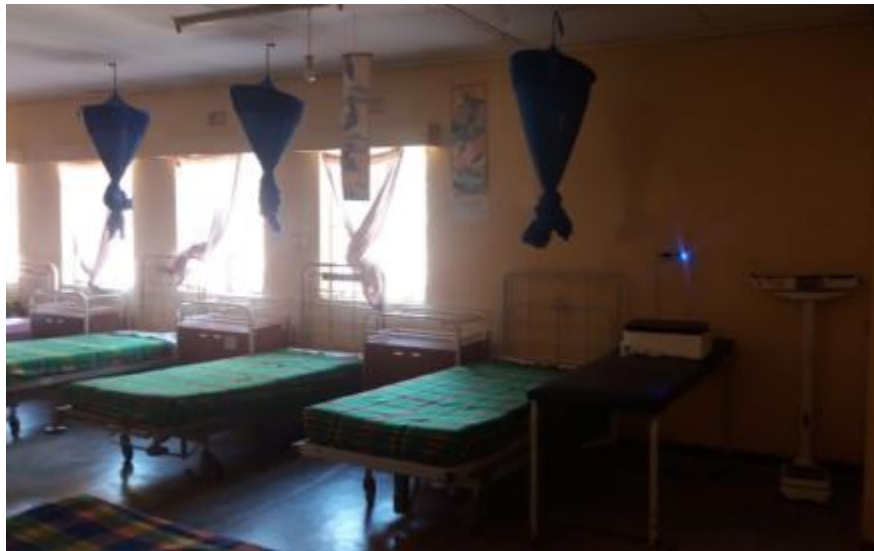
- 1. Interview** with the facility director/deputy
- 2. Administrative data** collection form
  - Number of patients, beds, deliveries, etc.
- 3. Ward Observation** Checklist
  - Key wards: L&D, inpatient, outpatient, surgery, pediatrics
- 4. Toilet Observation** Checklist
- 5. Water Quality** Testing
  - *E. coli* and chlorine residual



# BabyWASH in WASHCon

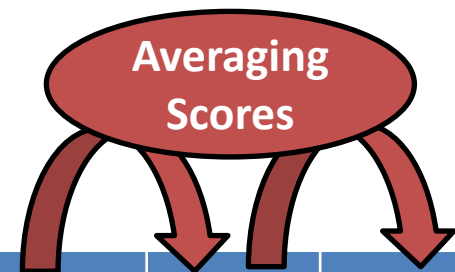
In Uganda, additional questions were added to address BabyWASH:

- Materials required to support a clean birth
- Instruction and counsel for bathing and cord care
- Storage of water in L&D





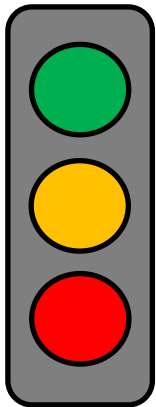
# Sample Scoring Metric



Domain	Sub-Domain	Indicator	Indicator Score	Sub-Domain Score	Domain Score
Water Supply	Source & Access	What is the main source of water? Where is it located?	2	1.7	2.1
		Is an alternative water source available?	2		
		Is water assessable to all users at all times?	1		
	Quantity	Is water available from the main source at the time of the survey?	3	2.5	
		How often is the main water source unavailable?	2		
	Quality	Is drinking-quality water purchase or produced for patients?	3	2.0	
		Does water meet chlorine residual guidelines?	2		
		Does water meet microbial guidelines?	1		

# “Traffic Light” WASH in HCF Scorecard

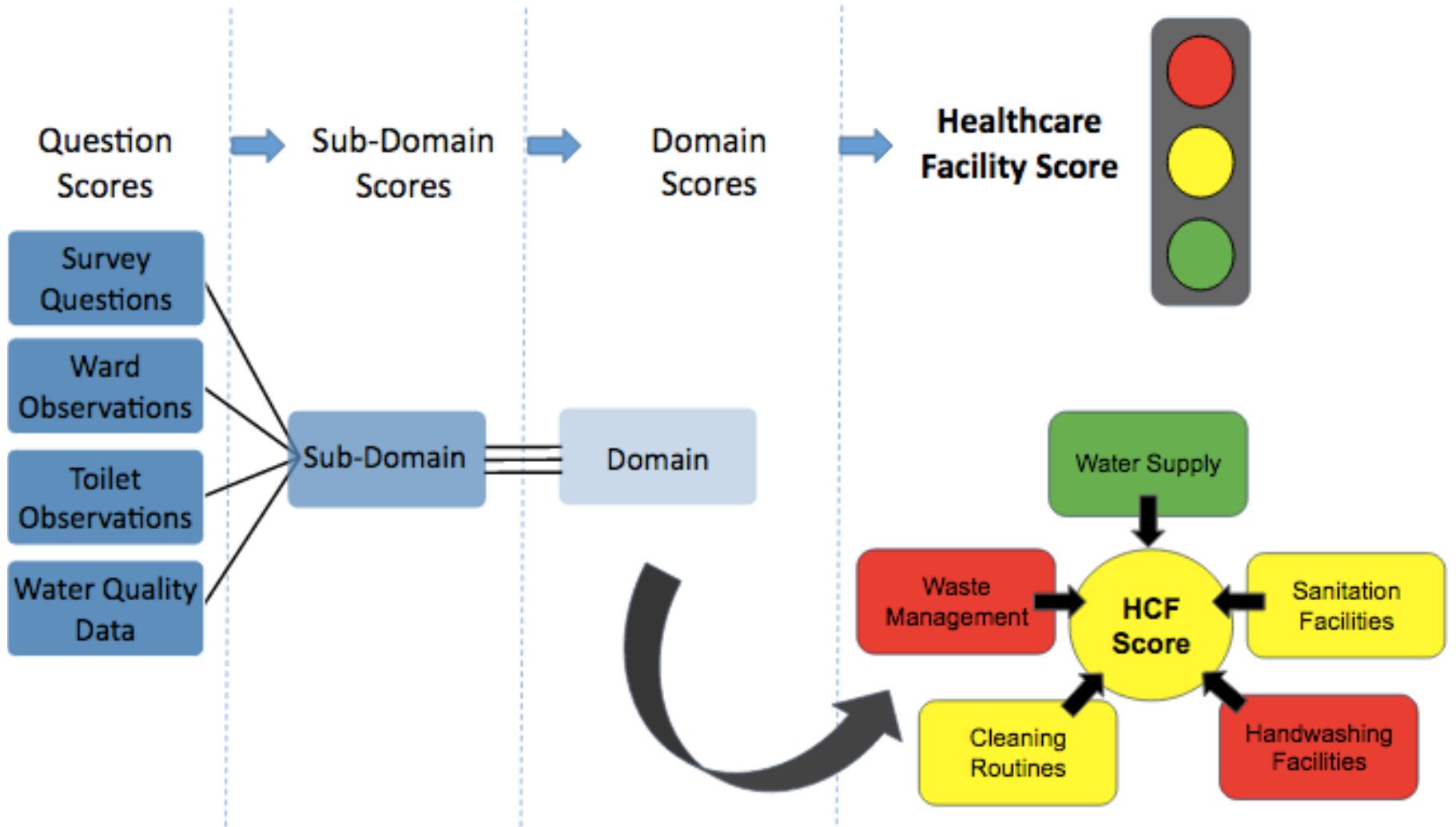
Each HCF receives a score for in each subdomain, domain and overall between **1.0 - 3.0**









Score	Traffic Light	Criteria
3.0 – 2.8	Basic Service	HCF has achieved the minimum WASH in HCF targets as indicated by JMP or is on track to achieve them.
2.7 – 1.8	Limited Service	HCF has made some progress towards the minimum WASH in HCF targets but is <i>not</i> on track to achieve it.
1.7 – 1.0	Unimproved or No Service	HCF has made little or no progress toward achieving the minimum WASH in HCF targets.

- Rapid method of evaluating HCF and tracking progress toward achieving targets.
- Based on the responses to the questions, a data dashboard calculates a traffic light score for each of the 5 core areas for WASH in HCF. All domains weighted equally.

# Scoring Process



# Sample Dashboard for Hospital X

Domain	Score
<b>Water Supply</b>	 <b>1.7</b>
Source and Access	2.1
Quantity	1.4
Quality	1.6
<b>Sanitation Facilities</b>	 <b>2.6</b>
Access	2.6
Quantity	3.0
Quality	2.1
<b>Handwashing Facilities</b>	 <b>2.8</b>
<b>Cleaning Routines</b>	 <b>1.8</b>
Equipment and Supplies	2.0
Cleaning Practices	1.5
<b>Waste Management</b>	 <b>2.0</b>
<b>OVERALL SCORE</b>	 <b>2.2</b>

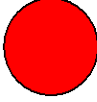
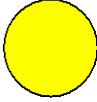
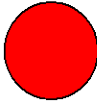
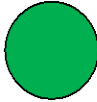
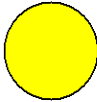
Traffic Light Scoring Legend	
<b>Red</b>	1.0- 1.8
<b>Yellow</b>	1.9 - 2.7
<b>Green</b>	2.8-3.0

# WASHCon Assessment Findings:

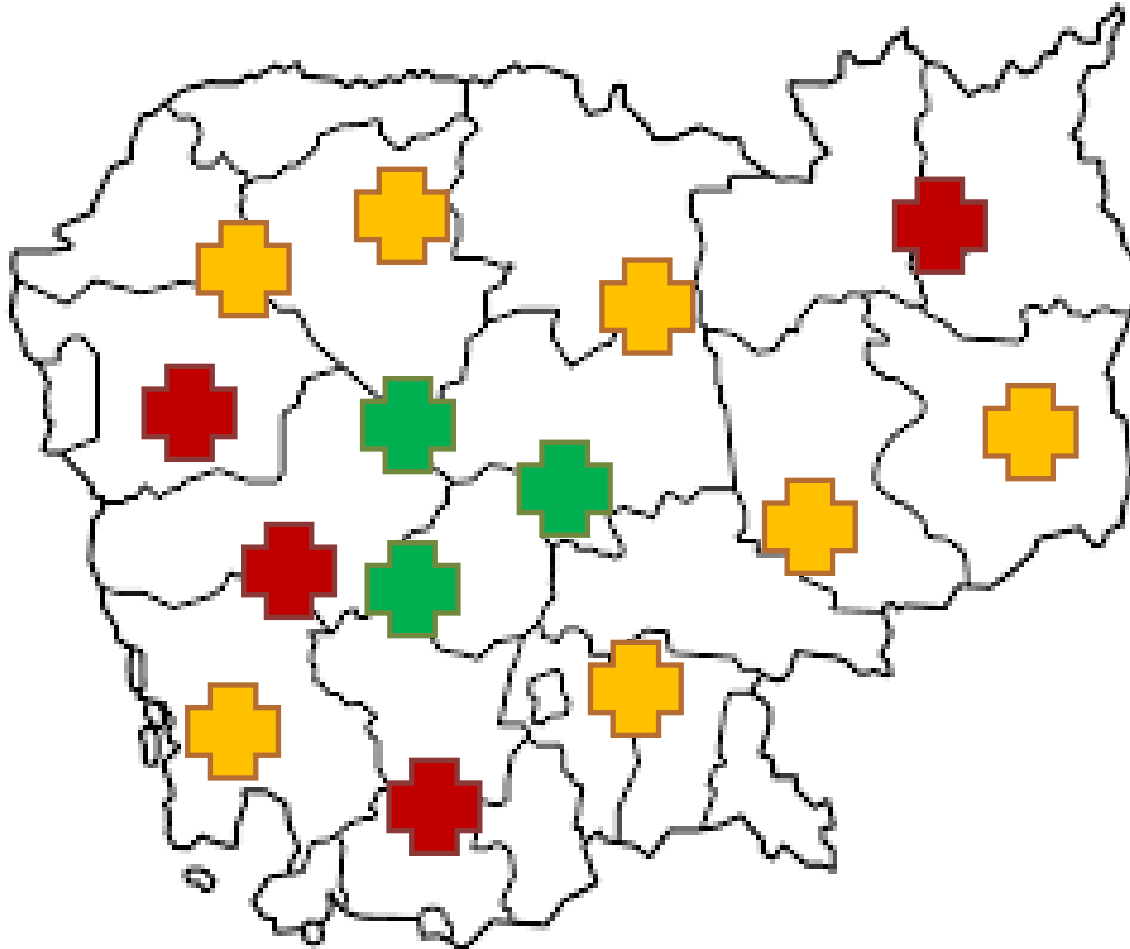
## Sample Health Centre

**HOSPITAL SCORE:**

**2.3**

<p><b>WATER SUPPLY: 1.8</b> Source &amp; Access: 2.7 Quantity: 1.0 Quality: 1.7</p> 	<p><b>Strengths:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Improved water source on premises.</li> <li><input type="checkbox"/> Water accessible to all users.</li> <li><input type="checkbox"/> Water samples met microbial guidelines.</li> </ul> <p><b>Weaknesses:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Water from the main source unavailable during initial visit and is reportedly often unavailable.</li> <li><input type="checkbox"/> Alternative source available but unimproved.</li> <li><input type="checkbox"/> Drinking water unavailable for patients.</li> </ul>
<p><b>SANITATION FACILITIES: 2.4</b> Access: 2.0 Quantity: 3.0 Quality: 2.2</p> 	<p><b>Strengths:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Improved toilets on premises.</li> <li><input type="checkbox"/> Separate toilets for men and women on premises.</li> <li><input type="checkbox"/> Sufficient number of toilets for staff and patients.</li> </ul> <p><b>Weaknesses:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> None of the toilets meet the needs of people with reduced mobility nor have facilities to manage menstrual hygiene.</li> <li><input type="checkbox"/> Toilets do not promote human dignity.</li> <li><input type="checkbox"/> Waste from toilets disposed in underground pits.</li> </ul>
<p><b>HANDWASHING FACILITIES: 1.8</b></p> 	<p><b>Strengths:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Soap provided for staff and sometimes for patients/caregivers.</li> </ul> <p><b>Weaknesses:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Toilets facilities, key patient care areas, food prep areas do not have handwashing station.</li> </ul>
<p><b>CLEANING ROUTINES: 3.0</b> Equipment &amp; Supplies: 3.0 Cleaning Practices: 3.0</p> 	<p><b>Strengths:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Key resources for cleaning available within wards.</li> <li><input type="checkbox"/> Wards clean of dust, soil and bodily fluids.</li> <li><input type="checkbox"/> Beds/mattresses cleaned between patients.</li> <li><input type="checkbox"/> Regular cleaning routines for wards and toilets.</li> </ul>
<p><b>WASTE MANAGEMENT: 2.4</b> Segregation: 2.2 Disposal &amp; Treatment: 2.5</p> 	<p><b>Strengths:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Sharps, infectious and placenta waste separated from other waste.</li> <li><input type="checkbox"/> Placenta waste disposed of safely.</li> </ul> <p><b>Weaknesses:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Protected areas not available for waste storage.</li> <li><input type="checkbox"/> Appropriate separate waste bins not available in wards.</li> <li><input type="checkbox"/> Infectious and sharps waste not disposed of safely.</li> </ul>

# Compare HCF within a country or region through GSP coordinates...

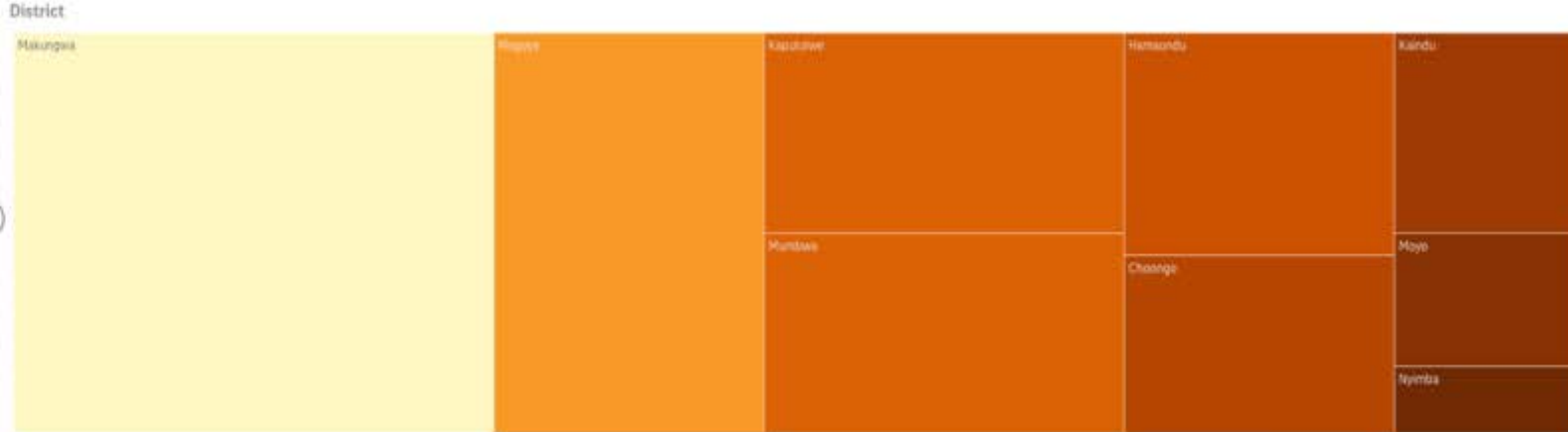




# WASHCon Dashboard

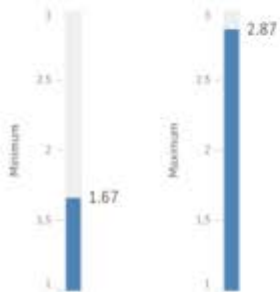
WASHCon Dashboard

- Q Name
- SANAKAILA
  - Chalimbana
  - Chikungu
  - Chipata General Hospital
  - Chipembe Mission Rural Health Center
  - Chisungu
  - Chisungu
  - Q ADP
  - Chonops
  - Hamauntli
  - Kandui
  - Kapufawe
  - Magoje
  - Makungwa



Average Water Supply

2.33



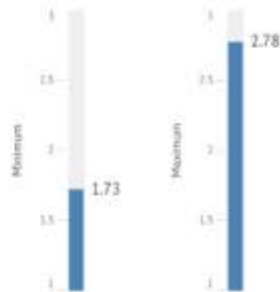
Average Sanitation Facilities

2.29



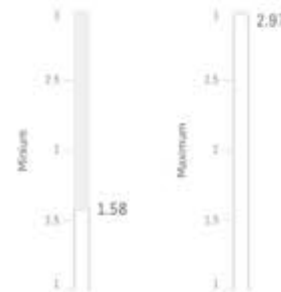
Average Cleaning Routines

2.28



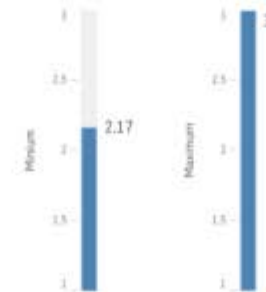
Average Handwashing Facilities

2.23



Average Solid Waste Management

2.7



Average Overall Score



Number of Facilities = 52

# From DATA to ACTION

- The data is particularly useful at highlighting which of the five domains are the most in need of improvement.
- Data can be collect regularly to see change over time.
- It is also useful in highlighting the real situation on the ground, as compared to the initial WHO/UNICEF status report from 2015.

# Disaggregating the Data

Additional analyses of the data can determine further differences, such as:

- Patient vs. staff access and quality of resources and infrastructure
- Health centers vs. hospitals
- Public vs. private HCF



# Moving to Implementation

- WASHCon data can be used to determine priority target areas, both by domain and by location.
- One recommended next step is address target areas using WHO's **WASH Facility Improvement Tool (WASH FIT)** for HCF, which walks facilities through the cycle of phased improvements through capacity building and assessments of risk.

# Strengths of the Tool

- **Systematic and Flexible:** Easy to use and can be employed in various levels of healthcare facilities and across different country contexts.
- **Rapid:** Takes ½ day with two enumerators to administer.
- **Fills a Gap:** Provides much needed data for advocacy and action.



# Limitations of the Tool

- **Broad:** Covers a variety of topics, but does not delve deeply into any one topic.
- **Not all inclusive:** Does not include information on behavior or knowledge, attitudes, and practices. Focuses on infrastructure, access, and resources.
- **Subject to biases:** Relies on information from the director which could be inaccurate.





# Implications

WASHCon findings can be used to:

- Identify priority areas for improvement
- Compare conditions across and within regions to understand which problems are widespread vs. localized
- Track progress over time, in particular in relation to JMP indicators.
- Describe the status of WASH in HCF and drive investment in operation, maintenance, and upgrades of WASH facilities





**EMORY**  
UNIVERSITY

**Center for Global Safe Water,  
Sanitation, and Hygiene**

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