

# Pneumonia in Bangladesh: where we are and what we need to do

World Pneumonia Day 2020

“Storytelling with Data” Series with Journalists

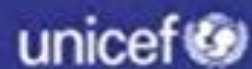
11 November 2020 || Wednesday || Dhaka





# PNEUMONIA


THE FORGOTTEN  
KILLER OF  
CHILDREN





# PNEUMONIA

THE FORGOTTEN  
KILLER OF  
CHILDREN

unicef 

 World Health  
Organization

# 1

million

deaths per year

An iceberg floating in the ocean, with a small tip above the water and a much larger, submerged part below. The sky is blue with light clouds, and the water is a deep blue. The text is overlaid on the top part of the iceberg.

**1** million  
deaths per year

An iceberg floats in the ocean under a blue sky with light clouds. The iceberg is white and jagged, with a large peak. The water is a deep blue, and the horizon is visible in the distance.

**1** million  
deaths per year

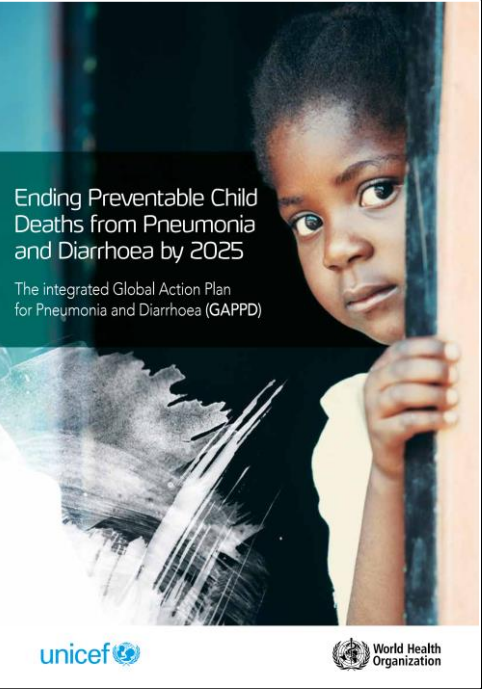
**22**

**Severe pneumonia episode**  
million

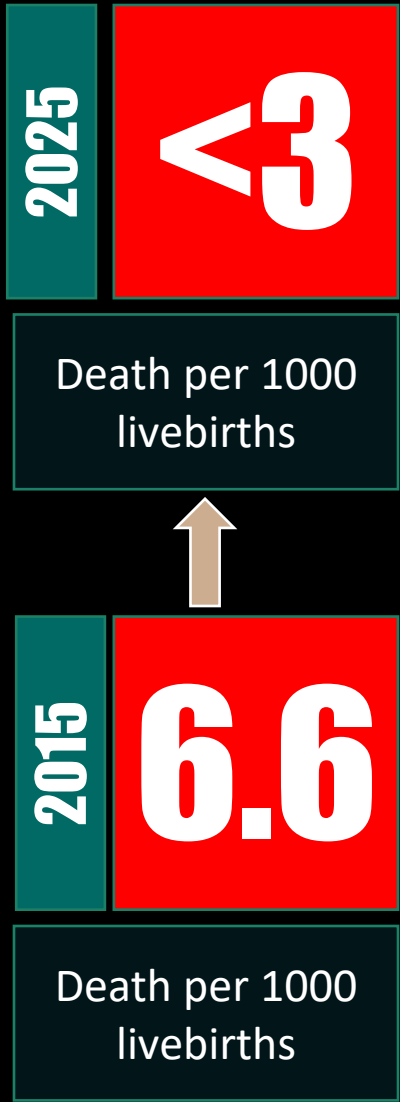
**138**

**pneumonia episode**  
million





The goal is ambitious but achievable:  
**to end**  
preventable childhood  
**deaths due to pneumonia**  
**by 2025.**



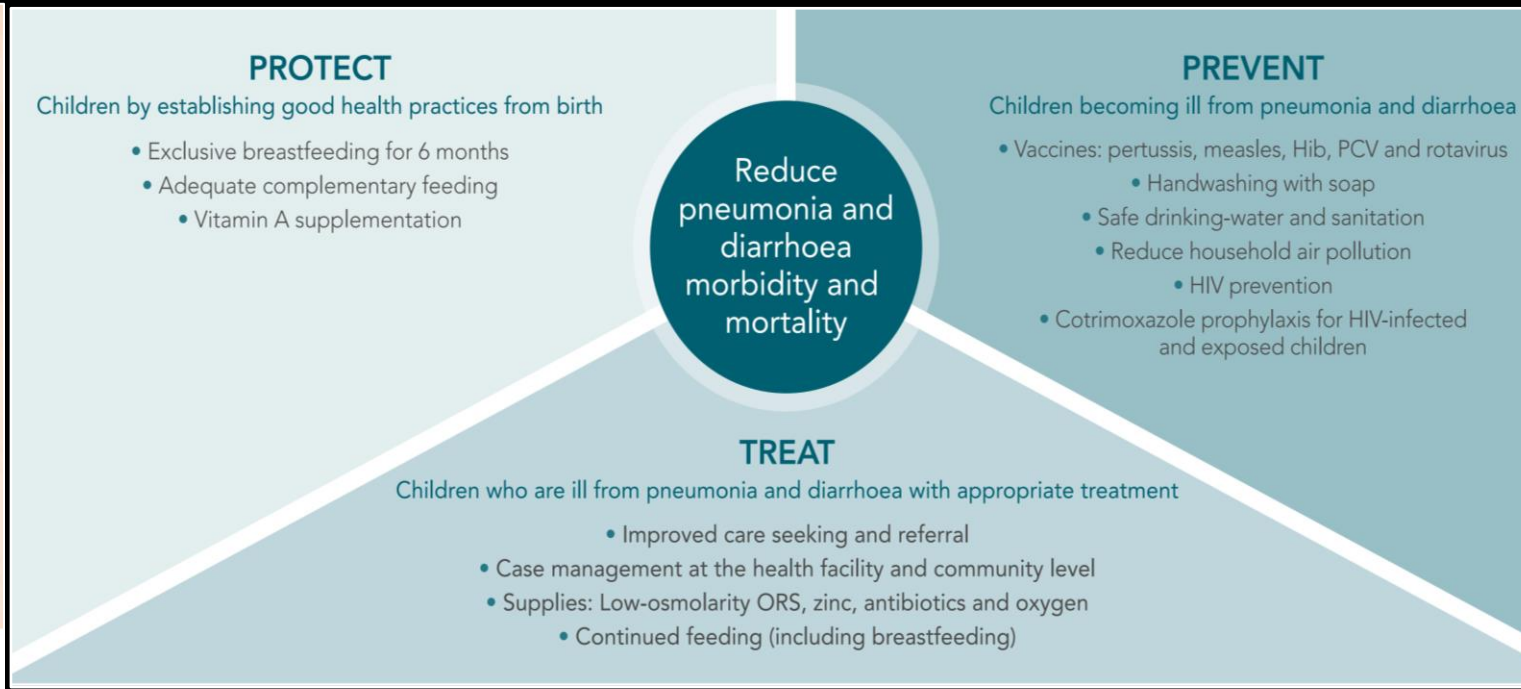
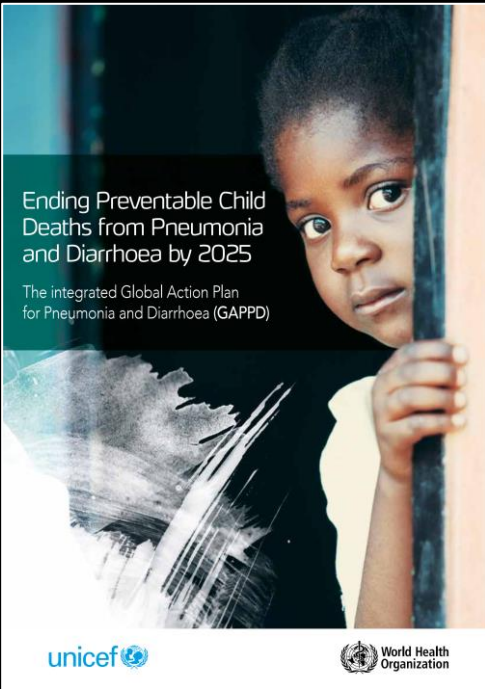
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**to end**

preventable childhood

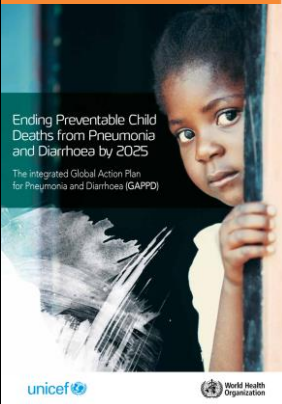
**deaths due to pneumonia**

**by 2025.**





# Pneumonia & Diarrhea Progress Report 2020



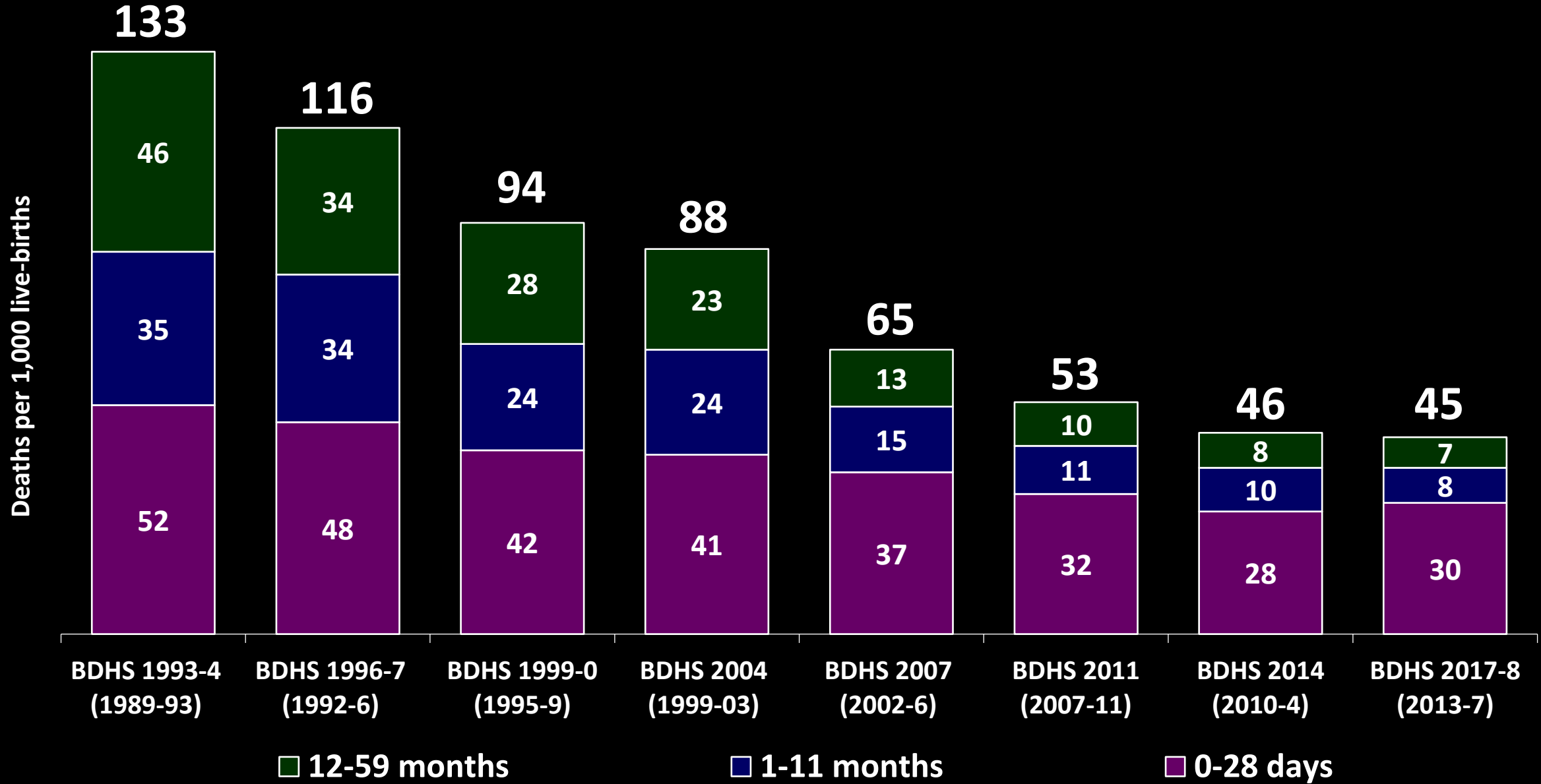
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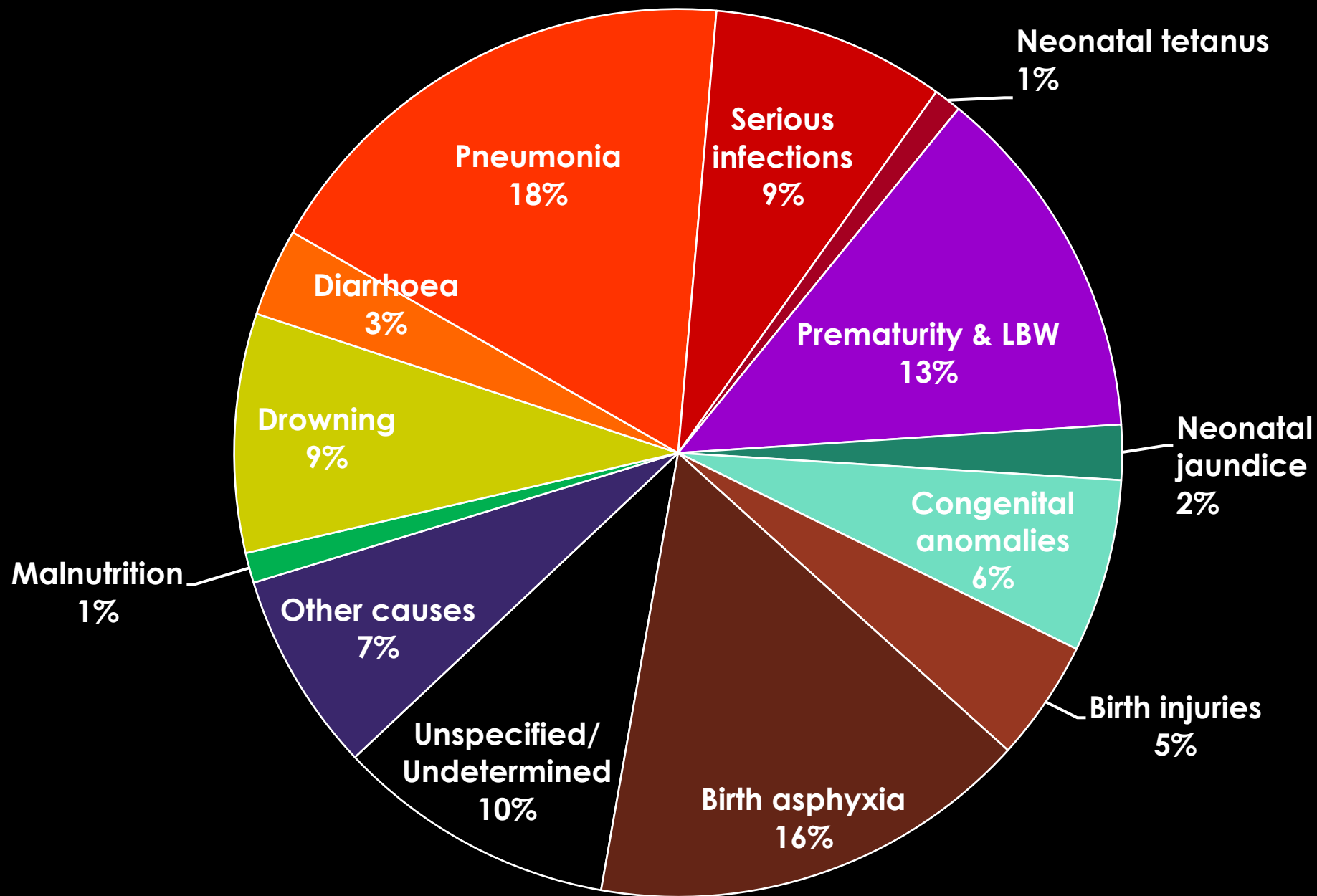
Countries with most under-5 pneumonia and diarrhea deaths		Under-5 pneumonia and diarrhea burden (2017)		PROTECT	PREVENT					TREAT				2020 GAPD Intervention Score		
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2	Nigeria	208,439	28.4	25	57	54	57	57	0	75	23	40	31	42	50	30
3	Pakistan	90,398	16.6	47	75	75	75	75	75	84	46	37	13	60	68	49
4	DRC	64,170	18.9	47	57	57	57	58	0	34	39	24	22	40	50	30
5	Ethiopia	44,692	13.6	59*	69	58	68	63	68	31	7	30	33	49	51	50
6	Chad	27,496	43.1	0	50	41	50	0	0	26	30	20	1	22	28	13
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15	Cote d'Ivoire	18,651	21	23	84	75	84	84	70	44	30	17	16	53	61	41
<b>MEDIAN</b>				<b>40</b>	<b>77</b>	<b>76</b>	<b>75</b>	<b>58</b>	<b>53</b>	<b>52</b>	<b>30</b>	<b>37</b>	<b>18</b>	<b>51</b>	<b>59</b>	<b>42</b>



# Under 5 Mortality in Bangladesh: rates in 1,000 LB

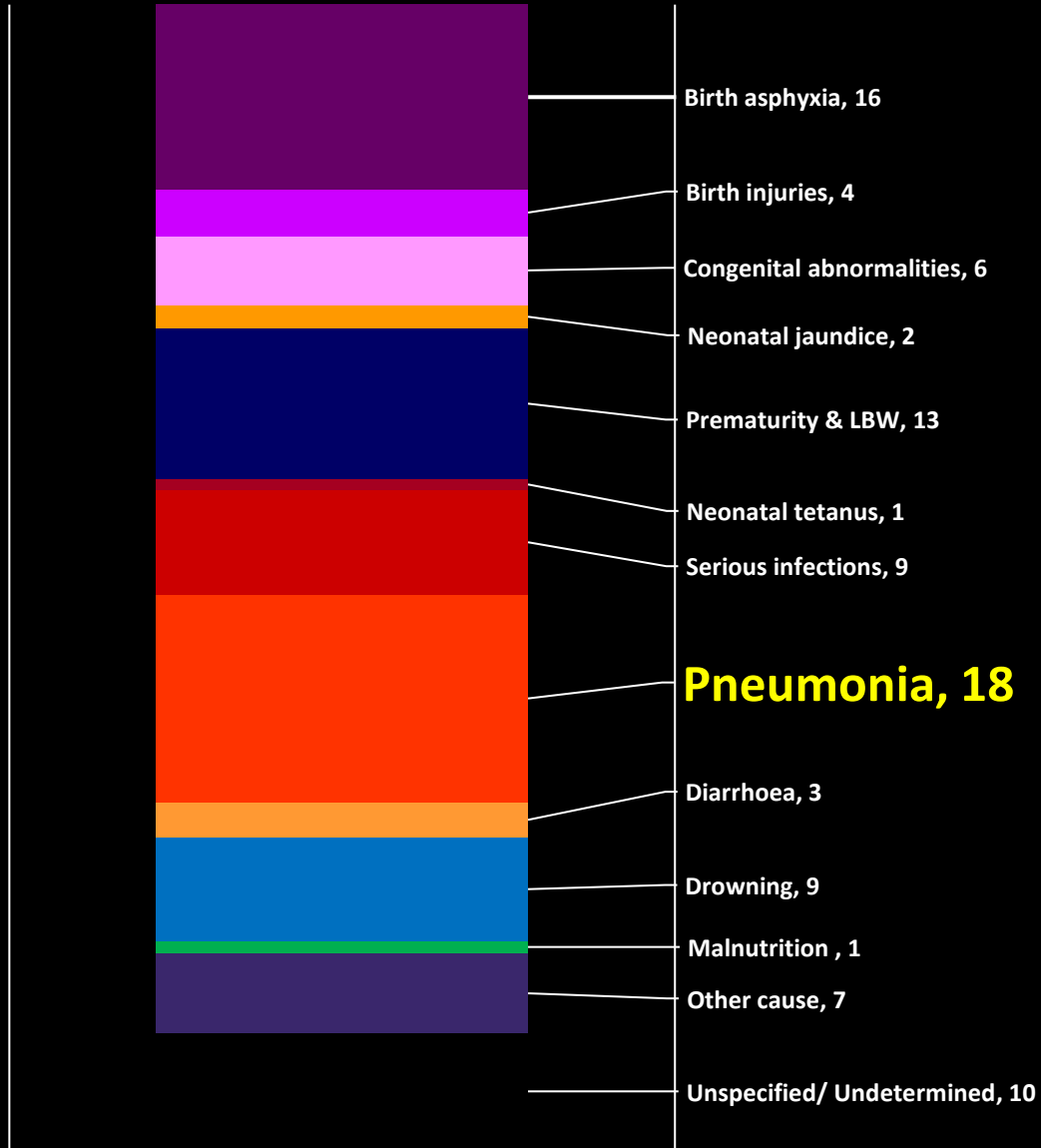


# Under 5 Mortality in Bangladesh: % distribution by causes



# Pneumonia Mortality in Bangladesh: number of deaths

BDHS 2017-18



BDHS 2017

Deaths per  
**YEAR**

**24,300**

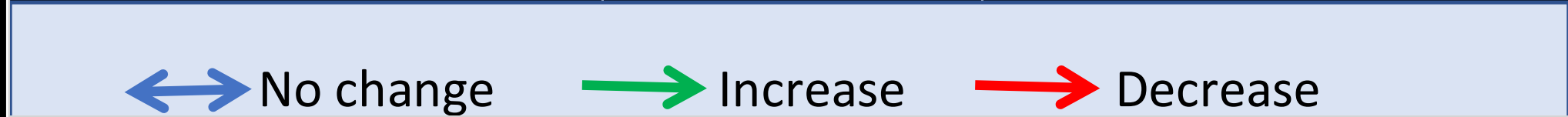
Deaths per  
**DAY**

**67**

Deaths per  
**HOUR**

**3**

CoD (BDHS 2011)		CoD (BDHS 2017)
1 Pneumonia		1 Pneumonia
2 Serious infections		2 Birth asphyxia
3 Birth asphyxia		3 Prematurity & LBW
4 Drowning		4 Serious infections
5 Prematurity & LBW		5 Drowning
6 Birth injuries		6 Congenital anomalies
7 Diarrhoea		7 Birth injuries
8 Neonatal tetanus		8 Diarrhoea
9 Neonatal jaundice		9 Neonatal jaundice
10 Congenital anomalies		10 Malnutrition
11 Malnutrition		11 Neonatal tetanus
12 Other causes		12 Other causes
13 Unspecified/ Undetermined		13 Unspecified/ Undetermined

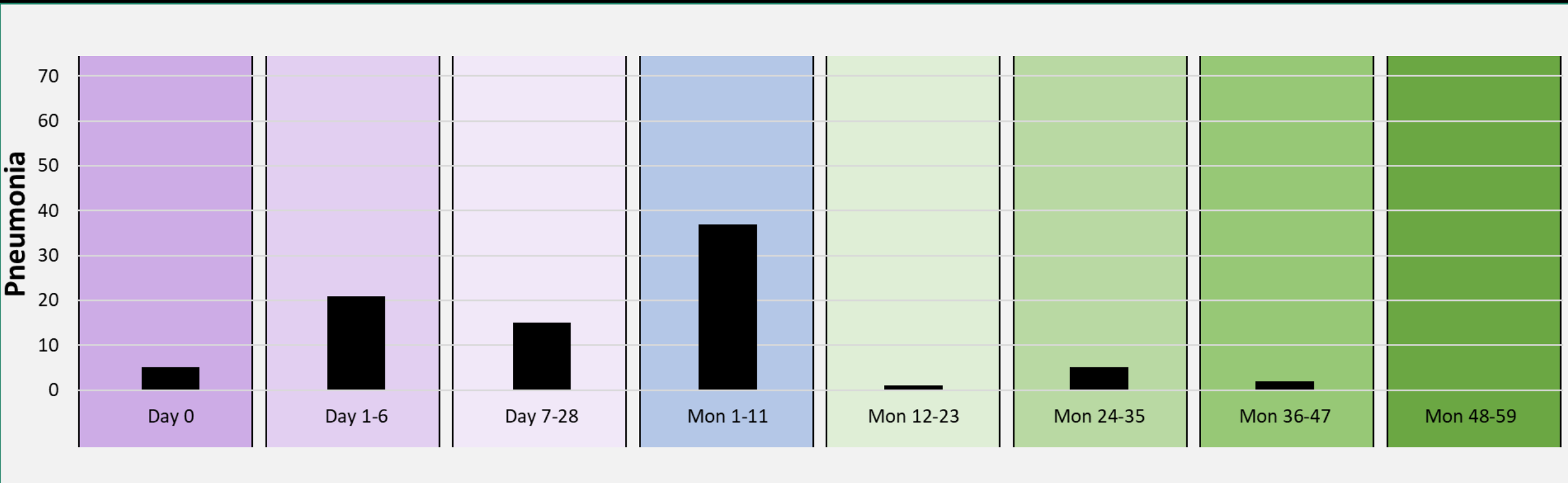




# Pneumonia Mortality in Bangladesh: rates per 1000 LB

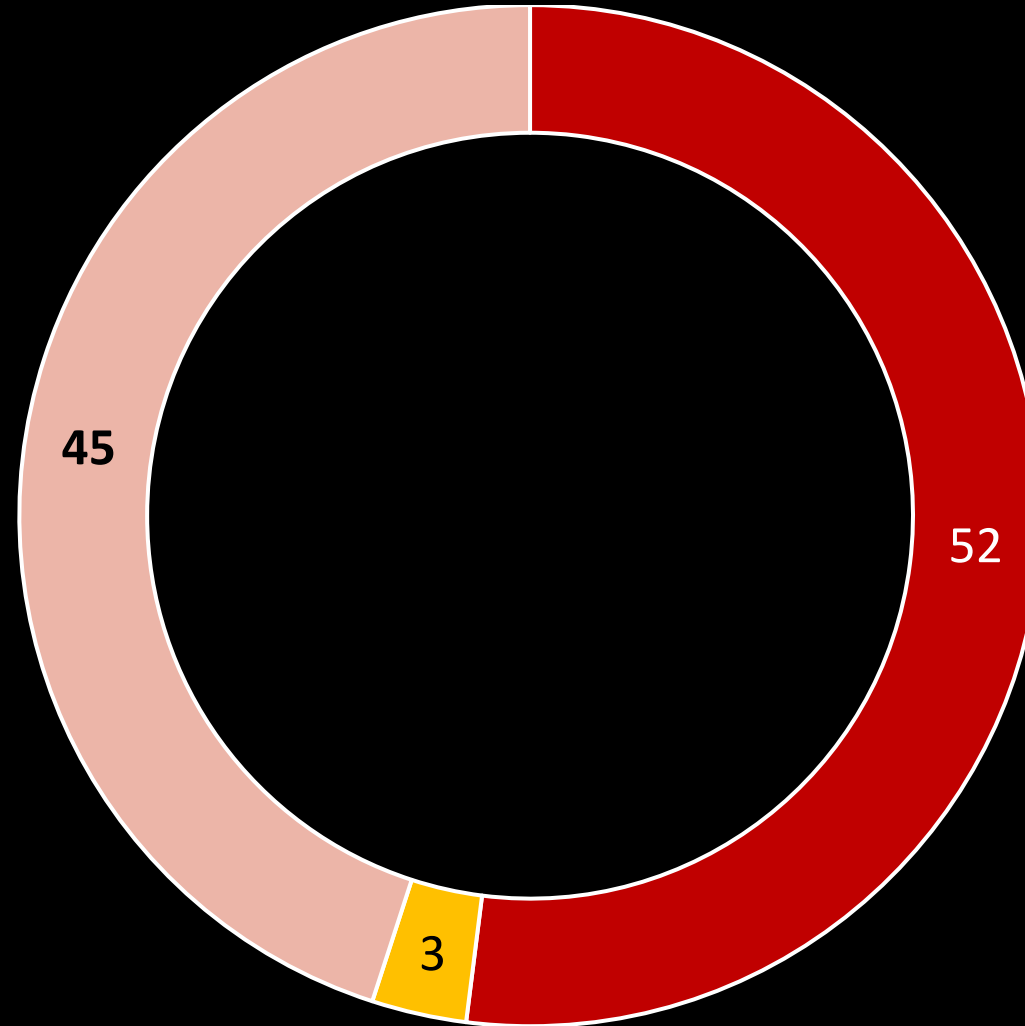


# Pneumonia Mortality in Bangladesh: timing of deaths by percent distribution



# Pneumonia Mortality in Bangladesh: place of deaths by % distribution

BDHS 2017-18



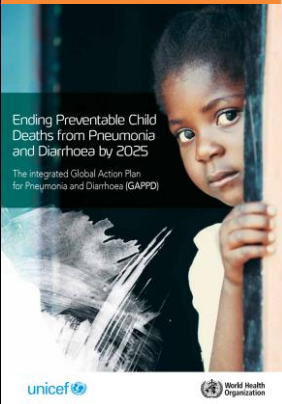
■ No Care Seeking and Home Death

■ Care Seeking and Home Death

■ Care Seeking and Facility Death



# Pneumonia & Diarrhea Progress Report 2020



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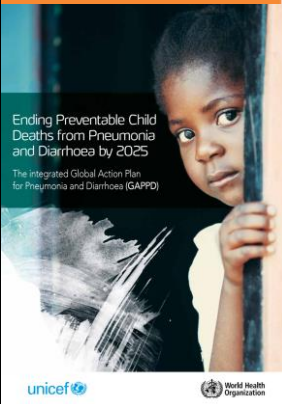
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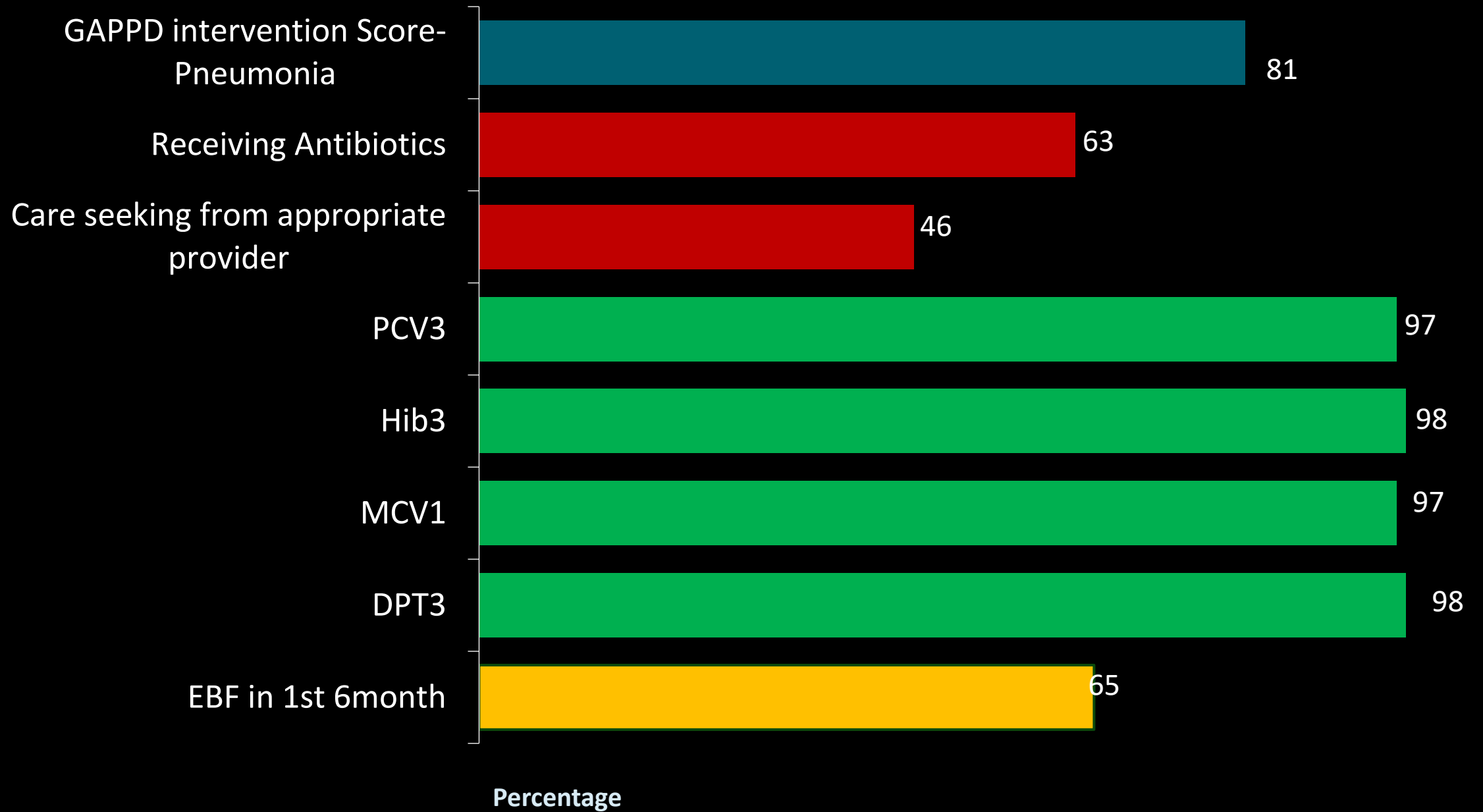
# Pneumonia & Diarrhea Progress Report 2020



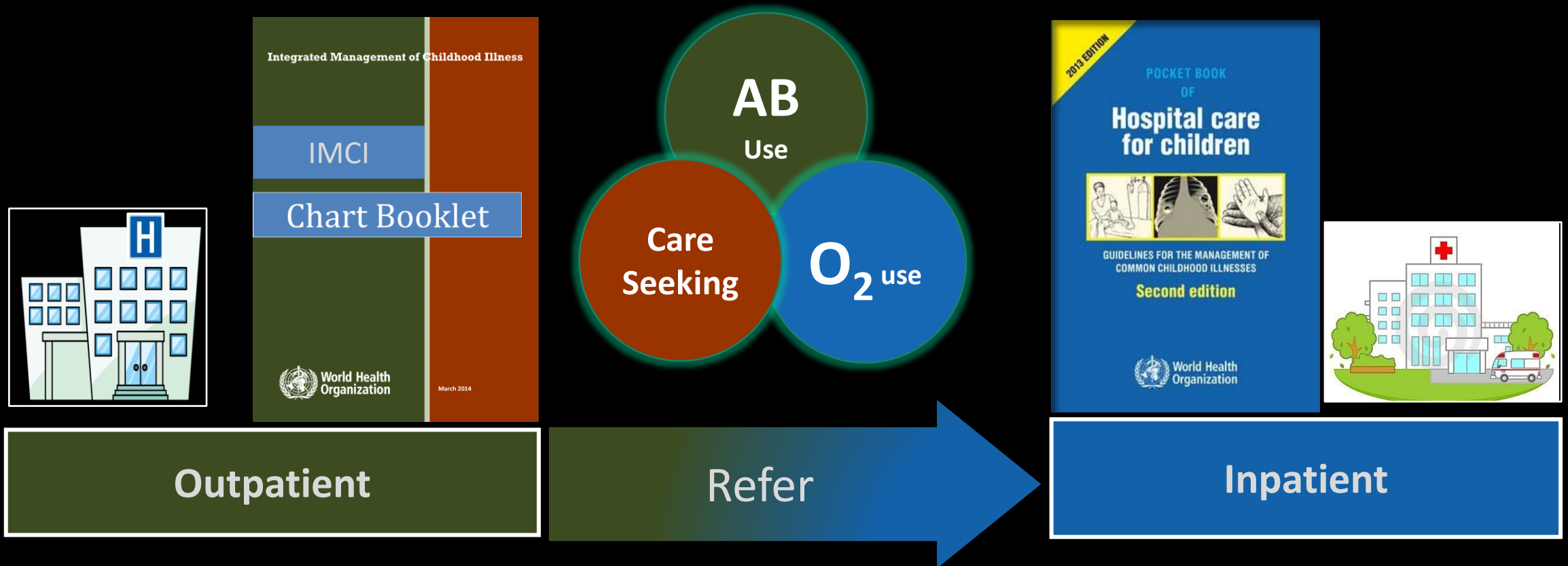
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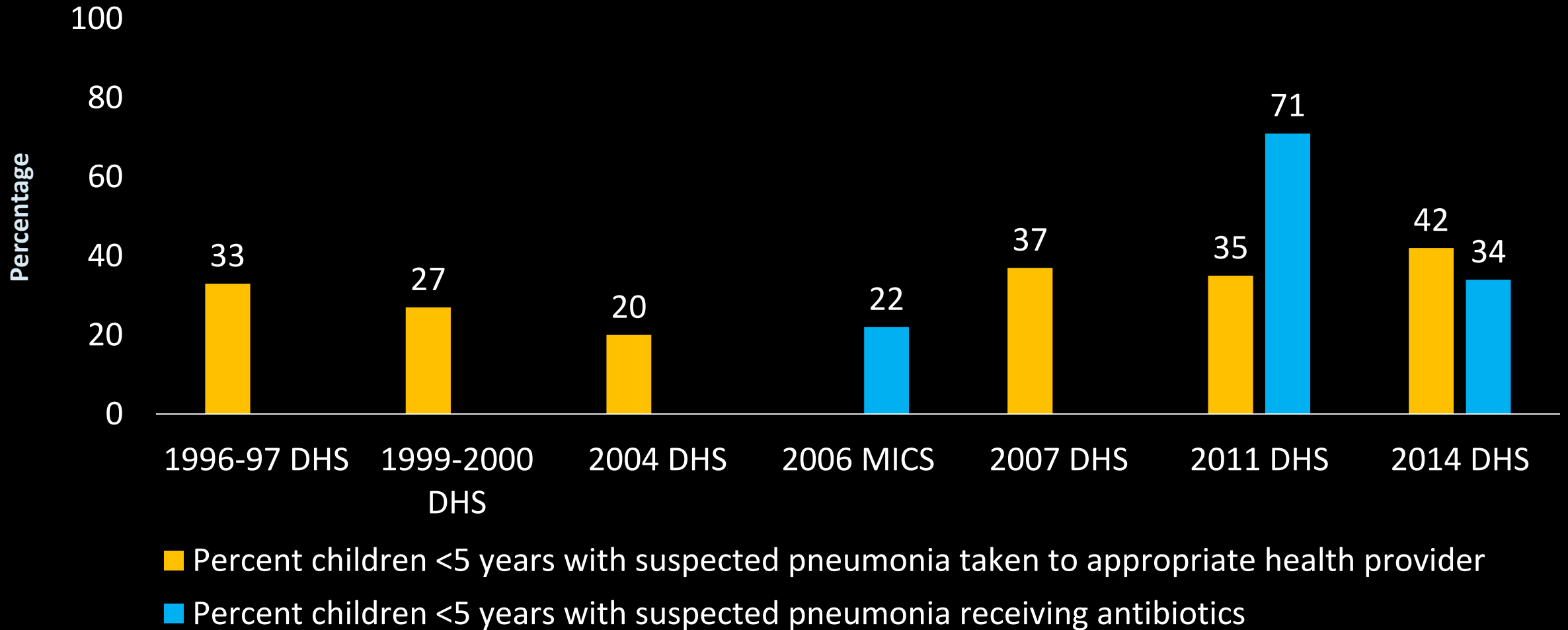
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# Treatment of Pneumonia-Bangladesh Strategy



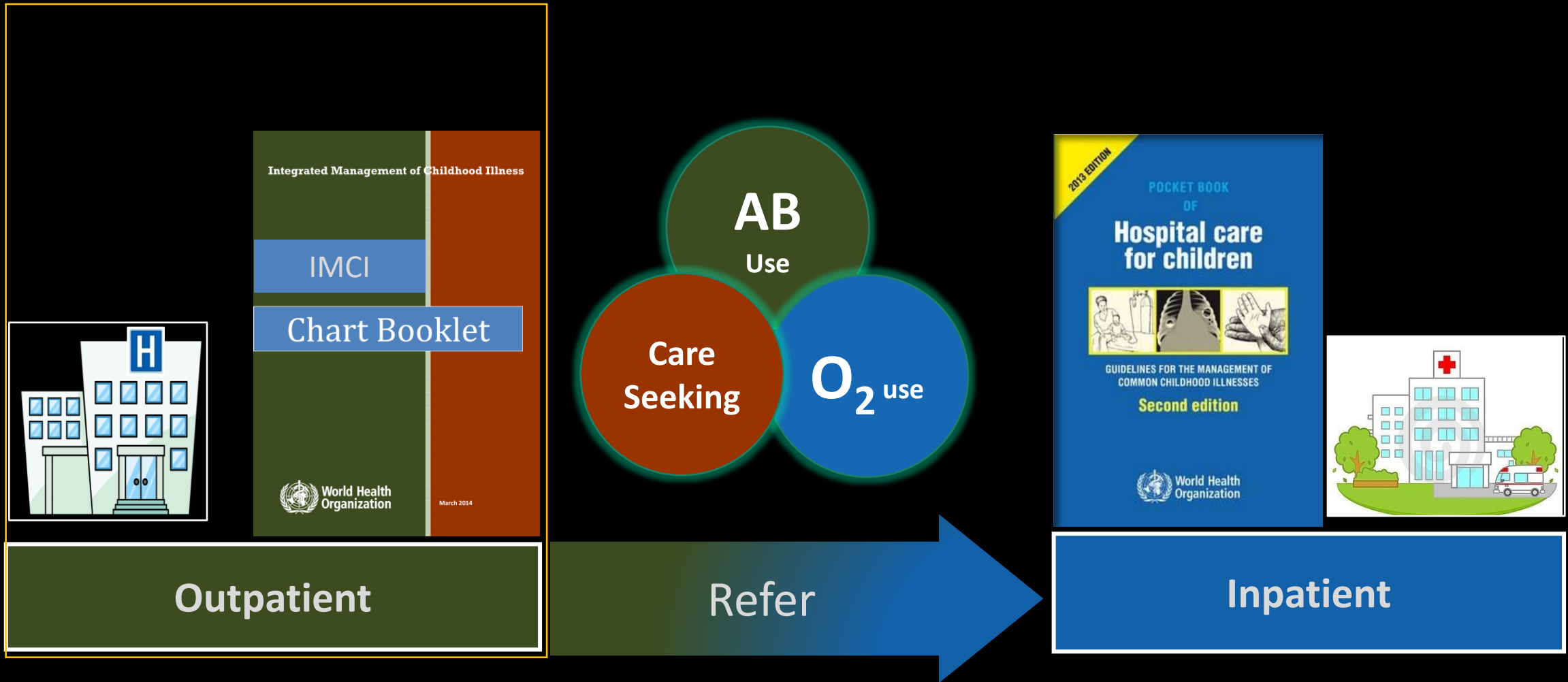
# Care Seeking Practices: Gaps and Challenges in Bangladesh



Majority of care-seeking is from informal care providers with inappropriate use of antibiotics



# Treatment of Pneumonia-Bangladesh Strategy



# Readiness Criteria to Provide Child Curative Care Service -as Per WHO

## Guidelines

IMCI guideline

## Trained Staff

IMCI trained staff

## Equipment

- Child scale
- Thermometer
- Growth chart

## Medicines

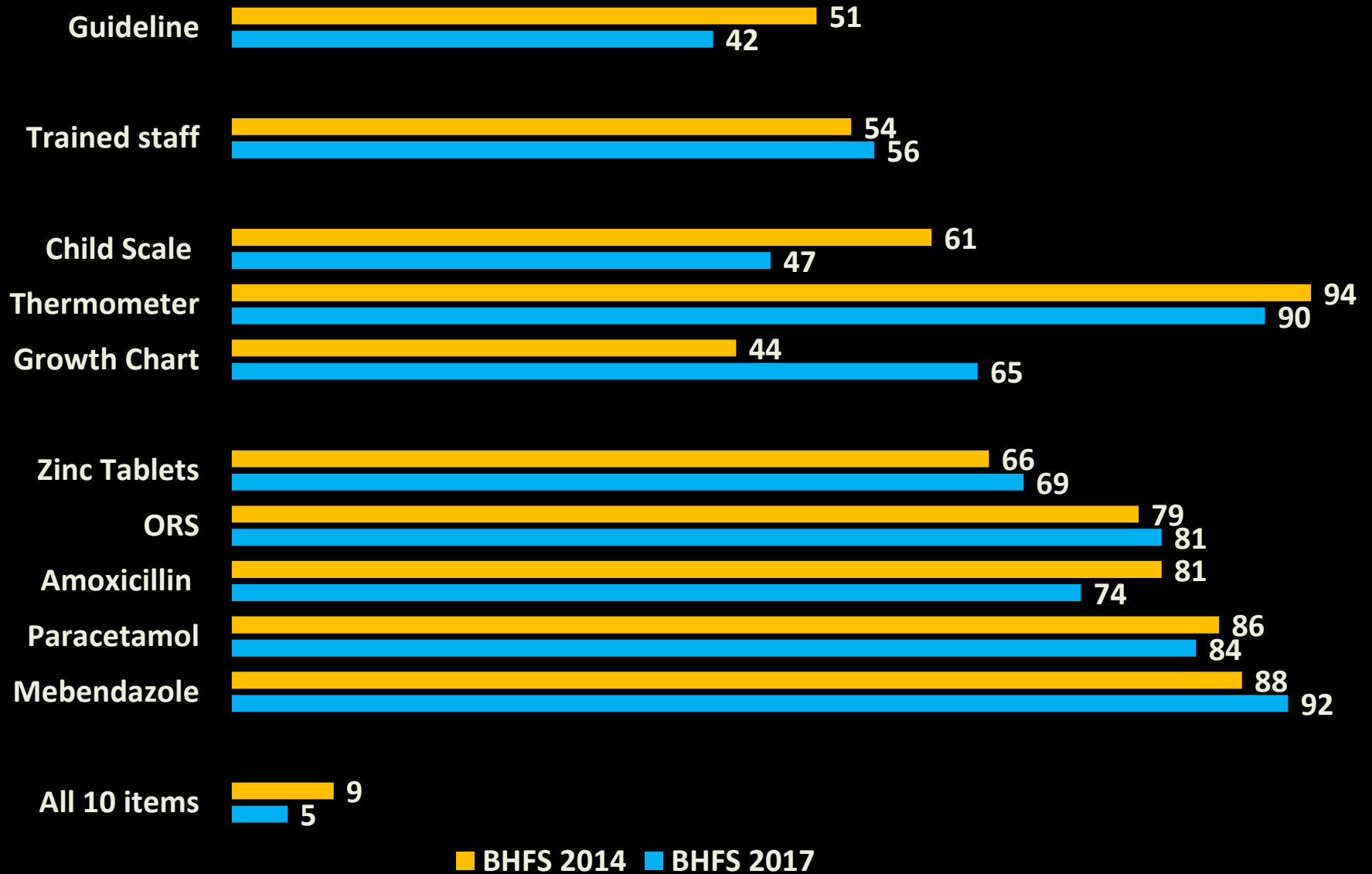
- ORS
- Zinc tablets/syrup
- Amoxicillin  
syrup/suspension/  
dispersible
- Paracetamol  
syrup/suspension
- Mebendazole/Alb  
endazole

**10**  
items

# Readiness Level to Provide Child Curative Care Service -as Per WHO

% facilities offering child curative services

10  
items



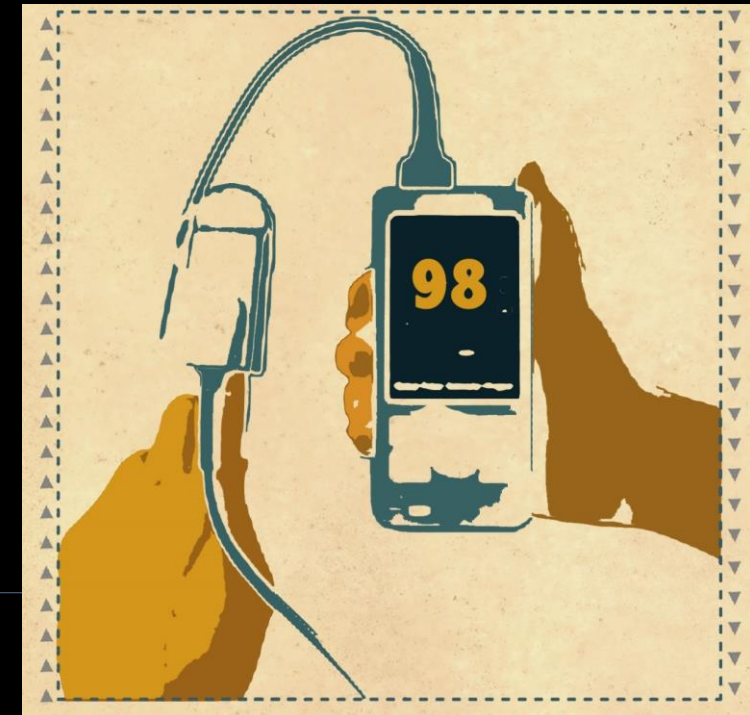
# Pneumonia management and role of oxygen therapy and pulse oximetry

ARTICLE **OPEN**

## Evaluating the impact of pulse oximetry on childhood pneumonia mortality in resource-poor settings

Jessica Floyd\*<sup>1</sup>, Lindsey Wu\*<sup>1,2</sup>, Deborah Hay Burgess<sup>3</sup>, Rasa Izadnegahdar<sup>3</sup>, David Mukanga<sup>3</sup> & Azra C. Ghani<sup>1</sup>

- **IMCI alone** has a relatively **small impact** on mortality owing to its low sensitivity
- **Pulse oximetry** has the potential to **avert up to 148,000 deaths** if implemented across the high burden 15 countries
- **Pulse oximetry with IMCI is highly cost-effective**, with median estimates ranging from US\$2.97 to \$52.92 per disability-adjusted life year averted in the 15 high burden countries





# Pneumonia management and role of oxygen therapy and pulse oximetry

**THEN ASK ABOUT MAIN SYMPTOMS:**  
Does the child have cough or difficult breathing?

**If yes, ask:**

- For how long?

**Look, listen, feel\*:**

- Count the breaths in one minute.
- Look for chest indrawing.
- Look and listen for stridor.
- Look and listen for wheezing.

CHILD  
MUST BE  
CALM

**Classify**  
**COUGH or**  
**DIFFICULT**  
**BREATHING**

<ul style="list-style-type: none"> <li>• Any general danger sign or</li> <li>• Stridor in calm child.</li> </ul>	<b>Pink:</b> SEVERE PNEUMONIA OR VERY SEVERE DISEASE	<ul style="list-style-type: none"> <li>■ Give first dose of an appropriate antibiotic</li> <li>■ Refer <b>URGENTLY</b> to hospital**</li> </ul>
<ul style="list-style-type: none"> <li>• Chest indrawing or</li> <li>• Fast breathing.</li> </ul>	<b>Yellow:</b> PNEUMONIA	<ul style="list-style-type: none"> <li>■ Give oral Amoxicillin for 5 days***</li> <li>■ If wheezing (or disappeared after rapidly acting bronchodilator) give an inhaled bronchodilator for 5 days****</li> <li>■ If chest indrawing in HIV exposed/infected child, give first dose of amoxicillin and refer.</li> <li>■ Soothe the throat and relieve the cough with a safe remedy</li> <li>■ If coughing for more than 14 days or recurrent wheeze, refer for possible TB or asthma assessment</li> <li>■ Advise mother when to return immediately</li> <li>■ Follow-up in 3 days</li> </ul>
<ul style="list-style-type: none"> <li>• No signs of pneumonia or very severe disease.</li> </ul>	<b>Green:</b> COUGH OR COLD	<ul style="list-style-type: none"> <li>■ If wheezing (or disappeared after rapidly acting bronchodilator) give an inhaled bronchodilator for 5 days****</li> <li>■ Soothe the throat and relieve the cough with a safe remedy</li> <li>■ If coughing for more than 14 days or recurrent wheezing, refer for possible TB or asthma assessment</li> <li>■ Advise mother when to return immediately</li> <li>■ Follow-up in 5 days if not improving</li> </ul>

**If the child is:**

2 months up to 12 months

12 Months up to 5 years

**Fast breathing is:**

**50** breaths per minute or more

**40** breaths per minute or more

\*If pulse oximeter is available, determine oxygen saturation and refer if < 90%.

\*\* If referral is not possible, manage the child as described in the pneumonia section of the national referral guidelines or as in WHO Pocket Book for hospital care for children.

\*\*\*Oral Amoxicillin for 3 days could be used in patients with fast breathing but no chest indrawing in low HIV settings.

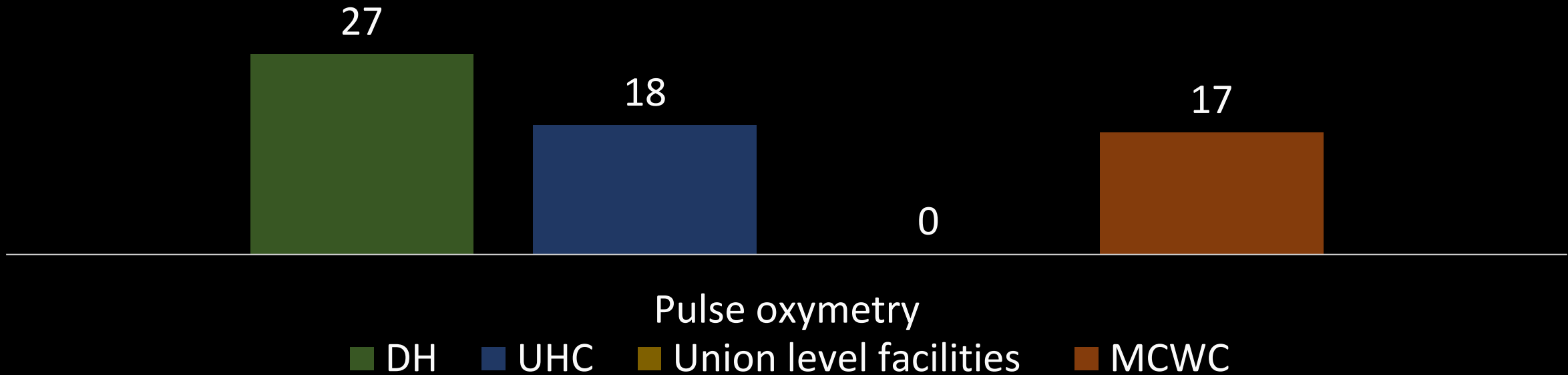
\*\*\*\* In settings where inhaled bronchodilator is not available, oral salbutamol may be tried but not recommended for treatment of severe acute wheeze.

**\*If pulse oximeter is available, determine oxygen saturation and refer if <90%.**

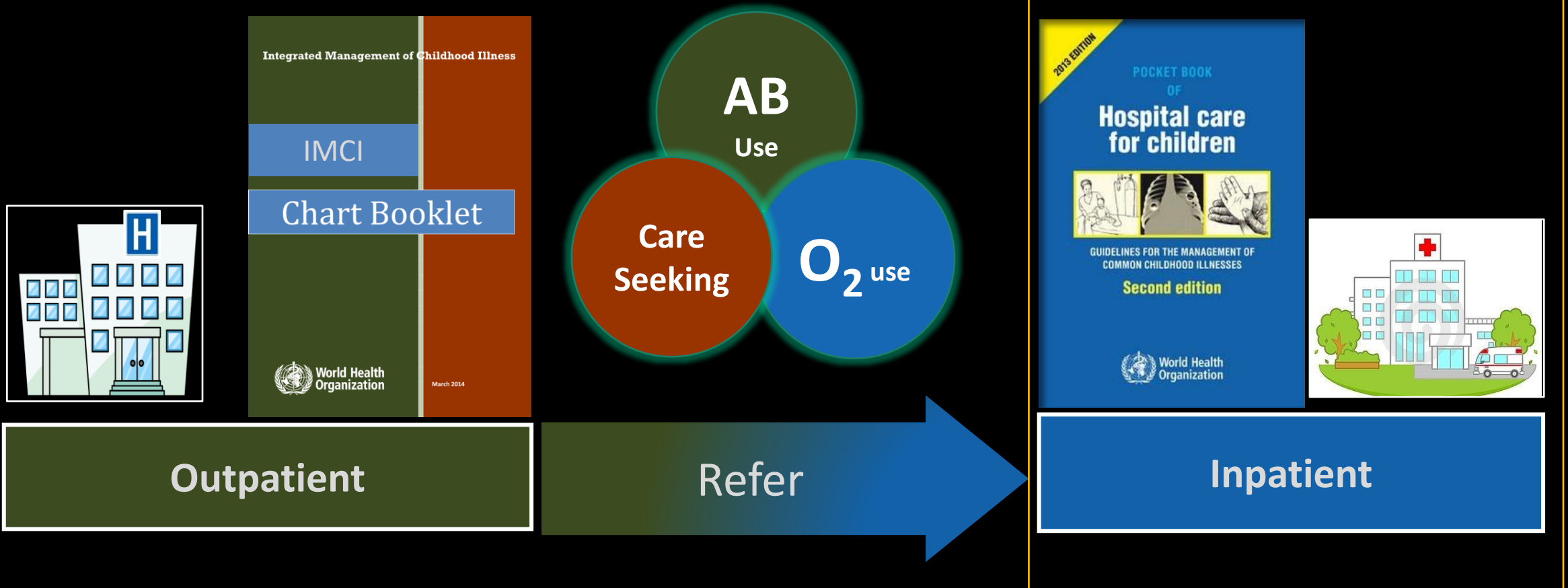


# Readiness Level to Assess O2 Saturation for Pneumonia Mx

% facilities offering child curative services



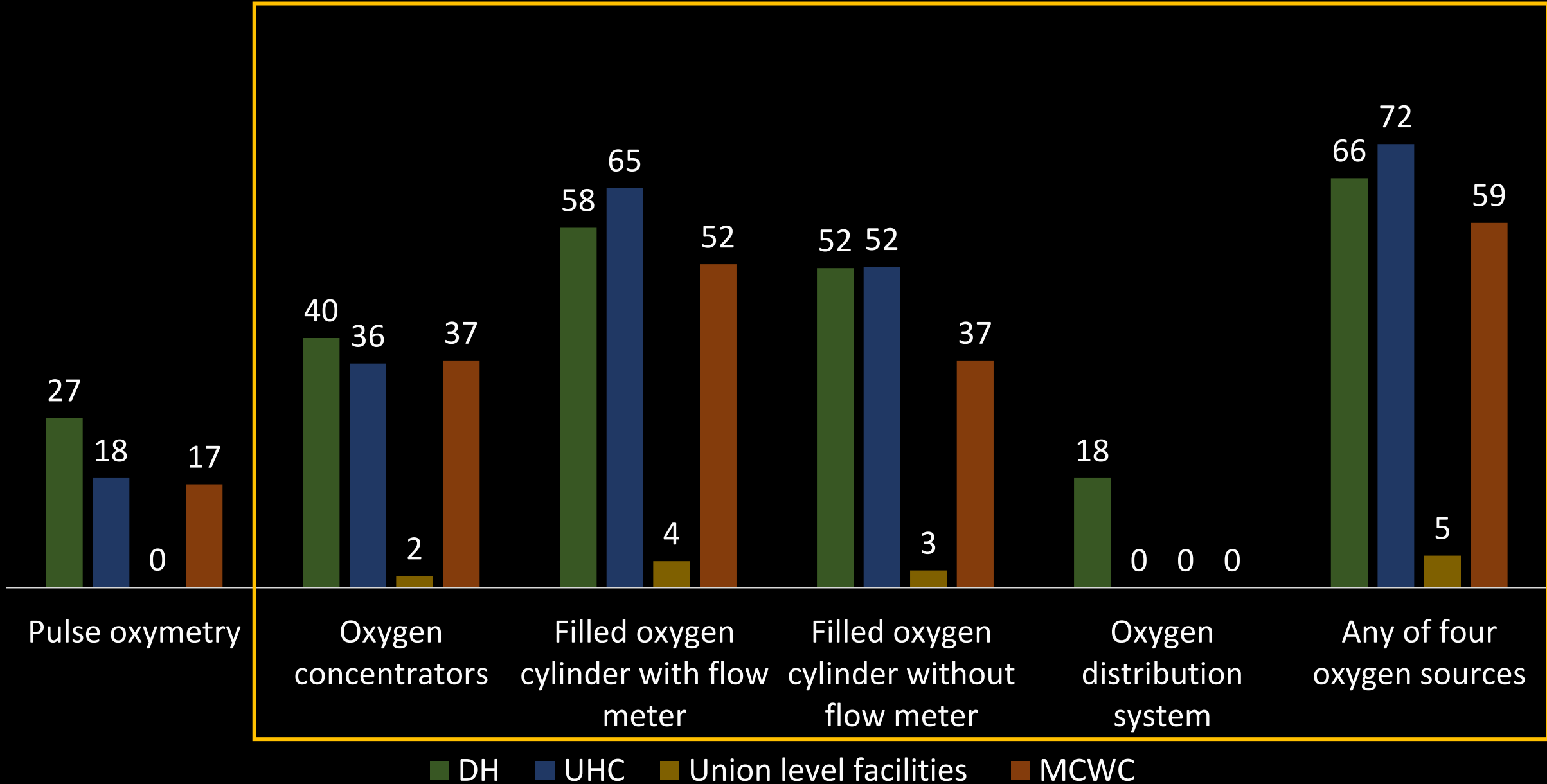
# Treatment of Pneumonia-Bangladesh Strategy





# Readiness Level to Provide O2 therapy for Pneumonia Mx

% facilities offering child curative services



Do we Really CARE?