



# STORYTELLING WITH DATA

Organized by:

USAID's Research for Decision Makers  
(RDM) Activity, icddr,b & D4I

Date: 3 February, 2021

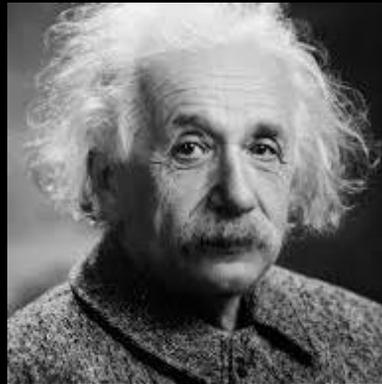
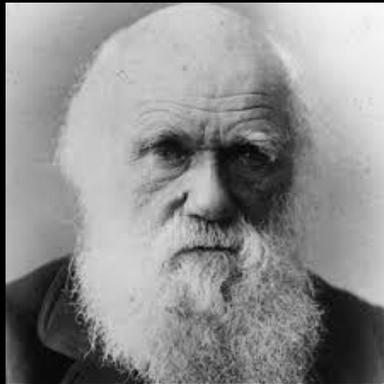


# Prematurity in Bangladesh

where we are and what we need to do



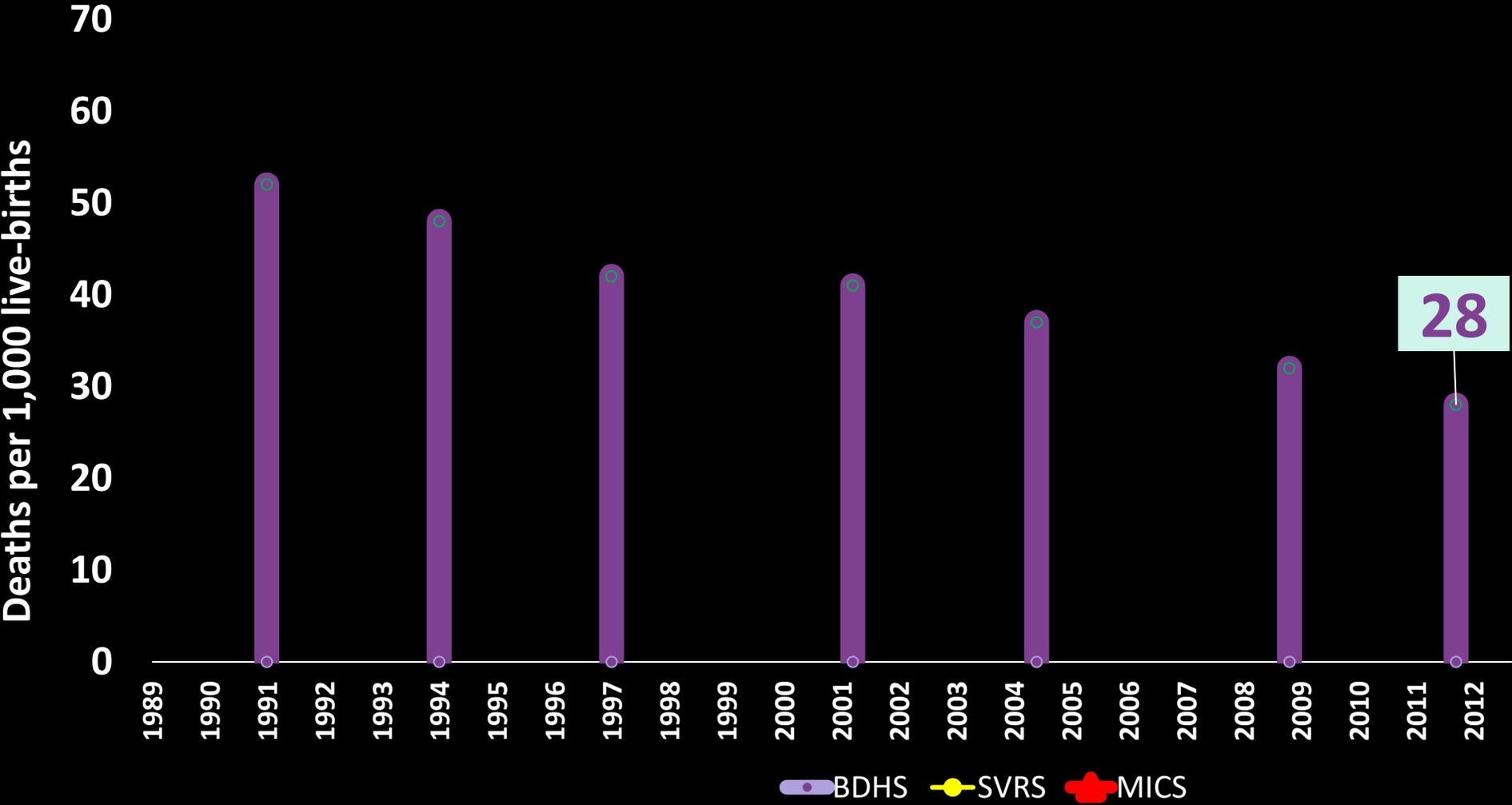
# Famous people who were born too soon...



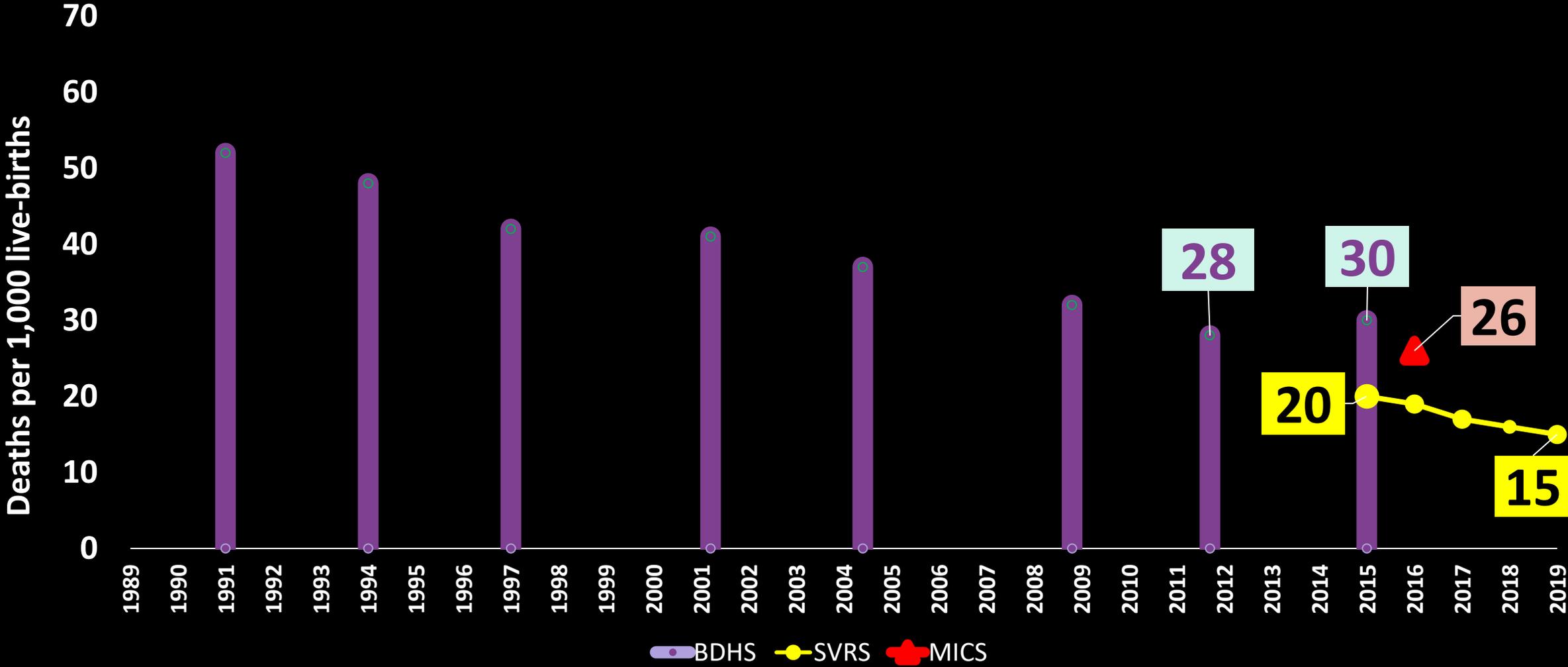
What is the neonatal mortality rate in Bangladesh?



# Neonatal Mortality in Bangladesh: rate and trend by different data source



# Neonatal Mortality in Bangladesh: rate and trend by different data source



Newborns

90,000

deaths per year

# What is Prematurity and LBW?



## Prematurity and LBW: WHO classification

### Prematurity

Extremely preterm	<28 weeks
Very preterm	28–<32 weeks
Moderate or late preterm	32–<37 weeks
Term	37–<42 weeks
Post-term	≥42 weeks

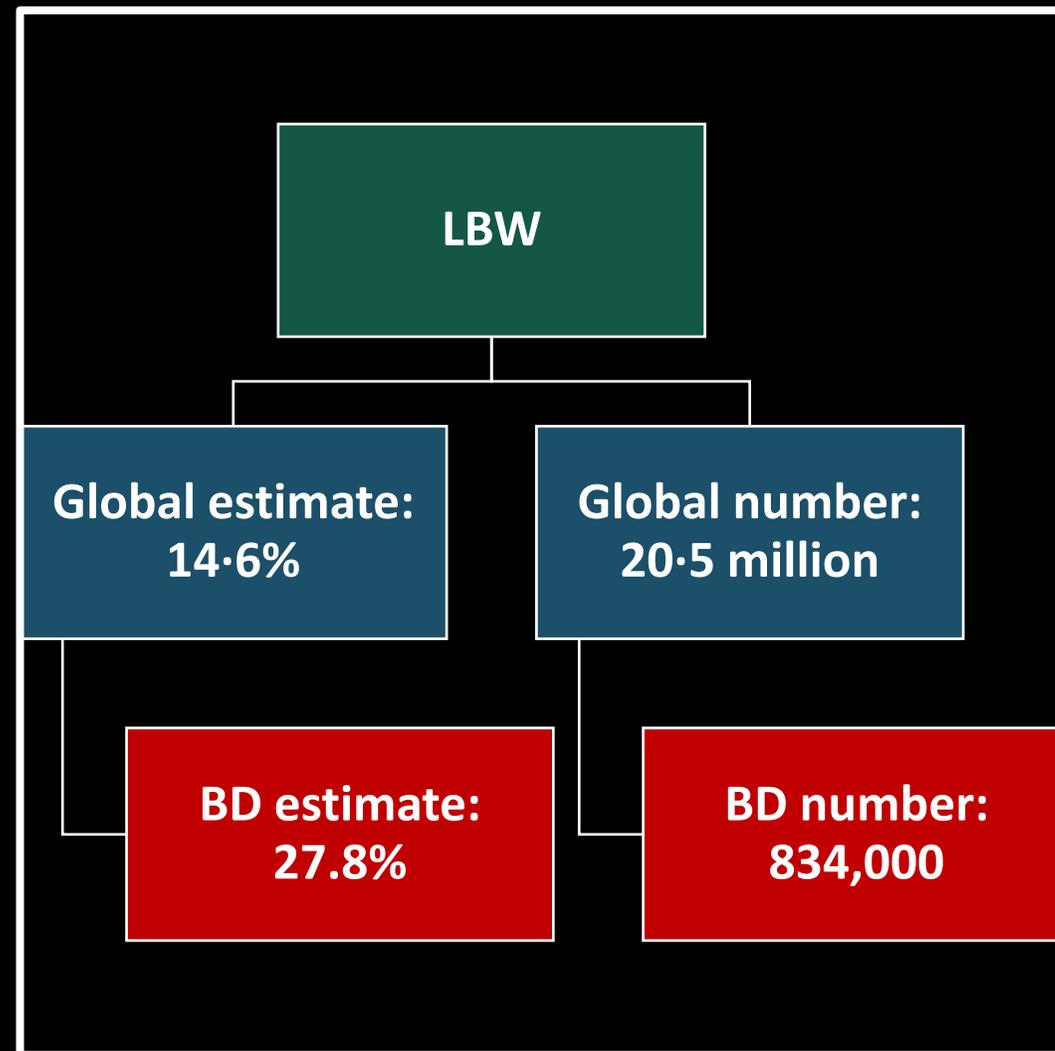
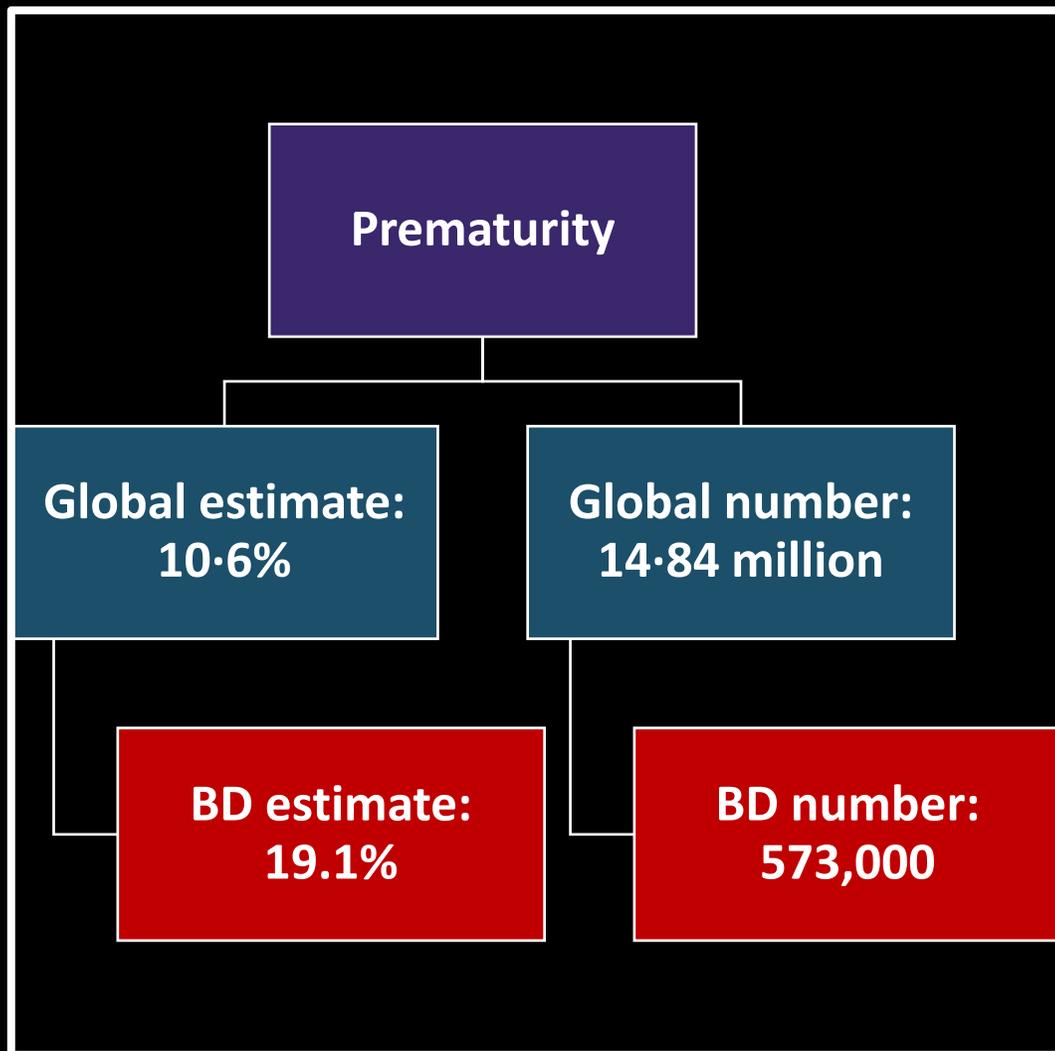
### LBW

Low birthweight	<2,500 g
Very low birthweight	<1,500 g
Extremely low birthweight	<1,000 g

What is the prematurity and LBW burden in Bangladesh?



## Prematurity and LBW: Global and Bangladesh estimates



Estimate directly extracted from:

- The Lancet Global Health. 2019;7(1):e37-e46.
- The Lancet Global Health. 2019;7(7):e849-e60

# Prematurity and LBW: Bangladesh Estimate

**Prematurity**

**573,000**

**birth per year**

**LBW**

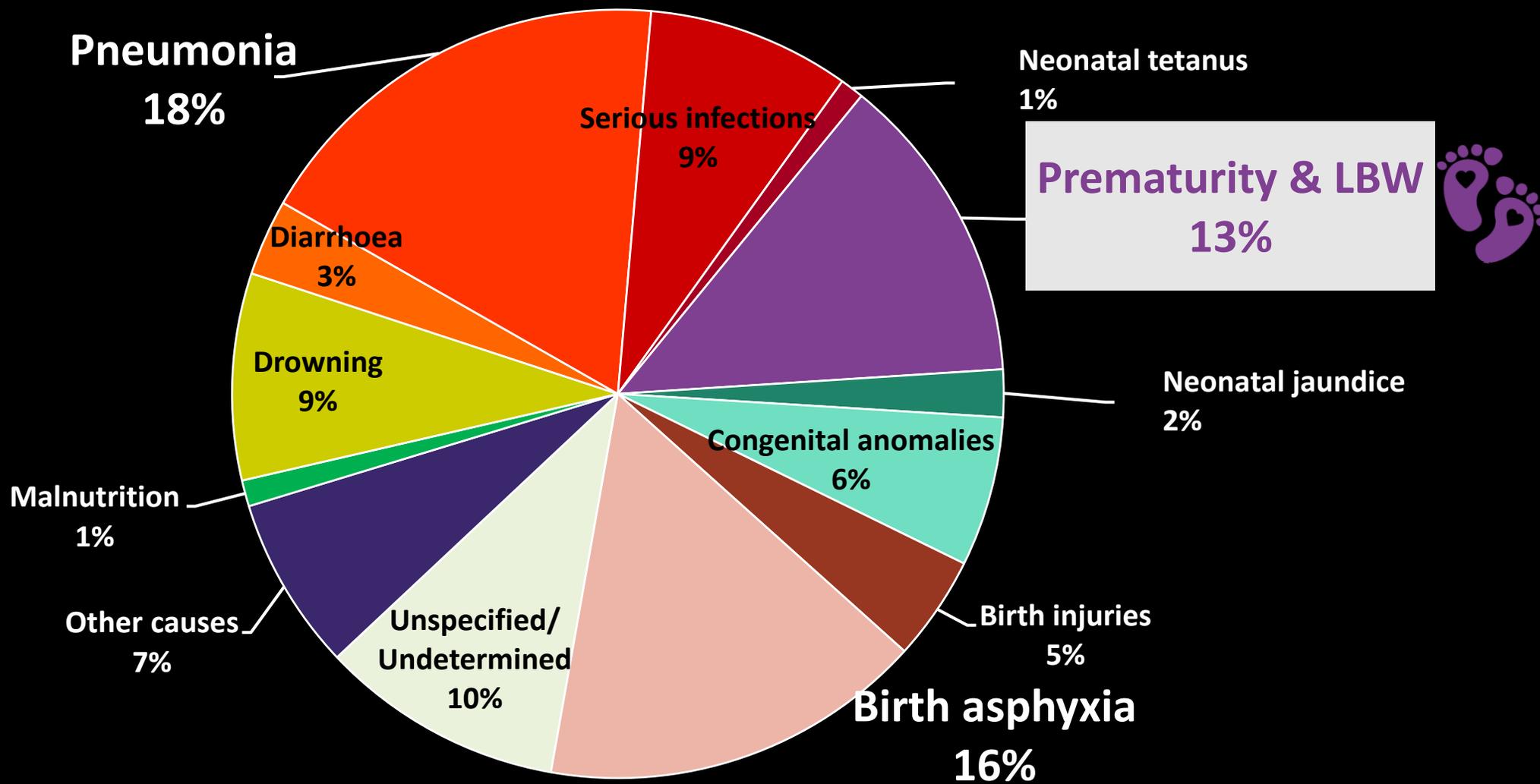
**834,000**

**births per year**

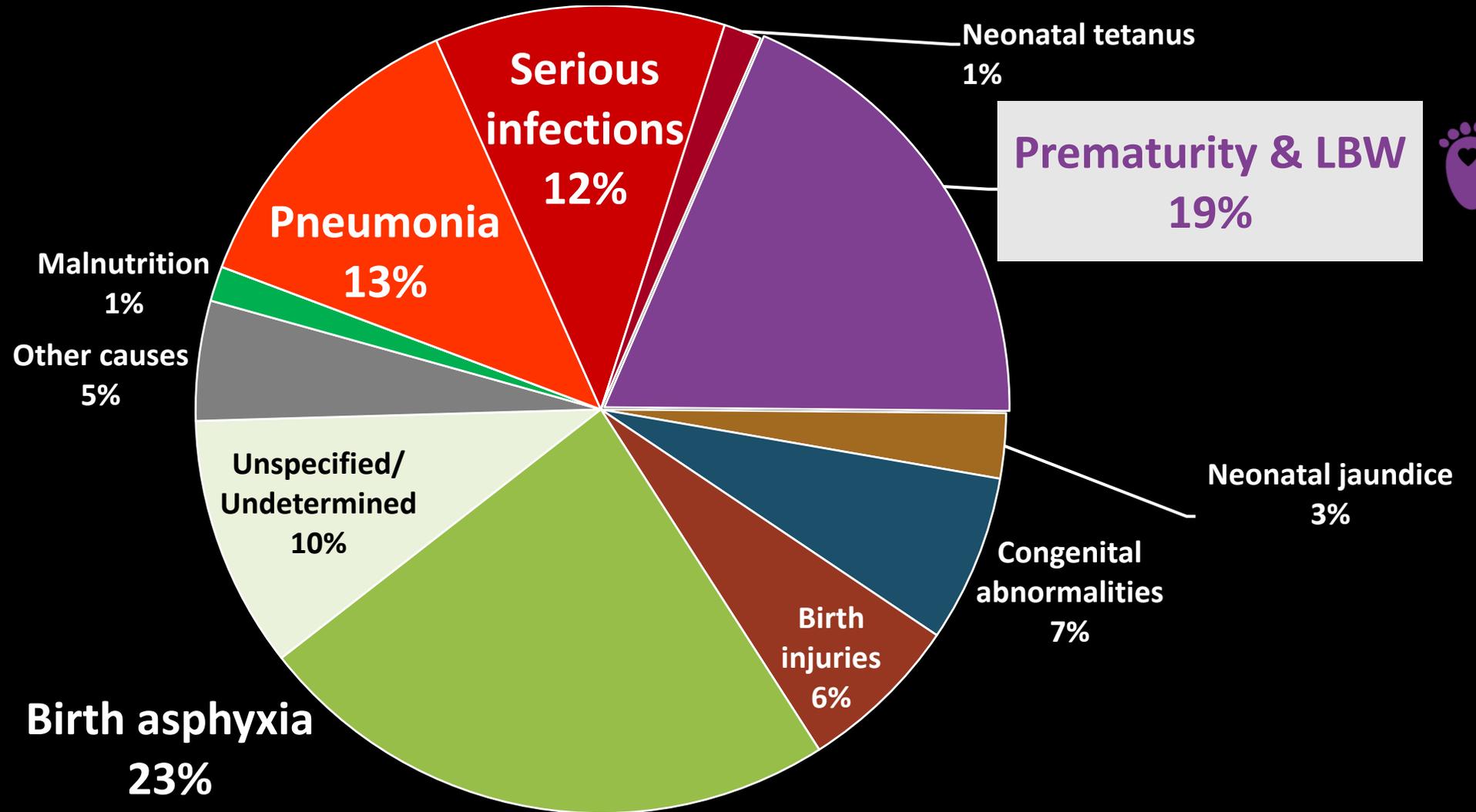
What is the contribution of prematurity & LBW in neonatal deaths in Bangladesh?



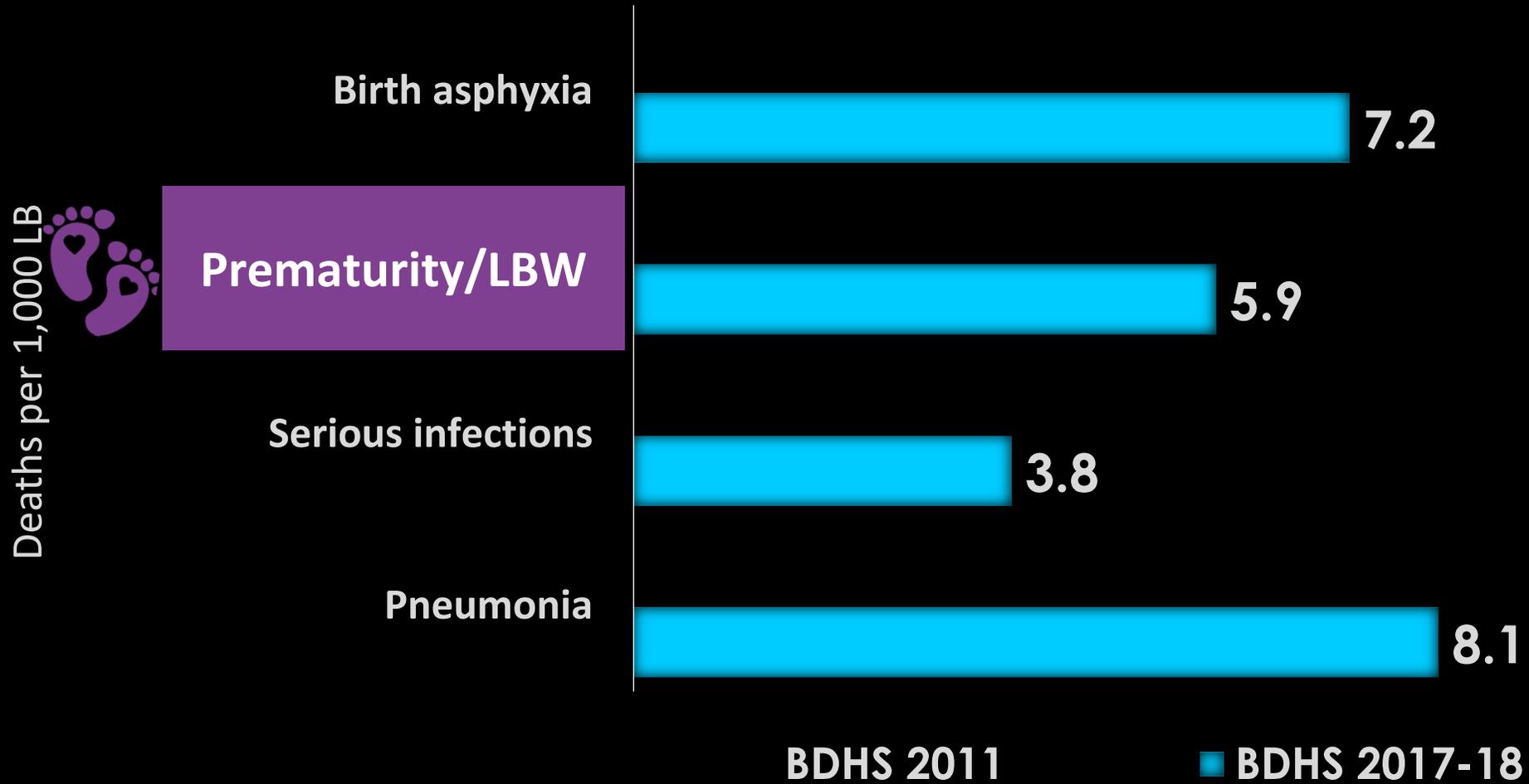
# U-5 Mortality in Bangladesh: causes of deaths by percent distribution



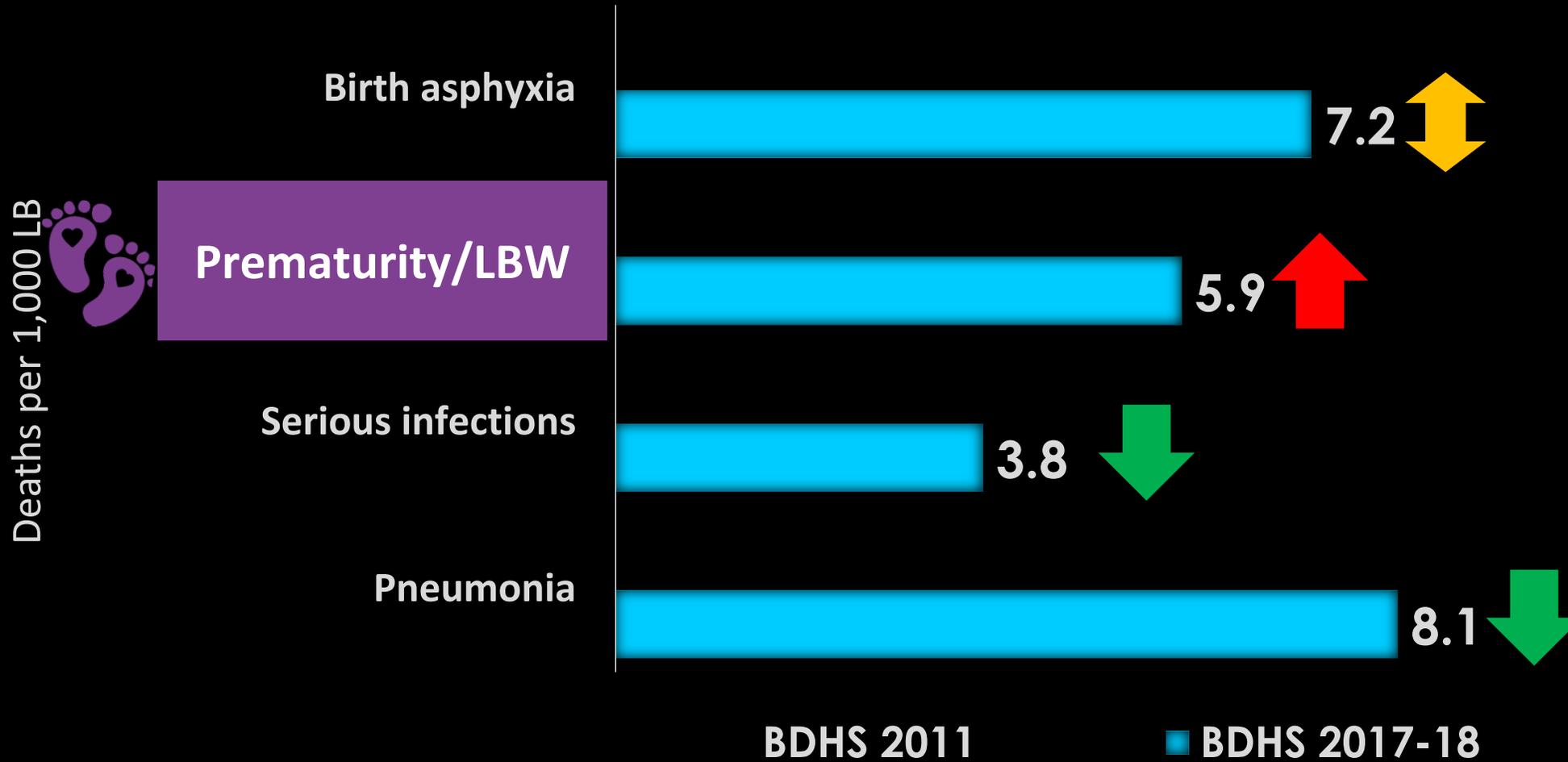
# Newborn Mortality in Bangladesh: causes of deaths by percent distribution



## Mortality due to prematurity/LBW in Bangladesh: cause specific mortality rates



# Mortality due to prematurity/LBW in Bangladesh: cause specific mortality rates



# Prematurity & LBW



17,100

deaths per year

What numbers should we keep in mind?



Prematurity:

**573,000** births per year

LBW <2500 gm :

**834,000** births per year

LBW <2000 gm :

**192,000** births per year

**17,100**  
deaths per year

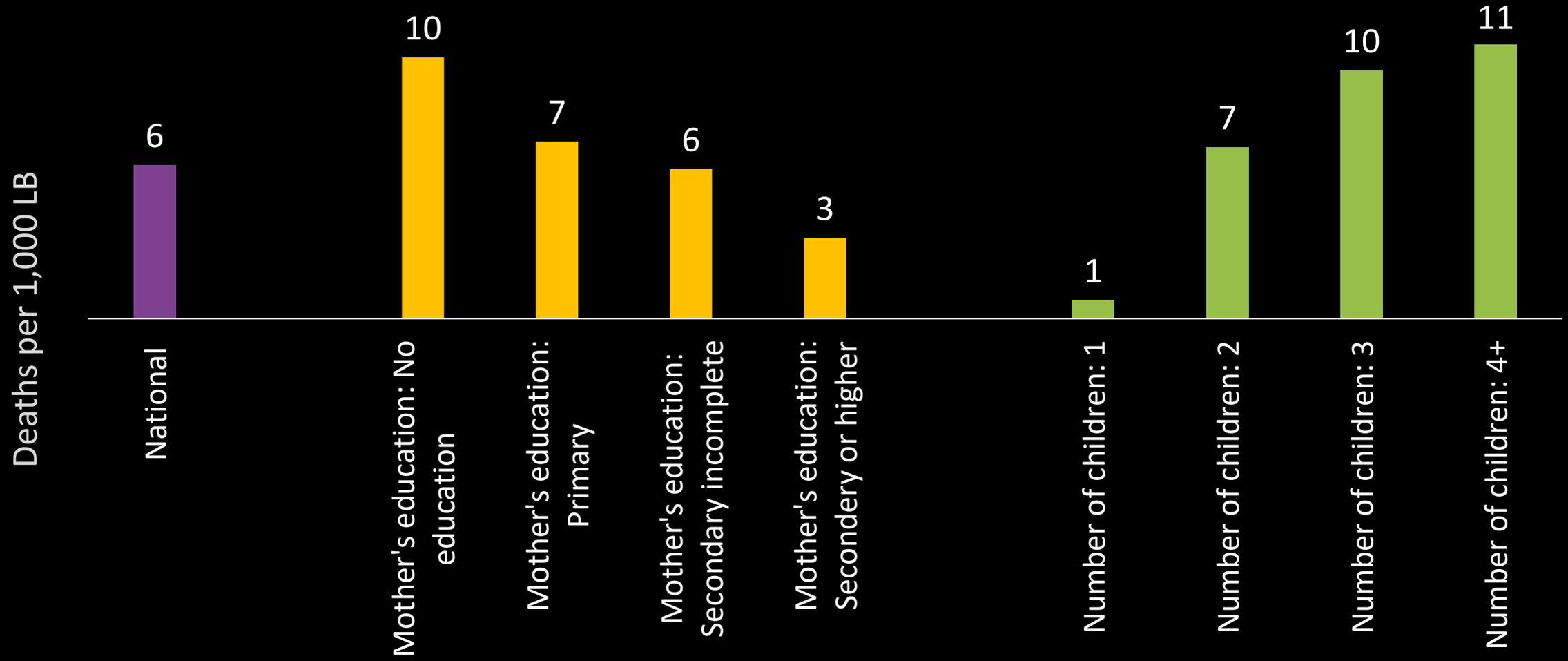
# What are the determinants?

17,100

deaths per year



## Prematurity/LBW: determinants of mortality



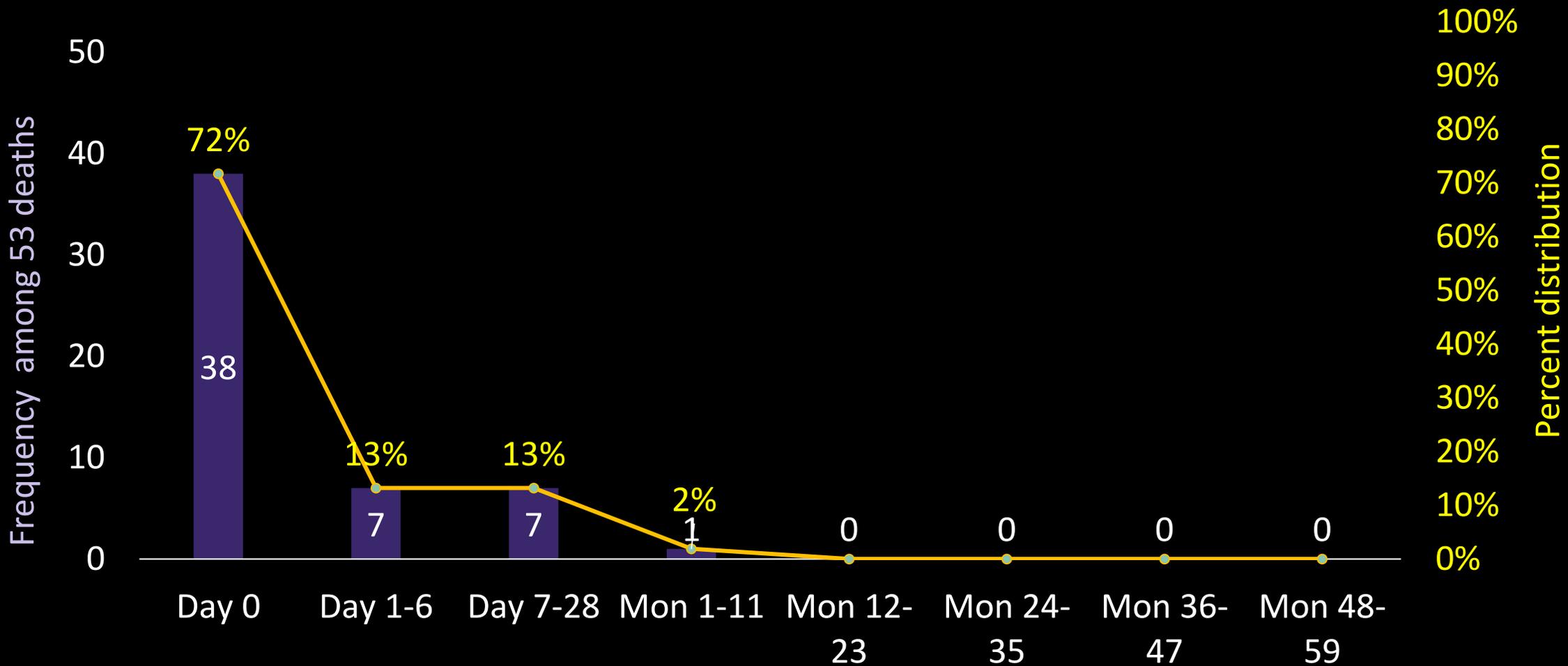
# When do they die?

17,100

deaths per year



# Prematurity/LBW Mortality in Bangladesh: timing of deaths



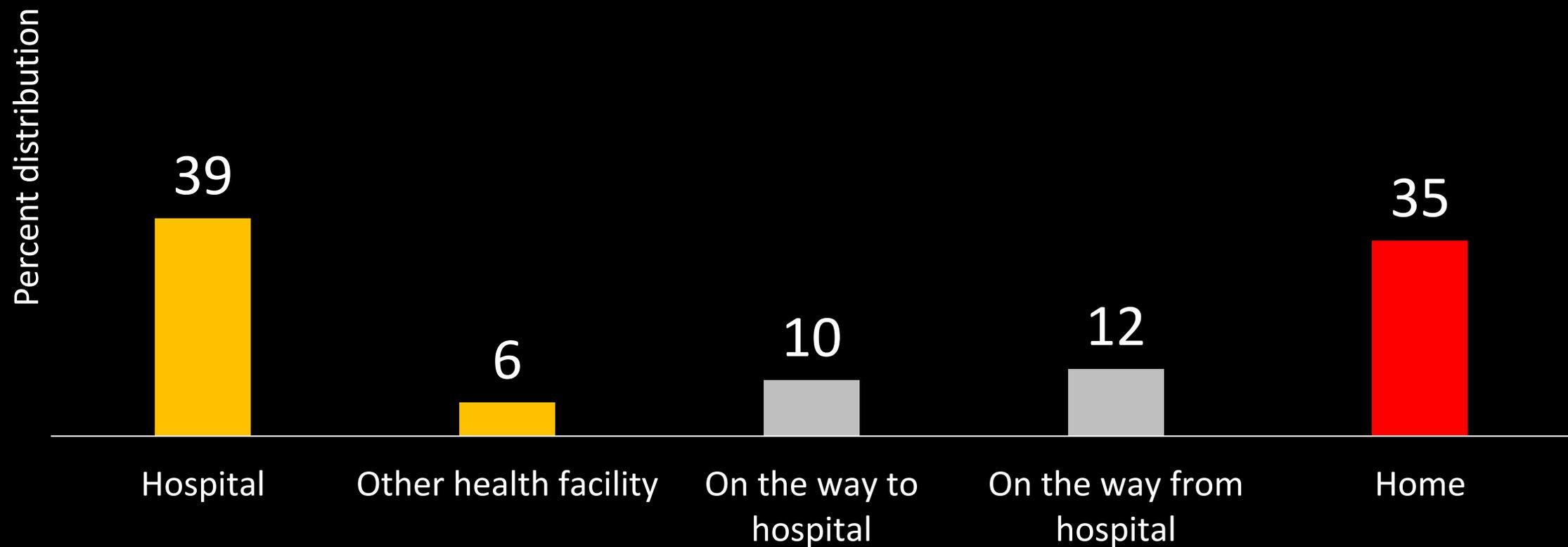
# Where do they die?

17,100

deaths per year



## Prematurity/LBW Mortality in Bangladesh: places of deaths



BDHS 2017-18

Did they seek care?

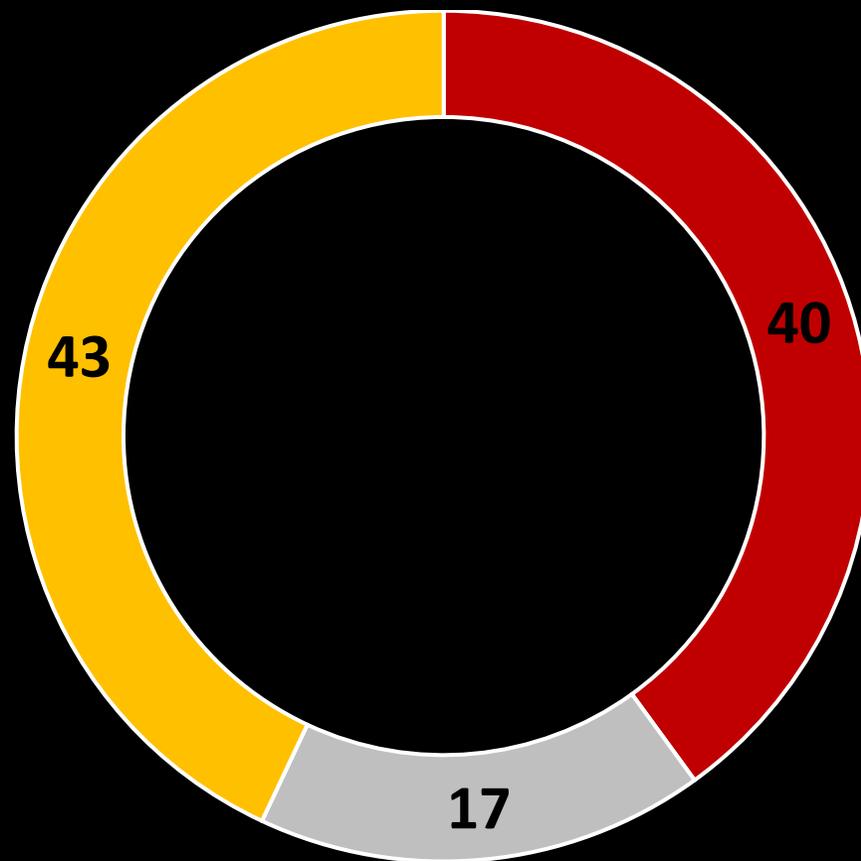
17,100

deaths per year



# Prematurity/LBW Mortality in Bangladesh: care seeking before deaths

Percent distribution



- No Care Seeking and Home Death
- Care Seeking and Home Death
- Care Seeking and Facility Death

Did they receive  
the required care?

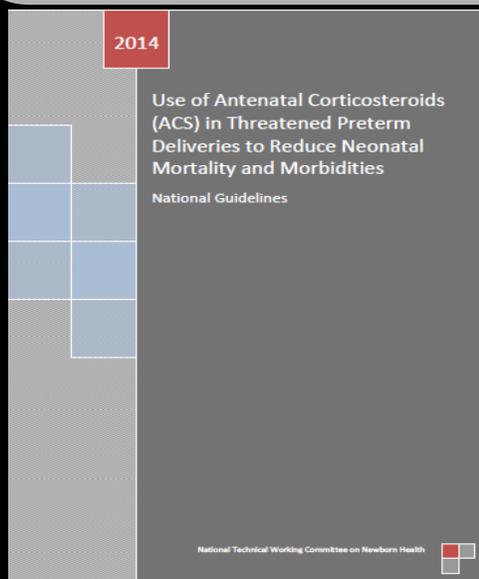
17,100

deaths per year



# Major interventions for prematurity/LBW

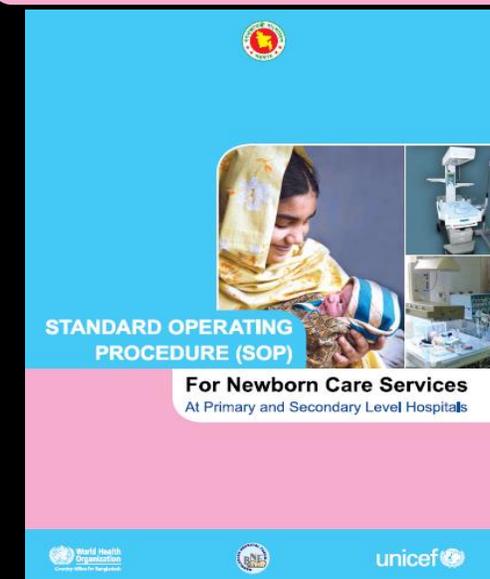
## Antenatal Corticosteroid (ACS)



## Kangaroo Mother Care (KMC)



## SCANU



# Major interventions for prematurity/LBW: coverage among deaths

# of verbal autopsy = 53

Antenatal  
Corticosteroid (ACS)

0

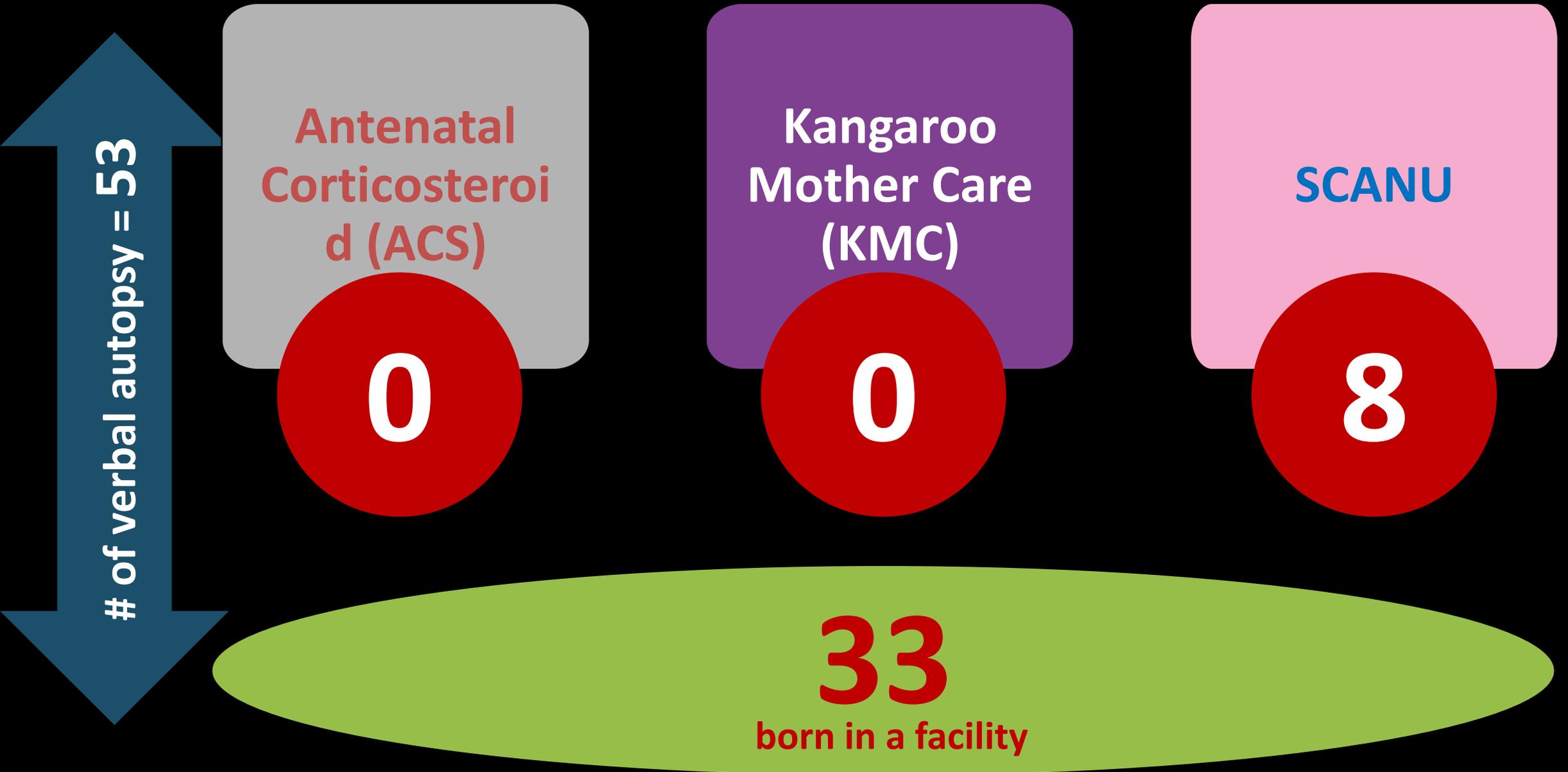
Kangaroo  
Mother Care  
(KMC)

0

SCANU

8

# Major interventions for prematurity/LBW: coverage among deaths



# Major interventions for prematurity/LBW: coverage among deaths



## Kangaroo Mother Care (KMC)

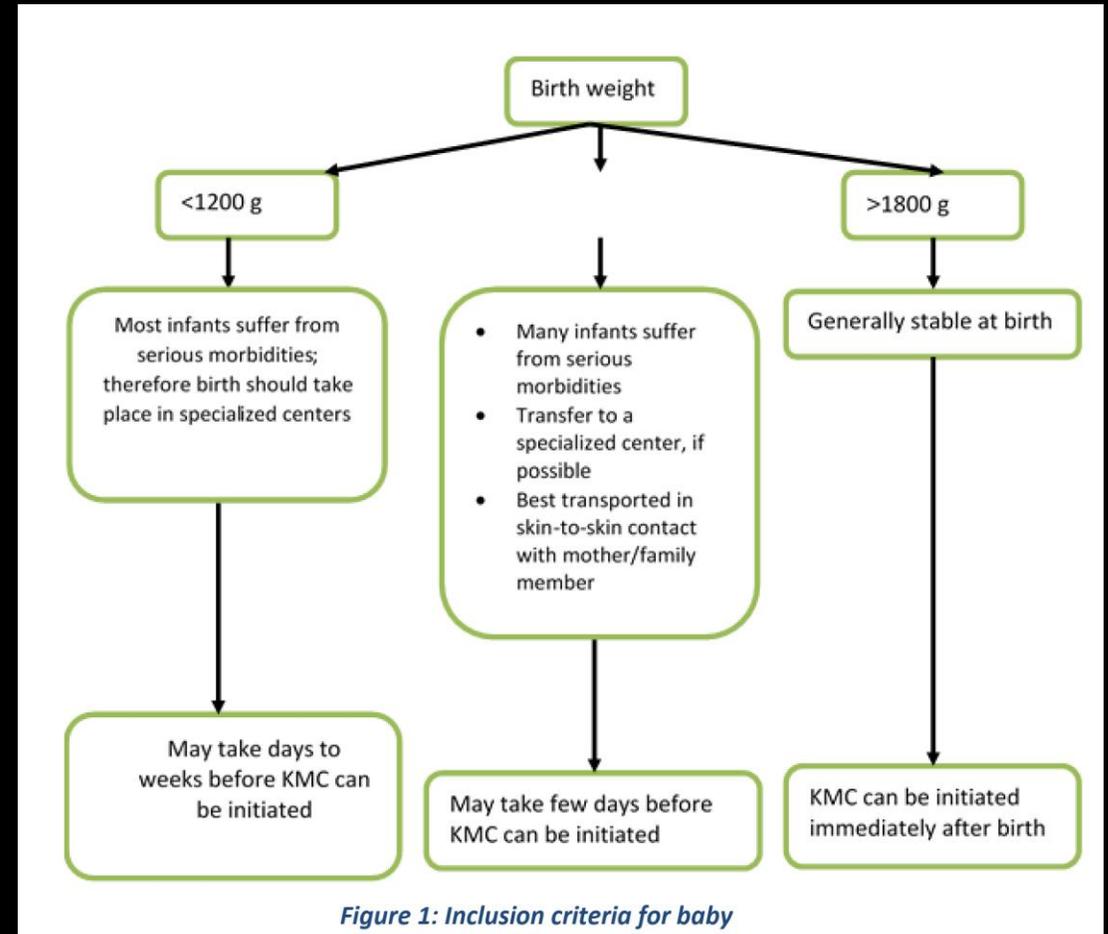


Figure 1: Inclusion criteria for baby

What is the current status  
services in Bangladesh?

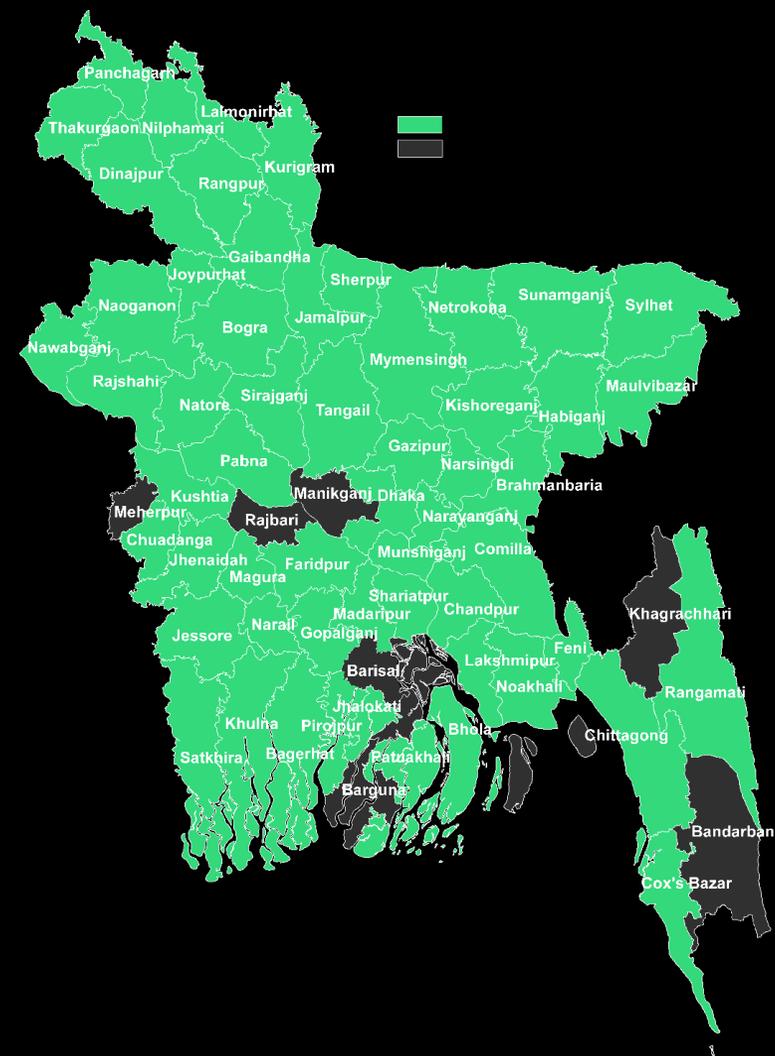
17,100

deaths per year



## KMC in Bangladesh: availability of KMC corners

	DGHS	DGFP	Private	Total
Govt. Medical College Hospital	13			13
District Hospital	47			47
Upazila Health Complex	128			128
Specialized hospitals/national institute		4	1	5
<b>Total</b>	<b>188</b>	<b>4</b>	<b>1</b>	<b>193</b>



## KMC in Bangladesh: availability of KMC corners and utilization of services

	DGHS	DGFP	Private	Total
Govt. Medical College Hospital	13			13
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Specialized hospitals/national institute		4	1	5
<b>Total</b>	<b>188</b>	<b>4</b>	<b>1</b>	<b>193</b>



**5740**  
babies  
in 2020

## Burden

Prematurity:

**573,000** births per year

LBW <2500 gm :

**834,000** births per year

LBW <2000 gm :

**192,000** births per year

## Coverage

1%

<1%

<3%

## Utilization

**5740**

babies  
in 2020

What are the bottlenecks  
to receiving KMC?

17,100

deaths per year



# KMC in Bangladesh: utilization gaps in 2020

Number of Babies

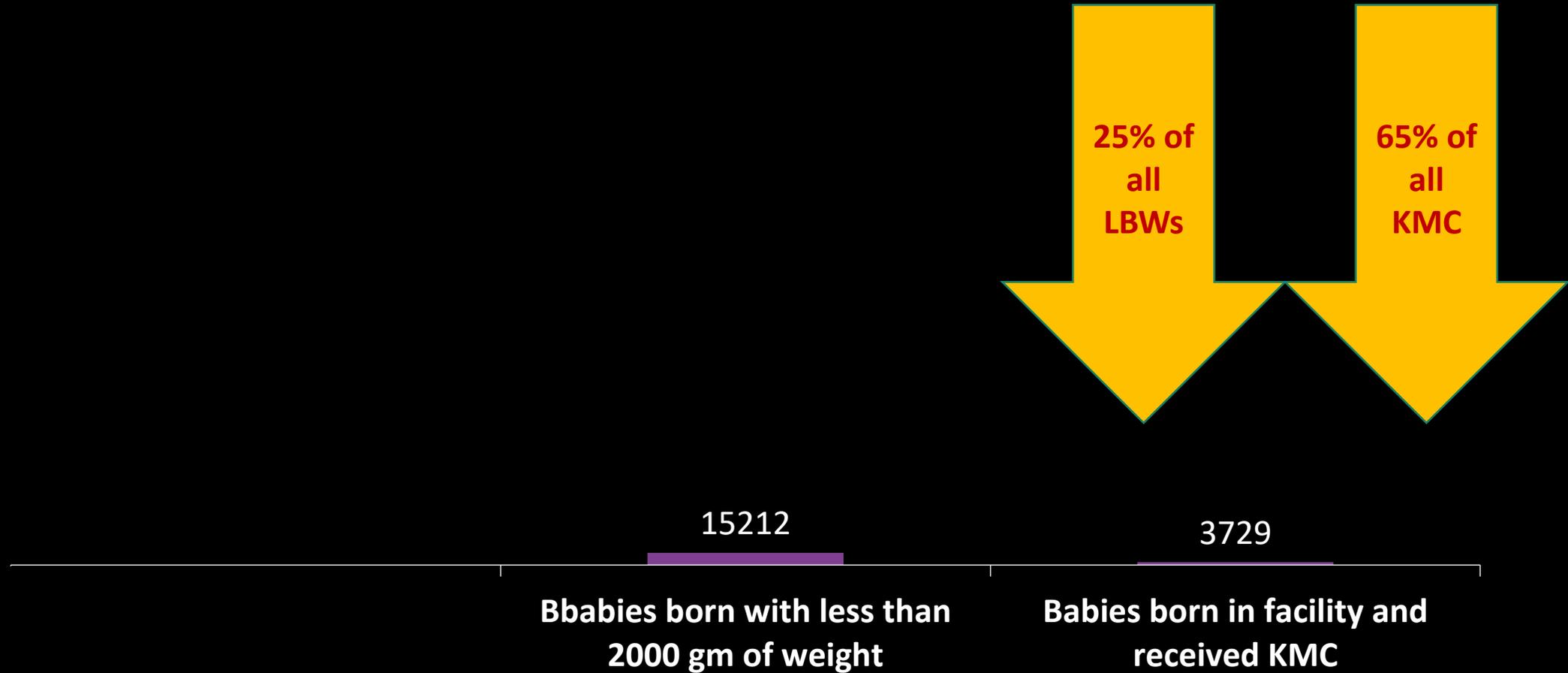


3729

Babies born in facility and  
received KMC

# KMC in Bangladesh: utilization gaps in 2020

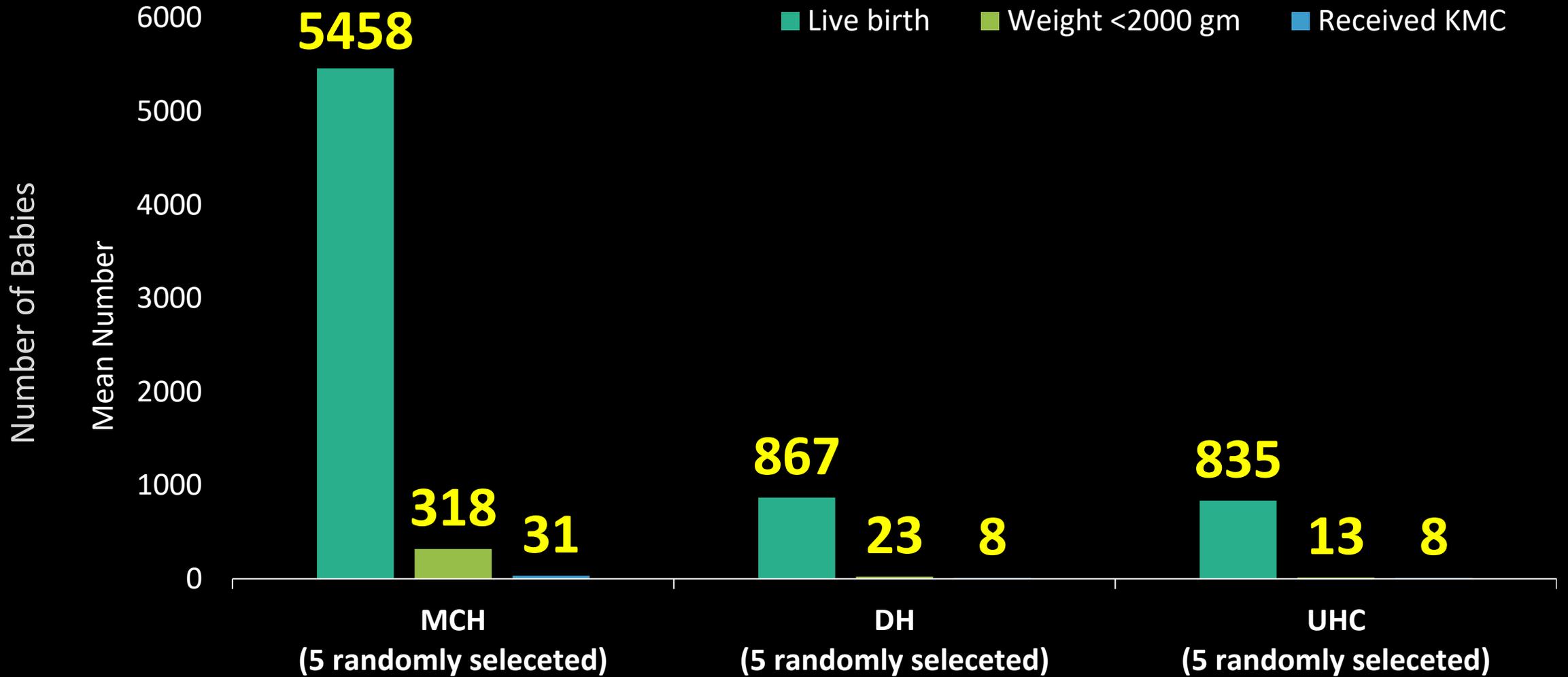
Number of Babies



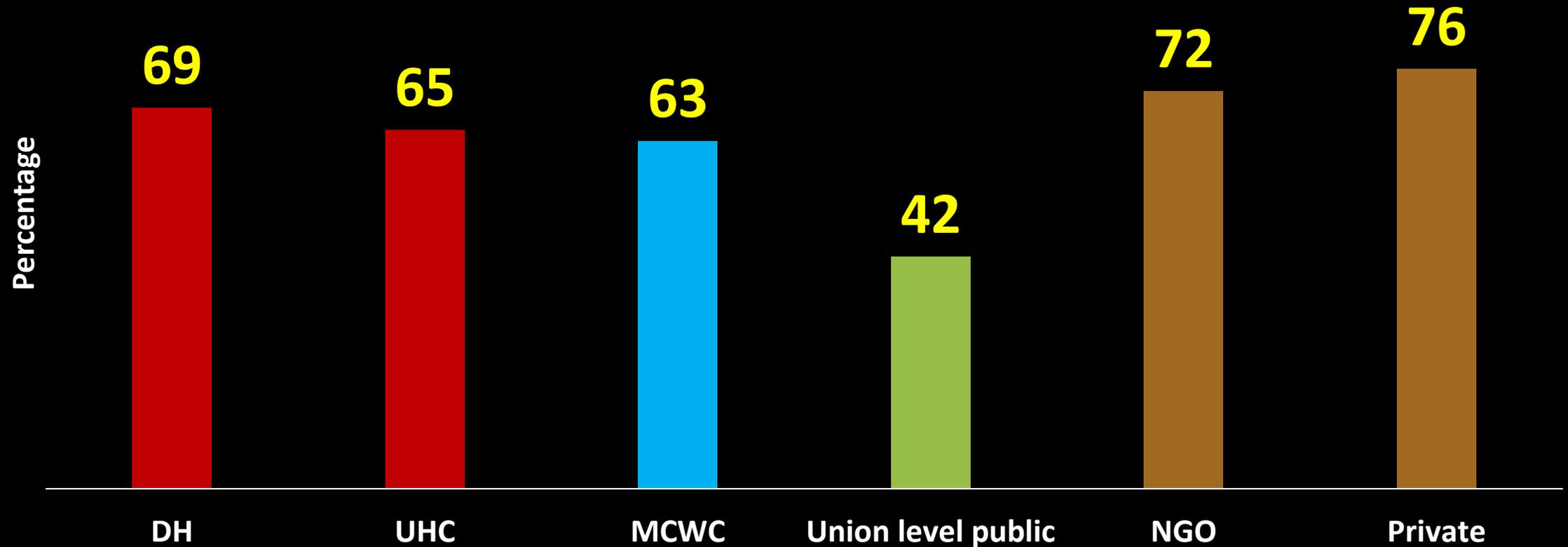
# KMC in Bangladesh: utilization gaps in 2020



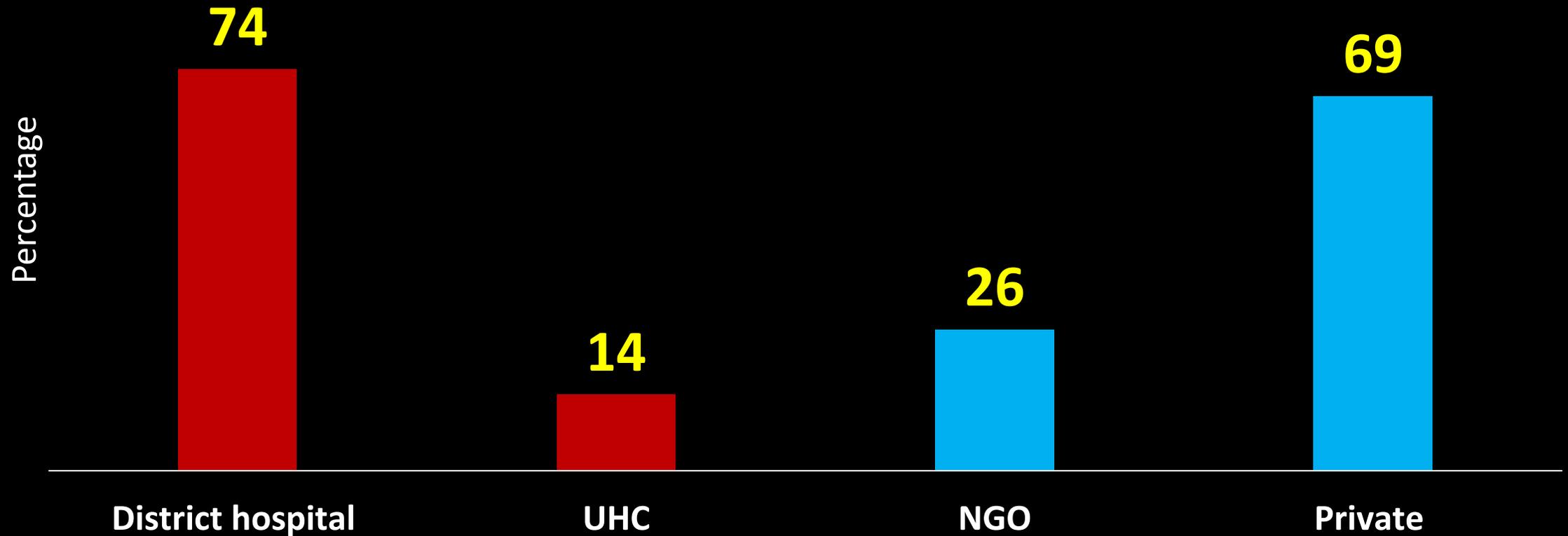
# KMC in Bangladesh: utilization gaps in 2020



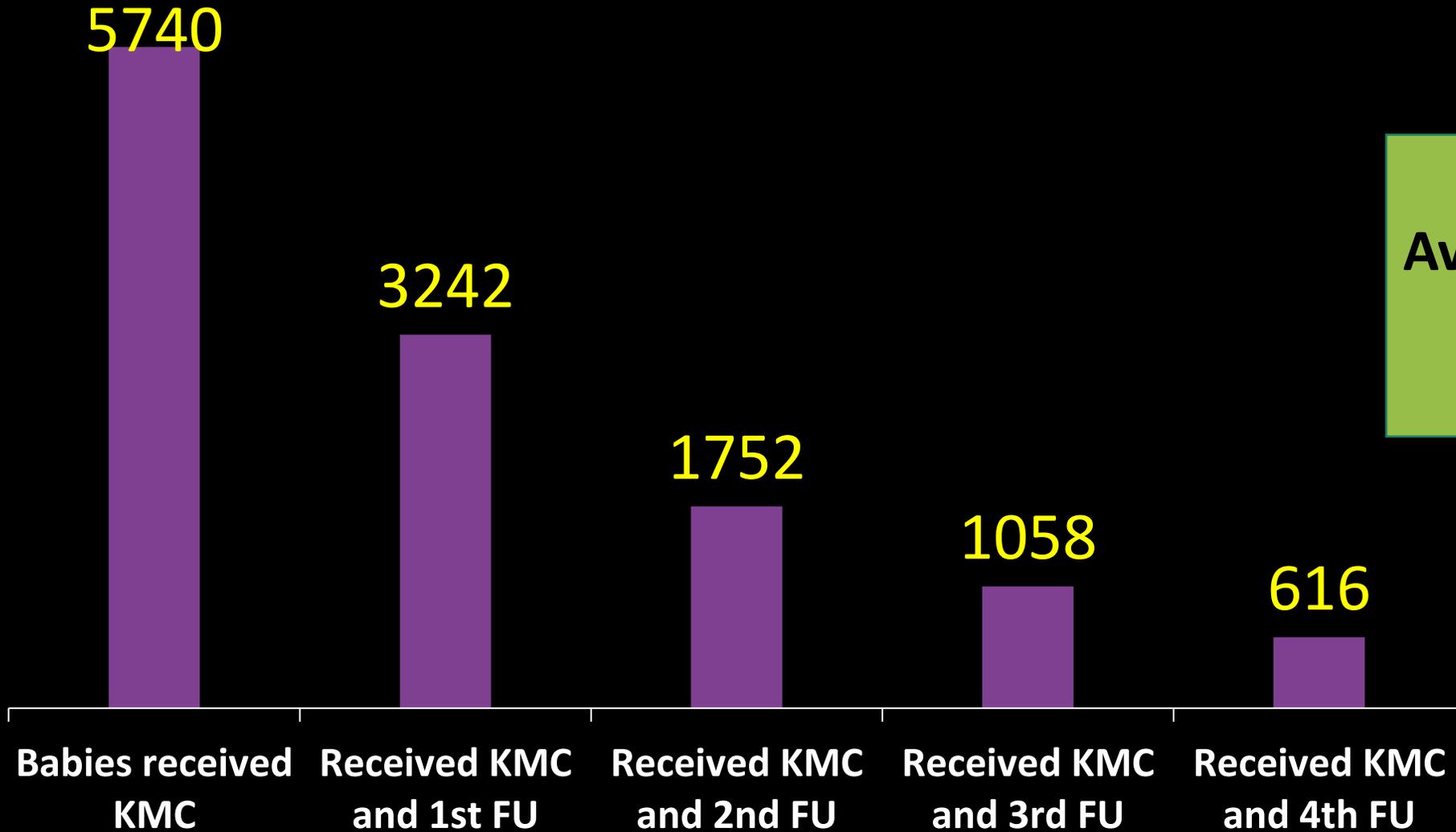
## Birth Weighing Practice: availability of infant weighing scale by facility types



## Gestational age assessment practice: availability of USG by facility types



## KMC in Bangladesh: quality of care



Average duration  
of stay:

**~3  
days**

# What do we need to do?

17,100

deaths per year



# Major interventions for prematurity/LBW

## Antenatal Corticosteroid (ACS)

- GA assessment

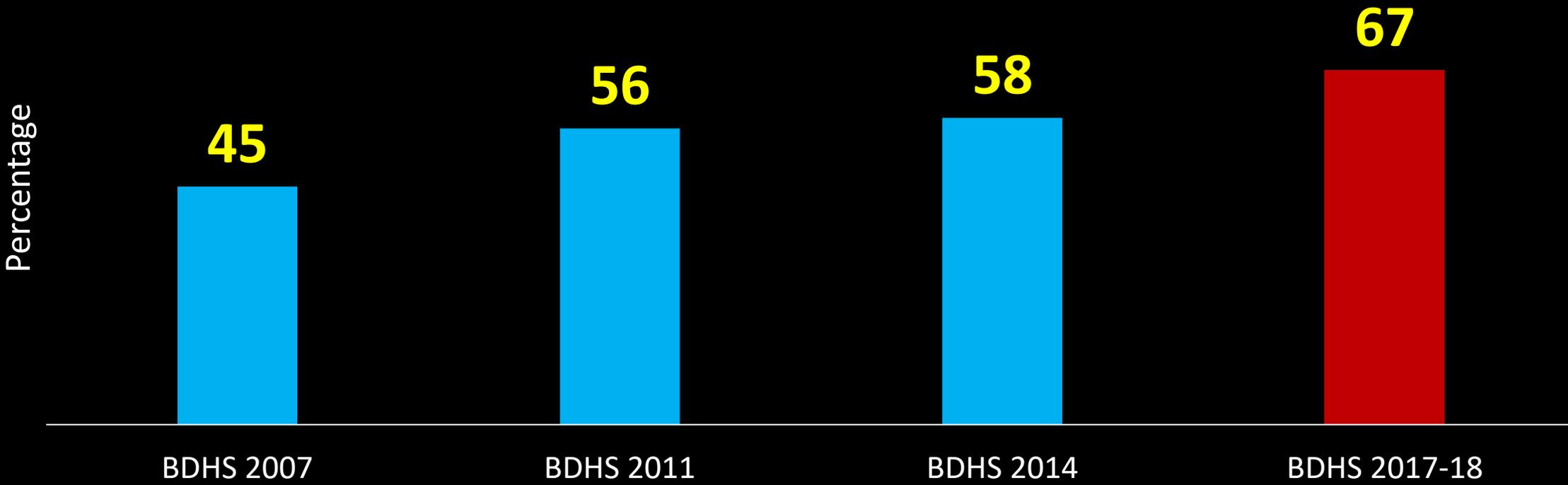
## Kangaroo Mother Care (KMC)

- BW measurement
- KMC awareness
- Number of KMC facility
- Quality of Care for KMC

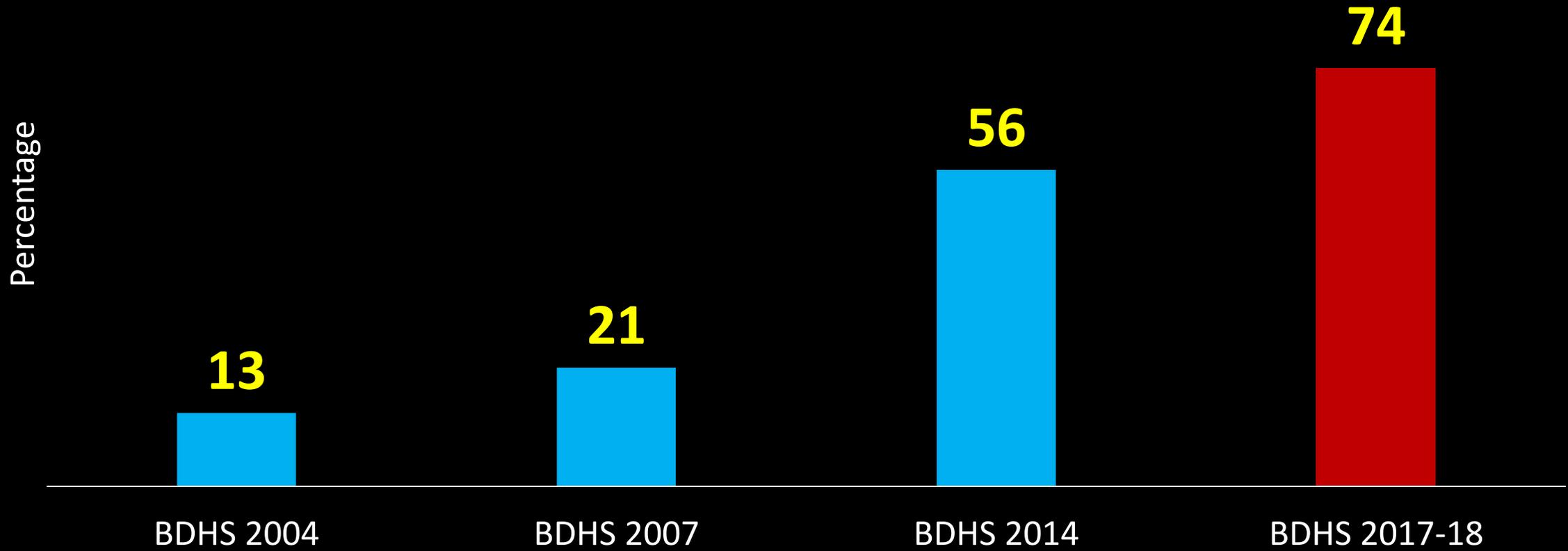
## SCANU

- Coordination and continuation of care

**Birth Weighing Practice:  
coverage among all LB**



# Gestational age assessment practice: USG coverage among all LB



# Innovations that can be tried

KMC Thermal Jacket



ThermoSpot



Colour	Temperature range	Manufacturer instructions
	> 36.5 °C	Body temperature in 'safe zone'
	35.5-36.4 °C	Seek advice if the 'smiling face' begins to fade or reverts to black
	< 35.5 °C	Seek advice if the 'smiling face' begins to fade or reverts to black

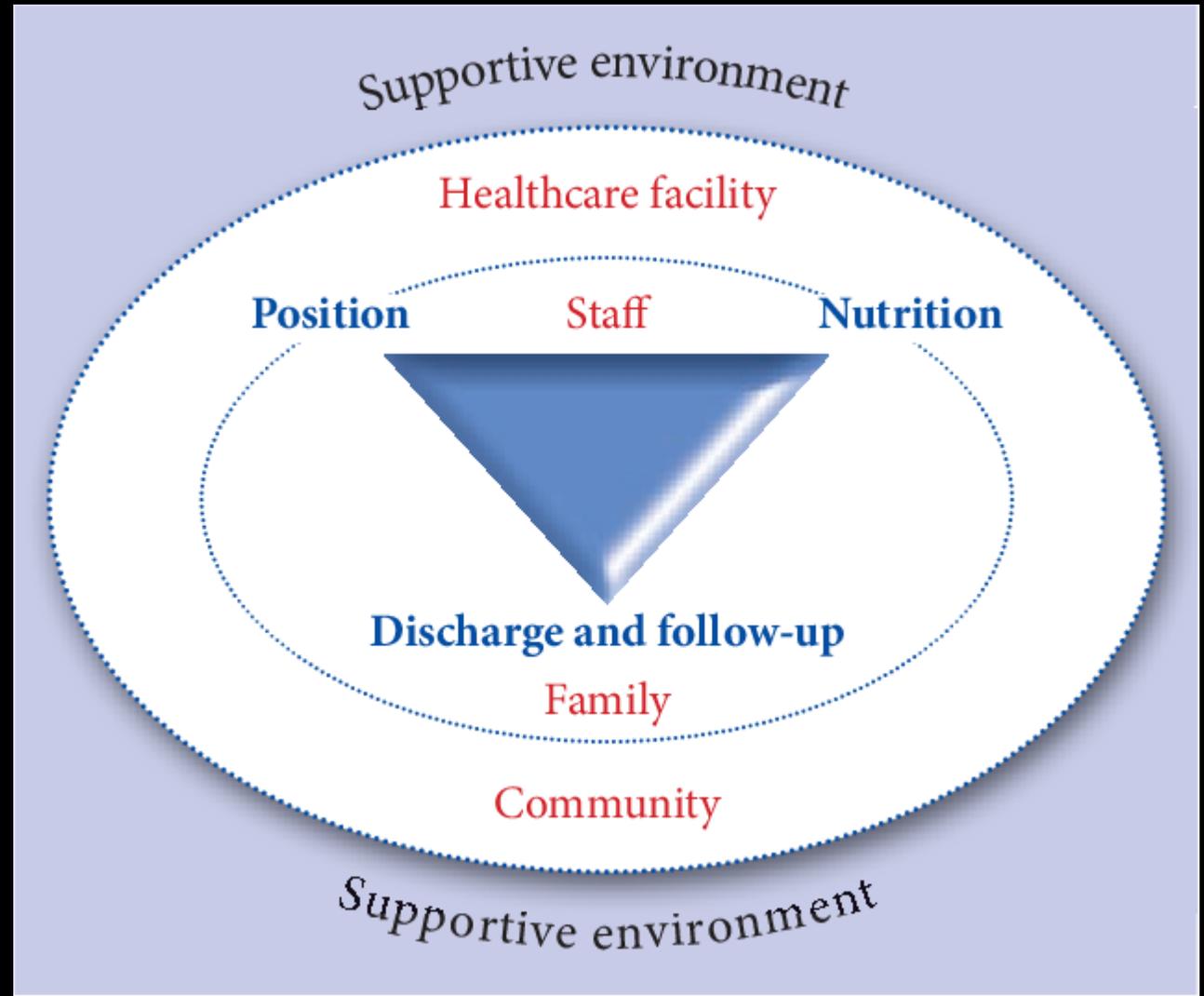


KMC  
**Easy &**  
**Low-Cost**  
Intervention



## key features of KMC

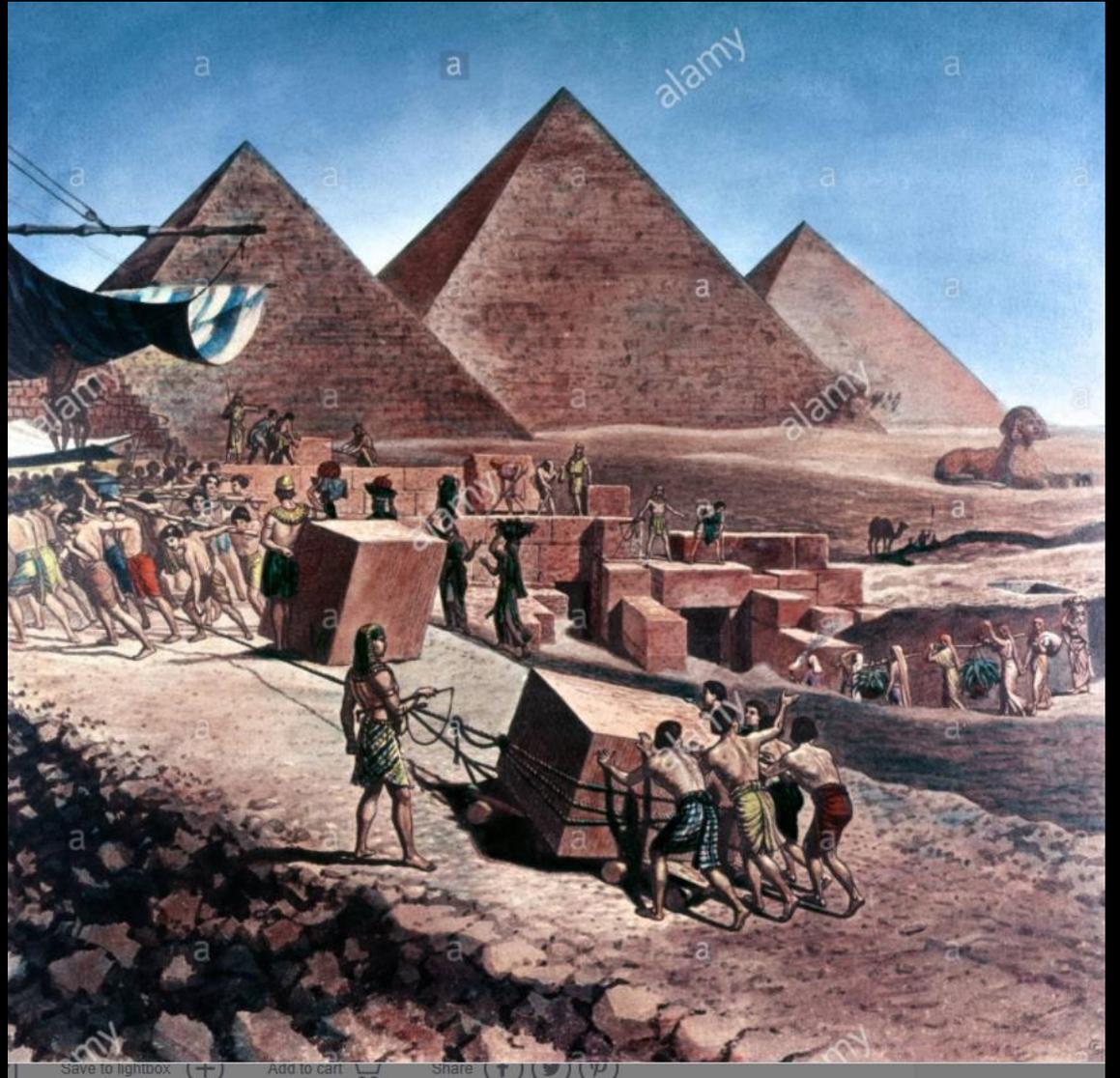
- Early, continuous (>20 hours a day) and prolonged skin-to-skin contact between the mother/care givers and the newborn;
- Exclusive breastfeeding
- Early discharge
- Continuation at home
- Adequate support for mothers and family at facility and home;
- Follow-up at home.





KMC

**NOT Easy &**  
**NOT Low-Cost**  
Intervention



It is time to  
**change** our  
**mindset**

