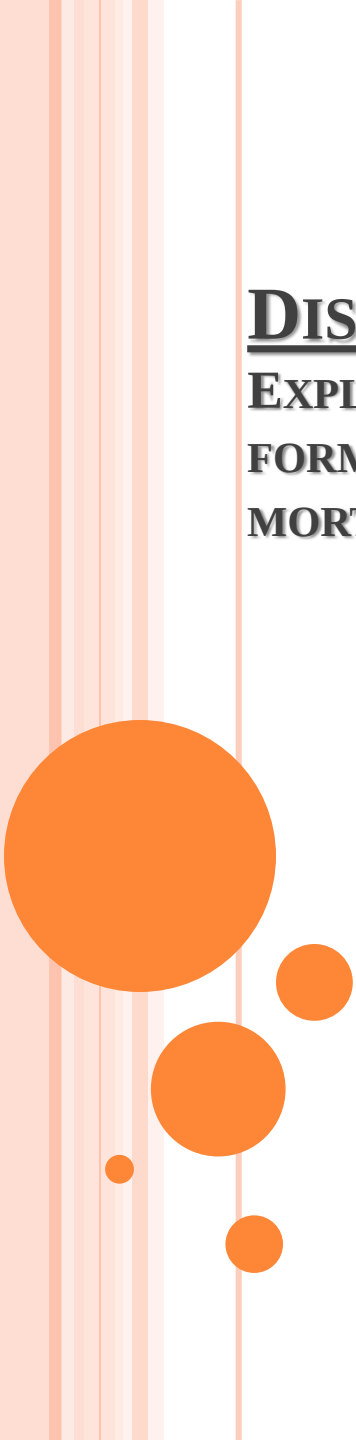




DISSERTATION TOPIC

**EXPLORATION OF VARIOUS ASPECTS TO COMPLEMENT THE
FORMULATION OF THE ROAD MAP FOR REDUCING NEWBORN
MORTALITY**

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**MBA HUMAN RESOURCE MANAGEMENT IN
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BACKGROUND

- Globally around 3.1 million babies per year die in the first 4 weeks of life. 30 percent of the Global neonatal deaths occur in India and little progress has been made reducing in the last one and half decade.

Globally major causes of neonatal deaths are due to preterm births (28%), sepsis or pneumonia (26%) and birth asphyxia (23%). Neonatal sepsis is one of the commonest causes of neonatal deaths in the developing world accounting to 30-50% of all neonatal deaths per year.

- In Madhya Pradesh, the total number of NMR (Neonatal Mortality Rate) is 39 in rural areas and 23 in urban areas according to NITI Aayog (National Institute for Transforming Data).



PROBLEM STATEMENT

- Madhya Pradesh needs to explore the various aspects which will complement the formulation of the road map for reducing newborn mortality through SNCU which, in turn, aid to achieve MDG-4 (Millennium Developmental Goal-4).



❖ **Research Question:-**

- ❖ What are the various aspects which will compliment the formulation of the road map for reducing the neonatal mortality rate through SNCU which, in turn, aid to achieve MDG-4 (Millennium Developmental Goal-4)?



OBJECTIVES

- To identify the percentage of neonatal patients coming from other blocks of the districts.
- To draw the comparison of the outborn and inborn cases in the SNCU and bring out the indication of admission of male and female neonates
- To access the average duration stay of male and female neonates and calculate the death percentage of male and female neonates for two years.
- To compare the pattern of diseases in the year 2016-17 and 2015-16 and calculate the disease specific death rate and its comparison between the two year.



METHODOLOGY

- **Research Methodology:**
- Study Design: Descriptive Study as it is describing the various aspects related to neonates admission Diseases, Indication of Death etc
- Study Setting: District Hospital of Madhya Pradesh
- Duration of Study: 90 Days
- Inclusion: (Inborn refers to infants born in that facility)
Exclusion: (Outborn refers to infants transferred to that facility from another facility).



- **Method of Data Collection:**

- Data Collection Procedure: The research is based on Secondary data of SNCU from District Hospital. The data has been extracted out from the HMIS system of the SNCU and the excel sheets are prepared based on the same data.
- Data Analysis Procedure: after the preparation of the excel sheet of the data taken from the HMIS system, quality of the data will be check followed by cleaning of data where, the variables relevant to the objectives will be taken into the account.
- Filtering and sorting of the data has been done in order to bring out the correct numbers related to the values. These values are summarized in the separate excel sheet to draw the graph.
- Data analysis done on the basis of calculating mean and frequency of the variables
- Interpretation of the graph has been done based on the findings of the bar and pi charts.

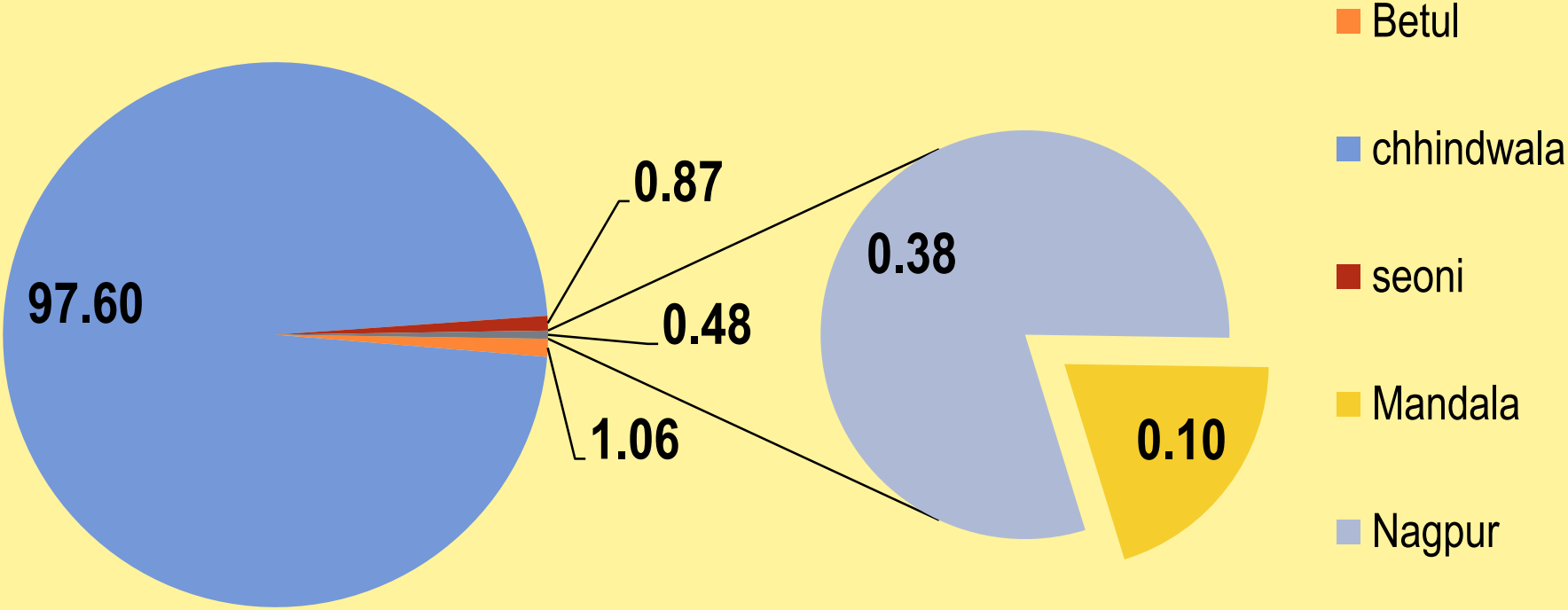


DATA ANALYSIS:

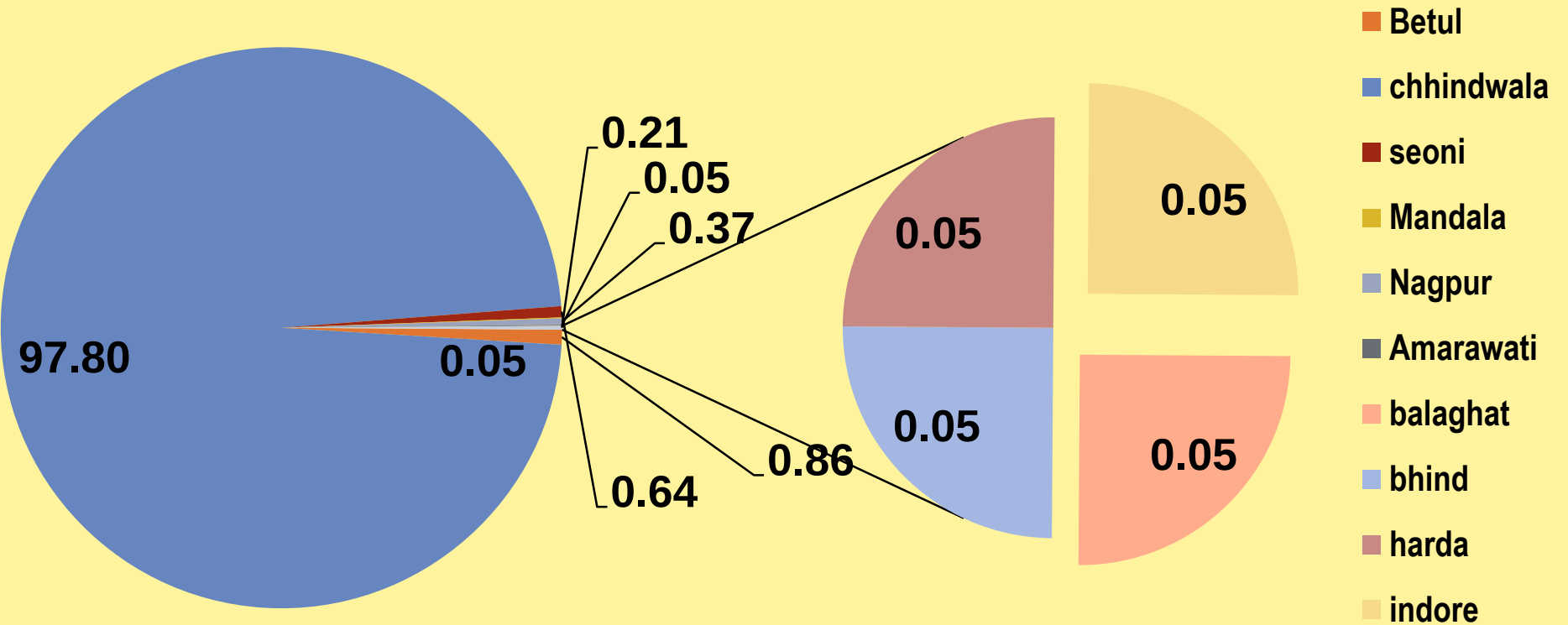


THE PERCENTAGE OF NEONATAL PATIENTS CAME FROM OTHER
BLOCKS OF THE DISTRICTS

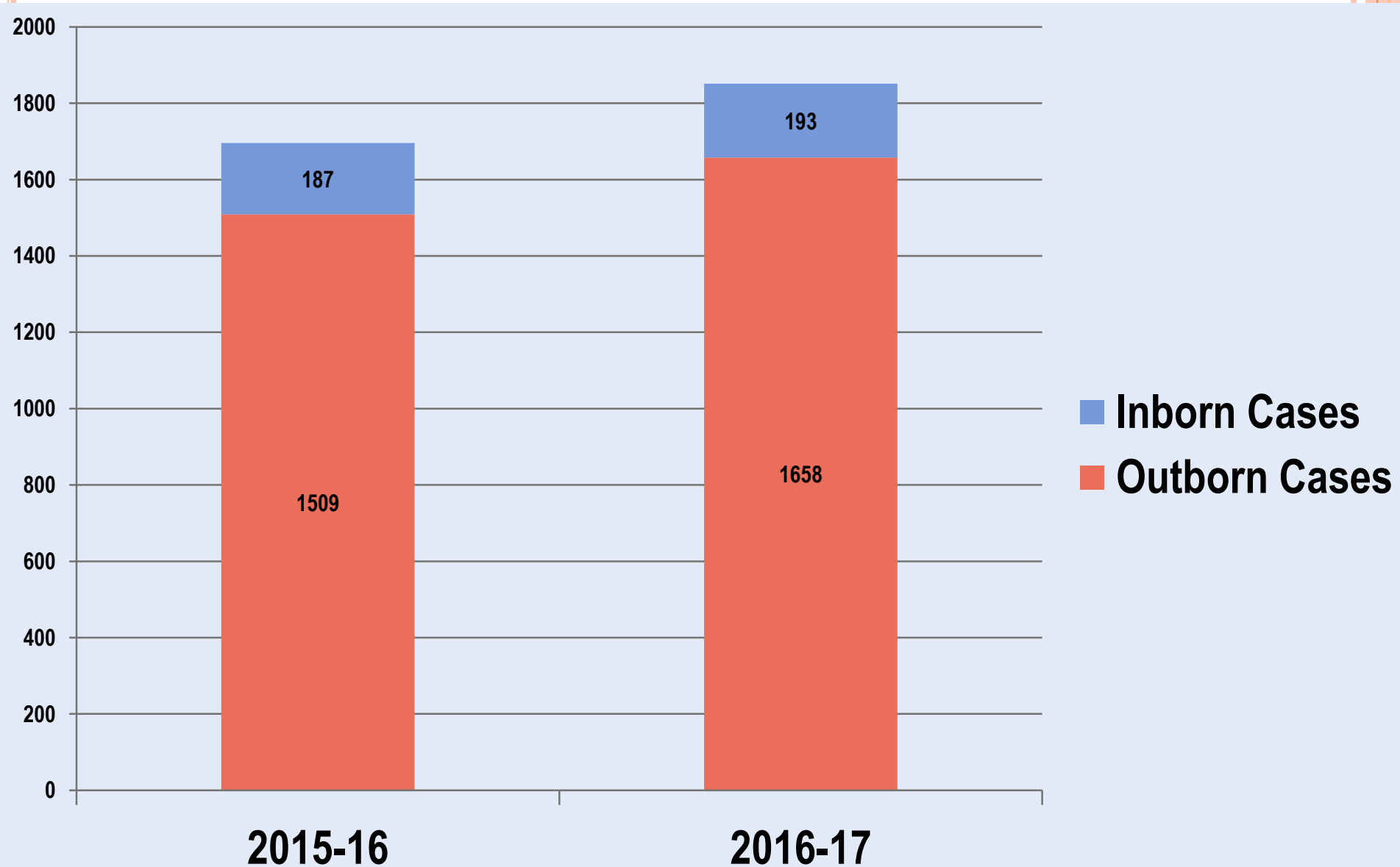
2015-16



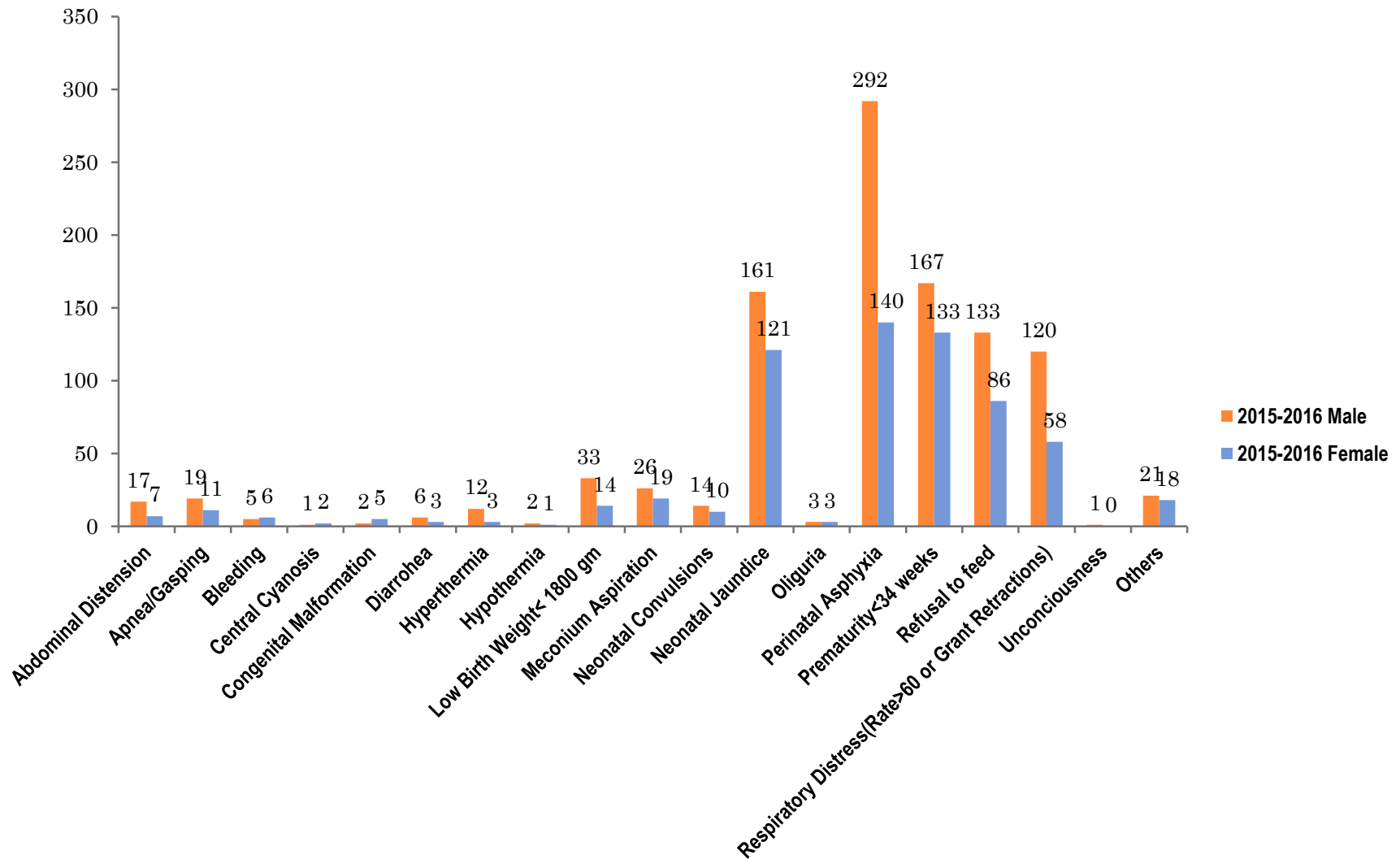
2016-17



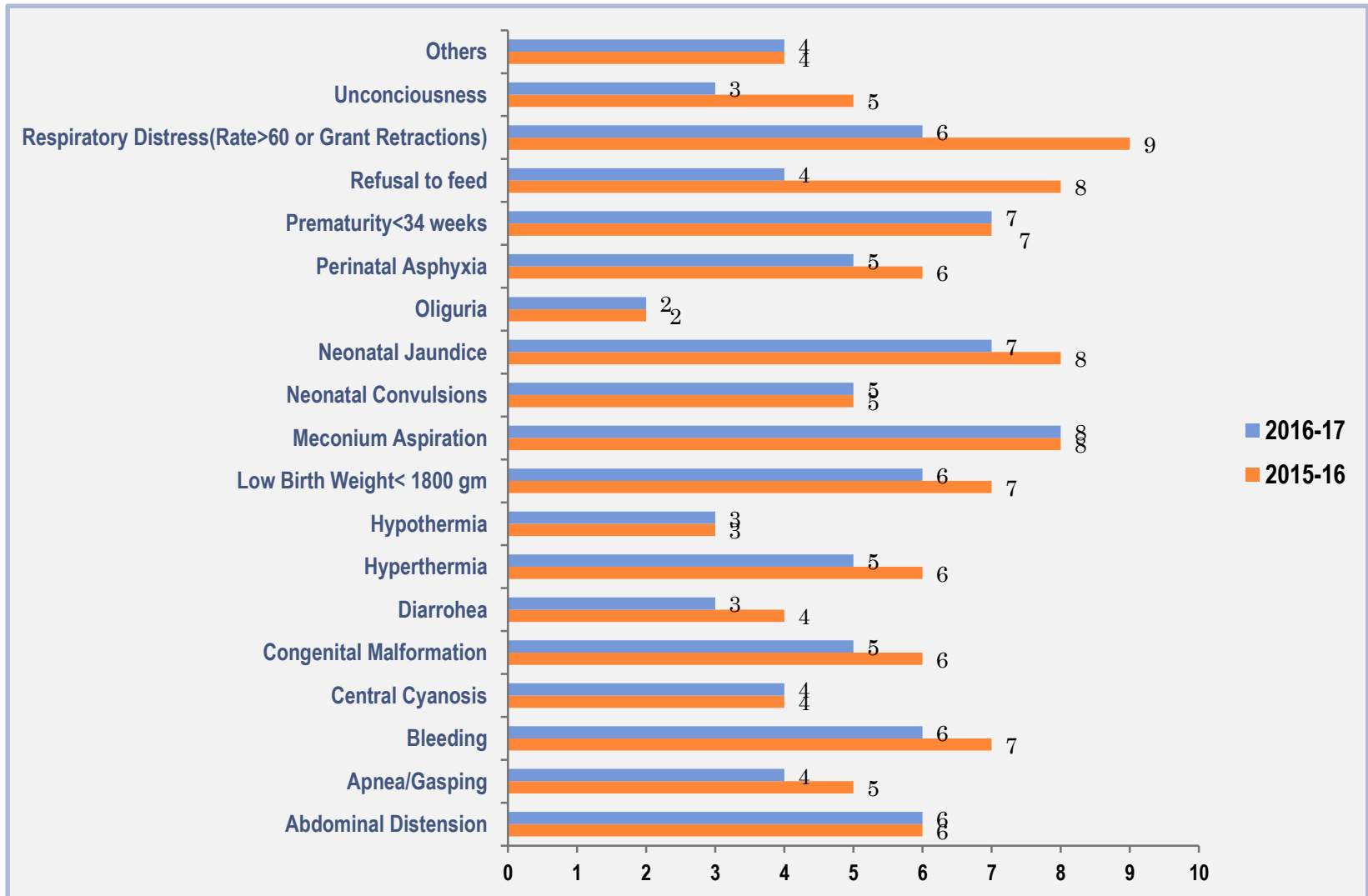
COMPARISON OF THE INBORN AND OUTBORN CASES IN THE SNCU



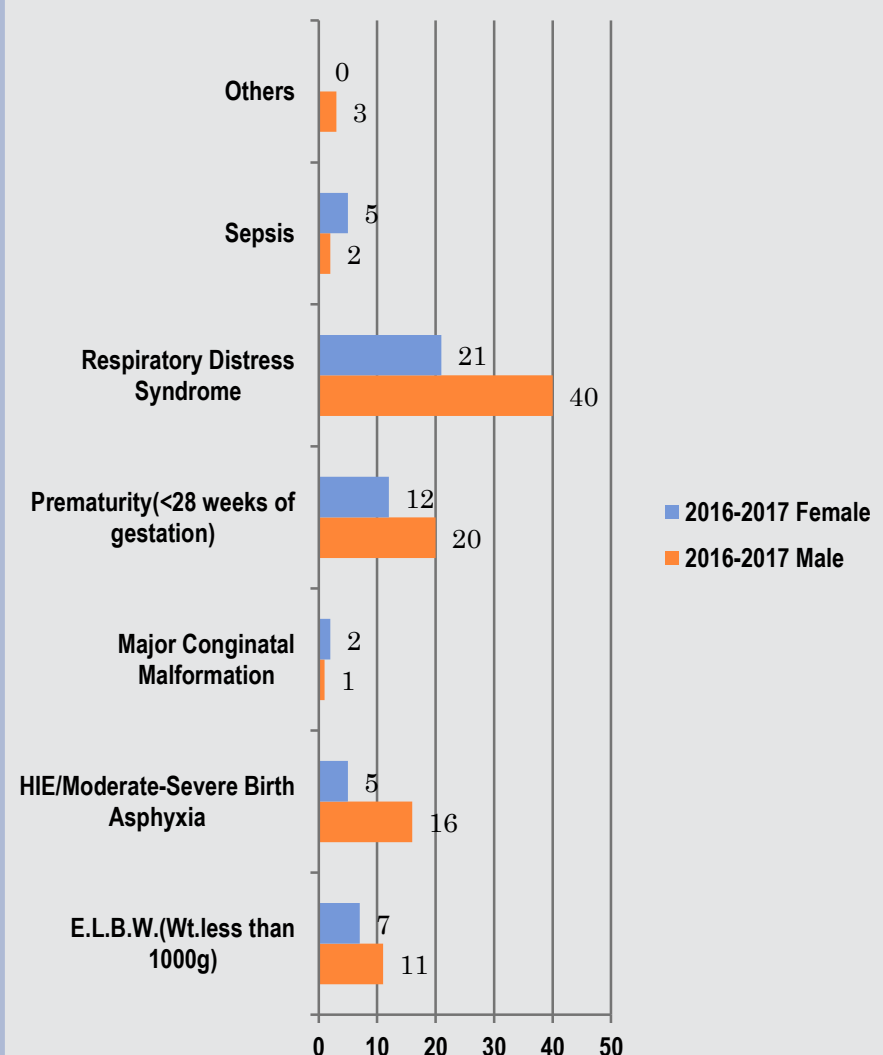
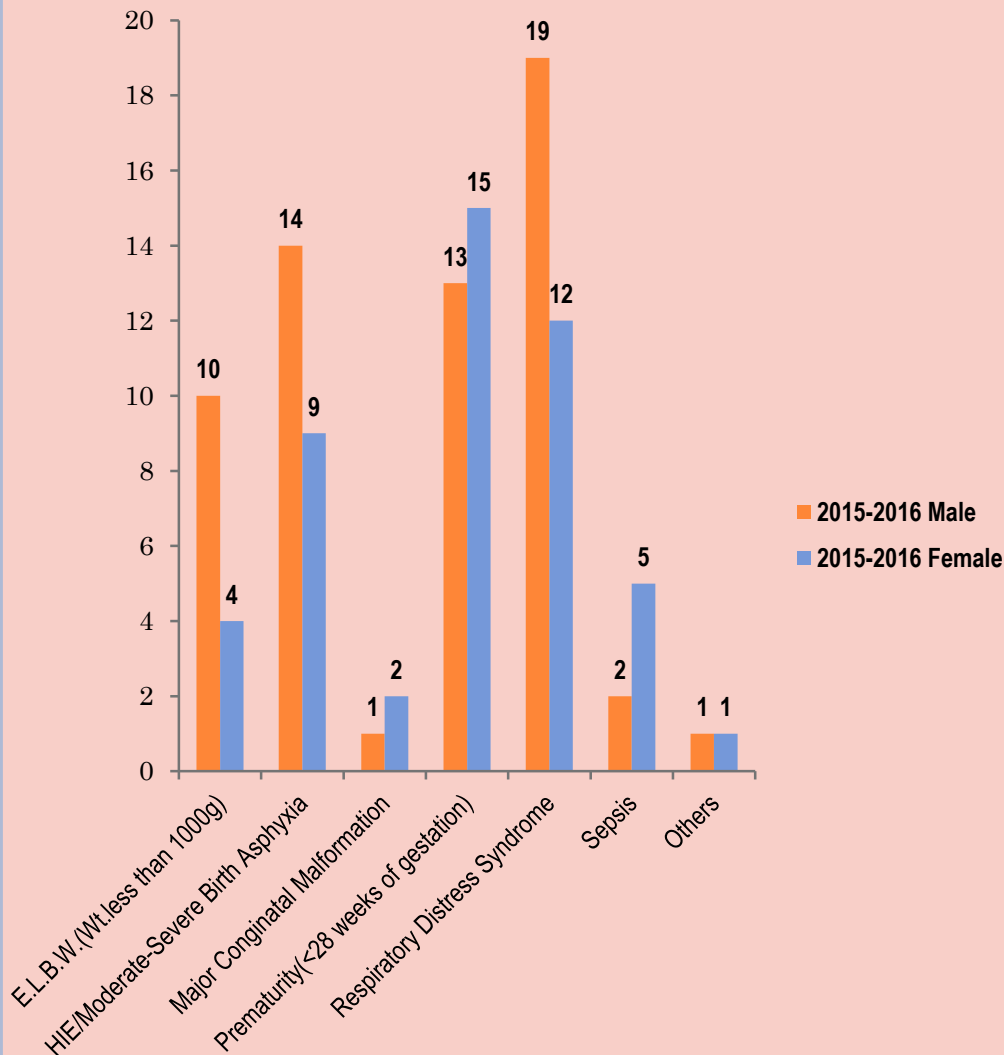
INDICATION OF ADMISSION OF MALE AND FEMALE NEONATES



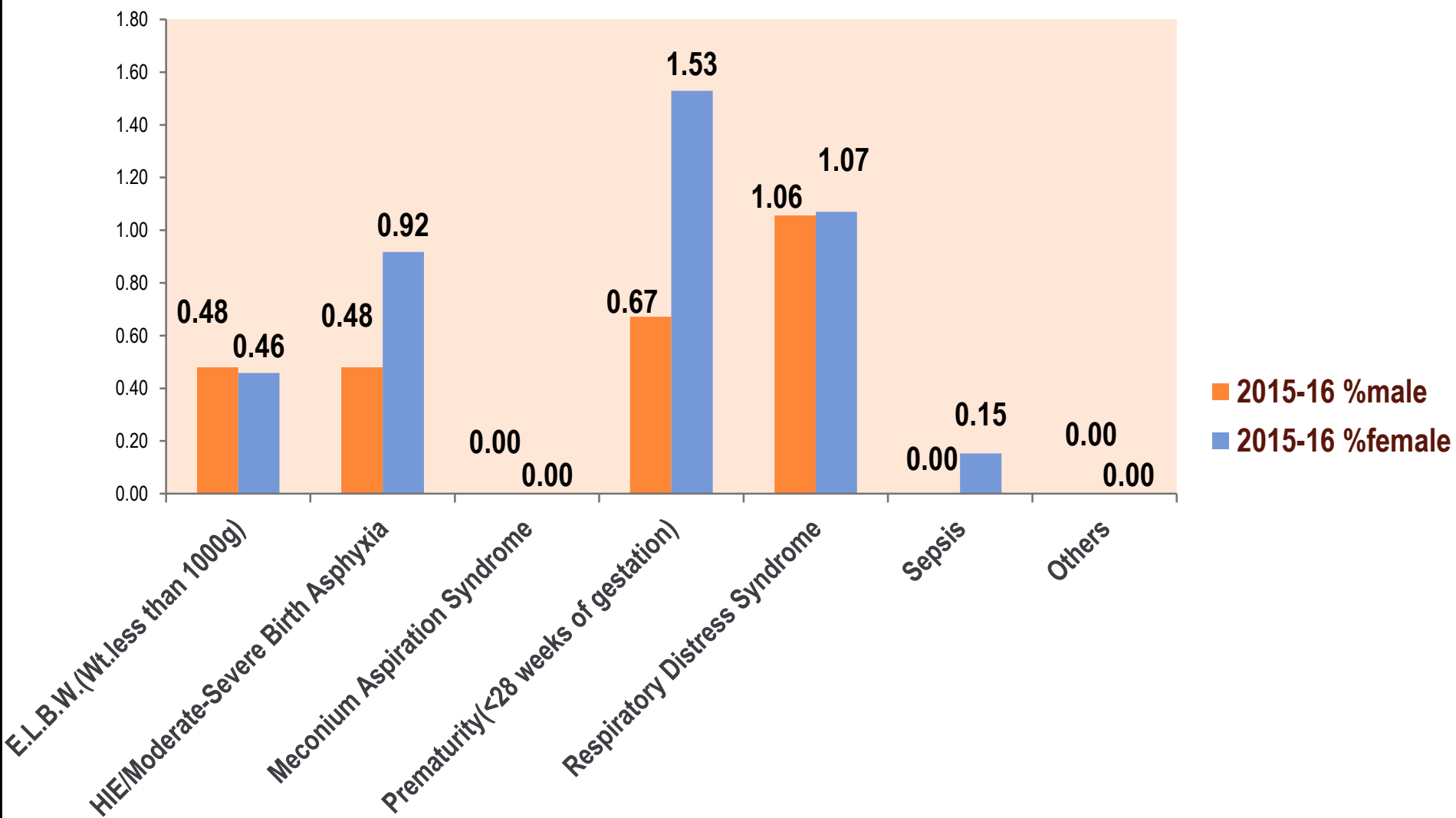
AVERAGE DURATION STAY OF MALE AND FEMALE NEONATES



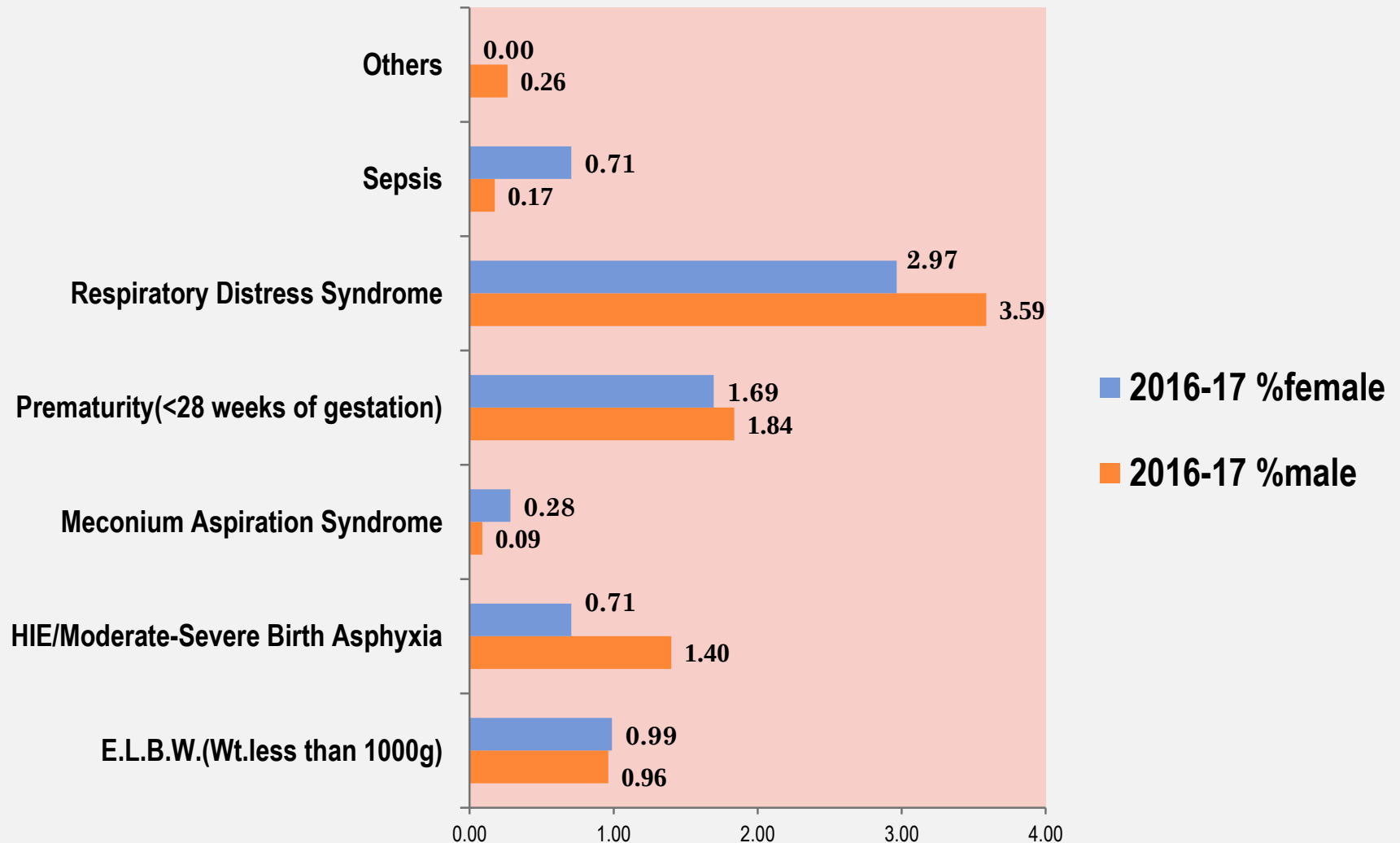
THE INDICATION OF DEATH FOR MALE AND FEMALE NEONATES FOR 2 YEARS



DEATH PERCENTAGE OF MALE AND FEMALE NEONATES 2015-16



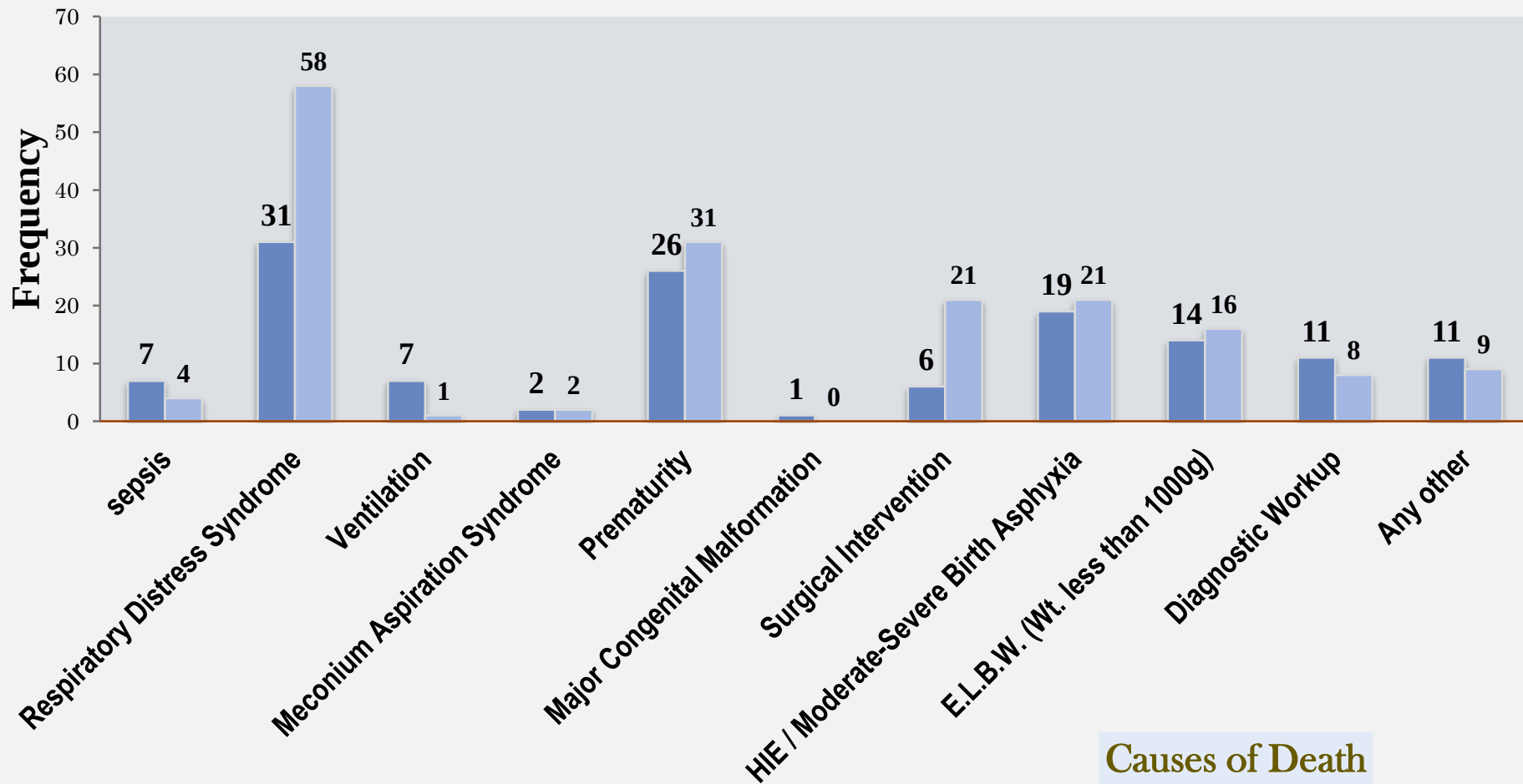
DEATH PERCENTAGE OF MALE AND FEMALE NEONATES 2016-17



Comparison of causes of death between 2015-16 & 2016-2017

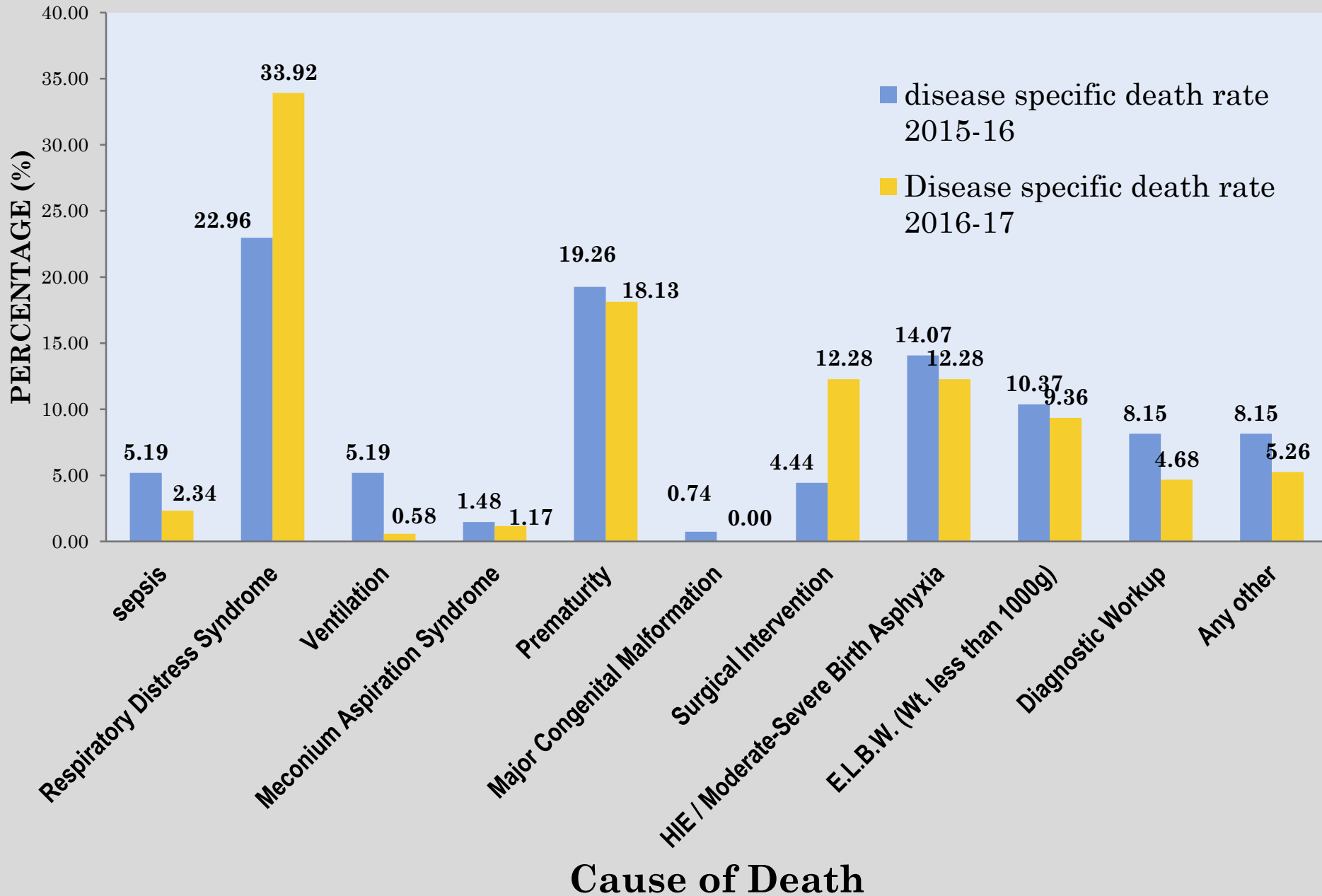
■ Number of death in 2015-2016

■ Number of death in 2016-2017



<u>Causes of death</u>	<u>Number of death in 2015-2016</u>	<u>2016-2017</u>	<u>Pattern of diseases in 2017</u>
<u>Sepsis</u>	<u>7</u>	<u>4</u>	<u>-3</u> 
<u>Respiratory Distress Syndrome</u>	<u>31</u>	<u>58</u>	<u>27</u> 
<u>Ventilation</u>	<u>7</u>	<u>1</u>	<u>-6</u> 
<u>Meconium Aspiration Syndrome</u>	<u>2</u>	<u>2</u>	<u>0</u> 
<u>Prematurity</u>	<u>26</u>	<u>31</u>	<u>5</u> 
<u>Major Congenital Malformation</u>	<u>1</u>	<u>0</u>	<u>-1</u> 
<u>Surgical Intervention</u>	<u>6</u>	<u>21</u>	<u>15</u> 
<u>HIE / Moderate-Severe Birth Asphyxia</u>	<u>19</u>	<u>21</u>	<u>2</u> 
<u>E.L.B.W. (Wt. less than 1000g)</u>	<u>14</u>	<u>16</u>	<u>2</u> 
<u>Diagnostic Workup</u>	<u>11</u>	<u>8</u>	<u>-3</u>  
<u>Any other</u>	<u>11</u>	<u>9</u>	<u>-2</u> 

Comparison of Disease Specific Death Rate



Causes of death	Disease Specific Death Rate 2015-16	Disease Specific Death Rate 2016-17		
Sepsis	5.19	2.34		-2.85
Respiratory Distress Syndrome	22.96	33.92		10.96
Ventilation	5.19	0.58		-4.60
Meconium Aspiration Syndrome	1.48	1.17		-0.31
Prematurity	19.26	18.13		-1.13
Major Congenital Malformation	0.74	0.00		-0.74
Surgical Intervention	4.44	12.28		7.84
HIE / Moderate-Severe Birth Asphyxia	14.07	12.28		-1.79
E.L.B.W. (Wt. less than 1000g)	10.37	9.36		-1.01
Diagnostic Workup	8.15	4.68		-3.47
Any other	8.15	5.26		-2.88

○ **Result:**

- Maximum of the patients came from all 11 blocks of Chhindwara Districts in both year (2015-16 and 2016-17) that is 97.60% and 97.70%.
- Frequency of patients increases in 2016-17 and the patient came from other district is also increasing.
- Total numbers of inborn cases are increases in the subsequent year from 187 to 193. Outborn cases are more than the inborn cases and their number also increases from 1509 to 1658 in years 2015-16 to 2016-17
- Most of the cases for admission in 2015-16 are of Perinatal asphyxia followed by neonatal jaundice, prematurity, refusal to feed and respiratory distress syndrome. Trends of all the diseases decreases in year 2016-17. Apart from that there are few other diseases whose trend seems to be decreased over a period of time
- Average duration of stay of the diseases is around 5 days
- Indication of death is more for the males as compared to the females and diseases having more prevalence are respiratory distress syndrome, prematurity and HIE.
- Death percentage is more for females than of males and the diseases which are more prevalent in causing death are respiratory distress syndrome, prematurity, HIE and low birth weight
- The pattern of deaths increased due to Respiratory Distress Syndrome, Prematurity, Surgical Intervention, HIE/ Moderate-Severe Birth Asphyxia and E.L.B.W.(Wt. less than 1000g) in the FY 2016-17 than 2015-16. And the pattern of deaths decreased due to Sepsis, Ventilation, Major Congenital Malformation, Diagnostic workup and others in the FY 2016-17 than 2015-16.
- After analysis of the data the inborn cases are very few. And the outborn cases are very high in SNCU of District Hospital Chhindwara, Madhya Pradesh. A



Recommendation:

- Separate research study should be done for finding out the reasons of increasing pattern of death Respiratory Distress Syndrome, Prematurity, Surgical Intervention, HIE / Moderate-Severe Birth Asphyxia, E.L.B.W. (Wt. less than 1000g). In order to reduce their number in subsequent year.
- Efforts should be done to reduce Disease Specific Death Rate of Respiratory Distress Syndrome, Prematurity, Surgical Intervention, HIE / Moderate-Severe Birth Asphyxia, E.L.B.W. (Wt. less than 1000g) by knowing the reason of their succession in the consecutive year.



Limitation:

- This research not based on the primary data. It is fully based on the secondary data where the two years data were collected from the SNCU of Chhindwara District Hospital.
- Further exploration of the reasons of death which has been increased over a period of time has not been done.



○ Conclusion:

Neonatal Mortality of Madhya Pradesh is 23 per 1000 live birth in urban area of Madhya Pradesh and 39 per 1000 live birth in rural areas of Madhya Pradesh. A cause of death has been identified through data analysis and their frequencies and Disease Specific Death rate has been calculated. The deaths which are showing positive pattern need to be explore further in order to decrease their occurrence. These leaves the research area for the researchers to explore further how to reduce deaths which are showing increase pattern in the subsequent years.



THANK
YOU

