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| title: “Perinatal” |
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| date: “1/7/2018” |
| output: word\_document |

## r notes

The report of perinatal death in Nakuru County from 2014 to 2017 dataset. Perinata Death review forms are filled in the facility where the event occured and uploaded to DHIS2.Of more than 2000 events are available from the system. The dataset were downloaded and data cleaning done to remove data elements that does not fit definition of perinatal death, multiple entries and duplicates were deleted as well as empty columns.

perdatn %>%   
 with(table(Org\_unit, Year)) %>%  
 prop.table(margin=2)\*100

## Year  
## Org\_unit 2014 2015  
## Annex Hospital (Nakuru) 0.0000000 6.0465116  
## Bahati District Hospital 0.2487562 0.9302326  
## Baraka Maternity Home 0.0000000 0.0000000  
## Elburgon Sub-District Hospital 0.0000000 0.4651163  
## Molo District Hospital 0.0000000 0.4651163  
## Naivasha District Hospital 0.0000000 0.0000000  
## Nakuru Nursing Home 0.0000000 0.0000000  
## Nakuru Provincial General Hospital (PGH) 99.7512438 92.0930233  
## Njoro Sub-County Hospital 0.0000000 0.0000000  
## Year  
## Org\_unit 2016 2017  
## Annex Hospital (Nakuru) 8.3916084 17.1597633  
## Bahati District Hospital 0.6993007 4.1420118  
## Baraka Maternity Home 2.0979021 0.0000000  
## Elburgon Sub-District Hospital 0.6993007 0.0000000  
## Molo District Hospital 3.4965035 0.0000000  
## Naivasha District Hospital 2.0979021 0.0000000  
## Nakuru Nursing Home 1.3986014 0.0000000  
## Nakuru Provincial General Hospital (PGH) 78.3216783 78.6982249  
## Njoro Sub-County Hospital 2.7972028 0.0000000

perdatn %>% ## reported no of perinatal deaths by year in 2015 we had 431 deaths  
 group\_by(Org\_unit) %>%   
 summarise(count = n()) %>%   
 mutate(rfreq = count/sum(count)\*100) %>%   
 mutate\_if(is.numeric, funs(round(., 1))) %>% ## relative frequency   
 arrange(desc(rfreq))

## # A tibble: 9 x 3  
## Org\_unit count rfreq  
## <chr> <dbl> <dbl>  
## 1 Nakuru Provincial General Hospital (PGH) 844 90.9  
## 2 Annex Hospital (Nakuru) 54 5.8  
## 3 Bahati District Hospital 11 1.2  
## 4 Molo District Hospital 6 0.6  
## 5 Njoro Sub-County Hospital 4 0.4  
## 6 Baraka Maternity Home 3 0.3  
## 7 Naivasha District Hospital 3 0.3  
## 8 Elburgon Sub-District Hospital 2 0.2  
## 9 Nakuru Nursing Home 2 0.2

## rmarkdown

Babies delivered by Nulliparous women are at greater risk of perinatal risk than multiparous women.The dataset is recorded on number of gravida mother ever had from 22 weeks gestation including the current pregnancy.

perdatn %>%   
 group\_by(Mgravrec) %>%   
 summarise(count=n()) %>%   
 mutate(rfreq= count/sum(count)\*100) %>%  
 mutate\_if(is.numeric, funs(round(., 1))) %>%   
 arrange(desc(rfreq))

## # A tibble: 3 x 3  
## Mgravrec count rfreq  
## <chr> <dbl> <dbl>  
## 1 Multiparous 501 53.9  
## 2 Nulliparous 419 45.1  
## 3 <NA> 9 1.0

## Gestational Weeks

Using WHO classification of preterm, gestational weeks were classified on extremely preterm (Less than 28 weeks), very preterm(28-32 weeks) moderate to late preterm(32-37weeks) and post mature from 41 weeks and above. From the dataset 794 varibales were complete with mean gestational of 34.5+/- 5.43, Min of 18 weeks and max of 48 weeks with skew of -0.59 and kurtosis of -0.45.

perdatn %>%   
 group\_by(rmgest) %>%   
 summarise(count=n()) %>%   
 mutate(rfreq= count/sum(count)\*100) %>%   
 mutate\_if(is.numeric, funs(round(., 1))) %>%   
 arrange(desc(rfreq))

## # A tibble: 6 x 3  
## rmgest count rfreq  
## <chr> <dbl> <dbl>  
## 1 Full term 263 28.3  
## 2 Late preterm 184 19.8  
## 3 Ext preterm 144 15.5  
## 4 Very preterm 139 15.0  
## 5 <NA> 135 14.5  
## 6 post term 64 6.9

## Type of pregnancy

A total of 765 (82%) of the cases were singleton, less than 15% being twin or triplet.

perdatn %>%   
 group\_by(preg\_type) %>%   
 summarise(count=n()) %>%   
 mutate(rfreq= count/sum(count)\*100) %>%   
 mutate\_if(is.numeric, funs(round(., 1))) %>%   
 arrange(desc(rfreq))

## # A tibble: 5 x 3  
## preg\_type count rfreq  
## <chr> <dbl> <dbl>  
## 1 Single 765 82.3  
## 2 Twin 124 13.3  
## 3 Triplet 29 3.1  
## 4 Others 10 1.1  
## 5 <NA> 1 0.1

## Presentation of foetus

Cephalic account for 77% of the perinatal death

perdatn %>%   
 group\_by(foetus\_pres) %>%   
 summarise(count=n()) %>%   
 mutate(rfreq= count/sum(count)\*100) %>%   
 mutate\_if(is.numeric, funs(round(., 1))) %>%   
 arrange(desc(rfreq))

## # A tibble: 9 x 3  
## foetus\_pres count rfreq  
## <chr> <dbl> <dbl>  
## 1 Cephalic 717 77.2  
## 2 Breech 124 13.3  
## 3 Others 52 5.6  
## 4 Transverse 24 2.6  
## 5 <NA> 6 0.6  
## 6 BBA 2 0.2  
## 7 C/S 2 0.2  
## 8 c/s 1 0.1  
## 9 Face to pubis 1 0.1

## Time of Newborn death

Of the deaths, 60% (557/929) died with 7 days of live.

perdatn %>%   
 group\_by(t\_nb\_death) %>%   
 summarise(count=n()) %>%   
 mutate(rfreq= count/sum(count)\*100) %>%   
 mutate\_if(is.numeric, funs(round(., 1))) %>%   
 arrange(desc(rfreq))

## # A tibble: 2 x 3  
## t\_nb\_death count rfreq  
## <chr> <dbl> <dbl>  
## 1 Within 7 days 557 60  
## 2 Before delivery (Still birth) 372 40