Plague outbreak in Himachal Pradesh,India

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Contents

- Read in data

```
plague2_data <- read.csv('plague_2.csv')
```

```
plague2_data <- plague2_data %>%
mutate(onsetDate_new = as.Date(strptime(onsetDate,'%d/%m/%Y')))

attach(plague2_data)

head(plague2_data)
```

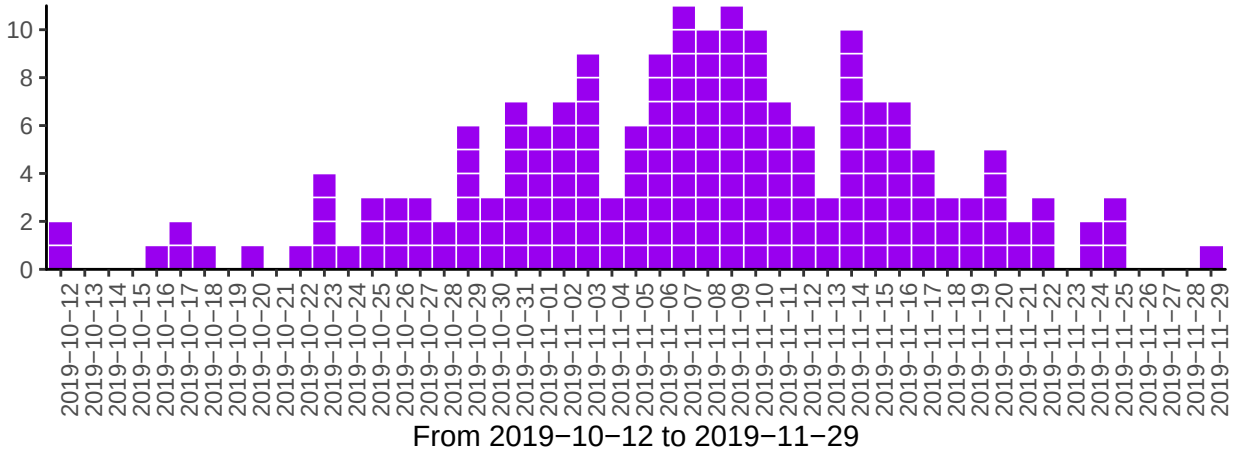
```
##   caseID householdID  onsetDate  deathDate reportDate    status
## 1  xcnye           1 12/11/2019       <NA> 16/11/2019 confirmed
## 2  vxbhl           1 12/11/2019 15/11/2019 20/11/2019  probable
## 3  jklkx           1 12/11/2019       <NA> 17/11/2019 confirmed
## 4  vezjd           1 06/11/2019 10/11/2019 14/11/2019  probable
## 5  tjvbn           1 17/11/2019 25/11/2019 02/12/2019  probable
## 6  hmzwe           1 17/11/2019       <NA> 26/11/2019 confirmed
##   onsetDate_new
## 1    2019-11-12
## 2    2019-11-12
## 3    2019-11-12
## 4    2019-11-06
## 5    2019-11-17
## 6    2019-11-17
```

```
summary(plague2_data)
```

```
##      caseID     householdID         onsetDate        deathDate
##  abuce  :  1   Min.   : 1.00   07/11/2019: 11   12/11/2019:  4
##  adjup  :  1   1st Qu.:11.00   09/11/2019: 11   15/11/2019:  3
##  ahhmx  :  1   Median :26.00   08/11/2019: 10   06/11/2019:  2
##  aikqg  :  1   Mean   :27.49   10/11/2019: 10   09/11/2019:  2
##  akdhw  :  1   3rd Qu.:41.00   14/11/2019: 10   10/11/2019:  2
##  atvlj  :  1   Max.   :58.00   03/11/2019:  9   (Other)   : 24
##  (Other):183                   (Other)   :128   NA's      :152
##       reportDate        status    onsetDate_new
##  08/11/2019: 12   confirmed:160   Min.   :2019-10-12
##  18/11/2019: 12   probable : 29   1st Qu.:2019-11-02
##  13/11/2019: 11                   Median :2019-11-08
##  17/11/2019:  9                   Mean   :2019-11-07
##  07/11/2019:  8                   3rd Qu.:2019-11-14
##  09/11/2019:  8                   Max.   :2019-11-29
##  (Other)   :129
```

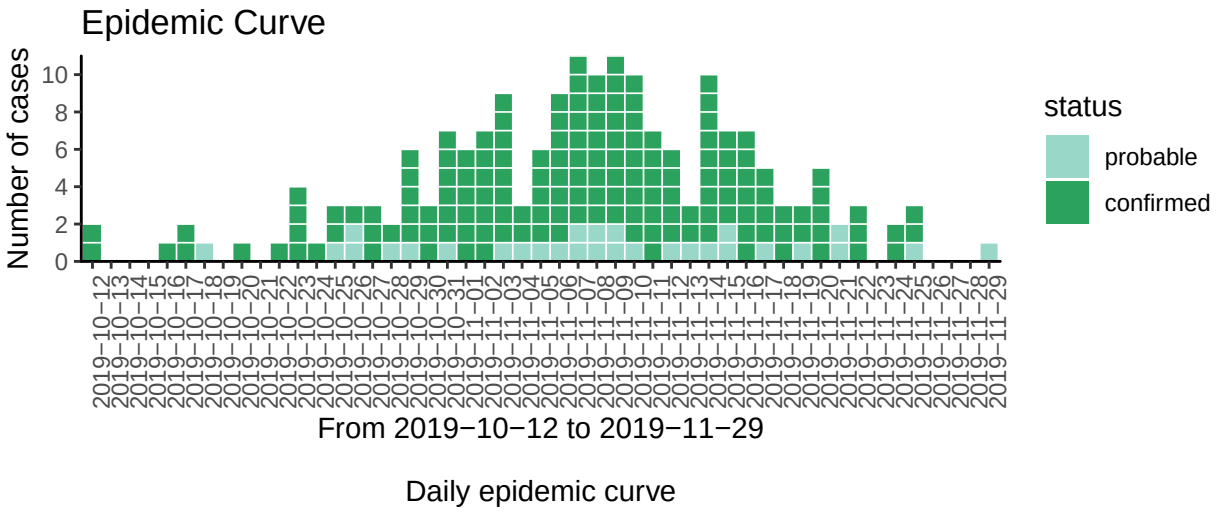
```
EpiCurve(plague2_data,
date = "onsetDate_new",
```

```
period = "day",
color ="#9900ef",
xlabel=sprintf("From %s to %s", min(onsetDate_new), max(onsetDate_new)))
```



The first case of the plague outbreak of India was detected on 11-Oct-19 and reached it's peak on 6-Nov-19. Majority 85% out of 189 plague cases were Lab confirmed.

```
EpiCurve(plague2_data,
date = "onsetDate_new",
period = "day",
color =c("#2ca25f","#99d8c9"),
ylabel="Number of cases",
title = "Epidemic Curve",
note = "Daily epidemic curve",
cutvar = 'status',
xlabel=sprintf("From %s to %s", min(onsetDate_new), max(onsetDate_new)))
```



Daily epidemic curve

Data needs:

We need genotypic data on confiemed cases to study transmission patterns in the dataset and GIS data to study the geographical distibution of the cases in Himachal Pradesh, India.