

Practical 4 – brief solution

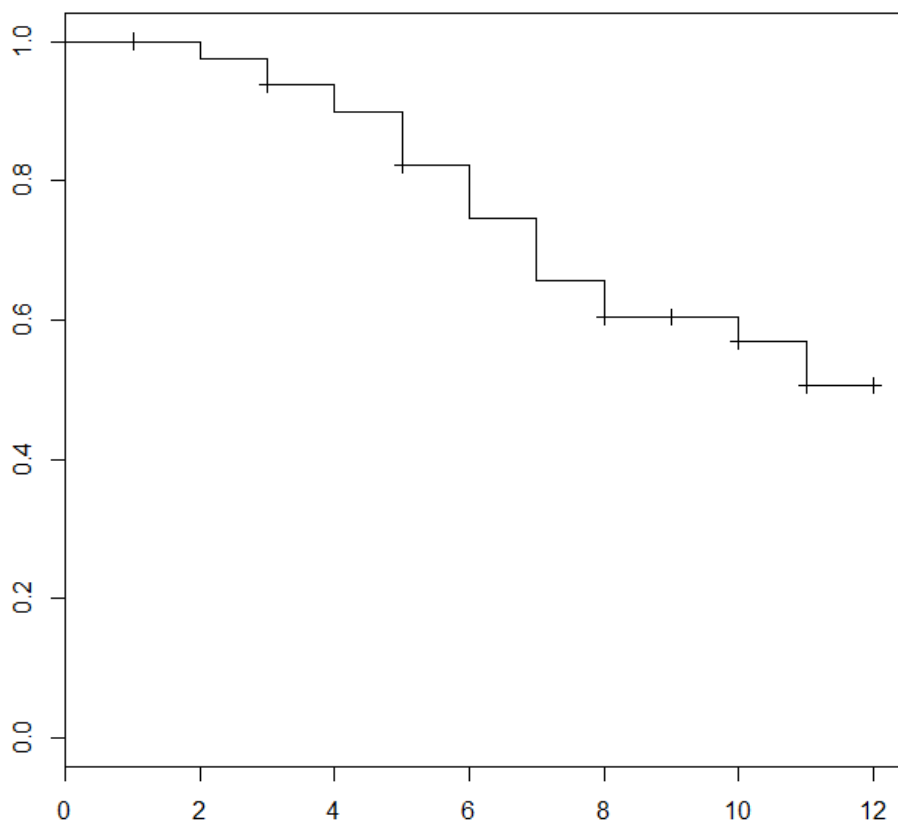
Explore time to cessation of symptoms in subjects with confirmed influenza virus infection

A study was conducted in 2007 to investigate household transmission of influenza virus (Cowling et al., 2008, PLoS ONE). An extract of the data regarding duration of illness in index cases may be loaded via

```
flu <- read.csv("http://web.hku.hk/~ehylau/pilot2007.csv")
```

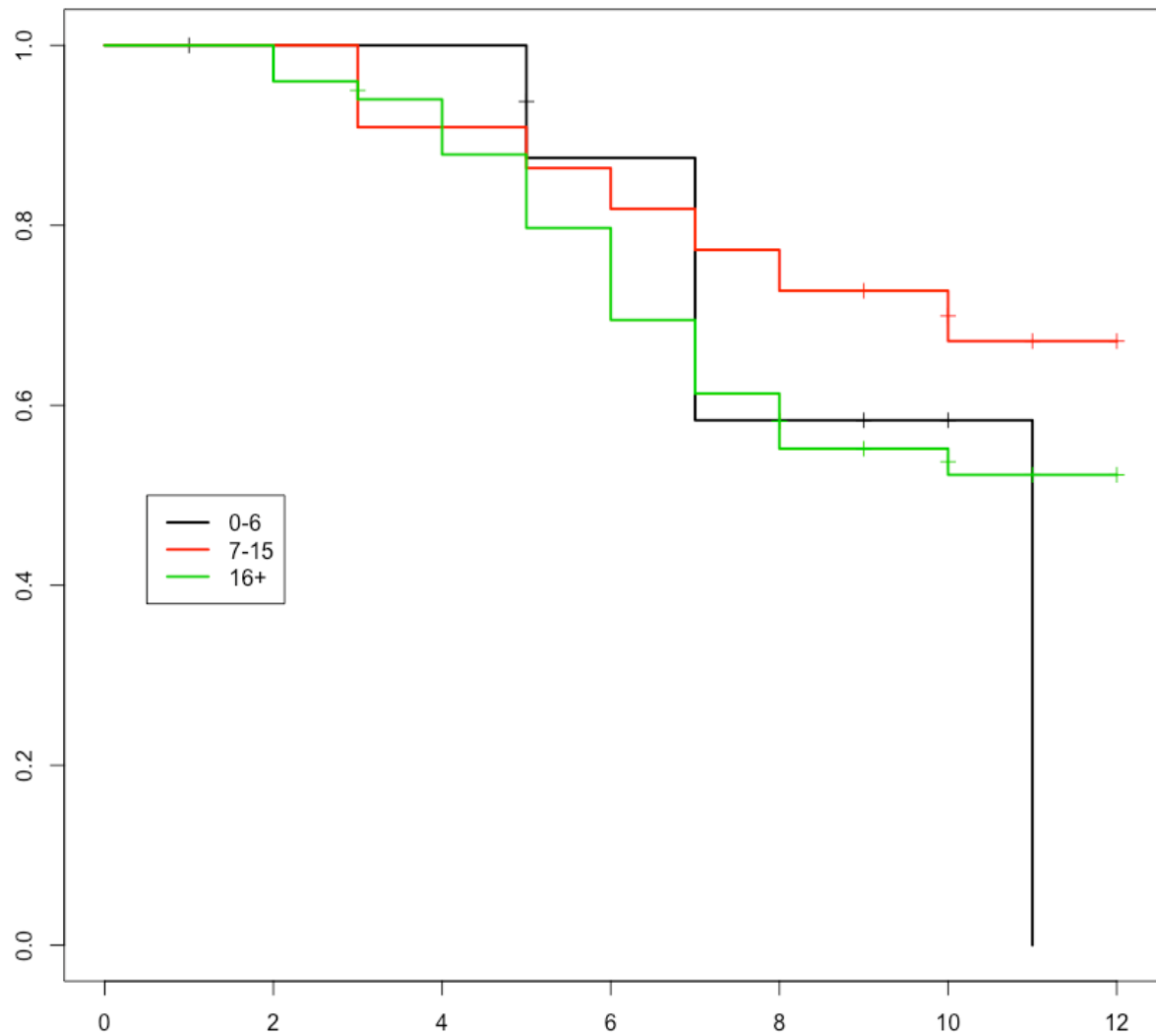
(a) Plot the K-M estimate of the time to cessation of symptoms

```
plot(survfit(Surv(time, event)~1, conf.int=FALSE, data=flu) , mark.time=T)
```



(b) Plot the K-M estimate by age group (divide into younger children 0-6, older children 7-15 and adults aged 16+)

```
plot(survfit(Surv(time, event)~cut(age, breaks=c(0,6,16,100)), data=flu), col=1:3, lwd=2)  
legend(0.5, 0.5, c("0-6", "7-15", "16+"), col = 1:3, lwd=2)
```



(c) Plot the K-M estimate by flu type.

```
plot(survfit(Surv(time, event)~flu.type, conf.int=FALSE, data=flu), col=2:3, lwd=2)  
legend(0.5, 0.5, c("Type A", "Type B"), col = 2:3, lwd=2)
```

