**Mortality plot for total population**

> library(flexsurv)

> flexsurvreg(surv ~ 1, dist="exp")

Call:

flexsurvreg(formula = surv ~ 1, dist = "exp")

Estimates:

est L95% U95% se

rate 0.09553 0.08860 0.10301 0.00367

N = 855, Events: 676, Censored: 179

Total time at risk: 7076

**Log-likelihood = -2263.431, df = 1**

**AIC = 4528.862**

> flexsurvreg(surv ~ 1, dist="gompertz")

Call:

flexsurvreg(formula = surv ~ 1, dist = "gompertz")

Estimates:

est L95% U95% se

shape 0.446993 0.417640 0.476346 0.014976

rate 0.006025 0.004728 0.007679 0.000746

N = 855, Events: 676, Censored: 179

Total time at risk: 7076

**Log-likelihood = -1758.492, df = 2**

**AIC = 3520.984**

> flexsurvreg(surv ~ 1, dist="gompertz")$coef

shape rate

0.4469927 -5.1117987

> shape = flexsurvreg(surv ~ 1, dist="gompertz")$coef[1]

> rate = flexsurvreg(surv ~ 1, dist="gompertz")$coef[2]

> x = seq(1,13)

> y = rate + x \* shape

> lines(x = x, y = y, lwd = 2)

