

Gilead and hepatitis C

Calculations behind the counter

This counter is intended to illustrate the high number of unnecessary deaths from hepatitis C globally. At the end of 2013, Gilead launched the drug, Sofosbuvir which can effectively cure the disease. However it has been priced so high that millions of people cannot access it and are dying even though a cure exists. Meanwhile Gilead is earning billions in revenue. The counter is a combination of actual revenues from 2014 to the first quarter of 2017 and death rates from 2014 until 10th May 2017 and then beyond this date, the counter is rising at an extrapolated rate based on historical figures.

We were unable to obtain Gilead's profit figures by drug so the use of revenue is for illustrative purposes. However, anecdotal reports have shown that the cost of production of the drug does not justify its high price.

Starting point

(i) Revenues

The counter began at 12noon, 10th May 2017. Sofosbuvir was brought to market in 2014. The revenue figures for the drug for the period 2014 to 10th May 2017 were added together.

Gilead revenue (\$)	
2014	12,300,000,000
2015	19,100,000,000
2016	14,800,000,000
2017	3,772,888,889*
TOTAL	49,972,888,889

*The 2017 figures is based on quarter 1 revenue figures and extrapolated to 10th May.

(ii) Deaths due to hepatitis C

According to the World Health Organisation 399,000 people die each year from hepatitis C.

Hep C deaths	
2014	399,000
2015	399,000
2016	399,000
2017	142,765*
Total	1,339,765

*The 2017 figure is based on pro-rata calculation of the annual deaths (399,000/365)

The total of these revenue and mortality figures are the starting point of the counter. The counter then increases at the rates as explained below.

Rate of increase

(i) Revenues

Gilead's first quarter figures for 2017 show revenues for Sofosbuvir at \$2.6bn. This is divided by 90 days, which works out at \$29m per day. With 86,400 seconds a day, profits go up \$1, every 0.003 seconds ($86400 \text{ seconds} / \29m).

(ii) Deaths

According to the World Health Organisation 399,000 people die each year from hepatitis C. This works out at 1093 people per day. With 86,400 seconds a day, deaths go up by 1 person, every 79 seconds ($86,400 \text{ seconds} / 1093 \text{ people}$)