

Healthcare-associated infections can result in mortality. Preventing these infections can prevent those attributable deaths.

During a 1 year period, our facility had 199 CDI events.

- These events caused an estimated 22 patient deaths.
 - This estimate is based on 10.9% of patients with CDI dying because of their infection.
- Over a 1 year period, a sustained 25% reduction in CDI events could result in:
 - 49 fewer CDI events
 - 5 fewer patient deaths attributable to CDI events

Mortality Attribution Tool: Methodology & Limitations

PURPOSE

This report provides:

- an estimate of the number of Healthcare Associated Infection (HAI) related deaths that occur over a given time period,
- an estimate of the number of lives that could be saved through a reduced HAI rate, and
- the option to add information about an intervention that could help achieve an applicable HAI reduction.

LIMITATIONS

- If the HAI of interest is an infrequent event, longer time periods (e.g. 1 or more years) may need to be used to see the full impact of the associated mortality rates.
- The default attributable mortality rates are not facility-specific, and although they were derived from contemporary, peer-reviewed publications, mortality estimates vary widely.
- The attribution of mortality is challenging, especially in more complicated patients, who are more likely to develop HAIs in the first place, so please consider this when viewing the results from this calculator.

METHODOLOGY

- The attributable mortality of each HAI was derived from primary sources of recent peer-reviewed literature, each of which were multi-institutional with appropriate control groups:
 - CLABSI¹
 - CAUTI¹
 - SSI¹
 - CDI²
- Users may opt to use estimates derived from their own facility's data or future published estimates.
- Mortality events are intentionally rounded up as one cannot experience 0.3 death events, while deaths avoided are intentionally rounded down based upon similar rationale.

EXPLANATION OF OUTPUT

See the sample results of the tool at http://haitools.apic.org/Sample_MAT_Report.pdf. In this hypothetical example, a facility identifies 199 cases of hospital onset *Clostridioides difficile* in a year. Using the default attributable mortality rate of 10.9%, an estimated 22 patients died as a result of this infection over the one-year period. A 25% reduction would prevent approximately 5 deaths.

REFERENCES

1. Glied S, Cohen B, Liu J, Neidell M, Larson E. Trends in mortality, length of stay, and hospital charges associated with health care-associated infections, 2006-2012. *Am J Infect Control* 2016;44:983-9.
<https://www.sciencedirect.com/science/article/abs/pii/S0196655316002364>
2. Olsen MA, Stwalley D, Demont C, Dubberke ER. *Clostridium difficile* infection increases acute and chronic morbidity and mortality. *Infect Control Hosp Epidemiol* 2019;40(1):65-71.
<https://www.ncbi.nlm.nih.gov/pubmed/30409240>