Objectives

Mandatory surveillance of patient-level *Clostridium difficile* infection (CDI) in England was initiated in 2007, whereby all *C. difficile* toxin-positive stool samples in patients aged ≥2 years had to be reported to Public Health England (PHE). In October 2007 acute Trusts (hospitals under the same management) were set a three year target of reducing cases of CDI by 30% by 2010/11, with financial penalties levied for failure. This objective was achieved and exceeded by 2008/09, with a >60% decline by 2010/11. This dramatic decrease in CDI led to some speculation that NHS acute Trusts had employed systematic “gaming” to bypass the fines, empirically treating possible cases of CDI and not testing stool samples, and that this, rather than better infection control practices, had caused the reduction in CDI observed in England since 2007/08. This study sought to explore whether there was any evidence to corroborate such concerns.

Methods

Aggregate-level mandatory laboratory data on stool examinations and *C. difficile* toxin testing for the 143 NHS acute Trusts in England who submitted complete data were examined from 2008 to 2013 to ascertain whether there had been a reduction in reported testing levels. Trends in the relationships between *C. difficile* toxin testing, stool examinations and CDI cases were also examined.

Results

The rate of stool examinations increased by 4.9% from 4,168.8/100,000 bed-days in 2008 to 4,374.3/100,000 bed-days in 2013. Over the same period a 16.2% decline in the rate of *C. difficile* toxin testing was observed (1,810.8/100,000 bed-days in 2008 vs. 1,517.5/100,000 bed-days in 2013), and the rate of CDI decreased by >60%. The ratio of both stool examinations and *C. difficile* toxin tests to the number of CDI cases increased over time, from 38.9 stool examinations for every case in 2008 to 109.3 in 2013 and from 16.9 *C. difficile* toxin tests per case in 2008 to 37.9 in 2013. Conversely, the ratio of stool examinations to *C. difficile* toxin tests performed has only increased slightly, from 2.3 in 2008 to 2.9 in 2013.

Conclusions

While there has been a decline in *C. difficile* toxin testing since 2008, there has been a much greater reduction in CDI, resulting in a much higher ratio of toxin tests to CDI cases in 2013 than in 2008. Coupled with the small change in the ratio between stool examinations and toxin tests, there is little evidence of large-scale change in testing practices that would have been expected if there had been a systematic and deliberate decline in *C. difficile* toxin testing. This suggests that any “gaming” which may have occurred across NHS acute Trusts in order to prevent exceeding objectives and incurring financial penalties, was not a major factor in the reductions in CDI case rate.