
Death by Numbers: Bills of Mortality in Early Modern London

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The foundation of *Death by Numbers: Bills of Mortality in Early Modern London* is the construction of a relational database containing plague mortality information from the London Bills of Mortality in all their varying levels of granularity. Plague first entered England in 1348, as part of a continent-wide epidemic that killed approximately one third of the population of Europe. Thereafter, England suffered continuous outbreaks of plague through 1679, and fear of plague lasted well into the eighteenth century. The most well-documented epidemics of the early modern era were in England's cities, particularly London, which suffered six major epidemics in the century between 1563 and 1665, and lost an estimated 225,000 people to plague. During the mid-sixteenth century, in response to these epidemics, some city officials began to compile numerical summaries of local deaths and circulated those mortality statistics in manuscript form. By the turn of the seventeenth century, there was enough popular interest in these numbers that officials in the city of London began publishing weekly mortality statistics in a series known as the Bills of Mortality. The weekly bills included a parish-by-parish list of total deaths and plague deaths, along with running tallies of city-wide christenings, deaths broken down by a variety of causes, and parishes infected with plague. London's weekly bills were also supplemented annually with a general account of the preceding year, published on the Thursday before Christmas. Over the first half of the seventeenth century, more parishes were added to the bills, including the parishes in surrounding counties and in the neighboring city of Westminster, until the "Bills of Mortality" formed a recognized geographical unit that included all of London and its suburbs.

The Bills of Mortality are thus a vital source of information about the population of seventeenth- and eighteenth-century London. They have been analyzed by politicians, demographers, historians, and epidemiologists as early as the seventeenth century

itself, but currently only the bills from a few select epidemic years are available online. Construction of the Bills of Mortality database is thus a vital step for both this project and for future digital humanists interested in the bills. After the construction of this database, this project will use network analysis to examine the transmission of plague between residents of London's parishes during both famous epidemic outbreaks and the periods of endemic plague that followed them. Subjects of particular interest in this analysis include the change in infection patterns over time, how the infrastructural and geographical features of the city act as barriers or "highways" to infection, and the devastating impact of – and slow recovery from – the Great Fire of London while plague was still active in the city. The project will also include a mapping component to visualize mortality trends by parish over time, with particular interest in the full duration of epidemics as opposed to each epidemic's highest mortality (and highest profile) year. Eventually the Bills of Mortality database, as well as materials associated with the network analysis and visualizations, will be made freely available online in accessible, sustainable formats for reuse by other members of the scholarly community.