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Mortality and morbidity responses to water investments in Finnish cities, 1880s-1960s.

The secular mortality decline in Finland since the 1870s has usually been linked with a standard Western urban sanitary intervention story, although the degree of urbanization was still low and much of the investments took place late. The paper uses longitudinal data on 45 Finnish cities to estimate the effect of water improvement on urban morbidity and mortality from the 1880s to the 1960s. Available data enables the construction of city-level time series on various outcome variables, such as the crude death rate, the infant mortality rate, mortality from waterborne vs. other illnesses, and non-lethal morbidity by disease. Local data on the exact timing of initiation and improvement of water services (piped water, sewers, filtration, chlorination) makes it possible to construct differences-in-differences regressions on key interventions, simultaneously including time/trend controls and other city-level controls (population, public services, etc.). This produces estimates on the share of mortality/morbidity change brought about by the initiation and upgrade of water services in cities, as opposed to other possible causes. As a late industrializer and a late urbanizer, Finland is potentially an interesting addition to the discussion on the factors behind the great Western mortality decline.