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THE GREAT CONVERGENCE? MORTALITY IN IRELAND AND EUROPE, 1956–2014

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The great convergence? Mortality in Ireland and Europe, 1956–2014¹

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INTRODUCTION

Europe saw significant improvements in mortality rates and life expectancy throughout the 20th century. While mortality rates between European countries saw sharp convergence from the mid-1970s, Ireland was slow in converging to the EU-15 average. Despite mortality rates in Ireland matching the UK and EU-15 countries in the post-WWII period, between the 1960s and 1980s, mortality rates plateaued, and Ireland consistently had amongst the highest mortality rates in the EU-15. An accelerated improvement in mortality began in Ireland in the mid-1990s. This study examines differences in mortality in Ireland and the EU-15 between 1956 and 2014 and provides insights into the causes of death and age groups responsible for the recent convergence to our EU-15 peers.

DATA AND METHODS

This study uses mortality and population data from the World Health Organization's (WHO) Mortality Database for the years 1956–2014. The analysis examines age-standardized mortality rates (ASMRs) that account for differences in the age profile of the population between countries and over time. It explores ASMRs across sex, cause of death, and age groups to identify where Ireland lagged its European neighbours initially, and where the largest improvements in mortality have occurred in recent years. To illustrate in detail the recent stark improvements in mortality rates in Ireland, the study estimates the additional number of deaths

¹ This Bulletin summarizes the findings from: Eighan, J., Walsh, B., Connolly, S., Wren, M-A., Keegan, C. and Bergin, A., "The great convergence? Mortality in Ireland and Europe, 1956–2014", *European Journal of Public Health*, DOI: <https://doi.org/10.1093/eurpub/ckaa060>

(‘deaths averted’) that would have occurred in 2014 if mortality rates from 2000 were applied to the 2014 Irish population.

RESULTS

Between 1956 and 1999, all-cause ASMRs in Ireland were amongst the highest in the EU-15. ASMRs were particularly high for Irish females. In every year between 1980 and 1999 female ASMRs in Ireland were the highest in the EU-15. Between 2000 and 2014, mortality rates in Ireland reduced at a much greater rate than any other EU-15 country. In these years, Ireland’s male and female ASMRs reduced by 34% and 32% respectively with the corresponding EU-15 average reducing by 28% and 24% respectively. Circulatory disease (e.g. cardiovascular disease and stroke) and respiratory disease (e.g. chronic obstructive pulmonary disease) ASMRs in Ireland were the highest in the EU-15 for many years between 1960 and 1999. However, similar to all-cause ASMRs, from the mid-1990s, Irish circulatory disease ASMRs converged to the EU-15 average. Respiratory disease ASMRs in Ireland halved between 2000 and 2014, though they remain amongst the highest in the EU-15.

The study estimates that ASMR improvements between 2000 and 2014 equate to an estimated 15,300 fewer deaths in 2014. Diseases of the circulatory system ASMR improvements accounted for 60% of the ‘deaths averted’ for males and females, with respiratory disease ASMR improvements accounting for 21% and 27% of the ‘deaths averted’ for males and females respectively.

POLICY CONCLUSIONS

Despite Ireland having amongst the highest mortality rates in the EU-15 in the latter half of the 20th century, accelerated mortality reductions in recent years resulted in Ireland converging to the EU-15 average for both males and females. The majority of the mortality improvements were due to large reductions in mortality from diseases of the circulatory system.

Changes in mortality rates reflect a complex interplay of social, economic, institutional, and health factors and it is difficult to untangle the role of each in determining changes in mortality in Ireland. Previous research has highlighted that public health interventions such as the 2004 smoking ban and improved sanitation, and improvements in medical treatments, have aided the reduction in mortality from circulatory disease and respiratory disease in particular. It is also clear from international studies that socio-economic improvements result in better health outcomes. Therefore, the dramatic changes to the Irish economic environment that occurred in recent decades such as higher incomes, educational achievement improvements, higher female employment rates, as well as increased investment in health, are also likely to explain some of the mortality reductions observed in this study.

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