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Using linked health data in international comparisons of infectious disease burden

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Linking population-level health databases – such as those on hospital admissions, GP consultations, prescriptions, maternal and perinatal data, and laboratory data – provides great opportunities to explore the epidemiology and burden of infectious diseases. Furthermore, comparing the epidemiology and burden of infectious diseases on an international scale is crucial in designing and implementing national and global prevention and control measures. However, substantial differences between countries in national health systems (including thresholds for hospital admission), as well as varying availability and quality of routinely collected data, can pose challenges when using linked population-level health databases to compare estimates of infectious disease burden between countries.

This session aims to highlight and discuss the opportunities and challenges of international comparisons of infectious disease burden using linked population-level health data. This session will facilitate discussion of the methodological, ethical and resource challenges when using linked health data to produce internationally comparable estimates of the burden of infectious diseases. We will use as an example the ongoing work of the REspiratory Syncytial virus Consortium in Europe (RESCEU) – a large-scale collaborative project producing evidence to inform policymaking and regulatory decisions on novel respiratory syncytial virus (RSV) vaccines and therapeutics. The RESCEU project involves at least seven European countries each using linked routinely collected health data to produce national estimates of the health and economic burden of RSV, by age and risk group, for comparison. The results will highlight target populations for future vaccines and therapeutics, and provide a baseline estimate of the pre-vaccine era burden of disease that can be used to measure future vaccine impact. We will share the challenges faced in the RESCEU project with regards to using linked health data in international comparative work. We will then discuss, with relevance to other ongoing or future projects, how these challenges may be overcome.

This session will generate ideas for procedures and tools for international comparative work using routinely collected data to investigate infectious diseases. This session will provide the opportunity to network with other researchers working in this area. We aim to facilitate the generation and dissemination of ideas for current and future projects, and therefore this session is likely to identify areas for potential future international collaborative work.

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