5.1 Introduction to systematic reviews of prevalence and incidence

The amount of literature in the health and social fields has increased at an exponential rate over the last 30 years and each year hundreds of thousands of new articles are being published in social and health journals. This increase in research output has been paralleled with a growing focus on the need for healthcare decisions, policies and funding to be based on the best available evidence, with consideration of patient preferences, clinical expertise and available resources. This need to base health and social care policy on evidence from research is now well-accepted internationally and is seen as the ideal way to practice healthcare. However, in real world settings this is not always the case.

There are many barriers that inhibit the uptake of research evidence into practice, one of which is the difficulty for the practicing professional to keep up to date with the expanding body of literature. The systematic review of evidence has been proposed and is well now accepted as the best method to summarize the literature relating to a certain social or healthcare topic. The systematic review is a type of research design that provides a reliable summary of the literature to assist health professionals to keep up to date. Key features of a systematic review include the creation of an a priori protocol, clear inclusion criteria, a structured and systematic search process, critical appraisal of studies, and a formal process of data extraction followed by methods to synthesize, or combine, this data. In this way, systematic reviews extend beyond the subjective, narrative reporting characteristics of a traditional literature review to provide a comprehensive, rigorous and transparent synthesis of the literature on a certain topic.

Historically reviews have focused on the synthesis of evidence of effects, particularly trying to establish the effectiveness of various treatments on social and health outcomes. However, decisions made in social and health care require more information than can be provided by the simple question ‘does this work?’ As systematic review methodology has evolved so have the types of evidence that have been synthesized using this approach. There now exists methods and guidance for conducting reviews of various forms of evidence, including qualitative research, cost data, diagnostics, prognostics, harms and risk.

Whilst the steps included in the systematic review process are mirrored across the various types of evidence, there are important considerations that need to be taken into account when conducting a systematic review pertaining to the type of research to be synthesized. There are established methods for conducting meta-analyses of randomized controlled trials and some observational study designs. However, no clear guidance currently exists on synthesizing frequency data from incidence and prevalence estimates. This chapter seeks to fill this gap by outlining methods and guidance for an emerging type of systematic review, that of prevalence and incidence data. Prevalence and incidence data systematic reviews are becoming more important as policy makers realize the usefulness of syntheses of this type of information. Synthesis of this type of information has the potential to better inform social and healthcare professionals, policy makers and consumers in decisions made relating to a range of healthcare decisions, but particularly regarding the burden of healthcare both now and in to the future. This chapter provides comprehensive guidance to authors wishing to conduct systematic reviews on prevalence and incidence data.