The use of placebo interventions outside clinical trials is ethically, professionally and legally controversial. Little is known about the frequency and circumstances of placebo use in clinical practice. Our aim was to summarize the available empirical studies addressing these issues. We searched PubMed and EMBASE from inception to July 2009 in order to identify cross-sectional surveys, qualitative or longitudinal studies among health care professionals, students or patients which investigated at least one of the following issues--frequency of placebo use or attitudes to, or motivations for, the use of placebo interventions. At least two reviewers extracted information on the study methods, participants and findings. Descriptive summaries were prepared in an iterative process by at least two reviewers per study. Twenty-two studies from 12 different countries met the inclusion criteria. Most studies had relevant shortcomings. The proportion of respondents reporting that they had applied 'pure' placebos (for example, saline injection) during their professional life varied between 17% and 80% among physicians and between 51% and 100% among nurses, but it seems that the actual frequency of such use seems to be rare. The use of 'impure' or 'active' placebos (for example, antibiotics for viral infections) is likely to be much more frequent. However, it is impossible to make a reliable estimation because there is no
agreement of what an impure placebo might be. Studies using qualitative methods or asking participants to judge case examples suggest that motivations and attitudes towards placebo use are complex and health care providers are often faced with a dilemma. Although the available evidence is incomplete and confusing at times there can be little doubt that the prevalence of placebo use outside of clinical trials is not negligible and that views and attitudes on placebos use differ considerably among individuals, both health care professionals and patients. Further research is needed to clarify these issues.