Title
Communication of scientific uncertainty: international case studies on the development of folate and vitamin D Dietary Reference Values

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Abstract

Objectives
Transparent evidence-based decision making has been promoted worldwide to engender trust in science and policy making. Yet, little attention has been given to transparency implementation. The degree of transparency (focused on how uncertain evidence was handled) during the development of folate and vitamin D Dietary Reference Values was explored in three a priori defined areas: (i) value request; (ii) evidence evaluation; and (iii) final values.

Materials and methods
Design: Qualitative case studies (semi-structured interviews and desk research). A common protocol was used for data collection, interview thematic analysis and reporting. Results were coordinated via cross-case synthesis.

Setting: Australia and New Zealand, Netherlands, Nordic countries, Poland, Spain and UK.

Subjects: Twenty-one interviews were conducted in six case studies.

Results
Transparency of process was not universally observed across countries or areas of the recommendation setting process. Transparency practices were most commonly seen surrounding the request to develop reference values (e.g. access to risk manager/assessor problem formulation discussions) and evidence evaluation (e.g. disclosure of risk assessor data sourcing/evaluation protocols). Fewer transparency practices were observed to assist with handling uncertainty in the evidence base during the development of quantitative reference values.

Conclusions
Implementation of transparency policies may be limited by a lack of dedicated resources and best practice procedures, particularly to assist with the latter stages of reference value development. Challenges remain regarding the best practice for transparently communicating the influence of uncertain evidence on the final reference values. Resolving this issue may assist the evolution of nutrition risk assessment and better inform the recommendation setting process.

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