

0759 **A MENTAL MODELS METHODOLOGY FOR UNDERSTANDING USE (AND NON-USE) OF PREVENTIVE MEASURES**

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Experts are often baffled by the behaviour of non-experts. Why won't people use bike helmets? Or stair rails? Or personal hearing protection? Safety items that are readily available, sometimes even required at work, often go unused. Experts may wonder, 'What are they thinking?' Individuals' behaviours are shaped by their mental models – their internal representations of beliefs they find relevant to a situation, and the relationships among those beliefs. We present a mental models methodology, which was developed by decision scientists and cognitive psychologists and offers an empirically validated approach for comparing how experts and non-experts think about the benefits, costs and tradeoffs of potential risks and related prevention. This method has been used to compare thinking about food safety, municipal drinking water, safety in the home and occupational safety. It offers a systematic approach to: (1) elicit how experts think about a given risk and related preventive measures; (2) diagram a consensus of expert thinking using an influence diagram; (3) elicit how non-experts think about the same risk and related prevention; (4) compare expert and non-expert thinking in order to reveal gaps, misperceptions and differences in how the two groups think about the same risk and prevention; and (5) develop effective risk management strategies and risk communications specifically focused on the issue at hand. We present the method using examples from mental models research projects we have conducted.