DEVELOPMENT OF A STANDARD TEST METHOD FOR ASSESSING THE FIRMNESS OF INFANT SLEEP SURFACES

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Background Over a period of many years, good quality research has pointed to an association between infant mortality and overly soft sleep surfaces. Caregivers are advised to use ‘firm’ mattresses, but there are no international definitions of what is firm enough.

Aims/Objectives/Purpose The aim of this work was to specify a test method and a performance criterion by which to identify infant sleep surfaces that are sufficiently firm to prevent ‘sleep accidents’ (asphyxiation), part of the SIDS spectrum.

Methods A panel of experts, working individually, examined a range of sleep surfaces and provided subjective views of acceptable product firmness. The consensus was then specified in terms of laboratory measured performance. Based on these measurements, a simple test instrument was developed.

Results/Outcomes The test instrument was validated against a research instrument used in Germany to compare the sleep surfaces of fatal infant cases and surviving matched controls. The test instrument replicated the sensitivity and specificity of the research instrument on products in Australia and the USA.

Significance/Contribution to the Field The availability of a practical test for assessing minimum acceptable firmness of infant sleep surfaces has allowed for the planned adoption of a world-first standard test method in Australia and New Zealand. A do-it-yourself version of the apparatus can be easily constructed by parents for their own use.