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COMFORT-SCALE AND NEWBORNS: A REVIEW

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Object of study: Assessing the current state-of-the-art regarding the clinimetric properties and clinical possibilities of COMFORT-scale in the care of ill neonates. The COMFORT-scale is a multi-dimensional assessment tool, originally designed to measure distress in ventilated infants.

Method: A review of the scientific literature was performed. Studies evaluating the COMFORT-scale, a derived version of the COMFORT-scale or studies comparing the COMFORT-scale with other assessment methods and the presence of a recognizable group of newborns were included. Review articles were not included. The studies found were critically appraised, using the guidelines of Terwee, for its clinimetric properties; validity (content-, criterion- and construct validity and internal consistency), reproducibility, longitudinal validity, responsiveness, floor and ceiling effects and interpretability.

Results: Nine studies (until October 2009) were included. The studies contained the original COMFORT-scale plus five derived versions; COMFORT plus 'crying', COMFORT-'behaviour', COMFORT-'modified', COMFORT-'adapted' and COMFORTneo. The scales have been studied for several concepts; pain, stress, distress and sedation and with neonates suffering from different disorders as well as during different (invasive) procedures. None of the studies had an overall positive judgement on all aspects of the methodological quality according to the guidelines of Terwee. Judgement was hampered by lack of information in the studies, lack of a golden standard and lack of clarity about the cut-off point of the different scales. Of all COMFORT-scale versions the COMFORT-'behaviour'-scale and the COMFORTneo-scale had the best clinimetric properties.

Conclusion: For now the COMFORTneo-scale seems the best option to measure discomfort of ill neonates.

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IS PREVENTION OF ATOPIC DERMATITIS WITH HYDROLYSATE FORMULAS COST-EFFECTIVE? AN APPLICATION OF RESULTS OF THE GINI-STUDY TO THE GERMAN SITUATION

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Background and aims: Atopic eczema generates a high economic burden, eg. 1.2-3.5 billion € per annum in Germany. The GINI trial, a prospective, randomized, double-blind intervention study in Germany that recruited a cohort of 2,252 infants with parental and/or sibling-related heredity for atopy between 1995 and 1998 showed that children fed with certain hydrolysate formulas at least the first four months of life have a reduction of the relative risk for atopic dermatitis by 26-45% compared to a cow's milk formula. The objective of this study was to assess the cost-effectiveness of feeding hydrolysate formulas in the prevention of atopic eczema.

Methods: Cost-effectiveness was assessed with a decision tree model programmed with the software TreeAge. Children were followed over a 6 year period. Costs and effects were analyzed using the perspective of the German statutory health insurance (SHI) and a societal perspective.

Results: In the base case scenario both the partial whey hydrolysate and the extensively hydrolysed casein formula-feeding are cost-effective in preventing infantile atopic eczema from a societal perspective. In the sixth year both formulas generated cost-savings. From the SHI perspective, the extensively hydrolysed casein formula was cost-effective and the partial whey

hydrolysate cost-saving after six years. The third formula, an extensively hydrolysed whey formula, was dominated in both analyses.

Conclusion: Our results show that for the prevention of atopic eczema two formulas can be cost-effective or even cost-saving depending on the scenario.

Economic studies indicate that atopic dermatitis generates a high economic burden.

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FACILITATING BLOOD WITHDRAWAL IN CHILDREN BY VISUALIZING VEINS WITH NEAR-INFRARED LIGHT

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Background and aims: Intravenous (IV) access for infusion or blood withdrawal may be cumbersome, especially in small children. Multiple puncture attempts for gaining IV access are traumatic and painful for the child. We developed a system (the VascuLuminator), based on infrared transillumination, that is able to visualize vessels underneath the skin. A feasibility study to the clinical use of the prototype in the procedure of blood withdrawal in children was performed.

Methods: The usefulness of the Vasculuminator during blood withdrawal in children under 6 years was studied in 45 children and compared to 80 children without the system at the phlebotomy station of the laboratory of a pediatric university hospital. Failure rate (i.e. percentage of procedures where more than one puncture was necessary to gain blood) was measured. The opinion of the laboratory technicians about using the VascuLuminator was evaluated after each procedure.

Results: The Vasculuminator enabled visualization of vessels underneath the skin up to a depth of several millimeters even in dark coloured skin. The failure rate of the procedures performed with the Vasculuminator (1/45; 2.2%) was smaller (p = .05) than in the procedures without the Vasculuminator (10/80; 12.5 %). In 26 of the 45 cases, the operators reported to have a benefit of the VascuLuminator. In none of the cases it was found to have a negative influence.

Conclusions: The Vasculuminator enabled visualization of relevant veins underneath the skin. This first clinical evaluation showed promising results in facilitating blood withdrawal in children by decreasing the failure rate.

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AN EXPLORATORY STUDY OF PALLIATIVE AND TERMINAL CARE FOR CHILDREN AND THEIR FAMILIES (PATCH)

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Background and aims: Embedded in future direction within the field of palliative care for children and families is the need for a more substantive research to underpin care provision. This interpretative qualitative study aimed to investigate bereaved parent and health care professional perspectives on developing care and services for children with life-limiting conditions at the end-of-life.

Methods: A novel approach to data collection was adapted. Semi-structured interviews were used to capture the experiences of 25 bereaved parents (mothers and fathers). Five focus groups with health and social care professionals used a consensus building technique, about how services could be developed in line with the issues identified by parents as priorities.

Results: Resonance in issues experienced in the context of caring for a child at the end of life, were noted between parents and professionals. Issues included: anxieties around 'truth telling', symptom management, emotional impact, sibling needs, relationships and bereavement support. In terms of the differences between parent and professional experiences, two dimensions of service provision are of particular note, late referral to hospice and lack of services in the community, both of which dominated the accounts of parents whose children had non-malignant conditions but were ranked as relatively unimportant by service providers.

Conclusions: More structured bereavement support for parents was identified across the