scientific literature was searched for systematic reviews and meta-analyses of effectiveness and efficacy data, as well as for health economic evaluations. IMPLEMENTATION STRATEGY: All currently reimbursed drugs with ATC-codes R03 and R05 were included in the review. A project team consisting of a pharmacist, a health economist and a legal advisor led the investigation. 3 external clinical experts were also attached to the project group. These experts were recruited based on nominations from stakeholders, both from the health care system and patient organizations. Companies marketing a product included in a review were asked to submit documentation about which studies best support the effectiveness and cost-effectiveness of their product. Before the report was published it was sent out for review by the stakeholders involved. RESULTS: A number of systematic reviews of a good quality were identified and were found to be relevant for the decision situation in Sweden. The quality of the evidence available to support the different types of inhaled medicines varied widely. Inhaled steroids, long action beta-agonists and combinations thereof have a large number of studies. The short acting beta agonists do not have as much evidence and the trials available are often small. There is also a shortage of head to head trials of relevant products at relevant doses. In this field there is also the added complication of different inhaler devices in addition to the different active substances. The value of having a wider range of substances and inhaler devices has not been studied and quantified. Based on the available evidence the products were compared at equivalent doses. Based on this comparison one product was considered too expensive compared to the alternatives and recommendations were made on which drugs should primarily be considered for new patients. The preferred measure of effect in health economic evaluations the QALY was rarely used within this field.

**CASE3**

**REVIEWING THE REIMBURSEMENT STATUS OF DRUGS AGAINST ASTHMA, COPD AND COUGHS**

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**ORGANIZATION:** The Pharmaceutical Benefits Board in Sweden (LFN) PROBLEM OR ISSUE ADDRESSED: In Sweden, the Pharmaceutical Benefits Board (LFN) was instituted in 2002 with the purpose of contributing to a rational and cost-effective use of pharmaceuticals. The Board’s assignment is to systematically and in accordance with national prioritization guidelines decide which pharmaceuticals should be reimbursed. Societal cost-effectiveness is a key decision parameter. One task of the LFN is to review the subsidy status of all products (~3 000 products) that are already in the pharmaceutical benefits when the Board was instituted. All the drugs used for treating asthma, COPD and coughs (43 products in total) were assessed to see whether they still merited reimbursement. GOALS: The primary purpose of the review of these products is to inform the Board’s decisions on subsidy status for the pharmaceuticals used within the therapeutic area of asthma, COPD and coughs. The secondary purpose is to help other decision makers in Swedish health care to rationally and cost-effectively use pharmaceuticals in the treatment of these diseases. OUTCOMES ITEMS USED IN THE DECISION: The scientific literature was searched for systematic reviews and meta-analyses of effectiveness and efficacy data, evidence on the humanistic burden of disease, as well as for health economic evaluations. IMPLEMENTATION STRATEGY: All currently reimbursed drugs with ATC-codes R03 and R05 were included in the review. A project team consisting of a pharmacist, a health economist and a legal advisor led the investigation. 3 external clinical experts were also attached to the project group. These experts were recruited based on nominations from stakeholders, both from the health care system and patient organizations. Companies marketing a product included in a review were asked to submit documentation about which studies best support the effectiveness and cost-effectiveness of their product. Before the report was published it was sent out for review by the stakeholders involved. RESULTS: Of the 43 products reviewed, 34 retained their reimbursement status. Eight products were removed from reimbursement while limited reimbursement was granted for one medicine. Of these nine medicines, five are cough medicines and four are medicines against asthma and/or COPD. The four asthma/COPD products were removed primarily because they were not judged to be cost-effective. The medicines against cough were removed from reimbursement due to the severity of the disease being low.

**CASE4**

**DEVELOPMENT AND VALIDATION OF A CAREGIVER GASTROENTERORITIS KNOWLEDGE QUESTIONNAIRE**

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**ORGANIZATION:** Authors: S, B Freedman (MD), S, Deiratany (MD), S, Bensler (MD), R Goldman (MD) (The Department of Paediatrics, Division of Paediatric Emergency Medicine (S.B.F., S.D.) and the Division of Rheumatology (S.B.) The Hospital for Sick Children, The University of Toronto, Toronto, ON, Canada and the Division of Pediatric Emergency Medicine (R.D.G.), BC Children’s Hospital and the Child & Family Research Institute (CFRI), Department of Pediatrics, University of British Columbia, British Columbia. GOALS: Title: Development and Validation of a Caregiver Gastroenteritis Knowledge Questionnaire. OUTCOMES ITEMS USED IN THE DECISION: Background: Gastroenteritis remains a leading cause of childhood morbidity and mortality and results in many non-urgent emergency department (ED) visits due to caregiver knowledge deficiencies. Children of caregivers who are less knowledgeable are at increased risk of presenting to a hospital secondary to dehydration. IMPLEMENTATION STRATEGY: Purpose: The primary aim of this study was to describe the reliability and validity of a Caregiver Gastroenteritis Knowledge Questionnaire (CGKQ). METHODS: The CGKQ design incorporated 38 true/false questions covering signs of dehydration, indications to see a physician, oral re-hydration therapy, solid intake and re-feeding, medication use and disease transmission. Following validation procedures, 80 caregivers, 25 nurses and 18 pediatric emergency medicine physicians and 4 general pediatricians completed the questionnaire. One month later all participants completed the questionnaire a second time. RESULTS: Findings: Content validity was confirmed qualitatively. Construct validity was demonstrated by incremental increases (P<0.001) in mean total scores from caregivers to nurses to physicians at both time points. A wide range of scores were recorded, from 12 to 38. Multiple regression analysis revealed the number of prior visits for gastroenteritis was inversely associated with overall caregiver score (P = 0.02). Internal test-retest data gave a single measure intraclass correlation coefficient of 0.74 (95% CI: 0.62, 0.83) and domain coefficients >0.50 for all domains except for signs of dehydration. The Pearson correlation coefficient for the test-retest score was 0.75. Internal consistency was demonstrated with a Cronbach’s alpha of 0.67 at time 0 and 0.80 at time 1 month. LESSONS LEARNED: The CGKQ is a reliable, valid tool suitable for identifying knowledge gaps amongst caregivers and measuring improvement following educational intervention.