

ECONOMICAL ASSESSMENT OF DIFFERENT HOSPITALIZATION CRITERIA IN CHILDREN WITH COMMUNITY-ACQUIRED PNEUMONIA

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Background: Criteria for hospitalization of children with community-acquired pneumonia (CAP) vary locally. Here, we aimed to adapt 3 different guidelines on CAP treatment (IDSA, BTS, and local Polish recommendations) and assess its usefulness and economic impact.

Material and methods: 246 children aged under 5 years old (median 20 months) who were hospitalized due to CAP in period of Jan2017-June2018 were eligible for the study. The end-points for criteria usefulness validation were suspicion of septic course assessed by high inflammatory markers values. Sensitivity, specificity, positive and negative predictive value (PPV, NPV) were calculated, and incremental cost-effectiveness ratio (ICER)/QALY compared.

Results: Sensitivity of IDSA criteria assessed by CRP, procalcitonin alone and CRP with procalcitonin reached 50%, 58%, 50% with NPV of 91%, 89%, 97% respectively. For BTS criteria sensitivity was 58%, 50%, 62.5%, and NPV 93%, 93%, 98% respectively. Sensitivity of the Polish criteria was 79%, 72%, 87.5% with NPV of 93%, 93%, 99% respectively. ICER for CRP-suspected sepsis in IDSA, BTS, and Polish guidelines reached \$31919, \$27360, and \$20160 respectively. In case of procalcitonin-based suspicion ICER was \$19282, \$38564, and \$26698 respectively. ICER of CRP with procalcitonin- based suspicion reached \$86769, \$69415 and \$49582 respectively.

Conclusions: Polish criteria although being the most conservative in terms of hospital treatment turn to have the highest sensitivity and NPV, and still are reasonable from the economical point of view.

[1] *This study was supported by CMKP grant no. 501-1-20-19-18*