



# Respiratory auscultation: (dis)agreement between health professionals

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## Abstract

Respiratory auscultation in paediatrics is part of their routine assessment. Poor inter-rater agreement is often reported in the auscultation of adult patients however, knowledge on health professionals' agreement during children's full assessment of respiratory sounds is limited. This study assessed r auscultation agreement between 2 health professionals in a pediatric unit.

84 children with respiratory infections (43[male];  $5.8 \pm 14.1$  yrs) were recruited. Children were auscultated in 6 locations (right and left anterior, lateral and posterior chest) by 2 experienced health professionals. The same stethoscope was used and the interval between auscultations was less than 15 minutes. Agreement for the number and position in the breathing cycle of crackles and wheezes was examined using Kappa statistics

Poor to fair agreement was found for crackles (number: 0.18 to 0.56; position in the breathing cycle: 0.16 to 0.56) and wheezes (number: -0.02 to 0.56; position in the breathing cycle: -0.01 to 0.56).

Similar to previous adult studies, agreement between health professionals was poor. The lowest k-values were found for wheezes detection. This may be explained by the noisy environment, which often present the same frequency ranges as wheezes (Riella, R.J. et al. Braz. J. Med. Biol. Res. 2009; 42:674-684). These results are of great concern as children are the population who has the highest incidence rates of respiratory diseases, often punctuated by wheezes. Studies exploring more accurate methods for detecting adventitious respiratory sounds in children are needed.

Children Wheezing Infections