

Title: NASOPHARYNGEAL CARRIAGE AND SEROTYPE DISTRIBUTION OF *Streptococcus pneumoniae* AMONG CHILDREN ATTENDING DAY-CARE CENTERS IN BRAZIL CENTRAL: BASELINE FOR ASSESSING THE INDIRECT EFFECT OF PCV10

Autors: Guerreiro, T.C.¹, Ternes, Y.M.F.¹, Vieira, M.A.³, Minamisava, R.², Lamaro, L.¹, Pires, C.H.¹, Silva, B.C.¹, Andrade, A.L.S.S.¹, Andre, M.C.D.P.B.¹, Lamaro-Cardoso, J.¹

Institution: ¹IPTSP/UFG – Instituto de Patologia Tropical e Saúde Pública da Universidade Federal de Goiás (Rua 235 – s/n – Setor Universitário – Goiânia-GO), ² Faculdade de Enfermagem da Universidade Federal de Goiás (Rua 227 Qd 68, s/n - Setor Universitário – Goiânia-GO), ³ Pontifícia Universidade Católica (Av. Universitária, 1440, Setor Universitário – Goiânia-GO)

Abstract:

Streptococcus pneumoniae is the leading cause of invasive bacterial infections in childhood. Owing to the key role of nasopharyngeal colonization in pneumococcal transmission and disease, infants and young children are the main reservoir. Surveillance of profile colonization is an important tool to assess the impact of pneumococcal conjugate vaccines. The aim of this study was determine the prevalence of pneumococcal carriage and serotype distribution in unvaccinated children attending in day care centers (DCCs) in Brazil Center (Goiania). Between October-November 2010, nasopharyngeal swabs were collected from 1.186 children between 36-59 months DCCs in Goiania. Standards methods were performed for the identification of pneumococci. Isolates were serotyped by a conventional multiplex PCR (cmPCR). Pneumococcal carriage rate was 55.5% (CI95% 52.6% - 58.2%). Of the 658 isolates, 472 (72%) were serotyped by cmPCR. Of all isolates 302 (45.9%) and 356 (54.1%) serotypes/serogroup were included in PCV10 and PCV13, respectively. The most frequently serotypes/serogroup were 6A/6B, 6C/6D (16.9%), 14 (10.5%), 23F (9.3%), 19F (7.1%), 15B/15C (5.6%), 3 (4.9%), 11A/11D (4.4%), 19A (3.3%) and 19Fvar (2.3%). More than 3 people (OR 1.56, 95%CI 1.18 – 1.92, $p<0,001$) and more than 2 children under 10 years (OR 1.85, 95%CI 1.35 – 2.52, $p<0,001$) living at the same household of the child were considered as risk factors for pneumococcal colonization. We identified a high prevalence of pneumococcal carriage among the study population. This data of serotypes will provide as baseline information for evaluating the indirect effect of PCV10 vaccination in the community.

Keywords: *Streptococcus pneumoniae*, nasopharyngeal carriage, children, day-care center, indirect effect PCV10

Funding agency: CNPq