Recent Declines in β-Lactam and MLSβ Resistances Among \textit{S. pneumoniae} and Age-Related Effects: Report from the SENTRY Antimicrobial Surveillance Program (North America, 1997 - 2002)

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**MATERIALS AND METHODS (Continued)**

**RESULTS**

- **S. pneumoniae** was isolated from 94% of the 16,489 isolates tested; 39 - 42% of isolates were penicillin-resistant intermediate (I) and 18 - 22% were penicillin-resistant (R).

- Resistance rates among \textit{S. pneumoniae} and \textit{M. catarrhalis} isolates remained stable over the last six years.


- Resistance reductions appear to be related in time to pneumococcal vaccination in the two targeted age groups.

- Further investigations are urged into the continued impact of vaccine usage and prescription discipline on pneumococcal resistance rates in CARTI and hospitalized patients with pneumonia.

**CONCLUSIONS**

- Resistance to penicillin and other β-lactams among \textit{S. pneumoniae}, decreased in 2002 via combined decreases in all MLSβ phenotypes, and showed a slight increase in the N. meningitidis phenotype strain (66%).

- Reductions in resistance was greater in age groups at the extremes of life, e.g. 0 - 5 and ≥65 years.

- Resistance reductions appears to be related in time to pneumococcal vaccination success in the two targeted age groups.

**SELECTED REFERENCES**

- Jones RN, Biedenbach DJ, Beach ML. Influence of patient age on the susceptibility patterns of \textit{Streptococcus pneumoniae}.

- Jones RN, Pfaller MA. In vitro activity of newer fluoroquinolones for respiratory tract infections and emerging patterns of antimicrobial resistance: Data from the SENTRY Program.

- Low DE. The new oral cephalosporins in community-acquired infections.

