Adherence rates and risk factors for suboptimal adherence to secondary prophylaxis for rheumatic fever

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Background

Secondary prophylaxis with 3–4 weekly benzathine penicillin G injections is necessary to prevent disease morbidity and cardiac mortality in patients with acute rheumatic fever (ARF) and rheumatic heart disease (RHD).

Aim

This study aimed to determine secondary prophylaxis adherence rates in the Far North Queensland paediatric population and to identify factors contributing to suboptimal adherence.

Methods

A retrospective analysis of data recorded in the online RHD register for Queensland, Australia, was performed for a 10-year study period. The proportion of benzathine penicillin G injections delivered within intervals of ≤ 28 days and ≤ 35 days was measured. A multi-level mixed model logistic regression assessed the influence of age, gender, ethnicity, suburb, Accessibility and Remoteness Index of Australia class, number of people per dwelling, Index of Relative Socio-economic Advantage and Disadvantage, Index of Education and Occupation, year of inclusion on an ARF/RHD register and individual effect.

Results

The study included 277 children and analysis of 7374 injections. No children received ≥80% of recommended injections within a 28-day interval. Four percent received ≥50% of injections within ≤28 days and 46% received ≥50% of injections at an extended interval of ≤35 days. Increasing age was associated with reduced delivery of injections within 35 days. Increasing year of inclusion was associated with improved delivery within 28 days. The random effect of individual patients was significantly associated with adherence.

Conclusion

Improved timely delivery of secondary prophylaxis for ARF and RHD is needed as current adherence is very low. Interventions should focus on factors specific to each individual child or family unit.