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Home ► All Journals ► Medicine ► Scandinavian Journal of Rheumatology ► List of Issues
► Volume 40, Issue 1 ► Small-area variations in sales of TNF in

Scandinavian Journal of Rheumatology >
Volume 40, 2011 - [Issue 1](#)

389 | 43 | 6
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Articles

Small-area variations in sales of TNF inhibitors in Sweden between 2000 and 2009

M Neovius , A Sundström, JF Simard, B Wettermark, T Cars, N Feltelius, ... show all

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of biologics in the rheumatoid arthritis (RA) population was calculated using nationwide registers. Small areas were defined as the 21 counties of Sweden.

Results: From 2000 to 2009, annual TNF inhibitor sales increased 9-fold from 195 to 1779 million SEK (0.7–5.0% of total drug expenditure). The county variation in sales per capita, initially 6.2-fold (coefficient of variation 42%), decreased to 2.3-fold in 2009 (24%). During the same period, total drug expenditure per capita remained at a 1.2-fold county variation (4–6%). Sales per capita variations of non-biologic treatments against chronic inflammatory diseases ranged from 1.5 to 1.8 (12–16%). For trastuzumab, a 3.2-fold variation (30%) was observed in 2009. At the patient level, there was a 2-fold county variation (from 10% to 21%) in biologic penetration in RA. County-specific sales per capita were associated with mean RA duration ($r = -0.52$, $p = 0.015$) and C-reactive protein at treatment initiation ($r = -0.49$, $p = 0.025$), while pain was borderline significant ($r = -0.43$, $p = 0.055$).

Conclusions: Despite universal access to treatment, substantial but decreasing small-area variations were observed. Although geographic variations are anticipated initially, their persistence calls for investigation of patient equity and treatment appropriateness as counties seem to have different initiation thresholds.

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