# Supplement: Patient Identification & Anti-Rheumatic Treatment

The National Patient Register contains data from inpatient and outpatient specialist care visits in the universally accessible Swedish health care system. The data include, e.g., personal identification number, admission date, main and contributory ICD-diagnoses, hospital, county, sex and age. Data from the inpatient register exist from 1964 onwards and the register attained national coverage in 1987. Data on outpatient specialist care exist from 2001 onwards. At the time of data linkage, the National Patient Register was updated until December 31, 2007.

Patients with a visit in either inpatient (1964-2007) or outpatient specialist care (2001-2007) with a main or contributory diagnosis for RA were identified (ICD10 M05, M06, M12.3; ICD9 714A/B/C, 719D; ICD8 712.10/20/38/39; ICD7 722). The validity of the diagnosis has been assessed previously by scrutinizing a random nationwide sample of almost 1,000 records of patients admitted to hospital with an RA diagnosis.[1] Approximately 90% of these patients fulfilled the American College of Rheumatology classification criteria.[2] In a smaller validation study of visits listing RA as diagnosis in outpatient specialist care during the period 2001 to 2005, 94% (50/53) fulfilled the ACR criteria.[3] A validation in Lund found similar percentages fulfilling the ACR criteria in inpatient (629/679=93%) as well as outpatient care (428/504=85%; P Geborek, personal communication.)

The Swedish Rheumatology Quality Register, maintained by the Swedish Society for Rheumatology, is a clinical quality register containing patients with both early and advanced RA. The register has been in operation since the mid-1990s and patients were included in the current linkage if they were identified prior to January 1, 2008. Since 1999, the register also contains the Swedish Biologics Register (ARTIS) of biologically treated patients with RA.[4, 5] In a regional validation in southern Sweden, the percentage of biologics treated patients labeled with RA fulfilling the ACR criteria has been estimated to 98%.[6]

**Anti-Rheumatic Drug Treatment**

Data on prescription drugs were retrieved from the Prescribed Drug Register for the period July 2005 to 2007. Data were retrieved on treatment with biologics (etanercept, infliximab, adalimumab, rituximab, abatacept and anakinra), non-biologic RA treatments (methotrexate, sulfasalazin, leflunomide, azathioprine, antimalarials (ATC P01B), gold (ATC M01CB01), and ciclosporine), glucocorticoids (ATC H02) and prescription NSAIDs (ATC M01A).

While >99% of etanercept and adalimumab use is dispensed to patients via pharmacies, close to 80% of infliximab is used in hospitals.[7] Therefore a large extent of infliximab is in the Prescribed Drug Register without the patients’ personal identification number and can therefore not be linked to individual patients. The same applies to rituximab and abatacept. To reduce underestimation of biologic drug use due to hospital provision, additional biologics data were obtained from the Swedish Biologics Register ARTIS[4] for the period 2005 to 2007. ARTIS has been estimated to cover 87% of all biologics treated patients with RA in Sweden.[8]

# References

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