

Incidence of Renal Replacement Therapy for End-Stage Renal Disease in Europe, 1990-99



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Introduction

The epidemiology of renal replacement therapy (RRT) for end-stage renal disease (ESRD) varies considerably worldwide, but we have lacked reliable quantitative estimates of trends in the incidence by age, gender and cause in Europe over the last decade.

Methods

- Data from 12 national or regional registries in 9 countries participating in the ERA-EDTA registry: Austria, Belgium, Denmark, Finland, Greece, The Netherlands, Norway, UK-Scotland, and Spain including Andalusia, Catalonia and Valencia, and covering a population of 82.1 million people.
- Incident cases were patients with either first dialysis or a pre-emptive graft, between 1990-99.
- Adjusted incidence rates for age and gender (reference : 1995 European population) were studied by 2-year period. Average annual changes (%) were estimated by Poisson regression.

Results

- The overall RRT incidence rate increased almost linearly over the last decade, except in the Netherlands. It remained stable in both men and women younger than 44. In the 45-64 year age group, the overall rate rose by 2.2%/year, increasing twice as high in men than women. In those aged 75 years or more, the RRT incidence more than tripled in 10 years for both gender.

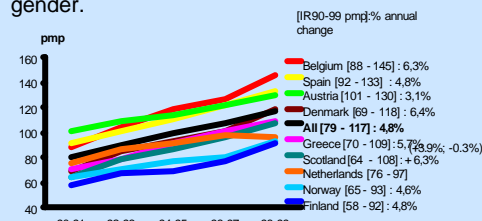


Fig 1 - RRT adjusted incidence rates (IR) and % annual change

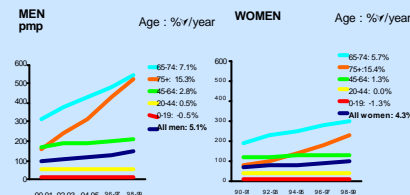


Fig 2 - RRT incidence and % annual change, by age and sex

- The trends by age group were very similar between countries below the age of 65, but differed substantially for the elderly, with a wide range in the percentage of patients older than 65.

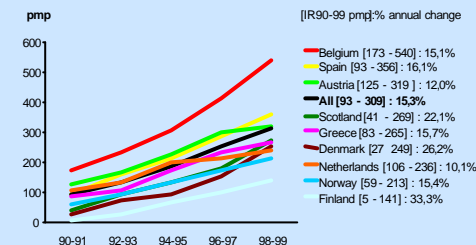


Fig 3 - Incidence rates of RRT, among the 75 years old or plus

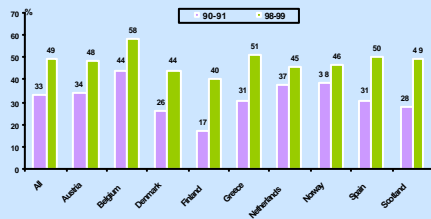


Fig 4 - Percentage of patients older than 65 among incident cases

- The incidence of RRT for ESRD due to diabetes, hypertension and renal vascular diseases nearly doubled over the decade, while that due to other known causes remained stable.

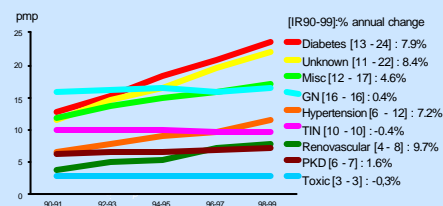


Fig 5 - RRT adjusted incidence rates, by cause of ESRD

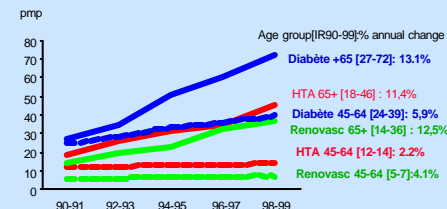


Fig 6 - RRT adjusted incidence rates, by age and cause of ESRD

- The growth for ESRD due to diabetes, hypertension and renal vascular disease mainly involved patients older than 65, but was also high in the 45-64 year age group for diabetes.

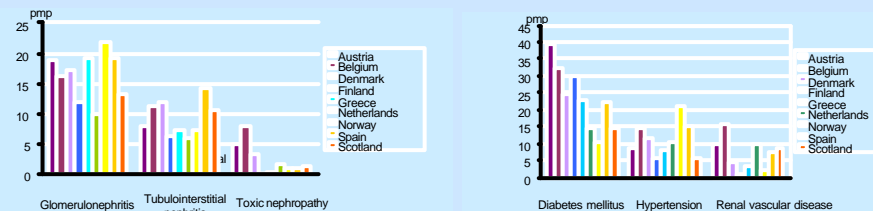


Fig 7 and 8 - RRT adjusted incidence rates in 98-99, by cause of ESRD and by country

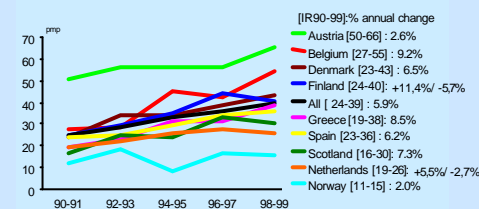


Fig 9 - Adjusted incidence rates of RRT for ESRD due to diabetes among the 45-64 years old, by country

- The RRT incidence in the 45-64 year age group reflects true ESRD incidence more closely, as it is less subject to access variation than in older patients. In this age group the largest range in incidence between countries was that for diabetes.

Conclusions

- RRT incidence continues to rise but at various rates in Europe, resulting from enlarging differences in incidence in the elderly and, to a lesser extent, in that due to diabetes.
- To what extent these differences are due to under-provision of dialysis in the countries with lower incidence rates rather than differences in true ESRD incidence needs to be answered