OBJECTIVES: Crohn’s disease is a chronic relapsing–remitting inflammatory bowel disease with heterogeneous disease course, requiring life-long treatment. Phenotypes explaining disease heterogeneity is of interest in optimizing allocation of health care resources, e.g. to avoid expensive maintenance treatment to prolong relapse-free remission in unaffected patients compared to prolonged relapse in patients with severe phenotype.

METHODS: We had individual data on relapse and remission time for each patient. We used a score of medications, aggregated over three month periods, from inflammatory bowel disease patients from 1991 and ten year onwards. Data from Crohn’s disease patients were extracted. An exact maximax likelihood estimator using observations aggregated over time was used to estimate the monthly transition probabilities. This estimator was adjusted to allow for different disease phenotypes using an Expectation-Maximization method which identifies the phenotypes that best describe patient heterogeneity. The estimated parameters were used to derive the mean durations of a relapse and a period of remission to describe the phenotypes. RESULTS: At least two distinct phenotypes were found in each country, seldom-relapsing (<once/3 years) and often-relapsing (>once/3 years). The best fit was with four phenotypes in Denmark, three phenotypes in the Netherlands and in Italy, and two in Norway, Israel, Ireland, Spain, and Greece. In Denmark and Italy there was a single seldom-relapsing phenotype and more than one often-relapsing phenotype. In Netherlands there were two seldom-relapsing phenotypes. Denmark, The Netherlands, Israel, Ireland and Italy have roughly as many seldom-relapsing as often-relapsing patients. Norway, Spain and Greece have a majority of seldom-relapsing patients.

CONCLUSIONS: Allowing for different heterogeneous epidemiological models fit improves resource allocation can be optimized using phenotypes. Using data aggregated over time appears to remain a challenge.

PRM49 EVALUATION OF PATIENT CENTERED OUTCOMES USING INDIVIDUAL DATA FROM A QUALITY REGISTRY AND PATIENT REPORTED ABILITIES AND RATINGS OF QUALITY IN HEALTH CARE, IN DIABETES PATIENTS IN SWEDEN

OBJECTIVES: The Swedish National Diabetes Register (NDR) has since 1996 longitudinally collected patient outcomes e.g. quality of life and diabetes care from the majority (80%) of Swedish diabetes patients. In addition patient reported values were collected alongside the registry in a questionnaire. Our purpose was to evaluate a method for measuring patient reported abilities and ratings of quality in health care and evaluating them together with outcomes extracted from the NDR.

METHODS: A questionnaire was developed to measure if diabetes care is perceived as patient focused and efficient, through questions on self management ability, worries, ability to carry out daily activities, and perception of service, access and involvement. The questionnaire was issued to 4,760 patients, 2,916 responded. Registered patient data on the registry (NDR), blood pressure, and self reported co morbidities for each patient and connected to the questionnaire. Item Response Theory (IRT) was used to estimate patient abilities and patient ratings of quality in health care (IRT scores) from the response patterns. For each patient, registry data and IRT scores were used to derive an overall Malinquiast output quality index, a health care related component and a patient ability component. The index is a measure of how efficiently the patient leads his or her life with diabetes and its care, and provides a measure of the patient’s state of health in relation to the patient’s situation.

RESULTS: We obtained IRT scale models with good fit, satisfactorily validated in another population. The IRT scores provide basis for patient evaluation in a broader perspective than risk factors alone. The ability index component varies more than the health care component. CONCLUSIONS: The questionnaire provides estimates of abilities and ratings of quality. Our approach allows estimating patient benefit and health care production using combined registry and patient reported data. The procedure probably easier for patients than methods like time trade-off.

PRM40 EFFICACY OF LIRAGLUTIDE COMPARED TO EXENATIDE AND INSULIN GLARGINE IN PATIENTS WITH DIABETES TYPE 2: A META-ANALYSIS

OBJECTIVES: liragliptide and exenatide are the two known approved GLP-1 analogues that may help when considering SLRs. A systematic review of literature was conducted to evaluate the character- ...