and C2, while PL references to all EU countries. C2 and RO employ the average among the three lowest reference prices for BG, C2, and RO the lowest reference price. There is no single scale in all countries. In BG, RO and PL, children are separated for wholesalers and retailers, while in C2 they are negotiated. In C2 and PL there are multiple insurance companies compared to BG and RO, where there is only one. Currently RO’s reimbursement is 50% of the price for all prescription drugs, while BG, C2 and RO reimbursement rates 50% employ a complex external and internal referencing. In C2 the reimbursement base is the cheapest medicinal price in the group. In BG, PL and RO the reimbursement level is the cheapest price per DDD for every INN. All countries require pharmacoeconomic analyses, but C2 and PL employ guidelines, while BG and RO apply criteria for evaluation.

CONCLUSIONS: We deem BG and RO systems less adaptable, but clearer to follow. C2 and PL systems show greater flexibility, due to existence of negotiation and freedom.

Individual’s Health – Research on Methods

PIH63
THE KIGS QUALITY INSIGHT PROGRAM ASSESSING THE QUALITY OF CARE FOR SHORT CHILDREN TREATED WITH GROWTH HORMONE USING THE OUTPUT FROM A LARGE PHARMACO-EPIEMIDIOLOGICAL SURVEY
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OBJECTIVES: Despite nearly 25 years of experience with recombinant human growth hormone (GH) treatment modalities vary significantly between centres and regions and final outcome of GH therapy varies widely. In a country like Germany, for example, children with growth disorders are treated with Genotropin® (Pfizer Inc., USA) and Humatrope® (Eli Lilly Co., USA). Aims: To compare and contrast treatment outcomes between centres. METHODS: Data collected from more than 75,000 children with growth disorders treated with Genotropin are followed-up worldwide in a large, pharmaco-epidemiological database (KIGS, Pfizer International Growth Study). Country specific data- sets are used to compare treatment standards and demonstrate differences between individual centres and the country as a whole. Site-specific, individualized reports enable clinicians to anonymously benchmark the quality of care in their treatment centre. Quality indicators (like diagnostic tests, height and height velocity, GH dose, treatment response and responsiveness, treatment duration, adverse events, completeness of documentation) are collected and compared. RESULTS: Structural aspects as well as process and outcome indicators differed between the paediatric endocrinology centres, e.g. age at start of therapy, GH doses and diagnostic procedures. The reports allowed self-audit of clinical practice, sharing of best practice and promote discussion of clinical decision making in paediatric specialist care forums. CONCLUSIONS: The KIGS Quality Insight (KIGS QI) program provides a successful approach to unmask deficits and to improve the outcome of care. The output from the centre and country specific analysis allows identification and follow-up of GH non-responders and assists with demonstration of standard of care and treatment outcomes in the country to hospital managers, guidelines committees and payers. Results from KIGS can be successfully used to enable investigators to compare their treatment centre with the country as a whole and to assess changes over time.

PIH64
FEMALE URINARY INCONTINENCE IN GERMANY – COST EXPLOSION TOMORROW?
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OBJECTIVES: To estimate costs of routine care for female urinary incontinence in nursing care in Germany. The management of female urinary incontinence is considered as the most cumbersome task in nursing homes for the elderly. Despite the great economic burden of incontinence, the largest cost category, routine care costs, is poorly described, and there are limited data on cost on nursing homes.

METHODS: In cooperation with a nursing home, cost of managing incontinent patients was evaluated. Both direct patient-material and labor costs were considered. Time required to manage an incontinent patients was also evaluated. Data were collected on randomly selected female patients. The determination of the cost was based on the existing prices and the usual salary of employees in nursing homes.

RESULTS: Total cost of managing an incontinent patient sums up to €260.06/month/patient. Cost calculation of nursing care was based on a 4 times/day change of diapers. This accounted in total €0.40 for the material costs (anatomical pads, disposable gloves, hand and surface disinfectants, incontinence bed cover, mattress protectors, pants, wound cream, protective aprons and diapers). The costs for the nursing staff work amounted to €182.66. The results are in contrast to the prediction of Schubenberg et al. who analyzed the material costs in German Health Care System by incontinence patients. The annual costs were calculated with 261 €. Personnel costs were not calculated.

CONCLUSIONS: Female urinary incontinence demands highest attention and should not be taken as symptom of old age. Rather, the urinary incontinence is treatable disease, which improves the quality of life and reduces the cost of health care. Female urinary incontinence should be perceived as a widespread disease. Approaches would include the development of a disease management program and the implementation in German social act.

PIH65
WHAT ARE WE MISSING IN MENINGOCOCCAL DISEASE MODELLING TO BETTER UNDERSTAND THE HEALTH AND ECONOMIC IMPACT OF NEW VACCINES?
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OBJECTIVES: Neisseria meningitidis (Nm) is a leading cause of bacterial meningitis and invasive meningococcal disease (IMD) in many parts of the world. WHO recommends that countries consider the introduction of meningococcal conjugate vaccines (MCV) as part of routine immunisation programs. Regardless of whether or not countries decide to introduce meningococcal vaccination, a complete understanding of the epidemiology of meningococcal disease and the potential cost-effectiveness of MCV is necessary. A recent study in Canada showed that the incidence of invasive meningococcal disease had doubled overall and that the disease was evenly distributed among different age groups. Models that are used to evaluate the health and economic impact of new meningococcal vaccines have not always considered interactions between different serogroups nor have they considered the emerging role of type a meningococci. Our objective was to test the validity of the assumption that meningococcal disease is dominated by one serogroup in order to better understand meningococcal disease burden in high-risk populations. METHODS: We developed a new meningococcal disease model that incorporates interactions between all serogroups. The model uses observed serogroup-specific incidence data, including IMD, and incorporates temporal changes in serogroup-specific incidence. The model is calibrated to carriage data and 62-year case notification data from Canada. We compared the model’s predictions for meningococcal disease burden with observed serogroup-specific incidence data and IMD case notification data. RESULTS: The model was able to reproduce the observed meningococcal disease burden in Canada. The model supports the idea that meningococcal disease is dominated by one serogroup, but is able to capture the changing burden of meningococcal disease over time. CONCLUSIONS: The model was able to reproduce the observed meningococcal disease burden in Canada. The model supports the idea that meningococcal disease is dominated by one serogroup, but is able to capture the changing burden of meningococcal disease over time.

PIH66
TRAIT OR STATE: AN EXPLORATION OF SELF-ESTEEM, HAPPINESS AND QUALITY OF LIFE BY TIME SERIES
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OBJECTIVES: Mainstream of psychological researches usually utilizes large samples, cross-sectional studies and aggregate frames to analyze data and interpret them. However, the limitations are that the specific features of individuals are not easy to be revealed and the time effect has been ignored. This study explores both of the trait-like and state-like properties including global self-esteem, happiness and the quality of life. By using time series analysis which can examine individual, longitudinal and non-aggregate data, the properties of psychological measures can be investigated.

METHODS: Ten college students (mean age: 20.6 years, SD: ±2.18) and four adults (mean age: 30.27 years, SD: ±1.23) participated in this study. Each subject completed six 10-cm visual analogue scale items, once a day for 2 months. These items measure subject’s global self-esteem, happiness, the quality of life, positive life events, negative life events as well as random error (i.e., Participant was asked to make a mark on the center of a line). Time series analysis, including autoregressive and moving average processes, were employed to explore the time dependency (i.e., more trait-like) for each item. RESULTS: For the college sample, 80% of autocorrelation and partial-autocorrelation coefficients were not significant across time lag. This result doesn’t fully support the existence of time dependency in the sample. 80% of autocorrelation and partial-autocorrelation coefficients were statistically significance for the adult sample. Both samples showed significant correlations among psychological measures (self-esteem, happiness and the quality of life) and life events (positive and negative). CONCLUSIONS: In conclusion, the results support that self-esteem, happiness and quality of life may contain both trait-like and state-like properties, and the time dependency of psychological measures is more stable especially in adults.

PIH67
SUCCESSFUL DEVELOPMENT OF ANNUAL AND LONG TERM PREDICTION MODELS TO ESTIMATE HEIGHT OUTCOME FOLLOWING GROWTH HORMONE (GH) THERAPY IN CHILDREN USING DATA FROM KIGS – A LARGE PHARMACOEPIDEMIOLOGICAL SURVEY
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OBJECTIVES: Algorithms for height velocity (HV) and newly developed algorithms for weight gain (WG) treatment have been developed to facilitate treatment guidance. However, accurately predicting height over the long term, during pre-pubertal treatment years has always been a problem. Long-term outcome prediction models for GH treatment have been developed to facilitate treatment guidance. However, accurately predicting height over the long term, during pre-pubertal treatment years has not been assessed and is a prerequisite for modelling of cost effective optimum height outcomes. METHODS: Annual prediction models utilised data from large cohorts of children from the KIGS database (Pfizer International Growth Database, comprising 75,000 children with growth disorders) and describe the likely annual height gain based on patients’ auxiological and biochemical characteristics (e.g. GH dose, age, mid parental height standard deviation [SDS] and weight SDS score) at treatment start. The most likely long-term height development was simulated prospectively up to 4 years by sequential application of existing yearly prediction algorithms for height velocity (HV) and newly developed algorithms for weight gain.