COST-EFFECTIVENESS ANALYSES OF PRIMARY PREVENTIVE INTERVENTIONS FORMING PART OF A GENERICALLY APPLICABLE MODEL FOR UNDERSTANDING THE EFFECT OF DIFFERENTIAL COMPLIANCE WITH ANTIHYPERTENSIVE DRUGS ON CLINICAL OUTCOMES

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OBJECTIVES: Compliance with antihypertensives is influenced by various factors, and influences blood pressure (BP) control and cardiovascular outcomes. Differences in compliance, eg. the improvement associated with fixed-dose combinations (FDCs), are acknowledged, but have not been incorporated into cost-effectiveness modeling because the chain of causality between compliance and outcomes is complex. We developed a method to quantify this chain of effects which can use simple compliance parameters such as medication possession ratios, or more sophisticated inputs; it can also be tailored to specific decision problems. METHODS: First the effect of variation in compliance on simulated dosing histories is modeled. Second, the rate of fall/rise in BP on initiating/withdrawing treatment, and the full-compliance BP reduction, are used to estimate corresponding BP trajectories. Finally clinical endpoints are modeled from these trajectories, based on existing evidence. In an illustrative example, the effect of choosing an FDC over the corresponding component-based therapy. Congestive Heart Failure 2003;9:524–32.

THE CARDIOVASCULAR PREVENTION MODEL (CPM), A GENERICALLY APPLICABLE MODEL FOR PERFORMING COST-EFFECTIVENESS ANALYSES OF PRIMARY PREVENTIVE INTERVENTIONS

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OBJECTIVES: To develop an epidemiological and economic model of cardiovascular disease (CVD, comprising coronary heart disease and stroke) that can be used to predict the future incidence of CVD in a given population (with representative cross-sectional data on cardiovascular risk factors) and under-take cost-effectiveness analyses of primary preventive strategies. METHODS: The CPM is a Markov model comprising four health states: ‘Alive without CVD’, ‘Alive with CVD’, ‘Dead from CVD’ and ‘Dead from non-CVD causes’. Individual subjects’ risks of CVD are derived from Framingham and UKPDS risk equations for non-diabetic and diabetic individuals, respectively. The risks of non-CVD death are drawn from local mortality data. To illustrate the function of the CPM, it was populated with 1335 Australian subjects from the nationally-representative 1999–2000 Australian Diabetes, Obesity and Lifestyle study who were: aged 35–74 years; free of CVD; and met current criteria for reimbursed access to statin treatment. Follow-up was simulated until death or age 75 years. The cost-effectiveness of atorvastatin for the primary prevention of CVD was modelled via decision analysis, using efficacy data from a recent meta-analysis of randomized trials and Australian cost and utility data. A 5% annual discount rate was applied. RESULTS: The CPM predicted that of Australians currently aged 35–74 years who were CVD-free but met criteria for lipid-lowering treatment, 23.3% would develop CVD and 24.3% would be dead by age 75 years without statin treatment. Atorvastatin would reduce these figures to 16.5% and 22.2%, representing numbers needed to treat of 14.7 and 46.2 to prevent CVD and death, respectively. The estimated ICERs were AUD$54,100/YoLS and AUD$35,600/QALY. CONCLUSIONS: The CPM allows for the prediction of future incidences of CVD in a population where representative cross-sectional data on cardiovascular risk factors are available. It can also be applied to cost-effectiveness analyses of primary preventive interventions for that population.

INDIVIDUAL’S HEALTH—Clinical Outcomes Studies

PIH1 CHANGES IN PELVIC FLOOR MUSCLE STRENGTH, ITS DURATION AND ITS RELAXATION ABILITY DURING PREGNANCY

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OBJECTIVES: To assess the strength and duration of pelvic floor muscle contraction and the ability of muscle relaxation before and during pregnancy.

METHODS: Our study focused on examining the strength of duration and ability of relaxation of pelvic floor muscle in cases of nulliparous young women and pregnant women in the second and third trimesters. The measurement of parameters characterizing the functional abilities of the muscle was performed by vaginal pressure measurement equipment. The statistical data were calculated according to mean, standard deviation, Fisher’s exact test, T-test methods and the results were considered to be relevant at p < 0.05.

RESULTS: Out of 119 measurements the data of 93 women were processed. The maximum muscle strength (103.13 H2Ocm ± 54.12) of nulliparous women (n = 36) was significantly higher (p = 0.00348) than that of pregnant women (n = 57); (68.3 H2Ocm ± 47.23). The duration of maximum contraction in case of nulliparous women (6.4 sec ± 4.9) proved to be markedly longer (p = 0.011067) than during pregnancy (3.98 sec ± 4.011). Although the maximum muscle strength is higher in the second trimester than in the third trimester the difference is not significant. The difference of maximum contraction in newborn carried no marked difference was found. A total ability of relaxation could only be observed in one third of the sample but no significant difference was detected between...
the groups. Women who occasionally do some forms of physical exercise showed a significantly better muscle strength (p = 0.02923), and women who regularly do some physical exercises showed a significantly longer duration of maximum contraction (p = 0.01838) than pregnant women doing regular or occasional exercises. CONCLUSIONS: A significant decrease could be observed in pregnancy as compared to nulliparous young women concerning maximum pelvic floor muscle strength and duration of maximum contraction.

**PIH2**

**ONE DAY NATIONAL SURVEY ON PREVALENCE OF MALE SEXUAL DYSFUNCTION, AMONG MEN CONSULTING UROLOGISTS**

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**OBJECTIVES:** ENJEU is a French one day, cross sectional, observational survey aimed to describe medical reasons disclosed by men over 18 years old when visiting an urologist, to estimate the prevalence of male sexual dysfunction (MSD) including erectile dysfunction (ED) and to describe treatment options for ED.

**METHODS:** All French urologists have been contacted to participate in this national survey; 150 physicians did participate. This sample was representative of the French urologists regarding age, geographical distribution and practice. The survey was proposed to 1998 patients: 1848 (92.5%) agreed to participate; analysis was performed on 1740 patients. Information on urologists’ practices were collected through a questionnaire filled by the physicians. Information related to urological disorders, sexual dysfunctions, their treatment and their impact on the patient’s life were gathered by a patient auto-questionnaire. Erectile dysfunction was assessed through the single question of John B. McKinlay. RESULTS: Male sexual dysfunction was the first reason for visiting urologists (14%) following prostatic diseases (62%). Eighty-eight percent (88%) of urologists reported “usually” managing male sexual dysfunction. Sixty-five percent (65%) of urologists reported “systematically or often” asking their patients about eventual MSD. The median number of patients managed for ED was five per week. Among patients (mean age 63 +/- 14 years), 68% (IC95% = [65.2%; 70.7%]) had ED (44% severe). Forty-one percent (41%) did not talk about their ED to the urologist. Twenty percent (20%) reported ejaculatory dysfunction and 13% lack of desire. Among patients with ED, only 25% were treated (12% with IPDES, 8% with intracavernous injection and 5% with treatment association). Among patients visiting for the first time an urologist (25%), 52% reported ED and only 8% had previously received treatment for this condition. Among patient followed by urologists (after surgery or medical treatment), 75% reported ED and 39.3% were treated. CONCLUSIONS: This survey emphasizes the high prevalence of reported, and particularly unreported male sexual dysfunctions, for patients visiting their urologists. Despite declared urologists’ interest for male sexual dysfunction, the discrepancy between the high prevalence of ED and the low rate of patients consulting for this condition probably explains the low rate of patients using treatments. This survey demonstrates the value of a routine evaluation of sexual dysfunctions in urology clinics.

**PIH3**

**EPIDEMIOLOGICAL SURVEILLANCE OF CONGENITAL MALFORMATIONS IN 52,744 BIRTHS COLOMBIAN BETWEEN APRIL 2001 AND JANUARY 2008**

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**OBJECTIVES:** It is intended to describe the characteristics of the birth defects in 52,744 births in 4 Colombian cities. A congenital malformation (CM) is defined as an alteration of the morphology that can be diagnosed at the pre or postnatal period. The Collaborative Latin-American congenital malformations study (ECLAMC) was established since 2001 at the Human Genetics Institute at the Pontificia Universidad Javeriana. The objective of the latter study is to do a surveillance of all newborns in order to diagnose them promptly and to establish possible risk factors involved in the development of CM.

**METHODS:** We used the data base registered from 4 different cities in Colombia during the period between April 2001 to January 2008. The cases were all newborns with any weight at the moment of birth or any stillbirth above 500 gr. The controls were all healthy newborns from the same sex as the cases. It was excluded a case or a control if the mother did not accept to participate in the study.

**RESULTS:** The population of the study was 52,744 newborns from which 1650 (3.12%) had a MC. The majority of cases were male and the most common CM was the group of the ear anomalies followed by clubfoot, polydactyly, Down syndrome, nevus, cleft palate and cardiopathies. The weight and gestational age were less in the group of the cases compared to the controls (p < 0.001). It was used the prognostic scale for each MC and it was found that the majority of cases had a high risk of permanent disability if not treated (54%).

**CONCLUSIONS:** In this study are reported frequencies of the CM in a sample of newborns to 4 Colombian cities found prevalence similar to the rest of the world. These diseases contribute significantly to the burden of disease in our country and directly impacting infant mortality rates.

**PIH4**

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