Cost-effectiveness of rotavirus immunization in vietnam: Exploring impacts of herd immunity and patterns of breastfeedingof

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fort, psychosocial discomfort, worries/concerns, and satisfaction). For the overall scale and each subscale of PAC-SYM and PAC-QOL, scores can range from 0 through 4, higher scores indicate worse situation. **RESULTS:** Both placebo and prucalopride groups were well-matched at baseline in terms of demographic data and disease characteristics such as age, gender distribution, body weight, BMI, overall scales and subscales of PAC-SYM and PAC-QOL. At week 12 last observation carried forward (LOCF), the mean score reduction was significantly greater in the prucalopride group than that in the placebo group for the overall PAC-SYM score (0.3 point), the stool symptom (0.4 point), the abdominal symptom (0.2 point) and the rectal symptom (0.2 point) ($P \leq 0.008$). Mean overall PAC-QOL scores showed significant improvement (0.3 point) with prucalopride than with placebo (at week 12 LOCF), as well as physical discomfort (0.3 point), psychosocial discomfort (0.2 point), worries/concerns (0.2 point), and satisfaction (0.6 point) ($P \leq 0.017$). **CONCLUSIONS:** During a treatment period of 12 weeks, prucalopride significantly reduced the severity of symptoms, and improved satisfaction and the disease-related quality of life in Chinese patients with chronic constipation.

INDIVIDUAL'S HEALTH - Clinical Outcomes Studies

PIH1

PREGNANCY OUTCOMES AFTER MATERNAL EXPOSURE TO TOPICAL CORTICOSTEROIDS: A POPULATION-BASED COHORT STUDY

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OBJECTIVES: To investigate whether maternal exposure to topical corticosteroids results in adverse pregnancy outcomes. **METHODS:** We used the UK Health Informatics Centre (HIC) Datasets to conduct a population-based retrospective cohort study. We identified 2645 women who were given a topical corticosteroid during the period from last menstrual period (LMP) to delivery and 7212 unexposed women matched for maternal age and the calendar year of pregnancy. We examined if there was an increased risk of adverse pregnancy outcomes (including orofacial cleft, low birth weight, preterm delivery, and stillbirth) in the exposed group. **RESULTS:** No significant increase in adverse pregnancy outcomes (including orofacial cleft, low birth weight, preterm delivery, and stillbirth) was found in relation to maternal exposure to topical corticosteroid [adjusted risk ratio (RR) 1.85 [95% confidence interval (CI) 0.22-15.20], 0.97 (95% CI 0.78-1.19), 1.14 (95% CI 0.70-1.86), and 1.04 (95% CI 0.55-1.98), respectively]. Stratified analyses based on the potency of topical corticosteroids did not substantially change the results. Neither did sensitivity analyses that included topical corticosteroids given up to 85 days before last menstrual period. **CONCLUSIONS:** Congruent with previous studies, the present study found no associations of maternal exposure to topical corticosteroids with orofacial cleft, preterm delivery and stillbirth. In contrast to two previous cohort studies, the present study did not find an association of low birth weight with maternal exposure to either potent or very potent topical corticosteroid. This, however, may be due to the limited sample size and the risk being small.

PIH2

TOPICAL ESTROGEN THERAPY IN POSTMENOPAUSAL WOMEN - INDIAN EXPERIENCE

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Twenty-five to 30 % of menopausal Indian women suffer from local vaginal symptoms. Dearth of Indian data on hormone therapy to relieve local vaginal symptoms prompted this research. **OBJECTIVES:** The overall objective of the research was to assess the effects of treatment with local estrogen therapy on atrophic vaginitis and gynecological health in Indian post menopausal women. **METHODS:** Data of 50 menopausal Indian women having moderate to severe vaginal atrophy was collected. It was ensured that the women had intact uterus and were not suffering from any significant uterine pathology. Vaginal maturation index (VMI), vaginal pH, and severity of participant-reported most bothersome symptom (vaginal dryness, itching, burning, or dyspareunia) at week 12 were the primary outcome. Physiological changes were assessed by Genital Health Clinical Evaluation (GCHE) tool. Local estrogen therapy in the form of Conjugated Equine Estrogen and Estradiol was used in the dose of 0.5 g twice a week and 1 mg daily respectively for 12 weeks **RESULTS:** At week 12, there was significant improvements in VMI with the two low-dose preparations compared to baseline values ($p<0.05$). Local estrogen therapy reduced the most bothersome symptoms in 80 % of the patients. There was a significant improvement in GCHE score after 12 weeks. The local estrogen therapy was well tolerated in the patients and the adverse events were noted in only 5% of the patients. **CONCLUSIONS:** Local estrogen therapy was effective in relieving the symptoms of moderate-to-severe atrophic vaginitis when used twice weekly. Twelve weeks local estrogen therapy was well tolerated and resulted in beneficial changes in the vaginal tissue and induced an overall genital health pattern more characteristic of the premenopausal state.

PIH3

PREGNANCY OUTCOMES FOLOWING EXPOSURE TO SEROTONIN REUPTAKE INHIBITORS: A META-ANALYSIS

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OBJECTIVES: Serotonin reuptake inhibitors (SRIs) are extensively used in management of clinical depression. Reports vary about the risk of these drugs during pregnancy. To determine the risk of exposure to SRIs, we pooled data from multiple clinical studies that investigated obstetrical outcomes in women exposed to this group of drugs during pregnancy. **METHODS:** Studies were identified by search of PUBMED, OVID, Web of Sciences and SCOPUS databases and the data were derived from 1966 to 2011(September). Types of outcome investigated were spontaneous abortion, major malformations, cardiovascular malformations, and minor malformations. The criteria for inclusion of studies in this meta-analysis were exposure of women to any therapeutic dosage of SRI (citalopram, fluoxetine, fluvoxamine, paroxetine, sertraline, escitalopram, venlafaxine) during pregnancy. **RESULTS:** A total of 22 studies and 616 522 patients were included in the meta-analysis. Overall, we did not find significant risks of cardiovascular and minor malformations for exposure to SIRs during all trimesters of pregnancy but OR for spontaneous abortion was 1.87 with 95% CI = 1.5 to 2.33 and for major malformations 1.37 with 95% CI = 1.11 to 1.68 respectively. **CONCLUSIONS:** Our results find that SRIs do not increase the risk of cardiovascular and minor malformations but increasing the risks of spontaneous abortion and major malformations significantly should be consider during pregnancy cautiously.

PIH4

IMMUNIZATION STATUS AND FAMILIES' FACTORS IN IRAQ

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OBJECTIVES: To evaluate immunization status and to identify the family factors associated with immunization rate in children younger than two years. **METHODS:** A cross-sectional and a cluster sampling design were implemented; five hundred twenty eight representative Iraqi families with children between 18 and 70 months of age were interviewed in five public health clinics in Mosul-Iraq. Demographic characteristics of the child and family, and the child's immunization history were obtained. Immunization rate or completeness for the following six vaccines were assessed: one dose of Bacille Calmette-Guérin (BCG) vaccine; five doses of polio (OPV); three doses of hepatitis B (HBV) vaccine; four doses of diphtheria, tetanus, and pertussis (DTP) vaccine; one dose of measles, mumps, and rubella (MMR) vaccine; one dose of the measles vaccine. Risk factors for partial immunization for the 1-5-3-4-1-1 vaccine series were explored using both bivariate analyses and multilevel logistic regression models. **RESULTS:** More than half of the children were immunized with all vaccination doses therefore considered as complete immunization cases. In addition, less than half of the children had one or more than one missed dose, considered as partial immunization cases. The study found significant associations of immunization completeness with father's education level, mother's education level, mother's race and family income. Six factors were found that strongly impacted on immunization completeness in the presence of other factors; birthplace, number of preschool children, family income, father's education, mother's education and marital status. **CONCLUSIONS:** There is a need to increase awareness and knowledge about the benefits and importance of vaccination, as well as the harmful consequences of non-complete or partial immunization.

INDIVIDUAL'S HEALTH - Cost Studies

PIH5

PROVIDER PAYMENT AND COST OF TREATMENT FOR COMPLICATED DELIVERY CARE: EVIDENCE FROM CASE STUDIES IN INDONESIA

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OBJECTIVES: To obtain information on provider payment scheme for complicated delivery care (nearmiss cases) and compared with cost of treatment. **METHODS:** Crosssectional study was conducted and interview with 372 discharged patients with nearmiss (life threatening) cases in Banten province was done. Information was also captured from hospital records, including charges for consultation fees and other fees, drugs and supplies, and other expenses. Other variables were also collected from hospital documents and a statistical model was developed to learn factors affecting the cost. We combined information with additional data from other districts to obtain information on hospital's perspective, how they accept the scheme for provider payment. **RESULTS:** Subsidy for the poor has been started since 2004 and provider payment scheme has been improving to respond the need of quality services with adequate funding. Hospital type C (4 specialists only), however, is not happy with payment under DRG system and it was found that claims for nearmiss cases were below its costs. Medical staffs were unhappy with incentive systems and proposing 'free delivery' for all type of nearmiss cases would add burden for the hospitals. Cost of treatment was ranging from USD 172 to USD 272. Costs of drugs and supply constituted the major proportion (20% - 48%) varies with severity. Private hospital suggested that payment is too low and they are not interested in joining the scheme for the poor. Statistical analysis showed that severe cases increased cost of treatment. Hospital claimed that the expected cost recovery was still not achieved. **CONCLUSIONS:** Provider payment scheme was not well accepted for severe cases since it was found below the cost. Realistic cost estimates is expected to be assessed and more fair scheme to any type of hospital is expected to undertake.

PIH6

COST-EFFECTIVENESS OF ROTAVIRUS IMMUNIZATION IN VIETNAM: EXPLORING IMPACTS OF HERD IMMUNITY AND PATTERNS OF BREASTFEEDINGOF

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OBJECTIVES: : Rotavirus is the most common cause of severe diarrhoea worldwide. This study was designed to evaluate the cost-effectiveness of rotavirus immunization in Vietnam taking into account herd immunity and patterns of breastfeeding. The affordability of implementing universal rotavirus immunization was assessed based on both GAVI-subsidized and market vaccine prices for the next 5 years from the perspective of the Vietnamese health care system. **METHODS:** An age-structured birth cohort model for Vietnam was developed to compare two strategies of no vaccination and universal rotavirus vaccination in 2011. A lifetime time horizon was used with monthly time cycles for those under one year and annually thereafter. The analysis was performed under three breastfeeding scenarios: 1) 100% exclusive breastfeeding for children under 6 months; 2) 100% partial breastfeeding, and 3) 100% no breastfeeding. Herd immunity was explored in all scenarios. Monte Carlo simulations were used to examine the acceptability and affordability of the immunization strategy. **RESULTS:** Rotavirus immunization would effectively reduce severe cases of rotavirus during the first 5 years of life. Herd immunity makes rotavirus vaccination a cost-saving strategy under the GAVI-subsidized vaccine price in the case of partial breastfeeding and a cost-effective strategy in all breastfeeding scenarios under the market vaccine price. Affordability results showed that at the GAVI-subsidized vaccine price, rotavirus vaccination is affordable. **CONCLUSIONS:** This is the first study in developing countries considering herd immunity under rotavirus vaccination. If the indirect effect were considered, vaccination would become a cost-saving strategy. Given the high mortality rate of diarrhea in children under-five-years of age, our findings show rotavirus immunization to be an effective and "must-do" prevention strategy. Vaccination, however, only becomes affordable if Vietnam receives GAVI's financial support. In the next five years, Vietnam will need financial support from international organizations to implement rotavirus vaccination.

PIH7

IMMUNIZATION PROVIDERS' COST AND VACCINATION COST IN IRAQ

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OBJECTIVES: To evaluate the activities of immunization providers in terms of activities time and cost, and to calculate the immunization doses cost. **METHODS:** Time-motion and cost analysis study design was used. Five public health clinics in Mosul-Iraq participated in the study. Fifty (50) vaccine doses were required to estimate activities time and cost. Micro-costing method was used; time and cost data were collected for each immunization-related activity performed by the clinic staff. A stopwatch was used to measure the duration of activity interactions between the parents and clinic staff. The immunization service cost was calculated by multiplying the average salary/min by activity time per minute. **RESULTS:** The average time for child registration was 6.7 minutes per each immunization dose, and the physician spent more than 10 minutes per dose. Nurses needed more than five minutes to complete child vaccination. The total cost of immunization activities was 1.67 US$ per each immunization dose. Measles vaccine (fifth dose) has a lower price (0.42 US$) than all other immunization doses. **CONCLUSIONS:** The time spent on physicians' activities was longer than that spent on registrars' and nurses' activities. Physician total cost was higher than registrar cost and nurse cost.

INDIVIDUAL'S HEALTH - Patient-Reported Outcomes & Patient Preference Studies

PIH8

MEDICATION COMPLIANCE IN ERECTILE DYSFUNCTION (ED) PATIENTS WHO REPORTED SATISFACTORY RESTORATION OF ERECTILE FUNCTION (EF) AFTER ORAL TREATMENT

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OBJECTIVES: To explore how many patients discontinue oral treatment despite satisfactory restoration of their erectile function (EF) and to identify the associated characteristics to discontinuation of medication. **METHODS:** Erectial Dysfunction (ED) patients treated between 2009 and 2011 in 34 urology clinics in Korea were studied. Restoration of EF after taking medication more than 4 times was asked to patients. 882 patients who reported satisfactory restoration of EF were surveyed with a questionnaire to collect data regarding patient compliance of medication, demographic, clinical, partners' characteristics and medication discontinuation reasons. Data on ED etiology and total medication period were collected via medical chart review. We used the 857 eligible data of discriminating discontinuation. **RESULTS:** Total of 857 ED patients aged 53.6 ± 11.8 years had ED oral treatment for a mean period of 25.3±24.7 months. 251 (28.5%) patients discontinued oral treatment for the last one year, and patients aged < 50 years, living in rural areas and with monthly income < 4 million KRW tended to more discontinue their medication ($P<0.05$, respectively). Lower sexual libido, shorter treatment period, psychogenic cause of ED, and experiencing low treatment efficacy were also associated factors with discontinuation ($P<0.05$, respectively). Partners with characteristics of unawareness of patient's ED treatment and experiencing poorer treatment satisfaction increased patients' treatment discontinuation ($P<0.05$, respectively). Most frequent reasons for discontinuing treatment were unwillingness to have medication-dependent intercourse (31.0%), spontaneous recovery of EF (30.2%) and economic burden of medication (26.7%). **CONCLUSIONS:** Approximately one third of ED patients tended to discontinue the oral treatment while they reported satisfactory restoration of EF. Both patients' and partners' characteristics affected patients' medication compliance in ED patient.

PIH9

ASSOSIATION BETWEEN HEALTH CARE PROVIDERS AND IMMUNIZATION COMPLIANCE IN IRAQ

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OBJECTIVES: To identify the immunization providers' characteristics associated with immunization rate in children younger than two years. **METHODS:** A cross-sectional and a cluster sampling design were implemented; 528 children between 18 and 70 months of age were sampled in five public health clinics in Mosul-Iraq. Providers' characterizations were obtained. Immunization rate for the children were assessed. Risk factors for partial immunization were explored using both bivariate analyses and multi-level logistic regression models. **RESULTS:** Less than half of the children had one or more than one missed dose, considered as partial immunization cases. The study found significant associations of immunization rate with provider's types. Two factors were found that strongly impacted on immunization rate in the presence of other factors; birthplace and immunization providers' types. **CONCLUSIONS:** Improving communication between parents and immunization provider will engage the parents in decision making, clarify the importance of immunization, and highlight the value of immunization compliance.

PIH10

UTILITY VALUES FOR USE IN HEALTH CARE DECISION MAKING FOR OLDER FRAIL ADULTS

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OBJECTIVES: To compare the utility measurements and quality adjusted life years gained obtained from the EQ-5D and ICECAP-O instruments in a group of older frail people receiving a community program. **METHODS:** Prospective observational cohort study with baseline and repeated measures follow up of 357 participants and 122 caregivers . Participants were receiving the transition care program, a clearly defined post acute discharge program consisting of case management, medical and nursing support, rehabilitation services and personal and domestic care in one of six community sites in two states of Australia. Quality of life was measured four time points over six months. **RESULTS:** The ICECAP-O yielded consistently higher utility values at all time points than the EQ-5D. Admission utility scores were 0.55 (0.20) and 0.75(0.16) and at 6 months were 0.60 (0.28) and 0.84 (0.25) for the EQ-5D and ICECAP-O respectively. Using the area under the curve method, the QALYs gained from baseline over six months were modest; however the ICECAP-O gave higher overall QALYs gained than the EQ-5D. The increased QALYs gained with the ICECAP-O could have implications when using it in an economic evaluation of this type of service. **CONCLUSIONS:** The EQ-5D has been criticised for its potential lack of responsiveness particularly when only small health improvements are expected. The ICECAP-O may represent a better choice for use in evaluating community based programs for older frail people.

PIH11

A SURVEY EVALUATING GENERAL PUBLIC PERCEPTIONS TOWARDS TRADITIONAL MEDICINES USED FOR APHRODISIAC PURPOSE

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The use of herbal medicine for aphrodisiac purpose has been increasingly in both developing and developed country. Within this context, it is little know regarding the factors contributing for the high usage of these preparations among general public. **OBJECTIVES:** To evaluate public perceptions towards the use of traditional products with aphrodisiac properties. **METHODS:** A cross-sectional study was undertaken among potential respondents selected from the state of Penang Malaysia. Totally, 392 respondents were included in the study. Descriptive statistics including frequencies and percentage were used for data analysis. Frequencies of demographic information of respondents are tabulated and expresses in bar chart and pie chart. **RESULTS:** The study showed that most of the respondents (46.94%) agreed that traditional medicines for aphrodisiac purpose are easily available in the country. Moreover, 40.31% of the respondents agreed that traditional medicine with aphrodisiac purpose is cheaper than modern medicine. **CONCLUSIONS:** There is a need for health care profession to explore in the field of traditional medicine in order to safeguard patients health. The study showed that the public have limited knowledge towards usage of traditional aphrodisiac medicine.

PIH12

A DESCRIPTIVE STUDY OF HEALTH RELATED QUALITY OF LIFE AMONG GENERAL POPULATION OF QUETTA, PAKISTAN

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