

Abortion

A5057: Complications of first-trimester abortion by vacuum aspiration after cervical preparation with and without misoprostol: a multicentre randomised trial

Author: Olav Meirik and others

Source: Lancet, 379, 9828 (May 12-18, 2012): 1817 – 1824

Abstract: **Background:** Little information is available about the incidence of complications from vacuum aspiration for first-trimester abortion after cervical preparation with prostaglandin analogues. We compared incidence of complications from vacuum aspiration in women who had had cervical preparation with misoprostol and those who had not. **Methods:** We did a randomised parallel-group trial at 14 centres in nine countries between Oct 22, 2002, and Sept 24, 2005. Healthy women seeking first-trimester abortion were randomly assigned via a computer-generated randomisation sequence stratified by centre, to receive vaginal administration of either two 200 µg tablets of misoprostol or two placebo tablets 3 h before abortion by vacuum aspiration. Participants and health-care personnel other than staff administering the treatment were masked to group assignment. Follow-up was up to 2 weeks. The primary outcome was one or more complications of vacuum aspiration (cervical tear, uterine perforation, incomplete abortion, uterine re-evacuation, pelvic inflammatory disease, or any other serious adverse event). We included women undergoing treatment and vacuum aspiration in the analysis of immediate complications; whereas, in the analysis of delayed complications, we included only those followed-up. In the analysis of any immediate or delayed complication, we excluded women lost to follow-up. This trial is registered, number ISRCTN85366519. **Findings:** We randomly assigned 2485 women to the misoprostol group and 2487 to the placebo group. Two women in the misoprostol group did not have vacuum aspiration. 56 women in each group were lost to follow-up. 50 (2%) of 2427 women in the misoprostol group and 74 (3%) of 2431 in the placebo group had one or more complication of vacuum aspiration (relative risk [RR] 0.68, 95% CI 0.47–0.96). No women in the misoprostol group had cervical tears and three had uterine perforations compared with two women in the placebo group who had cervical tears and one who had perforation. 19 (<1%) women given misoprostol and 55 (2%) on placebo had incomplete abortions (0.35, 0.21–0.58), of whom 14 (<1%) versus 48 (2%) needed uterine re-evacuation (0.29, 0.16–0.53). We noted no difference between groups in incidence of pelvic inflammatory disease (30 [1%] vs 25 [1%]; RR 1.20, 0.71–2.04) or other serious adverse events. The main side-effects of misoprostol during the 3 h treatment were abdominal pain (1355 [55%] of 2484 women vs 545 [22%] of 2487 women in the placebo group) and vaginal bleeding (909 [37%] vs 167 [7%]). **Interpretation:** Cervical

preparation with 400 µg of vaginal misoprostol can reduce incidence of complications from vacuum aspiration for first trimester abortion.

Keywords: Abortion, Cervical preparation, Vacuum aspiration

Aging

A5021: Epidemiological study of the Morbidity Pattern among the elderly population in Ahemedabad, Gujarat

Author: Rajshree Bhatt and others

Source: The Indian Practitioner, 65, 6 (June, 2012): 335-338

Abstract: **Background:** Ageing is a part of the developmental sequences of entire life span, from prenatal growth to senescence. India is going to be having highest number of elderly in world by year 2025. Morbidity among elderly is a serious problem for health service utilisation in India due to increase in elderly population. **Aims & Objectives:** To study the socio demographic profile and morbidity pattern among geriatric population of study area. **Methodology:** It was cross sectional community based study done in Kalapinagar area of UHTC. All elders above age of 60years are covered in survey on house visit. Data analysis was done using EPI-Info 6.4. **Result:** Total 218 elderly were surveyed (Male=74 & Female=144). Mean age of female was 50.31 & of male was 57.44. Among elderly surveyed, 92% were living in joint family. Nearly 34% of female were illiterate. 47.7% of elderly were earning with maximum wages between Rs. 1000-2000/month. Among them majority were suffering from loco motor, visual & hypertension problem. Gender wise association was found significant when comparison was done between normotensive & pre hypertensive but not with hypertensive. Statistical significance was there between weights of male & female but no significance was there in BMI. Among tobacco users gender wise difference was statistically significant. Palloriness was common in both the gender.

Keywords: BMI, Elderly morbidity pattern, Smoking

Alcohol and tobacco

A5024: Moderate alcohol intake during pregnancy and risk of fetal death

Author: Anne-Marie Nybo Andersen and others

Source: *International Journal of Epidemiology*, 41, 2 (April, 2012): 405-413

Abstract: **Background:** Controversies still exist regarding the existence of a 'safe' level of alcohol intake during pregnancy. The aim of this study was to assess the risk of fetal death (spontaneous abortion and stillbirth) according to maternal alcohol consumption in a large Danish pregnancy cohort. **Methods:** A cohort study carried out within the framework of the Danish National Birth Cohort. A total of the 92 719 participants enrolled in the Danish National Birth Cohort who provided information about lifestyle during first trimester of pregnancy were included in the study. Information about average weekly consumption of alcohol during pregnancy, smoking, coffee drinking, occupational status and reproductive history were obtained by means of computer-assisted telephone interviews. Pregnancy outcomes (spontaneous abortion, stillbirth, live birth and other pregnancy outcome) and gestational age at end of pregnancy were obtained through register linkage with the Civil Registration System and the National Discharge Registry. Data were analysed using Cox regression models, taking the varying gestational age at recruitment and time-dependent co-variables into account. **Results:** Fifty-five per cent of the participants abstained from alcohol drinking during pregnancy and only 2.2% reported four or more drinks per week. The adjusted hazard ratios for fetal death in first trimester were 1.66 [95% confidence interval (CI) 1.43–1.92] and 2.82 (95% CI 2.27–3.49) for women who reported 2–3½ drinks per week and 4 or more drinks per week, respectively, and 1.57 (95% CI 1.30–1.90) and 1.73 (95% CI 1.24–2.41) for fetal death during pregnancy weeks 13–16. No increased risk was found for fetal death after 16 weeks of pregnancy. **Conclusions:** Even low amounts of alcohol consumption during early pregnancy increased the risk of spontaneous abortion substantially. The results indicate that the fetus is particularly susceptible to alcohol exposure early in pregnancy.

Key words: Fetal death, Alcohol drinking, Pregnancy

A5042: Tobacco Branding, Plain Packaging, Pictorial Warnings, and Symbolic Consumption

Author: Janet Hoek and others

Source: *Qualitative Health Research*, 22, 5 (May, 2012): 630-639

Abstract: We use brand association and symbolic consumption theory to explore how plain cigarette packaging would influence the identities young adults cocreate with tobacco products. Group discussions and in-depth interviews with 86 young adult smokers and nonsmokers investigated how participants perceive tobacco branding and plain cigarette packaging with larger health warnings. We examined the transcript data using thematic analysis and explored how removing tobacco branding and replacing this with larger warnings would

affect the symbolic status of tobacco brands and their social connotations. Smokers used tobacco brand imagery to define their social attributes and standing, and their connection with specific groups. Plain cigarette packaging usurped this process by undermining aspirational connotations and exposing tobacco products as toxic. Replacing tobacco branding with larger health warnings diminishes the cachet brand insignia creates, weakens the social benefits brands confer on users, and represents a potentially powerful policy measure.

Keywords: Tobacco and health, Tobacco branding, Young adults

A5064: Does the association between smoking and mortality differ by educational level

Author: Rana Charafeddine and others

Source: *Social Science & Medicine*, 74, 9 (May, 2012): 1402–1406

Abstract: Some researchers suggest that the effect of smoking on health depends on socioeconomic status; while others purport that the effect of smoking on health is similar across all social groups. This question of the interaction between smoking and socioeconomic status is important to an improved understanding of the role of smoking in the social gradient in mortality and morbidity. For this purpose, we examined whether educational level modifies the association between smoking and mortality. Information on smoking by age, gender and educational level was extracted from the Belgian Health Interview Surveys of 1997 and 2001. The mortality follow up of the survey respondents was reported until December 2010. A Poisson regression was used to estimate the hazard ratio of mortality for heavy smokers, light smokers, and former smokers compared with never smokers by educational level controlling for age and other confounders. Among men, we found lower hazard ratios in the lowest educational category compared with the intermediate and high-educated categories. For instance, for heavy smokers, the hazard ratios were 2.59 (1.18–5.70) for those with low levels of education, 4.03 (2.59–6.26) for those with intermediate levels of education and 3.78 (1.52–9.43) for the highly educated. However, the interaction between smoking and education was not statistically significant. For women, the hazard ratios were not significant for any educational category except for heavy smokers with intermediate levels of education. Also here the interaction was not statistically significant. Our results support the hypothesis that educational attainment does not substantially influence the association between smoking and mortality.

Keywords: Belgium, Smoking, Mortality, Educational level

Asthma

A5017: Effect of Inhaled Glucocorticoids in Childhood on Adult Height

Author: H. William Kelly and others

Source: New England Journal of Medicine, 367, 10 (September 6, 2012): 904-912

Abstract: **Background:** The use of inhaled glucocorticoids for persistent asthma causes a temporary reduction in growth velocity in prepubertal children. The resulting decrease in attained height 1 to 4 years after the initiation of inhaled glucocorticoids is thought not to decrease attained adult height. **Methods:** We measured adult height in 943 of 1041 participants (90.6%) in the Childhood Asthma Management Program; adult height was determined at a mean (\pm SD) age of 24.9 \pm 2.7 years. Starting at the age of 5 to 13 years, the participants had been randomly assigned to receive 400 μ g of budesonide, 16 mg of nedocromil, or placebo daily for 4 to 6 years. We calculated differences in adult height for each active treatment group, as compared with placebo, using multiple linear regression with adjustment for demographic characteristics, asthma features, and height at trial entry. **Results:** Mean adult height was 1.2 cm lower (95% confidence interval [CI], -1.9 to -0.5) in the budesonide group than in the placebo group ($P=0.001$) and was 0.2 cm lower (95% CI, -0.9 to 0.5) in the nedocromil group than in the placebo group ($P=0.61$). A larger daily dose of inhaled glucocorticoid in the first 2 years was associated with a lower adult height (-0.1 cm for each microgram per kilogram of body weight) ($P=0.007$). The reduction in adult height in the budesonide group as compared with the placebo group was similar to that seen after 2 years of treatment (-1.3 cm; 95% CI, -1.7 to -0.9). During the first 2 years, decreased growth velocity in the budesonide group occurred primarily in prepubertal participants. **Conclusions:** The initial decrease in attained height associated with the use of inhaled glucocorticoids in prepubertal children persisted as a reduction in adult height, although the decrease was not progressive or cumulative.

Keywords: Childhood , Glucocorticoids, Adult Height, Adulth

Cancer

A5014: Suicide and Cardiovascular Death after a Cancer Diagnosis

Author: F. Fang and others

Source: New England Journal of Medicine, 366, 14(April 5, 2012): 1310-1318

Abstract: Background: Receiving a diagnosis of cancer is a traumatic experience that may trigger immediate adverse health consequences beyond the effects of the disease or treatment. **Methods:** Using Poisson and negative binomial regression models, we conducted a historical cohort study involving 6,073,240 Swedes to examine the associations between a cancer diagnosis and the immediate risk of suicide or death from cardiovascular causes from 1991 through 2006. To adjust for unmeasured confounders, we also performed a nested, self-matched case-crossover analysis among all patients with cancer who died from suicide or cardiovascular diseases in the cohort. **Results:** As compared with cancer-free persons, the relative risk of suicide among patients receiving a cancer diagnosis was 12.6 (95% confidence interval [CI], 8.6 to 17.8) during the first week (29 patients; incidence rate, 2.50 per 1000 person-years) and 3.1 (95% CI, 2.7 to 3.5) during the first year (260 patients; incidence rate, 0.60 per 1000 person-years). The relative risk of cardiovascular death after diagnosis was 5.6 (95% CI, 5.2 to 5.9) during the first week (1318 patients; incidence rate, 116.80 per 1000 person-years) and 3.3 (95% CI, 3.1 to 3.4) during the first 4 weeks (2641 patients; incidence rate, 65.81 per 1000 person-years). The risk elevations decreased rapidly during the first year after diagnosis. Increased risk was particularly prominent for cancers with a poor prognosis. The case-crossover analysis largely confirmed results from the main analysis. **Conclusions:** In this large cohort study, patients who had recently received a cancer diagnosis had increased risks of both suicide and death from cardiovascular causes, as compared with cancer-free persons.

Keywords: Suicide, Cardiovascular, Cancer

A5016: Combination Anastrozole and Fulvestrant in Metastatic Breast Cancer

Author: Rita S. Mehta

Source: New England Journal of Medicine, 367, 5 (August 2, 2012):435-444

Abstract: Background: The aromatase inhibitor anastrozole inhibits estrogen synthesis. Fulvestrant binds and accelerates degradation of estrogen receptors. We hypothesized that these two agents in combination might be more effective than anastrozole alone in patients with hormone-receptor (HR)-positive metastatic breast cancer. **Methods:** Postmenopausal women with previously untreated metastatic disease were randomly assigned, in a 1:1 ratio, to receive either 1 mg of anastrozole orally every day (group 1), with crossover to fulvestrant alone strongly encouraged if the disease progressed, or anastrozole and fulvestrant in combination (group 2). Patients were stratified according to prior or no prior receipt of adjuvant tamoxifen therapy. Fulvestrant was administered intramuscularly at a dose of 500 mg on day 1 and 250 mg on days 14 and 28 and monthly thereafter. The primary end point was progression-free survival, with overall survival designated as a prespecified secondary outcome.

Results: The median progression-free survival was 13.5 months in group 1 and 15.0 months in group 2 (hazard ratio for progression or death with combination therapy, 0.80; 95% confidence interval [CI], 0.68 to 0.94; P=0.007 by the log-rank test). The combination therapy was generally more effective than anastrozole alone in all subgroups, with no significant interactions. Overall survival was also longer with combination therapy (median, 41.3 months in group 1 and 47.7 months in group 2; hazard ratio for death, 0.81; 95% CI, 0.65 to 1.00; P=0.05 by the log-rank test), despite the fact that 41% of the patients in group 1 crossed over to fulvestrant after progression. Three deaths that were possibly associated with treatment occurred in group 2. The rates of grade 3 to 5 toxic effects did not differ significantly between the two groups.

Conclusions: The combination of anastrozole and fulvestrant was superior to anastrozole alone or sequential anastrozole and fulvestrant for the treatment of HR-positive metastatic breast cancer, despite the use of a dose of fulvestrant that was below the current standard.

Keywords: Breast Cancer, Anastrozole, Fulvestrant

A5053: Effect of daily aspirin on risk of cancer metastasis: a study of incident cancers during randomised controlled trials

Author: Peter M Rothwell and others

Source: Lancet, 379, 9826 (April 28-May 4, 2012):1591 – 1601

Abstract: Background: Daily aspirin reduces the long-term incidence of some adenocarcinomas, but effects on mortality due to some cancers appear after only a few years, suggesting that it might also reduce growth or metastasis. We established the frequency of distant metastasis in patients who developed cancer during trials of daily aspirin versus control. **Methods:** Our analysis included all five large randomised trials of daily aspirin (≥ 75 mg daily) versus control for the prevention of vascular events in the UK. Electronic and paper records were reviewed for all patients with incident cancer. The effect of aspirin on risk of metastases at presentation or on subsequent follow-up (including post-trial follow-up of in-trial cancers) was stratified by tumour histology (adenocarcinoma vs other) and clinical characteristics. **Findings:** Of 17 285 trial participants, 987 had a new solid cancer diagnosed during mean in-trial follow-up of 6.5 years (SD 2.0). Allocation to aspirin reduced risk of cancer with distant metastasis (all cancers, hazard ratio [HR] 0.64, 95% CI 0.48–0.84, $p=0.001$; adenocarcinoma, HR 0.54, 95% CI 0.38–0.77, $p=0.0007$; other solid cancers, HR 0.82, 95% CI 0.53–1.28, $p=0.39$), due mainly to a reduction in proportion of adenocarcinomas that had metastatic versus local disease (odds ratio 0.52, 95% CI 0.35–0.75, $p=0.0006$). Aspirin reduced risk of adenocarcinoma with metastasis at initial diagnosis (HR 0.69, 95% CI 0.50–0.95, $p=0.02$) and risk of metastasis on subsequent follow-up in patients without metastasis initially (HR 0.45, 95% CI 0.28–0.72, $p=0.0009$), particularly in

patients with colorectal cancer (HR 0.26, 95% CI 0.11–0.57, $p=0.0008$) and in patients who remained on trial treatment up to or after diagnosis (HR 0.31, 95% CI 0.15–0.62, $p=0.0009$). Allocation to aspirin reduced death due to cancer in patients who developed adenocarcinoma, particularly in those without metastasis at diagnosis (HR 0.50, 95% CI 0.34–0.74, $p=0.0006$). Consequently, aspirin reduced the overall risk of fatal adenocarcinoma in the trial populations (HR 0.65, 95% CI 0.53–0.82, $p=0.0002$), but not the risk of other fatal cancers (HR 1.06, 95% CI 0.84–1.32, $p=0.64$; difference, $p=0.003$). Effects were independent of age and sex, but absolute benefit was greatest in smokers. A low-dose, slow-release formulation of aspirin designed to inhibit platelets but to have little systemic bioavailability was as effective as higher doses. **Interpretation:** That aspirin prevents distant metastasis could account for the early reduction in cancer deaths in trials of daily aspirin versus control. This finding suggests that aspirin might help in treatment of some cancers and provides proof of principle for pharmacological intervention specifically to prevent distant metastasis.

Keywords: Cancer metastasis, Cancer death, Mortality

A5054: Short-term effects of daily aspirin on cancer incidence, mortality, and non-vascular death: analysis of the time course of risks and benefits in 51 randomised controlled trials

Author: Peter M Rothwell and others

Source: Lancet, 379, 9826 (April 28-May 4, 2012): 1602 – 1612

Abstract: **Background:** Daily aspirin reduces the long-term risk of death due to cancer. However, the short-term effect is less certain, especially in women, effects on cancer incidence are largely unknown, and the time course of risk and benefit in primary prevention is unclear. We studied cancer deaths in all trials of daily aspirin versus control and the time course of effects of low-dose aspirin on cancer incidence and other outcomes in trials in primary prevention. **Methods:** We studied individual patient data from randomised trials of daily aspirin versus no aspirin in prevention of vascular events. Death due to cancer, all non-vascular death, vascular death, and all deaths were assessed in all eligible trials. In trials of low-dose aspirin in primary prevention, we also established the time course of effects on incident cancer, major vascular events, and major extracranial bleeds, with stratification by age, sex, and smoking status. **Results:** Allocation to aspirin reduced cancer deaths (562 vs 664 deaths; odds ratio [OR] 0.85, 95% CI 0.76–0.96, $p=0.008$; 34 trials, 69 224 participants), particularly from 5 years onwards (92 vs 145; OR 0.63, 95% CI 0.49–0.82, $p=0.0005$), resulting in fewer non-vascular deaths overall (1021 vs 1173; OR 0.88, 95% CI 0.78–0.96, $p=0.003$; 51 trials, 77 549 participants). In trials in primary prevention, the reduction in non-vascular deaths accounted for 87 (91%) of 96 deaths prevented. In six trials of daily low-dose aspirin in primary prevention (35

535 participants), aspirin reduced cancer incidence from 3 years onwards (324 vs 421 cases; OR 0.76, 95% CI 0.66—0.88, $p=0.0003$) in women (132 vs 176; OR 0.75, 95% CI 0.59—0.94, $p=0.01$) and in men (192 vs 245; OR 0.77, 95% CI 0.63—0.93, $p=0.008$). The reduced risk of major vascular events on aspirin was initially offset by an increased risk of major bleeding, but effects on both outcomes diminished with increasing follow-up, leaving only the reduced risk of cancer (absolute reduction 3.13 [95% CI 1.44—4.82] per 1000 patients per year) from 3 years onwards. Case-fatality from major extracranial bleeds was also lower on aspirin than on control (8/203 vs 15/132; OR 0.32, 95% CI 0.12—0.83, $p=0.009$). **Interpretation:** Alongside the previously reported reduction by aspirin of the long-term risk of cancer death, the short-term reductions in cancer incidence and mortality and the decrease in risk of major extracranial bleeds with extended use, and their low case-fatality, add to the case for daily aspirin in prevention of cancer.

Keywords: Cancer incidence, Mortality, Non-vascular death

A5056: Cancer mortality in India: a nationally representative survey

Author: Rajesh Dikshit and others

Source: Lancet, 379, 9828 (May 12-18, 2012): 1807 – 1816

Abstract: Background: The age-specific mortality rates and total deaths from specific cancers have not been documented for the various regions and subpopulations of India. We therefore assessed the cause of death in 2001—03 in homes in small areas that were chosen to be representative of all the parts of India. **Methods:** At least 130 trained physicians independently assigned causes to 122 429 deaths, which occurred in 1.1 million homes in 6671 small areas that were randomly selected to be representative of all of India, based on a structured non-medical surveyor's field report. **Findings:** 7137 of 122 429 study deaths were due to cancer, corresponding to 556 400 national cancer deaths in India in 2010. 395 400 (71%) cancer deaths occurred in people aged 30—69 years (200 100 men and 195 300 women). At 30—69 years, the three most common fatal cancers were oral (including lip and pharynx, 45 800 [22.9%]), stomach (25 200 [12.6%]), and lung (including trachea and larynx, 22 900 [11.4%]) in men, and cervical (33 400 [17.1%]), stomach (27 500 [14.1%]), and breast (19 900 [10.2%]) in women. Tobacco-related cancers represented 42.0% (84 000) of male and 18.3% (35 700) of female cancer deaths and there were twice as many deaths from oral cancers as lung cancers. Age-standardised cancer mortality rates per 100 000 were similar in rural (men 95.6 [99% CI 89.6—101.7] and women 96.6 [90.7—102.6]) and urban areas (men 102.4 [92.7—112.1] and women 91.2 [81.9—100.5]), but varied greatly between the states, and were two times higher in the least educated than in the most educated adults (men, illiterate 106.6 [97.4—115.7] vs most

educated 45.7 [37.8—53.6]; women, illiterate 106.7 [99.9—113.6] vs most educated 43.4 [30.7—56.1]). Cervical cancer was far less common in Muslim than in Hindu women (study deaths 24, age-standardised mortality ratio 0.68 [0.64—0.71] vs 340, 1.06 [1.05—1.08]).

Interpretation: Prevention of tobacco-related and cervical cancers and earlier detection of treatable cancers would reduce cancer deaths in India, particularly in the rural areas that are underserved by cancer services. The substantial variation in cancer rates in India suggests other risk factors or causative agents that remain to be discovered.

Keywords: Cancer mortality, Mortality, India, National survey

A5058: Cancer morbidity in a cohort of 9175 Finnish women treated for infertility

Author: A. N. Yli-Kuha and others

Source: Human Reproduction, 27, 4 (April, 2012): 1149-1155

Abstract: **BACKGROUND:** Results of earlier studies on cancer risk in infertile women are inconsistent for many cancer types. Our goal was to study cancer incidence among a cohort of women treated with IVF, including ICSI and frozen embryo transfer (FET), compared with that of a control population. **METHODS:** A cohort of women who purchased drugs for IVF (including ICSI and FET treatments, n= 9175) in the period 1996–1998 in Finland (later called IVF women) and their age and residence-matched controls further adjusted for socio-economic position and marital status were linked to the Finnish Cancer Registry 1996–2004. **RESULTS:** The overall cancer incidence and combined incidence of hormonal-related breast, uterine and invasive ovarian cancers were similar among IVF women and controls. IVF women had statistically significantly less cervical cancer [odds ratio (OR): 0.51, 95% confidence interval (CI): 0.30–0.85], but more skin cancers other than melanoma (OR: 3.11, 95% CI: 1.02–9.6). IVF women had three times more invasive ovarian cancers than controls, but this difference was not statistically significant, possibly due to the small number of cases. IVF women had slightly fewer breast cancers but difference was likewise not statistically significant. All cases of pulmonary cancer were diagnosed among controls (P= 0.03). **CONCLUSIONS:** General cancer risk or risk of hormonal-related cancers in women was not increased by IVF. The differences in certain cancers suggest a healthy patient effect or may be partly caused by residual socio-economic differences. More large studies and reanalysis of existing studies are needed to evaluate cancer risk among infertile women by subgroups regarding the cause of infertility. When evaluating risk of cancer after drug exposure, dosage and the use of different medicaments should be taken into consideration.

Key words: Infertility, Infertility treatments, Cancer incidence

A5071: Socioeconomic Position and Lung Cancer Risk: How Important is the Modeling of Smoking?

Matukala Nkosi and others

Epidemiology, 23 , 3 (May, 2012): 377–385

Abstract: Background: Although it has been reported that low socioeconomic position (SEP) is associated with lung cancer, the extent to which this reflects SEP differences in cigarette smoking is unclear. We investigated how various modeling approaches for smoking might influence this observed association. **Methods:** We used data from a case-control study conducted in Montreal, Canada (1996–2002), comprising 1203 subjects with incident lung cancer and 1513 population controls. SEP was measured by census-based and self-reported income, residential value, education level, and occupational class. Odds ratios (ORs) and 95% confidence intervals (CIs) were estimated using logistic regression, and Akaike's Information Criterion (AIC) was used to compare model fit. **Results:** Associations were observed between SEP indicators and lung cancer, but gradually disappeared with more comprehensive adjustment for smoking. For comparisons of the highest to lowest categories of census-based income, the OR for lung cancer was 0.58 (95% CI = 0.32–1.05) when adjusting only for smoking status (never, former, current), but 0.97 (0.51–1.86) when adjusting for smoking status, cigarette-years, and time since cessation. For comparisons of highest to lowest levels of education, the ORs for lung cancer were 0.50 (0.38–0.65) and 0.76 (0.57–1.02), when making the least and most comprehensive adjustments for smoking, respectively. Similarly, comparing highly skilled with unskilled manual workers, the ORs were 0.78 (0.54–1.12) and 1.00 (0.68–1.47), respectively. With thorough smoking adjustment, associations between SEP indicators and lung cancer virtually disappeared, and SEP did not improve model fit. **Conclusions:** Previously reported associations of SEP with lung cancer may be attributable to incomplete adjustment for smoking. Our findings underline the importance of adjusting for several dimensions of smoking behavior to make correct inferences.

Keywords: Lung Cancer, Smoking, Socioeconomic Position, Cancer

Child health care and development

A5035: Child Health in the Sundarbans: How Far Do Mutually Reinforcing Shocks Act As Contextual Determinants?

Author: Moumita Mukherjee and others

Source: Journal of Health Management, 14, 2 (June, 2012): 117-140

Abstract: Childhood chronic under-nutrition and common childhood illness are highly prevalent in the delta region of the Sundarbans of West Bengal, India. The present work tested the hypothesis—frequent climatic shock is likely to predispose chronic and transient health shocks through behavioural responses of households in the presence of inaccessibility, inadequacy and acceptability barriers which act in the economy as long wave shocks. The work is based on a household and facility survey; primary data was collected in 19 blocks of the Sundarbans. The results highlight that transient climatic shock make child health worse through the pathway of chronic poverty, low resilience, physical and social barriers to health-seeking as well as ineffective service delivery systems. Further in-depth research is required to understand multiple vulnerabilities, related to coping of households and ways to improve the service delivery mechanism to have healthy children in the Sundarbans in the near future.

Keywords: Children, Chronic under-nutrition, Morbidity, Different shocks

A5070: Victimization of children in Cyber space: A study of adverse effects of Internet use.

Author: Raju Narayana Swamy

Source: Ashwattha, 2 (April-June, 2012): 24-30

Abstract: Extensive use of Information and Communication Technology (ICT) has accrued several benefits including increased efficiency, faster communication capabilities and immeasurable expediency. At the same time its side-effects such as cyber crimes have generated different types of threats to mankind. This article presents findings of a study which had objectives to explore the variety of disconcerting experiences children encounter while making use of internet, types of their reaction to such experiences and the methods adopted by parents and school authorities to protect the children from its ill-effects. It also offers suggestions for adoption of preventive measures in this regard.

Keywords: Cyber space, Internet, Victimization, Children

Demography & Statistics

A5023: Newborn survival: a multi-country analysis of a decade of change

Author: Joy E Lawn

Source: Health Policy and Planning, 27, Suppl 3 (July, 2012): iii6-iii28

Abstract: Neonatal deaths account for 40% of global under-five mortality and are ever more important if we are to achieve the Millennium Development Goal 4 (MDG 4) on child survival. We applied a results framework to evaluate global and national changes for neonatal mortality rates (NMR), healthy behaviours, intervention coverage, health system change, and inputs including funding, while considering contextual changes. The average annual rate of reduction of NMR globally accelerated between 2000 and 2010 (2.1% per year) compared with the 1990s, but was slower than the reduction in mortality of children aged 1–59 months (2.9% per year) and maternal mortality (4.2% per year). Regional variation of NMR change ranged from 3.0% per year in developed countries to 1.5% per year in sub-Saharan Africa. Some countries have made remarkable progress despite major challenges. Our statistical analysis identifies inter-country predictors of NMR reduction including high baseline NMR, and changes in income or fertility. Changes in intervention or package coverage did not appear to be important predictors in any region, but coverage data are lacking for several neonatal-specific interventions. Mortality due to neonatal infection deaths, notably tetanus, decreased, and deaths from complications of preterm birth are increasingly important. Official development assistance for maternal, newborn and child health doubled from 2003 to 2008, yet by 2008 only 6% of this aid mentioned newborns, and a mere 0.1% (US\$4.56m) exclusively targeted newborn care. The amount of newborn survival data and the evidence based increased, as did recognition in donor funding. Over this decade, NMR reduction seems more related to change in context, such as socio-economic factors, than to increasing intervention coverage. High impact cost-effective interventions hold great potential to save newborn lives especially in the highest burden countries. Accelerating progress requires data-driven investments and addressing context-specific implementation realities.

Key words: Neonatal, Newborn, Survival, Mortality trends, Multi-country evaluation, Evaluation framework

A5025: Ageing, physical activity and mortality—a 42-year follow-up study

Author: Anne K Gulsvik and others

Source: International Journal of Epidemiology, 41, 2 (April, 2012): 521-530

Abstract: **Background:** Physical activity (PA) is inversely associated with mortality in the general population. We wanted to quantify the association of self-reported PA with mortality from all causes, ischaemic heart disease (IHD) and stroke, and compare it with other known risk factors in different age segments. **Methods:** The Bergen Clinical Blood Pressure Survey examined a

sample of 6811 Norwegian men and women in 1965–71 with follow-up until 2005–07. Cox proportional hazard regression ratio (HR) and population attributable fraction (PAF) were calculated for the old (>65), middle-aged (45–64) and young adults (22–44), respectively. We minimized confounding and bias by progressive comprehensive adjustments and subgroup-analyses (excluding early follow-up deaths, participants with self-reported disease and participants with changes in their PA-level prior baseline due to disease). **Results:** The HR [95% confidence interval (CI)] associated with a high PA-level was 0.63(0.56–0.71), 0.66(0.52–0.83) and 0.66(0.47–0.93) for mortality from all causes, IHD and stroke, respectively (reference: no participation in any of the listed activities, adjusted for age and gender). PAF (95% CI) of no/low activity (reference: any activity) was consistent across all age groups, varying from 7.3% (3.4–11.4) in the young adults to 9.1% (3.6–15.3) in the old. PAF of smoking and high s-cholesterol declined with increasing age [smoking from 19.9% (15.3–24.7) to 1.5% (–1.3 to 6.2) and s-cholesterol from 11.5% (5.6–17.5) to –9.5% (–18.1 to –0.7)], whereas PAF of hypertension increased from 5.3% (2.1–9.1) to 18.9% (8.3–28.4). **Conclusion:** The relative importance of traditional risk factors varies between the age groups, but physical activity is a major health promoting factor across all age segments and should be encouraged particularly in an ageing population.

Key words: Age, Physical activity, Mortality, Risk factor, Epidemiology

A5029: Determining population based mortality risk in the Department of Veterans Affairs

Author: Theodore Stefos and others

Source: Health Care Management Science, 15, 2 (June, 2012): 121-137

Abstract: We develop a patient level hierarchical regression model using administrative claims data to assess mortality outcomes for a national VA population. This model, which complements more traditional process driven performance measures, includes demographic variables and disease specific measures of risk classified by Diagnostic Cost Groups (DCGs). Results indicate some ability to discriminate survivors and non-survivors with an area under the Receiver Operating Characteristic Curve (C-statistic) of .86. Observed to expected mortality ranges from .86 to 1.12 across predicted mortality deciles while Risk Standardized Mortality Rates (RSMRs) range from .76 to 1.29 across 145 VA hospitals. Further research is necessary to understand mortality variation which persists even after adjusting for case mix differences. Future work is also necessary to examine the role of personal behaviors on patient outcomes and the potential impact on population survival rates from changes in treatment policy and infrastructure investment.

Keywords: Mortality, Quality, Outcomes, Hierarchical Models

A5031: International shortfall inequality in life expectancy in women and in men, 1950–2010

Author: Ahmad Reza Hosseinpoor and others

Source: Bulletin of the World Health Organization, 90, 8 (August, 2012): 588-594

Abstract: **Objective:** To assess international shortfall inequality in life expectancy at birth among women and men and the influence of geography and country income group. **Methods:** The authors used estimates of life expectancy at birth, by sex, for 12 five-year periods between 1950–1955 and 2005–2010 and estimates of population for the midpoints of each period from the World population prospects, 2008 revision. Shortfall inequality was defined as the weighted average of the deviations of each country's average life expectancy by sex from the highest attained life expectancy by sex for each period. **Findings:** International shortfall inequalities in life expectancy among men and among women decreased between 1950 and 1975 but stagnated thereafter. International shortfall inequality in life expectancy has been higher in women than in men, ranging from 1.9 to 2.9 years. Women in low-income countries have the biggest shortfall, currently at around 26.7 years. **Conclusion:** International shortfall inequality is higher among women than men primarily because women in low-income and lower-middle-income country groups show larger differences in life expectancy than men. Further investigation is needed to determine the pathways causing these inequalities.

Keywords: Life expectancy, Inequality, Women and Men

A5032: Systematic review of Demographic and Health Surveys: data availability and utilization for research

Author: Madeleine Short Fabric and others

Source: Bulletin of the World Health Organization, 90, 8 (August, 2012): 604-612

Abstract: **Objective:** To systematically review the public health literature to assess trends in the use of Demographic and Health Survey (DHS) data for research from 1984 to 2010 and to describe the relationship between data availability and data utilization. **Methods:** The MEASURE DHS web site was searched for information on all population-based surveys completed under the DHS project between 1984 and 2010. The information collected included the country, type of survey, survey design, fieldwork period and certain special features, such as inclusion of biomarkers. A search of PubMed was also conducted to identify peer-reviewed

articles published during 2010 that analysed DHS data and included an English-language abstract. Trends in data availability and in the use of DHS data for research were assessed through descriptive, graphical and bivariate linear regression analyses. **Findings:** In total, 236 household surveys under the DHS project were completed across 84 countries during 2010. The number of surveys per year has remained constant, although the scope of the survey questions has expanded. The inclusion criteria were met by 1117 peer-reviewed publications. The number of publications has increased progressively over the last quarter century, with an average annual increment of 4.3 (95% confidence interval, CI: 3.2–5.3) publications. Trends in the number of peer-reviewed publications based on the use of DHS data were highly correlated with trends in funding for health by the Government of the United States of America and globally. **Conclusion:** Published peer-reviewed articles analysing DHS data, which have increased progressively in number over the last quarter century, have made a substantial contribution to the public health evidence base in developing countries.

Keywords: Health Surveys, Data availability, Data utilization, Systematic review

A5051: International shortfall inequality in life expectancy in women and in men, 1950–2010

Author: Ahmad Reza Hosseinpoor and others

Source: Bulletin of the World Health Organization, 90, 8, (August, 2012): 588-594

Abstract: **Objective:** To assess international shortfall inequality in life expectancy at birth among women and men and the influence of geography and country income group. **Methods:** The authors used estimates of life expectancy at birth, by sex, for 12 five-year periods between 1950–1955 and 2005–2010 and estimates of population for the midpoints of each period from the World population prospects, 2008 revision. Shortfall inequality was defined as the weighted average of the deviations of each country's average life expectancy by sex from the highest attained life expectancy by sex for each period. **Findings:** International shortfall inequalities in life expectancy among men and among women decreased between 1950 and 1975 but stagnated thereafter. International shortfall inequality in life expectancy has been higher in women than in men, ranging from 1.9 to 2.9 years. Women in low-income countries have the biggest shortfall, currently at around 26.7 years. **Conclusion:** International shortfall inequality is higher among women than men primarily because women in low-income and lower-middle-income country groups show larger differences in life expectancy than men. Further investigation is needed to determine the pathways causing these inequalities.

Keywords: Women and Men, Life expectancy, International shortfall inequality

A5063: Statistical approaches to analyse patient-reported outcomes as response variables: An application to health-related quality of life

Author: Inmaculada Arostegui and others

Statistical Methods in Medical Research, 21, 2 (April, 2012): 189-214

Abstract: Patient-reported outcomes (PRO) are used as primary endpoints in medical research and their statistical analysis is an important methodological issue. Theoretical assumptions of the selected methodology and interpretation of its results are issues to take into account when selecting an appropriate statistical technique to analyse data. We present eight methods of analysis of a popular PRO tool under different assumptions that lead to different interpretations of the results. All methods were applied to responses obtained from two of the health dimensions of the SF-36 Health Survey. The proposed methods are: multiple linear regression (MLR), with least square and bootstrap estimations, tobit regression, ordinal logistic and probit regressions, beta-binomial regression (BBR), binomial-logit-normal regression (BLNR) and coarsening. Selection of an appropriate model depends not only on its distributional assumptions but also on the continuous or ordinal features of the response and the fact that they are constrained to a bounded interval. The BBR approach renders satisfactory results in a broad number of situations. MLR is not recommended, especially with skewed outcomes. Ordinal methods are only appropriate for outcomes with a few number of categories. Tobit regression is an acceptable option under normality assumptions and in the presence of moderate ceiling or floor effect. The BLNR and coarsening proposals are also acceptable, but only under certain distributional assumptions that are difficult to test a priori. Interpretation of the results is more convenient when using the BBR, BLNR and ordinal logistic regression approaches.

Keywords: Patient-reported outcomes, Statistical methods, Health-related quality of life, Regression models

Family Planning

A5049: Knowledge, attitudes and practices towards family planning among women in the rural southern region of Jordan

Author: A.I. Mahadeen and others

Source: Eastern Mediterranean Health Journal, 18, 6 (June, 2012): 567-572

Abstract: Data about family planning among women in rural and remote areas of Jordan are lacking. This study explored the prevalence of use and knowledge and attitudes towards family planning among rural Jordanian women. A descriptive study was conducted with 807 ever-married women aged 15–49 years in a household survey of 29 villages in the southern region of Jordan. The most common contraceptive methods ever used were oral contraceptive pills (31.1%), intrauterine device (24.8%) and withdrawal (19.5%). Of the women interviewed, 37% were currently using contraception. Being pregnant (11%) and breastfeeding (10%) were the most reported reasons for not using contraceptives. None of the women reported obtaining supplies or the cost of them as barriers, while opposition from husband or family members or religious reasons were reported by less than 1% of the women. About 95% of the women agreed that using family planning had positive advantages for health. The results highlight some educational needs among these women.

Keywords: Knowledge, Family planning, Rural southern region, Jordan

Fertility

A5059: Comparison of the pregnancy outcomes of subfertile women after infertility treatment and in naturally conceived pregnancies

Author: Kaisa Raatikainen and others

Source: Human Reproduction, 27, 4 (April, 2012): 1162-1169

Abstract: **Background:** Adverse obstetric outcomes in pregnancies achieved through assisted reproductive technology (ART) could either be due to the technology or to the underlying subfertility or to both. To address this issue, we compared the pregnancy outcomes of singletons conceived naturally after a long time to pregnancy (TTP) with those of ART pregnancies. **Methods:** We analysed an existing birth database. Altogether 428 ART pregnancies were compared with 928 spontaneously conceived pregnancies with TTP of 2 years or more, during the period 1989–2007 at Kuopio University Hospital, Finland. Odds ratios (ORs) with 95% confidence intervals (CIs) were calculated for pregnancy outcomes. **Results:** Between treated and untreated subfertile women no significant differences were found in the rates of Caesarean sections (OR 1.21, 95% CI 0.89–1.64), preterm births (OR 1.28, 95% CI 0.81–2.03), small for gestational age (SGA) birthweight (OR 0.95, 95% CI 0.65–1.39), need of neonatal intensive care (OR 1.28, 95% CI 0.88–1.88) or low Apgar scores (OR 1.19, 95% CI 0.47–3.04). However, compared with pregnancies of women with TTP 0–6 months, ART pregnancies had significantly increased risks of preterm or very preterm birth, low birthweight and need of neonatal intensive care. **Conclusions:** The risks of preterm birth, SGA, need for neonatal

intensive care and low Apgar scores were not significantly different between subfertile women who conceived spontaneously and those who conceived through ART indicating that maternal factors relating to subfertility and not only infertility treatment are associated with adverse pregnancy outcomes.

Key words: Subfertility, ART, IVF, Time to pregnancy, Pregnancy outcome

Food and Nutrition

A5061: Role of local food availability in explaining obesity risk among young school-aged children

Author: Helen Lee

Source: *Social Science & Medicine*, 74, 8 (April, 2012): 1193–1203

Abstract: In recent years, research and public policy attention has increasingly focused on understanding whether modifiable aspects of the local food environment – the types and composition of food outlets families have proximate access to – are drivers of and potential solutions to the problem of childhood obesity in the United States. Given that much of the earlier published research has documented greater concentrations of fast-food outlets alongside limited access to large grocery stores in neighborhoods with higher shares of racial/ethnic minority groups and residents living in poverty, differences in retail food contexts may indeed exacerbate notable child obesity disparities along socioeconomic and racial/ethnic lines. This paper examines whether the lack of access to more healthy food retailers and/or the greater availability of “unhealthy” food purveyors in residential neighborhoods explains children’s risk of excessive weight gain, and whether differential food availability explains obesity disparities. I do so by analyzing a national survey of U.S. children followed over elementary school (Early Childhood Longitudinal Study – Kindergarten Cohort) who are linked to detailed, longitudinal food availability measures from a comprehensive business establishment database (the National Establishment Time Series). I find that children who live in residentially poor and minority neighborhoods are indeed more likely to have greater access to fast-food outlets and convenience stores. However, these neighborhoods also have greater access to other food establishments that have not been linked to increased obesity risk, including large-scale grocery stores. When examined in a multi-level modeling framework, differential exposure to food outlets does not independently explain weight gain over time in this sample of elementary school-aged children. Variation in residential food outlet availability also does not explain socioeconomic and racial/ethnic differences. It may thus be important to

reconsider whether food access is, in all settings, a salient factor in understanding obesity risk among young children.

Keywords: USA, Childhood obesity, Food environments, Longitudinal, Retail food outlets

Gynecology

A5044: History of Interpersonal Trauma and the Gynecological Exam

Author: Kelly Ackerson

Source: Qualitative Health Research, 22, 5 (May, 2012): 679-688

Abstract: Cervical cancer is preventable, in part, by routine Papanicolaou (Pap) testing, but some women avoid routine screening. African American women have the greatest mortality among all groups of women in the United States. Personal reasons have been found to contribute to screening avoidance behavior, such as a history of sexual abuse and intimate partner violence. Fifteen African American women with a trauma history participated in personal interviews. The Interaction Model of Client Behavior was employed for exploring the women's social influence, previous health care experience, cognitive appraisal, affective response, and motivation associated with routine Pap testing. Study findings suggest that providers need to assess and provide accurate information about Pap testing and cervical cancer to increase patients' knowledge. Personally reflecting on one's approach to conducting a woman's gynecologic exam (and how it is performed) might prevent triggering unwanted memories, making that visit a positive experience and facilitating repeat screening behavior.

Keywords: Cancer screening and prevention, Health seeking, Gynecological Exam, Trauma, Women's health

Health Care

A5019: Predictors of Sickness Absence in Patients with a New Episode of Low Back Pain in Primary Care

Author: Markus Melloh

Source: Industrial Health, 50, 4 (July, 2012): 288-298

Abstract: This study examines predictors of sickness absence in patients presenting to a health practitioner with acute/ subacute low back pain (LBP). Aims of this study were to identify baseline-variables that detect patients with a new LBP episode at risk of sickness absence and to identify prognostic models for sickness absence at different time points after initial presentation. Prospective cohort study investigating 310 patients presenting to a health practitioner with a new episode of LBP at baseline, three-, six-, twelve-week and six-month follow-up, addressing work-related, psychological and biomedical factors. Multivariate logistic regression analysis was performed to identify baseline-predictors of sickness absence at different time points. Prognostic models comprised 'job control', 'depression' and 'functional limitation' as predictive baseline-factors of sickness absence at three and six-week follow-up with 'job control' being the best single predictor (OR 0.47; 95%CI 0.26–0.87). The six-week model explained 47% of variance of sickness absence at six-week follow-up ($p < 0.001$). The prediction of sickness absence beyond six-weeks is limited, and health practitioners should re-assess patients at six weeks, especially if they have previously been identified as at risk of sickness absence. This would allow timely intervention with measures designed to reduce the likelihood of prolonged sickness absence.

Keywords: Low back pain, Sickness absence, Prospective cohort study, Prognosis, Predictors, Risk factors, Primary Care

A5020: Intermittently Increased Repetitive Work Intensity and Neuromuscular Function in the Cold

Author: Juha Oksa and others

Source: Industrial Health, 50, 4 (July, 2012): 307-315

Abstract: This study evaluated whether cold-induced deterioration in neuromuscular function can be restored by intermittently increasing the workload. We examined the level of muscular strain, agonist-antagonist co-activation, the occurrence of EMG gaps and neuromuscular efficiency in wrist flexor and extensor muscles at 21°C (TN) and 4°C (C10) with a 10%MVC workload. During second exposure to 4°C (C50) the workload was increased every fourth minute to 50%MVC. The results indicated that muscular strain and co-activation was the highest and the amount of EMG gaps and neuromuscular efficiency the lowest at C10. By intermittently increasing the workload at C50 we were able to reduce muscular strain and co-activation ($p < 0.05$) and induce a trend like increase in EMG gaps and enhance neuromuscular efficiency in relation to C10 (NS). It may be concluded that intermittently increasing the workload, i.e. breaking the monotonous work cycle was able to partially restore neuromuscular function.

Keywords: Cold exposure, Repetitive work, EMG, Co-activation, Neuromuscular efficiency, Intermittent work

A5034: Declining Free Health Care and Rising Treatment Costs in India: An Analysis of National Sample Surveys 1986–2004

Author: Anil Gumber and others

Source: Journal of Health Management, 14, 2 (June, 2012): 97-116

Abstract: The article focuses on trends in health-seeking behaviour of people and choosing between government and private sources, reasons for not accessing health care and the cost of treatment by examining three rounds of NSS data on health care use and morbidity pattern during 1986–87, 1995–96 and 2004. With variation across states, treatment-seeking from public providers has declined and preference for private providers has increased over the period. Although overall health-seeking behaviour has improved for both males and females, a significant percentage of people, more in rural than urban areas, do not seek treatment due to lack of accessibility and consider that the illness is not serious enough to require treatment. The financial reason for not seeking treatment was also an important issue in rural areas. There has also been change in the cost of health care over time. While the health care cost has increased, the gap between the public and the private has reduced, owing to perhaps increased cost of treatment in public health facilities following the levying of user-fees and curtailing distribution of free medicine care. Practically all states reported decline in availability of free both out-patient and in-patient care. The article concludes with supporting the adaptation of innovative public-private partnership in health sector for various services realizing the limitations of the state provision of health, particularly in rural and remote areas, and the growing preference of consumers for private health providers. As effectiveness of public spending also depends on the choice of health interventions, target population and technical efficiency partnering with private health providers could work towards reducing the health inequalities in the country.

Keywords: Health care system, Health-seeking behavior, Free health-care, India, National Sample Survey

A5039: Morbidity, Household Spending and the Burden of Health Care on the Urban Poor in Orissa

Author: Sanjukta Das

Source: Journal of Health Management, 14, 2 (June, 2012): 207-220

Abstract: Inadequate public spending on health care most probably is causing high morbidity and high proportion of household spending on curative health care in the poor state of Orissa. In a micro-study on morbidity, health care expense and burden on the poor in Sambalpur town, it was found that morbidity and disease prevalence rates among the poor are higher compared to that among the rich. The per capita monthly expenditure on health care is found to be as high as ₹299.57 and the median household is spending 17.91 per cent of its income on it. Households with monthly incomes of less than ₹3,000 are found spending approximately 68 per cent of their income on curative health expenditure. High out-of-pocket (OOP) spending on health care forced 21.43 per cent households to borrow; borrowing as a percentage of income is found to be 21.67 per cent on an average. The severity of the health care burden is found in the poorest. Borrowing increases the intensity of poverty and forces many non-poor/near-poor households to slip below the poverty line. The study argues for more government provision on health care to reduce the burden on the poor and to ensure equity.

Keywords: Morbidity, Health care cost, Out-of-pocket expense on health, Household debt

A5067: Women's health, men's health, and gender and health: Implications of intersectionality

Author: Olena Hankivsky

Source: Social Science & Medicine, 74, 11 (June, 2012): 1712–1720

Abstract: Although intersectionality is now recognized in the context of women's health, men's health, and gender and health, its full implications for research, policy, and practice have not yet been interrogated. This paper investigates, from an intersectionality perspective, the common struggles within each field to confront the complex interplay of factors that shape health inequities. Drawing on developments within intersectionality scholarship and various sources of research and policy evidence (including examples from the field of HIV/AIDS), the paper demonstrates the methodological feasibility of intersectionality and in particular, the wide-ranging benefits of de-centering gender through intersectional analyses.

Keywords: Women's health, Men's health, Gender and health, Intersectionality, Review

Health care Technology and Management

A5050: Management of diarrhoea cases by community pharmacies in 3 cities of Pakistan

Author: A. Hussain and M.I.M. Ibrahim

Source: Eastern Mediterranean Health Journal, 18, 6 (June, 2012): 635-640

Abstract: Community pharmacies are valued for their potential role in the management of common ailments. This cross-sectional study aimed to document the management of diarrhoea by community pharmacies in 3 cities in Pakistan. Visits were performed to 371 randomly selected pharmacies to request advice for a simulated paediatric case of diarrhoea. The pharmacy's management was scored on a checklist including history taking and provision of advice and information. Customers were served by a salesperson in 97.3% of visits and by a pharmacist in only 2.2%. Medication was dispensed in 77.1% of visits. Of the medications dispensed, 58.7% were antiamoebics, 14.0% antibiotics and 18.9% antidiarrhoeals; only 8.4% were oral rehydration salts. None of the regimens matched with a standard prescription. The dosage regimen was explained to the customer in only 52.6% of cases. Drug safety, unqualified personnel, lack of history taking, inappropriate treatment and lack of counselling are concerns to be addressed.

Keywords: Diarrhoea, Community pharmacies, Pakistan

A5065: Does attachment insecurity affect the outcomes of a multidisciplinary pain management program? The association between attachment insecurity, pain, disability, distress, and the use of opioids

Author: Tonny Elmoose Andersen

Source: Social Science & Medicine, 74, 9 (May, 2012): 1461–1468

Abstract: Cognitive and behavioural treatments have been shown to be effective for the management of chronic pain. However, not all patients succeed at such a treatment. Attachment insecurity has recently been proposed as an individual vulnerability factor that may have a negative impact on pain, disability, psychological distress, and compliance with treatment, resulting in a poorer outcome. Furthermore, attachment avoidance has been associated with opioid abuse. We hypothesised that attachment anxiety would be associated with higher levels of pain intensity and disability, and that both attachment dimensions would be associated with anxiety and depression. Moreover, we hypothesised that attachment avoidance would be positively associated with the use of opioids. Finally, we predicted that patients with an insecure attachment orientation would profit less from a routine pain management program. Data were collected from 72 patients referred consecutively from December 2008 to August 2009 to a 13-week pain management program at a Danish

multidisciplinary pain centre. Both attachment dimensions were positively associated with anxiety and depression. Moreover, the insecurely attached patients used significantly more opioids compared to the securely attached. None of the attachment dimensions was associated with pain and disability, and the pain management program was equally effective for both the secure and insecure groups. However, the level of anxiety and depression for insecurely attached patients did not decline below a clinical level post-treatment. The present study suggests that attachment insecurity plays an important role in the context of chronic pain management. With regards to the management of pain related anxiety, depression, and the use of opioids, the current results suggests that practitioners should keep attachment insecurity in mind.

Keywords: Denmark, Chronic pain, Cognitive behavioural therapy, Psychological distress, Opioid abuse, Management program

Health Economics

A5028: Terminal costs, improved life expectancy and future public health expenditure

Author: Thomas Bue Bjorner and Soren Arnberg

Source: International Journal of Health Care Finance and Economics, 12, 2 (June, 2012): 129-143

Abstract: This paper presents an empirical analysis of public health expenditure on individuals in Denmark. The analysis separates out the individual effects of age and proximity to death (reflecting terminal costs of dying) and employs unique micro data from the period 2000 to 2009, covering a random sample of 10% of the Danish population. Health expenditure includes treatment in hospitals, subsidies to prescribed medication and health care provided by general practitioners and specialists and covers about 80% of public health care expenditure on individuals. The results confirm findings from previous studies showing that proximity to death has a significant impact on health care expenditure. However, it is also found that cohort effects (the baby boom generation) as well as improvements in life expectancy have a substantial effect on future health care expenditure even when proximity to death is controlled for. These results are obtained by combining the empirical estimates with a long term population forecast. When life expectancy increases, terminal costs are postponed but the increases in health expenditure that follow from longer life expectancy are not as large as the increase in the number of elderly persons would suggest (due to "healthy ageing"). Based on the empirical estimates, healthy ageing is expected to reduce the impact of increased life expectancy on real health expenditure by 50% compared to a situation without healthy ageing.

Keywords: Public health expenditure forecast, Healthy ageing, Cost of dying, Two-part model

Health policy and planning

A5018: Influencing policy change: the experience of health think tanks in low- and middle-income countries

Author: Sara Bennett and others

Source: Health Policy and Planning, 27, 3 (May, 2012): 194-203

Abstract: In recent years there has been a growth in the number of independent health policy analysis institutes in low- and middle-income countries which has occurred in response to the limitation of government analytical capacity and pressures associated with democratization. This study aimed to: (i) investigate the contribution made by health policy analysis institutes in low- and middle-income countries to health policy agenda setting, formulation, implementation and monitoring and evaluation; and (ii) assess which factors, including organizational form and structure, support the role of health policy analysis institutes in low- and middle-income countries in terms of positively contributing to health policy. Six case studies of health policy analysis institutes in Bangladesh, Ghana, India, South Africa, Uganda and Vietnam were conducted including two NGOs, two university and two government-owned policy analysis institutes. Case studies drew on document review, analysis of financial information, semi-structured interviews with staff and other stakeholders, and iterative feedback of draft findings. Some of the institutes had made major contributions to policy development in their respective countries. All of the institutes were actively engaged in providing policy advice and most undertook policy-relevant research. Relatively few were engaged in conducting policy dialogues, or systematic reviews, or commissioning research. Much of the work undertaken by institutes was driven by requests from government or donors, and the primary outputs for most institutes were research reports, frequently combined with verbal briefings. Several factors were critical in supporting effective policy engagement. These included a supportive policy environment, some degree of independence in governance and financing, and strong links to policy makers that facilitate trust and influence. While the formal relationship of the institute to government was not found to be critical, units within government faced considerable difficulties.

Key words: Policy analysis, Policy research, Policy change

Hepatic veno-occlusive Disease

A5052: Defibrotide for prophylaxis of hepatic veno-occlusive disease in paediatric haemopoietic stem-cell transplantation: an open-label, phase 3, randomised controlled trial

Author: Selim Corbacioglu and others

Source: Lancet, 379, 9823 (April 7-13, 2012): 1301 – 1309

Abstract: **Background:** Hepatic veno-occlusive disease is a leading cause of morbidity and mortality after haemopoietic stem-cell transplantation (HSCT). We aimed to assess whether defibrotide can reduce the incidence of veno-occlusive disease in this setting. **Methods:** In our phase 3 open-label, randomised controlled trial, we enrolled patients at 28 European university hospitals or academic medical centres. Eligible patients were younger than 18 years, had undergone myeloablative conditioning before allogeneic or autologous HSCT, and had one or more risk factor for veno-occlusive disease based on modified Seattle criteria. We centrally assigned eligible participants on the basis of a computer-generated randomisation sequence (1:1), stratified by centre and presence of osteopetrosis, to receive intravenous defibrotide prophylaxis (treatment group) or not (control group). The primary endpoint was incidence of veno-occlusive disease by 30 days after HSCT, adjudicated by a masked, independent review committee, in eligible patients who consented to randomisation (intention-to-treat population), and was assessed with a competing risk approach. Patients in either group who developed veno-occlusive disease received defibrotide for treatment. We assessed adverse events to 180 days after HSCT in all patients who received allocated prophylaxis. This trial is registered with ClinicalTrials.gov, number NCT00272948. **Findings:** Between Jan 25, 2006, and Jan 29, 2009, we enrolled 356 eligible patients to the intention-to-treat population. 22 (12%) of 180 patients randomly allocated to the defibrotide group had veno-occlusive disease by 30 days after HSCT compared with 35 (20%) of 176 controls (risk difference -7.7%, 95% CI -15.3 to -0.1; Z test for competing risk analysis $p=0.0488$; log-rank test $p=0.0507$). 154 (87%) of 177 patients in the defibrotide group had adverse events by day 180 compared with 155 (88%) of 176 controls. **Interpretation:** Defibrotide prophylaxis seems to reduce incidence of veno-occlusive disease and is well tolerated. Thus, such prophylaxis could present a useful clinical option for this serious complication of HSCT.

Keywords: Hepatic veno-occlusive disease, Morbidity, Mortality, Haemopoietic stem-cell transplantation

HIV/AIDS

A5013: Cutaneous manifestations in HIV infected patients at Tertiary Care Hospital in tribal region of Chhattisgarh (Jagdalpur), India: between Jan 2006 and June 2008.

Author: Prabhakar Singh and others

Source: The Indian Practitioner, 65, 4 (April, 2012): 211-215

Abstract: **Objective:** aim of this study is to estimate the status of Cutaneous manifestation in HIV infected patients and its co-relationship with CD4 cell count at tertiary care centre at Jagdalpur; Bastar. Patient and methods: In this study 137 HIV positive subjects were enrolled. Information on demographics i.e., weight, height, socioeconomic status, age, educational status, sex, laboratory parameter (CD4 counts) and treatment regimens were noted, patients were examined for skin disorders by a dermatologist. Data were analysed using chi-square test for categorical variables. **Results:** majority of the patients resided in rural area (65.69%), belonged to low socioeconomic and educational status. 30.65% were housewives, 23.35% drivers and 16.78% labourers respectively. Predominant mode of transmission was heterosexual contact (94.16%). Most common HIV related dermatological manifestations were seborrheic dermatitis (74.16%), xerosis (52.5%), generalized skin hyper pigmentation 56 (46.67%), Onychomycosis 53 (44.16%), pruritic papular eruption 27 (22.5%), oral candidiasis 21 (17.5%), photo dermatitis 21 (17.5%) and scabies 4 (3.33%). Significant correlation with low CD4+cell counts was found for oral candidiasis ($p < 0.0001$) and Kaposi sarcoma ($p 0.03$), while other disorders like seborrheic dermatitis ($p 0.22$), xerosis ($p 0.25$) and onychomycosis ($p 0.08$) were not statistically significant. **Conclusion:** This study showed high prevalence of dermatological manifestations in HIV infected subjects, and they occur more frequently with progression of HIV and decline in immune functions. So, early diagnosis and management of skin disorders can improve the quality of life of HIV infected subjects.

Keywords: HIV, AIDS, PLHA- people living with HIV/AIDS, NACO

A5015: Antiretroviral Prophylaxis for HIV Prevention in Heterosexual Men and Women

Author: Jared M. Baeten and others

Source: New England Journal of Medicine, 367, 5 (August 2, 2012):399-410

Abstract: **Background:** Antiretroviral preexposure prophylaxis is a promising approach for preventing human immunodeficiency virus type 1 (HIV-1) infection in heterosexual populations. **Methods:** We conducted a randomized trial of oral antiretroviral therapy for use as

preexposure prophylaxis among HIV-1-serodiscordant heterosexual couples from Kenya and Uganda. The HIV-1-seronegative partner in each couple was randomly assigned to one of three study regimens — once-daily tenofovir (TDF), combination tenofovir–emtricitabine (TDF–FTC), or matching placebo — and followed monthly for up to 36 months. At enrollment, the HIV-1-seropositive partners were not eligible for antiretroviral therapy, according to national guidelines. All couples received standard HIV-1 treatment and prevention services. **Results:** We enrolled 4758 couples, of whom 4747 were followed: 1584 randomly assigned to TDF, 1579 to TDF–FTC, and 1584 to placebo. For 62% of the couples followed, the HIV-1-seronegative partner was male. Among HIV-1-seropositive participants, the median CD4 count was 495 cells per cubic millimeter (interquartile range, 375 to 662). A total of 82 HIV-1 infections occurred in seronegative participants during the study, 17 in the TDF group (incidence, 0.65 per 100 person-years), 13 in the TDF–FTC group (incidence, 0.50 per 100 person-years), and 52 in the placebo group (incidence, 1.99 per 100 person-years), indicating a relative reduction of 67% in the incidence of HIV-1 with TDF (95% confidence interval [CI], 44 to 81; $P < 0.001$) and of 75% with TDF–FTC (95% CI, 55 to 87; $P < 0.001$). Protective effects of TDF–FTC and TDF alone against HIV-1 were not significantly different ($P = 0.23$), and both study medications significantly reduced the HIV-1 incidence among both men and women. The rate of serious adverse events was similar across the study groups. Eight participants receiving active treatment were found to have been infected with HIV-1 at baseline, and among these eight, antiretroviral resistance developed in two during the study. **Conclusions:** Oral TDF and TDF–FTC both protect against HIV-1 infection in heterosexual men and women.

Keywords: HIV Prevention, HIV, Antiretroviral Prophylaxis

A5027: Qualitative study of HIV testing and referral practices of private hospital doctors treating patients with TB in Chennai, India

Author: Rosalind Miller and others

Source: International Journal of Health Planning and Management, 27, 2 (April/June 2012): 180-191

Abstract: **Objective:** In India, 50%–80% of patients with tuberculosis (TB) seek private care. This study set out to explore HIV testing and referral practices of private hospital doctors treating patients with TB. **Methods:** Interviews were conducted with private hospital doctors ($n = 15$). Interviews covered HIV testing, linking HIV-positive patients with TB to HIV care, and coordination of care for co-infected patients. **Results:** Doctors did not routinely refer patients with TB to government HIV testing facilities as per national policy guidance. If deemed appropriate, then testing was conducted privately. Testing was more common when a facility

guideline mandated testing or a public–private initiative for TB management was in place. Otherwise, testing was based on doctors' judgement. Patients accustomed to private care who could not afford treatment were reportedly reluctant to shift to public facilities. A lack of communication between public and private doctors was found to undermine co-management. **Conclusions:** In this sample, private provider practices were influenced by both the social and the health systems contexts in which they operated. An understanding of patient perceptions of HIV, private doctors concerns for retaining patients, and the contrasting philosophies of private medicine versus public health objectives was found to be critical to explain HIV testing and referral behaviours. The government has proposed to scale up HIV testing and treatment among patients with TB, yet operationalising this will require engagement with the realities of a large, diverse private sector.

Keywords: Private sector, Tuberculosis, HIV, India, health systems.

A5040: Living Positively: The Experiences of Thai Women Living With HIV/AIDS in Central Thailand

Author: Pranee Liamputtong and others

Source: Qualitative Health Research, 22, 4 (April, 2012): 441-451

Abstract: Living with an incurable illness such as HIV/AIDS is a stressful experience. However, many HIV-positive individuals are able to maintain their emotional well-being. This begs the question of what strategies these individuals employ to allow them to do so. In this article, we examine how Thai women living with HIV/AIDS learned about their health status, what feelings they had, and how they dealt with the illness. In-depth interviews were conducted with 26 women in central Thailand. The women adopted several strategies to deal with their HIV status, including taking care of themselves, accepting their own faith, disclosing their HIV status to family, and joining AIDS support groups. These strategies can be situated within the “living positively” discourse, which helped to create a sense of optimism to combat the HIV epidemic among the women. Additionally, the acceptance of their HIV status played an essential role in the meaning-making process because it assisted the women in sustaining the equilibrium of their emotional well-being.

Keywords: Asia-South, Asian people-cultures, Health and well-being, HIV, AIDS, Women's health

A5043: When HIV-Positive Children Grow Up: A Critical Analysis of the Transition Literature in Developed Countries

Author: Asha Persson and Christy Newman

Source: *Qualitative Health Research*, 22, 5 (May, 2012): 656-667

Abstract: Young people with perinatally acquired HIV are routinely problematized in the research literature as inadequately equipped to manage transition to adolescent sexuality and adult clinical care without comprehensive interventions, partly because of challenges associated with adolescence itself, and partly because of neurocognitive and psychosocial dysfunctions commonly attributed to these children. However, little is actually known about this population, given their recent emergence in the HIV epidemic. Using critical discourse analysis, we argue that several problematic assumptions operate in this literature, hampering the objective of understanding these young people. Our analysis can contribute to a reframing of future research on HIV-positive adolescents, by encouraging greater attunement to the experiences of the adolescents themselves and to the discursive meanings that underpin research agendas, so that different and more productive questions can be asked and answered.

Keywords: Adolescent, Critical methods, HIV, AIDS, Social construction, Sexual health

A5045: Parent–Adolescent Communication About Sex in Rural India: U.S.–India Collaboration to Prevent Adolescent HIV

Author: Guilamo-Ramos Vincent and others

Source: *Qualitative Health Research*, 22, 6 (June, 2012): 788-800

Abstract: In this article, we examine parent–adolescent communication about sex among rural Indian youth and their parents. We conducted in-depth interviews (N = 40) with mothers, fathers, and adolescent boys and girls aged 14 to 18 years in a rural community in Maharashtra, India. In the context of key cultural factors, including gender-related norms, we explore issues of sexual health and critically assess widely held beliefs that Indian parents are unwilling or unable to discuss sex-related topics with their children. Our findings suggest that despite communication barriers, e.g., lack of knowledge and cultural proscriptions, Indian families are interested in and willing to communicate about sex-related topics. Future research should seek to determine the viability of family-based HIV prevention interventions for Indian adolescents.

Keywords: Adolescents, Rural India, HIV prevention, AIDS prevention, Parenting, Sexual health

A5066: HIV and tuberculosis: The construction and management of double stigma

Author: Amrita Daftary

Source: *Social Science & Medicine*, 74, 10 (May, 2012): 1512–1519

Abstract: Mitigation of the tuberculosis (TB) and HIV syndemic is undermined by critical clinical, operational and social challenges of which the social aspects have been least explored. This paper examines the lived experience of TB disease and HIV from the perspective of affected individuals to analyze how they may think about their dual illness; how they understand their illness with TB in relation to HIV, and vice versa; and how they characterize their (stigmatized) experiences in the context of their perceptions and identities. From February–August 2009, qualitative, semi-structured interviews were conducted with 40 adults with HIV and TB disease at three ambulatory clinics in KwaZulu-Natal, South Africa. Subjective meanings of illness experience were analyzed using modified grounded-theory. Emergent themes on illness perception and disclosure revealed how patients constructed dichotomous identities associated with TB and HIV through social constructs of moral susceptibility and (im)permanence. Each identity was associated with relatively disparate degrees of stigma as a product of labeling, negative stereotyping and discrimination. HIV bore the least desirable identity and invoked the greatest stigma. However, the confluence of the two epidemics rendered TB symbolic and symptomatic of HIV, and enhanced the visibility of AIDS. Dual illness thus introduced a paradox to patients' identity constructions, and produced a unique, overlapping double stigma. This facilitated new forms of stigma against TB, and aggravated existing stigma against HIV. It also conferred visibility to some forms of extra-pulmonary TB. Patients managed their double stigmas through novel forms of information sharing that relied on segregating their dual illness identities. Patients deflected the dominant stigma of HIV through concurrent processes of HIV 'othering' – their symbolic distancing from persons affected by HIV, and 'covering' – their selective disclosure of illness (and identity associated) with TB over that of HIV. Findings call for greater consideration to the complex role of stigma in the delivery of TB/HIV healthcare.

Keywords: South Africa, HIV, Tuberculosis, Double stigma, Stigma management, Experience of illness

Malaria

A5026: Comparative effects of vivax malaria, fever and diarrhoea on child growth

Author: Gwennyth Lee, and others

Source: International Journal of Epidemiology, 41, 2 (April, 2012): 531:539

Abstract: Background: The adverse impact of Plasmodium vivax on child health beyond acute febrile illness is poorly studied. The effect of vivax malaria on child growth was evaluated and compared with diarrhoeal disease and non-specific fever. **Methods:** Using data from a 43-month longitudinal cohort of children 0–72 months of age (n = 442) in the Peruvian Amazon, ponderal and linear growth velocities over 2-, 4- and 6-month periods were examined using longitudinal models and related to the incidence of disease during the same period. **Results:** An episode of vivax malaria led to 138.6 g (95% confidence interval (CI) 81.9–195.4), 108.6 g (62.8–153.2) and 61 g (20.9–101.1) less weight gain over 2-, 4- and 6-month intervals, respectively. These deficits were larger than both diarrhoea (21.9, 17.2 and 13.8 g less weight gain, respectively) and fever (39.0, 30.3 and 25.6 g less weight gain, respectively). An incident episode of vivax also led to 0.070 cm (0.004–0.137) and 0.083 cm (0.015–0.151) less linear growth over 4 and 6 months, respectively, which were also larger than deficits from diarrhoea (0.029 and 0.028 cm, respectively) and fever (not associated with linear growth deficits). Despite the larger effect of P. vivax incident episodes on growth of a particular child, diarrhoeal disease had a larger cumulative impact on growth deficits as diarrhoeal incidence rates in this community are >10-fold higher than vivax malaria. **Conclusions:** Disease control measures for vivax malaria and diarrhoeal disease have the potential to improve the growth of children in endemic areas.

Keywords: Vivax malaria, Diarrhoea, fever, Human growth, Paediatric

A5030: Piloting the Affordable Medicines Facility-malaria: what will success look like?

Author: Gavin Yamey and others

Source: Bulletin of the World Health Organization, 90, 6 (June, 2012): 452-460

Abstract: The Affordable Medicines Facility-malaria is an innovative financing mechanism, managed by the Global Fund to Fight AIDS, Tuberculosis and Malaria. This initiative aims to increase the use of artemisinin-based combination therapies for treating malaria. A pilot is underway in eight countries to determine whether the mechanism reduces the consumer price of these drugs and increases their availability in public and private outlets, their market share and their use. To evaluate the pilot, an analysis was done to estimate predetermined “benchmarks” of success at 1 and 2 years. The analysis used a mixed-methods approach, triangulating data from a literature review with information from 33 interviews with experts. A sensitivity analysis and other methods were used to verify the results. Benchmarks used to determine success include an increase in availability of artemisinin-based combination

therapies of 40 percentage points from baseline, and an increase in their use of 10–15 percentage points from baseline at year 2. These benchmarks were based on evidence that national public health programmes aimed at increasing the use of a specific health commodity in developing countries have generally achieved only modest changes in use within a 2-year time frame. Evaluation should also take individual country contexts into account.

Keywords: Malaria, Medicines, Artemisinin-based

Maternal and Child Health

A5036: Technical Efficiency of Comprehensive Emergency Obstetric and New-Born Care Centres in Tamil Nadu

Author: S. Rajasulochana and Umakant Dash

Source: Journal of Health Management, 14, 2 (June, 2012): 151-160

Abstract: **Background:** The state government of Tamil Nadu in India has been implementing various health sector reforms to bring down maternal and infant deaths. One such significant step was to set up Comprehensive Emergency Obstetric and New-born Care (CEmONC) centres all over Tamil Nadu under the World Bank-funded Tamil Nadu Health Systems Project (TNHSP) in 2005. However, to date, except for the pilot study reported in this article, no attempt has been made to make an estimate of the efficiency of the CEmONC centres in Tamil Nadu. The objective of this study, based on data on performance indicators collected by the TNHSP for the period April 2009 to March 2010 was to estimate the relative technical efficiency (TE) and scale efficiency (SE) of Phase 1 CEmONC centres in Tamil Nadu using the DEA method. **Methods:** The Data Envelopment Analysis (DEA) method was used to estimate the efficiency of 48 Phase 1 CEmONC centres operating in secondary hospitals across Tamil Nadu. This is an exploratory study. **Results:** 10 (out of 48) centres were technically efficient, with an average TE score for inefficient centres of 72.3 per cent and a standard deviation (STD) of 15 per cent under the constant returns to scale assumption. Nineteen centres were technically efficient under variable returns to scale assumption with an average score of 81 per cent (STD of 14 per cent). Thirty-eight centres were scale inefficient with 84 per cent (STD of 11.79 per cent). **Discussion:** This pilot study demonstrates to the policy-makers the versatility of DEA in measuring inefficiencies among CEmONC centres. A key limitation of this study is that it has not accounted for quality of care. Further research is required to examine why certain centres out-perform others.

Keywords: Technical efficiency, Data Envelopment Analysis, Performance indicators, Tamil Nadu Health Systems Project

A5060: Congenital heart defects and parental occupational exposure to chemicals

Author: Claudia A. Snijder and others

Source: Human Reproduction, 27, 5 (May, 2012): 1510-1517

Abstract: **Background:** Congenital heart defects (CHDs) are the most common major malformations in newborns. In this study we examined the associations between the occurrence of CHDs in children and periconceptional occupational parental exposures to chemicals. **Methods:** In an age-matched case-control study with standardized data collection at c. 15 months after birth, 424 mothers and 421 fathers of a child with CHD and 480 mothers and 477 fathers of a non-malformed child, filled out questionnaires on periconceptional general and job characteristics. A job exposure matrix, which links the information on job title and a description of work tasks to an expert judgement on exposure to chemicals in the workplace, was used. **Results:** The overall prevalence of occupational exposure to chemicals was 5.0 in cases and 6.2% in controls for mothers [odds ratio (OR) adjusted = 0.92; 95% confidence interval (CI): 0.26–3.25], while 22.3 and 15.9% for fathers, respectively (OR adjusted = 1.23; 95% CI: 0.39–3.91). No association of maternal occupational exposure to chemicals with risk of CHDs was found. Paternal exposure to phthalates was associated with a higher incidence of CHDs in general (OR adjusted = 2.08; 95% CI: 1.27–3.40). Paternal exposure to phthalates was associated with perimembranous ventricular septal defect (OR adjusted = 2.84; 95% CI: 1.37–5.92), to polychlorinated compounds with atrioventricular septal defect (OR adjusted = 4.22; 95% CI: 1.23–14.42) and to alkylphenolic compounds with coarctation of the aorta (OR adjusted = 3.85; 95% CI: 1.17–12.67). **Conclusions:** Periconceptional paternal (but not maternal) occupational exposure to certain chemicals is associated with an increased risk of CHDs in children. The results, however, must be interpreted cautiously as exposure probabilities are a crude measure of exposure.

Keywords: Congenital heart defect, Occupational exposure, Chemicals, Phthalates, Job-exposure matrix

Mental Health

A5033: Social Support and Mental Health in Middle-Aged Men and Women: A Multidimensional Approach

Author: Katherine L. Fiori and Christy A. Denckla

Source: Journal of Aging and Health, 24, 3 (April, 2012): 407-438

Abstract: **Objective:** The purpose of this study is to examine the association between various aspects of social support and depressive symptoms separately among men and women. **Method:** Using a sample of 6,767 middle-aged adults from one wave of the Wisconsin Longitudinal Study (1992-1993), the authors performed a series of ANCOVAs predicting depressive symptoms and controlling for background variables. **Results:** The authors found that the receipt of emotional support was associated with mental health in women only, whereas the provision of emotional and instrumental support was associated with mental health among men and women, but with varying patterns. For example, men who provided instrumental support to nonkin only had the highest levels of depressive symptoms, whereas women who provided instrumental support to kin only had the highest levels of symptoms. **Discussion:** This study helps to clarify if and what types of social support are related to mental health in men and women.

Keywords: Gender, Depression, Social support, Middle-aged adults

Pregnancy

A5048: Impact of twice weekly versus daily iron supplementation during pregnancy on maternal and fetal haematological indices: a randomized clinical trial

Author: A. Goshtasebi and M. Alizadeh

Source: Eastern Mediterranean Health Journal, 18, 6 (June, 2012): 561-566

Abstract: A randomized clinical trial examined the efficiency and tolerability of twice weekly versus daily iron supplementation during pregnancy. A total of 370 pregnant women were randomly assigned to receive either daily or twice weekly iron supplementation during pregnancy. There were no significant differences in initial and delivery haemoglobin and haematocrit levels between the 2 groups. Ferritin concentrations were significantly lower in the twice weekly group at delivery, but hypoferritinaemia (ferritin < 15 µg/L) was not observed in either group. The frequency of nausea, vomiting and constipation were significantly lower in

the twice weekly group. Birth weight and length were significantly higher in the daily supplemented group. In non-anaemic mothers, a smaller dose of iron may be sufficient and also might prevent the complications of iron excess.

Keywords: Pregnancy, Maternal haematological, Fetal haematological, Iron

A5055: Cervical pessary in pregnant women with a short cervix (PECEP): an open-label randomised controlled trial

Author: Maria Goya and others

Source: Lancet, 379, 9828 (May 12-18, 2012): 1800 – 1806

Abstract: **Background:** Most previous studies of the use of cervical pessaries were either retrospective or case controlled and their results showed that this intervention might be a preventive strategy for women at risk of preterm birth; no randomised controlled trials have been undertaken. We therefore undertook a randomised, controlled trial to investigate whether the insertion of a cervical pessary in women with a short cervix identified by use of routine transvaginal scanning at 20–23 weeks of gestation reduces the rate of early preterm delivery. **Methods:** The Pesarío Cervical para Evitar Prematuridad (PECEP) trial was undertaken in five hospitals in Spain. Pregnant women (aged 18–43 years) with a cervical length of 25 mm or less were randomly assigned according to a computer-generated allocation sequence by use of central telephone in a 1:1 ratio to the cervical pessary or expectant management (without a cervical pessary) group. Because of the nature of the intervention, this study was not masked. The primary outcome was spontaneous delivery before 34 weeks of gestation. Analysis was by intention to treat. This study is registered with ClinicalTrials.gov, number NCT00706264. **Findings:** 385 pregnant women with a short cervix were assigned to the pessary (n=192) and expectant management groups (n=193), and 190 were analysed in each group. Spontaneous delivery before 34 weeks of gestation was significantly less frequent in the pessary group than in the expectant management group (12 [6%] vs 51 [27%], odds ratio 0·18, 95% CI 0·08–0·37; p<0·0001). No serious adverse effects associated with the use of a cervical pessary were reported. **Interpretation:** Cervical pessary use could prevent preterm birth in a population of appropriately selected at-risk women previously screened for cervical length assessment at the midtrimester scan.

Keywords: Cervical pessary, Pregnant women

A5068: Decision aid tools to support women's decision making in pregnancy and birth: A systematic review and meta-analysis

Author: Marylene Dugas and others

Source: Social Science & Medicine, 74, 12 (June, 2012): 1968–1978

Abstract: Support for a model of shared medical decision making, where women and their care providers discuss risks and benefits of their different options, reveal their preferences, and jointly make a decision, is a growing expectation in obstetric care. The objective of this study was to conduct a systematic review and meta-analysis of randomized controlled trials evaluating the efficacy of different decision aid tools compared to regular care for women facing several options in the specific field of obstetric care. We included published studies about interventions designed to aid mothers' decision making and provide information about obstetrical treatment or screening options. Following a search of electronic databases for articles published in English and French from 1994 to 2010, we found ten studies that met the inclusion criteria. In this systematic review and meta-analysis we found that all decision aid tools, except for Decision Trees, facilitated significant increases in knowledge. The Computer-based Information Tool, the Decision Analysis Tools, Individual Counseling and Group Counseling intervention presented significant results in reducing anxiety levels. The Decision Analysis Tools and the Computer-based Information tool were associated with a reduction in levels of decisional conflict. The Decision Analysis Tool was the only tool that presented evidence of an impact on the final choice and final outcome. Decision aid tools can assist health professionals to provide information and counseling about choices during pregnancy and support women in shared decision making. The choice of a specific tool should depend on resources available to support their use as well as the specific decisions being faced by women, their health care setting and providers.

Keywords: Obstetrics, Doctor–patient relations, Decision support techniques, Health education, Decision making; Patient-centered care

Psychology

A5037: Influence of Positive Affect on Physical Health and Psychological Well-Being: Examining the Mediating Role of Psychological Resilience

Author: Papri Nath and Rabindra Kumar Pradhan

Source: Journal of Health Management, 14, 2 (June, 2012): 161-170

Abstract: The present article examines the mediating role of psychological resilience in the relationship of positive affect with physical health and psychological well-being. The sample consists of 146 engineering, management and research students with an age range of 17–32 years ($M = 22.93$, $SD = 3.67$). Survey method was opted for data collection. Standard psychometric tools were used for collecting data on positive affect, psychological resilience, physical health, and psychological well-being. Positive affect was measured on the ‘Positive Negative Affectivity Scale’ (PANAS) constructed by Watson, Clark and Tellegen (1988). The ‘Ego Resiliency Scale’ by Block and Kremen (1996) was used to measure psychological resilience. Physical health and psychological well-being was assessed on the multi-dimensional health questionnaire proposed by Snell and Johnson (1997) and the psychological well-being scale by Ryff and Keyes (1995), respectively. The results revealed that psychological resilience significantly mediates between positive affect, and physical health and psychological well-being. The theoretical and practical implications of the study are discussed in the light of empirical findings.

Keywords: Positive affect, Psychological resilience, Physical health, Psychological well-being

Social Science

A5022: Migration Experience and Premarital Sexual Initiation in Urban Kenya: An Event History Analysis

Author: Nancy Luke and others

Source: *Studies in Family Planning*, 43, 2(June, 2012):115-126

Abstract: Migration during the formative adolescent years can affect important life-course transitions, including the initiation of sexual activity. In this study, we use life history calendar data to investigate the relationship between changes in residence and timing of premarital sexual debut among young people in urban Kenya. By age 18, 64 percent of respondents had initiated premarital sex, and 45 percent had moved at least once between the ages of 12 and 18. Results of the event history analysis show that girls and boys who move during early adolescence experience the earliest onset of sexual activity. For adolescent girls, however, other dimensions of migration provide protective effects, with greater numbers of residential changes and residential changes in the last one to three months associated with later sexual initiation. To support young people's ability to navigate the social, economic, and sexual environments that accompany residential change, researchers and policymakers should consider how various dimensions of migration affect sexual activity.

Keywords: Migration, Premarital Sexual Initiation, Kenya

Sociology

A5038: Occupational Health Hazards: A Study of Bus Drivers

Author: Bindu Bhatt and M.S. Seema

Source: Journal of Health Management, 14, 2 (June, 2012): 201-206

Abstract: Health has always been closely linked with occupation. Sound health in relation to vocation and employment is the most important aspect of the very life of an individual who works and to the society as a whole. Occupational hazards natural in the work environment have become more prominent in the post-industrial societies. These include a wide range of health problems ranging from asthma, heart attack, high blood pressure, stress and other psychological disorders, with many more to list. Occupational health is therefore, an aspect seeking attention at the individual, group and community levels. The related study deals with ergonomics—a link between the worker and his working environment. This would have impact on the body and discomfort reflected in various parts of the body bringing about certain health problems. The present article is an attempt to explore the health hazards among the bus drivers and conductors employed in State Road Transport Corporations. The attempt is directed at investigating risk factors at micro-level in a community of drivers and conductors. It not only establishes the link between health and work environment but also facilitates in assessing the adverse impacts that may be expected.

Keywords: Occupation, Health, Hazards, Bus drivers, Conductors

A5062: Do neighborhoods affect individual mortality? A systematic review and meta-analysis of multilevel studies

Author: Mathias Meijera and others

Source: Social Science & Medicine, 74, 8 (April, 2012): 1204–1212

Abstract: There has been increasing interest in investigating whether inhabitants in socially or physically deprived neighborhoods have higher mortality when individual socioeconomic status is adjusted for. Results so far appear ambiguous and the objective of this study was to conduct a systematic literature review of previous studies and to quantify the association between area-level socioeconomic status (ALSES) and all-cause mortality in a meta-analysis. Current

guidelines for systematic reviews and meta-analyses were followed. Articles were retrieved from Medline, Embase, Social Sciences Citation Index and PsycInfo and individually evaluated by two researchers. Only peer-reviewed multilevel studies from high-income countries, which analyzed the influence of at least one area-level indicator and which controlled for individual SES, were included. The ALSES estimates in each study were first combined into a single estimate using weighted linear regression. In the meta-analysis we calculated combined estimates with random effects to account for heterogeneity between studies. Out of the 40 studies found eligible for the systematic review 18 studies were included in the meta-analysis. The systematic review suggests that there is an association between social cohesion and mortality but found no evidence for a clear association for area-level income inequality or for social capital. Studies including more than one area level suggest that characteristics on different area levels contribute to individual mortality. In the meta-analysis we found significantly higher mortality among inhabitants living in areas with low ALSES. Associations were stronger for men and younger age groups and in studies analyzing geographical units with fewer inhabitants.

Keywords: Neighborhoods, Breast cancer, Risk factors, Residence characteristics, Mortality, Systematic review

Tuberculosis

A5046: Exploration of Patient Perceptions of Adherence to Tuberculosis Treatment in Tanzania

Author: Jossy van den Boogaard and others

Source: Qualitative Health Research, 22, 6 (June, 2012): 835-845

Abstract: In this study, we aimed to explore patient perceptions of adherence to tuberculosis (TB) treatment and construct a theoretical model of treatment adherence behavior. We conducted semistructured interviews with 11 adherent patients from Tanzania whom we recruited by purposive sampling. The interview data were analyzed by content analysis. We found that the patient's intention to adhere is the most important determinant of adherence behavior. This intention is preceded by the decision to seek biomedical health care, and based on knowledge and beliefs about TB treatment and the motivation to be cured. The intention to adhere helps patients to cope with perceived barriers to adherence, such as socioeconomic difficulties, and to create an adherence-enabling environment in which the presence of social support plays an important role. Our preliminary adherence behavior model should be validated in larger, nonadherent patient populations and evaluated for its applicability to the development of adherence-promoting strategies.

Keywords: Adherence, Compliance, Health behavior, Tuberculosis, Tanzania

A5047: Promoting public–private mix for TB-DOTS: a multicountry study from the WHO Eastern Mediterranean Region

Author: Z. Haq and others

Source: Eastern Mediterranean Health Journal, 18, 5 (May, 2012):410-416

Abstract: This study was carried out to document the implementation status of public–private mix (PPM) in 6 member countries of the World Health Organization Eastern Mediterranean Region, with a particular focus on advocacy, communication and social mobilization (ACSM) specific to PPM. Interviews and focus group discussions were held with staff of national tuberculosis control programmes and partners. Four PPM models were being practised. For all models, ACSM specific to PPM was at the elementary stage. Participants perceived that promoting private partners was difficult, specific policy guidelines were deficient and human resources and capacity for both initiatives were lacking across the region. Building ACSM capacity is required along with the development of guidelines and the implementation of country-specific communication plans to carry out local-level advocacy, strategic communication and effective social mobilization to maximize the benefits of PPM.

Keywords: TB-Dots, WHO Eastern Mediterranean Region,

Women Health

A5041: Sources of the Uncertainty Experienced by Women with HPV

Author: Kami A. Kosenko and others

Source: Qualitative Health Research, 22, 4 (April, 2012): 534-545

Abstract: Women with genital human papillomavirus (HPV) experience considerable stress and uncertainty as a result of the diagnosis; however, little is known about the sources of uncertainty in HPV. Given that uncertainty creates stress, which might be linked to the pathogenesis of cervical cancer, research on these sources of uncertainty is warranted. To this end, we completed semistructured interviews with 25 women living with HPV, and identified seven sources of uncertainty: The meaning of the diagnosis, the potential for disease progression, finances, the source of the infection, disclosure, sex and reproduction, and the

HPV vaccine. In the discussion we articulate the relevance and importance of study findings to research, theory, and practice.

Keywords: Illness and disease, Sexual health, Uncertainty, Women's health, HPV

A5069: Female Foeticide: An overview of the Provisions of the Related Law

Author: M. N. Phad

Source: Ashwattha, 2 (April-June, 2012): 17-23

Abstract: Policy makers, public administrators and development researchers are grwingly concerned about the decline of sex ration and especially of the child sex ratio in India and its progressive state like Maharashtra which is mainly attributed to growth in number of cases of female foeticide and Infanticide. This article provides overview of the status of women in India, region (district)-wise sex ration in Maharashtra and provisions of law related to female foeticide and suggests some measures to be taken for effective implementation of the law.

Keywords: Female Foeticide, Law, Foeticide.

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