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**OBJECTIVES:** There has been a growing concern about the economic burden of work incapacity due to mental health problems; meanwhile studies examining the employer's perspective are still scarce. This study aims to propose a rationale to estimate the burden of mental health problems in Brazilian corporations. METHODS: Data from an observational study investigating absenteeism due to sick leaves in a Brazilian bank were used to build a costing estimation model (total number of employees, average number of sick days per employee, and proportion of sick days due to mental ill health). These data were combined with average wage and turnover rate national statistics and published data on presenteeism due to mental health problems. **RESULTS:** Based on n=7499 workers, 3.36 annual sick days per employee, a proportion of sick days attributable to mental health disorders of 15.58%, and a mean daily wage of 51.33BRL, the costing model projected annual costs due to absenteeism of 201,534BRL. If presenteeism is included in the costing estimation, using a previously published presenteeism/absenteeism ratio of 4.0 (for depressed workers), costs due to presenteeism would represent 806,138BRL per year. There is a lack of Brazilian observational studies assessing turnover rates and associated costs. National rates according to economic sector were employed to estimate the impact of turnover of mental ill workers (Service Industry=4.15% in 2010) and a turnover cost of 3 times the average monthly cost per employee were used as a proxy. Turnover costs would incur in additional 115,500BRL per year. The annual economic burden of mental health disorders under the employers perspective was estimated in 1,123,173BRL. CONCLUSIONS: The cost of mental ill health to employers, particularly the cost of productivity losses due to lower performance of employees at work (presenteeism), can represent a significant burden for companies and society.

## **PMH24**

# ECONOMIC BURDEN OF MENTAL ILLNESSES IN PAKISTAN

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<sup>1</sup>Aga Khan University, Karachi, Sindh, Pakistan, <sup>2</sup>Aga Khan University, Karachi, Sindh, PR OBJECTIVES: Mental illnesses in Pakistan are at rise. Decade long terrorism, suicide bombing, recent floods, political uncertainty and transition to market economy are some of the key factors that are contributing to increasing mental illnesses in the country. This study emphasizes the importance of economic consequences of mental illness in Pakistan and provides estimates of cost on mental illness in the country. METHODS: Aga Khan University Hospital patient records of psychiatry clinics inpatient (N=727) and outpatient (N=1458) data for the year 2005-06 were classified into ten ICD-10 classification. For each category of mental illness the direct cost included consultation fee, diagnostics, bed charges, laboratory charges medication and procedure. The indirect costs on travel and productivity losses are being estimated drawing a stratified random sample for both inpatient and day care dataset. RESULTS: Mental illnesses categories 2(Schizophrenia (N=227) and 3(mood/depressive disorder (N=415) accounted for 82% of burden of mental illnesses in inpatient care. While in day care 2(Schizophrenia 3(mood/depressive disorder and 4(Panic/OCD) accounted for 75 % of the burden of mental illnesses in Pakistan. Mean cost for all categories in inpatient care is Pak Rs. 21701 per treatment episode. Illnesses category 8 (anorexia) was the most costly (Mean=Rs.71687) and category 1(dementia and other organic disorders were relatively less expensive to treat (Mean=Pak Rs.1183). CONCLUSIONS: Initial findings suggest the economic burden of mental illnesses is alarmingly high and its treatment is unaffordable by many families in the country. This might result in denied or delayed care. Using country level available data on burden of mental illness the economic impact of mental illnesses in Pakistan will be estimated. We will also explain socio-economic determinates of mental illnesses.

# PMH25

## COST OF DELIVERING PSYCHIATRIC INPATIENT CARE TO MENTAL HEALTH PATIENTS WITH PSYCHOSIS AND CO-OCCURING SUBSTANCE USE: A UK-BASED STUDY

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<sup>1</sup>University of Malaya, Kuala Lumpur, Malaysia, <sup>2</sup>University of Manchester, Manchester, UK OBJECTIVES: There is little data describing current practice in the clinical management of patients with psychosis and co-occurring substance use and the associated costs. In the UK, standard psychiatric care is based on the care programme approach and includes community and hospital-based treatment. Inpatient psychiatric treatment is the key cost driver of psychiatric care. This study aimed to describe practice-based patient-level costs of inpatient psychiatric treatment for NHS patients with psychosis and co-occurring substance use. METHODS: Resource use data of inpatient psychiatric treatment were collected from the medical records of 327 patients recruited in the MIDAS trial, a randomised controlled trial of an experimental intervention programme (integrated motivational interviewing and cognitive-behaviour therapy, MiCBT) plus standard care or standard care alone. Using the hospital perspective, data were collected from trial entry until end of 2-year trial follow-up (between 2004 to 2009). Unit costs were assigned, based on NHS Reference Costs 2008/09 and PSSRU 2009. Data were analysed using descriptive statistics and variations around the costs were obtained. **RESULTS:** Of the 327 patients, 95 patients (29%) experienced at least one episode of hospitalisation, with a mean of 85 inpatient days (95% CI: 65 – 105, median 42, range 2 - 568) per hospitalised patient. Total cost for these 95 patients was £2.43million (UK £2008/09) over 8,108 inpatient days. Mean cost per hospitalised patient was £25,547 (95% CI: £18,453 - £32,640, median £12,180, range £580 - £273,208). Cost components comprised: acute psychiatric admission (total 6,428 days, £1.86million), psychiatric rehabilitation admission (total 621 days, £165,186), psychiatric long-stay admission (total 434 days, £91,574), psychiatric ICU admission (total 57 days, £32,832) and

psychiatric forensic medium secure unit admission (568 days, £273,208). CONCLUSIONS: This study provided practice-based data describing patient-level costs associated with standard NHS care of inpatient psychiatric treatment for patients with psychosis and co-occurring substance use.

#### **PMH26**

# DIRECT COST OF SCHIZOPHRENIA IN QUEBEC, CANADA: AN INCIDENCE-BASED MICROSIMULATION MONTE-CARLO MARKOV MODEL

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OBJECTIVES: Pharmacological strategies for schizophrenia have received increasing attention due to the development of new and costly drug therapies. To estimate the direct healthcare and non-healthcare cost of schizophrenia and to simulate cost reductions potentially obtained with a new pharmacogenomics treatment, in a cohort of patients newly diagnosed with schizophrenia, over the first 5 years following their diagnosis. METHODS: A microsimulation Monte-Carlo Markov model was used. Six discrete disorder states defined the Markov model: 1): first episode (FE); 2) low dependency state (LDS); 3) high dependency state (HDS); 4) Stable state (Stable); 5) Well state (Well); and 6) Death state (Death). Costs and individual probabilities of transition were estimated from the Régie de l'assurance maladie du Québec and Med-Echo databases. RESULTS: A total of 14,320 individuals were identified in the study cohort as newly diagnosed patients with schizophrenia. Over the first 5 years following diagnosis the mean cost per person was estimated at \$36,701 (95%CI: 36,264 to 37,138). The direct health care cost accounted for 56.2% of the total cost, welfare assistance for 34.6% and long term care facilities for 9.2%. On the direct health care cost, hospitalisation cost accounted for 64.6%, medical cost for 11.4% and drug-related cost for 24%. In the case where a new pharmacogenomic treatment with 20% increase of effectiveness will be available, the direct healthcare and non-health care costs can be reduced up to 14.2%. CONCLUSIONS: This model is the first Canadian model incorporating transition probabilities adjusted for individual risk-factor profiles and costs using real-life data. Our results indicate that a new pharmacogenomics treatment could possibly reduce hospitalization and long-term care facility costs while potentially enabling patients to return to active employment that would in turn contribute to the reduction of the welfare assistance cost.

### PMH27

## AN ECONOMIC ANALYSIS OF THE IMPACT OF CRIME AND HOSPITALISATION ASSOCIATED WITH DIFFERENT INTERVENTIONS FOR OPIOID ABUSE IN THE UNITED KINGDOM

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**OBJECTIVES:** People addicted to opioids contribute a significant burden to society, both in terms of quality of life (QoL) and economic consequences. Untreated users are more likely to be out of work, commit crimes and require healthcare resources. Treating patients has been demonstrated to reduce these factors. However, some users receiving formal care continue to misuse that treatment, leading to other significant consequences for society. This study evaluated the potential impact of a novel formulation (buprenorphine/naloxone; suboxone), aimed at mitigating misuse and diversion. Increasing the currently limited number of treatments available will likely increase the number of people in treatment. The objective was to assess cost-effectiveness of two approaches to managing opioid users, buprenorphine/naloxone and methadone, and, further, to compare the use of any treatment against no treatment. METHODS: A cost-effectiveness model was built, incorporating the costs and benefits associated with each treatment. Healthcare unit cost data were taken from published data and databases, including NHS Reference Costs 2009-2010 and PSSRU Unit Costs of Health and Social Care 2010. Crime costs were taken from Home Office publications. Crime and hospitalisation rates, by treatment, were taken from an observational study of 109 patients in Scotland. Health related QoL figures, by treatment, were taken from an SF-36 questionnaire study. RESULTS: Over 6 months, it was estimated that savings associated with reduced crime (buprenorphine/naloxone versus methadone) were £2129, and savings from reduced health care visits were £1409. Based on a combination of mortality and QoL improvements, patients on buprenorphine/naloxone were shown to gain 0.087 QALYs compared to those receiving methadone. CONCLUSIONS: The model showed that the cost implications of crime, hospitalisation and misuse and diversion were key drivers of the results. Use of buprenorphine/naloxone resulted in a saving of £3538 due to reduced crime and hospitalisations, whilst providing a benefit to OoL

### PMH29

## COST EFFECTIVENESS OF EXTENDED RELEASE QUETIAPINE FUMARATE (OUETIAPINE XR) MONOTHERAPY IN TURKEY IN PATIENTS WITH MAJOR DEPRESSIVE DISORDER (MDD) WHO HAVE FAILED PREVIOUS ANTIDEPRESSANT THERAPY

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OBJECTIVES: The objective of this exploratory analysis was to assess the costeffectiveness of quetiapineXR as monotherapy compared to other key drug treatments in MDD patients, who have failed on previous therapy. METHODS: A Markov Model with one week cycles was used to assess the cost effectiveness of quetiapineXR treatment over 52 weeks. Key outcomes were: response rates, costs and Incremental Cost-Effectiveness Ratios (ICERs) for second line monotherapy. The