satisfaction point was reached at 13 in Khyber Pakhtunkhwa province of Pakistan from December to February 2014. The interviews were conducted at the hospital pharmacy, arrangements for the time and place of interview were made during initial contacts. Written consent was obtained from the participants prior to the interview.

RESULTS: Among the respondents interviewed, nine were male and four female hospital pharmacists in Pakistan. Twenty-six and 50% of them were female and male, respectively. The interview yielded 14 major themes: (a) Patients reporting (b) Lack of patient counseling (c) Lack of participation in health awareness programs, (d) Pharmacists reducing the prescribing errors, (e) Insufficient number of pharmacists.

CONCLUSIONS: Findings revealed that hospital pharmacists in Pakistan are not actively participating in provision of pharmaceutical care services. They are facing significant hurdles for their actively participation in patient care, major obstacles is the unavailability of sufficient number of pharmacist, lack of appropriate time for patient counseling and poor relationship between pharmacists and other health care providers. Moreover there is a need to explore the concept of pharmaceutical care among the other health care providers and general public.

MENTAL HEALTH OUTCOMES RESEARCH STUDIES

MH1 Efficacy and Safety of Paliperidone Palmitate in the Treatment of Schizophrenia: A Meta-Analysis

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OBJECTIVES: Paliperidone palmitate long-acting injectable (PP-LA) is a new once-monthly atypical antipsychotic for the treatment of schizophrenia. This article is to evaluate the efficacy and safety of PP-LA in the treatment of schizophrenia. METHODS: Published clinical studies concerning PP-LA for schizophrenia were carefully reviewed and systematically and assessed using the Cochrane software for data analysis and for calculating the combined outcomes of clinical trials and their 95% Confidence Intervals (CI). Furthermore, sensitive analysis and publication bias were conducted to test the stability of results from Meta-analysis. Results: 12 clinical randomized controlled trials including 39 analytical sets were selected for Meta-analysis. According to Jadad items, the qualities of including researches were high in which the rules of random grouping and balancing baseline characteristics between groups were conducted rigorously. The incidence of effective cases in PP-LA group was 1.7 (95%CI: 1.50-1.91) times higher than that in placebo group (Z=8.55, P<0.01) and equaled to the rate in risperidone group (Z=-1.95, 95%CI: 0.5-3.35). Compared with the control group of placebo (Z=1.01, 95%CI: 0.97-1.05) and risperidone (Z=1.07, 95%CI: 0.98-1.16), PP-LA seemed to be well tolerated, with the same incidence of adverse events. The stability of the present Meta-analysis was accepted without any statistical significance found by sensitive analysis and publication bias test. CONCLUSIONS: Paliperidone palmitate has certain efficacy and safety in the treatment of schizophrenia.

MH2 Current Impact of Dementia on the Caregiver in China

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OBJECTIVES: Dementia is an irreversible brain disease that results in progressive cognitive impairment and eventually, inability to carry out the simple tasks of daily living. Currently there exists no cure for this disease. Patients suffering dementia require plenty of care, mainly provided by the families. The objective of this study is to identify the proportion of the time caregivers spent on caring for patients with dementia in China. METHODS: The current Chinese demographic structure was put in balance with the need of caregiving time needed by the dementia population. Demographic data, proportion of diagnosed and/or treated patients were provided the China Alzheimer’s project Memory360. A Markov model was developed to estimate the data, proportion of diagnosed and/or treated patients were provided the China Demographic and Health Survey (2014). Results: The annual dementia diagnosis rate is 9.1% and the annual dementia proportion treated is 19.3%. Therefore, the dementia population in China is 13.2 million with 9 million dementia patients and 4 million dementia caregivers. Conclusions: The dementia patients in China are significantly more likely to relocate to the nursing home in 2 years if they were severely demented (OR=1.3, p<0.05) or were on antipsychotic medications (OR=1.0 p<0.05), or were getting older (OR=0.1, p<0.05). But, those who were living with caregivers, were female and were on antipsychotic medications (OR=1.0-1.4 p<0.01) were significantly less likely to move to nursing homes. Alzheimer patients were significantly more likely to relocate to nursing home compared to vascular dementia patients (OR=1.4 p<0.01) or were on antipsychotics medications and, the dementia is more advanced

MH3 Factors Associated with Relocating to Nursing Homes among Community-Dwelling Older Persons with Dementia

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OBJECTIVES: This study examined factors of relocating to nursing homes among community-dwelling older persons with dementia. METHODS: This retrospective study used data from The Aging, Demographics, and Memory Study (ADAMS) to assess the relocation services used from 2004 to 2014 in the United States. This study examined psychotropic medication use among 279 older people diagnosed with dementia and used logistic regressions to identify factors associated with nursing home relocation among older persons with dementia. RESULTS: Among older persons with dementia (weighted sample =178,843), 9.2% of persons with dementia (weighted sample =16,272) took any antipsychotic medications; 69% of them were prescribed antipsychotics. 68.8% were white. The average age was 85 years. Their physical functions were measured by the number activities of daily living (avg. 2.99) and number of instrumental activity of daily living (avg. 3.6). The most frequent diagnoses were Alzheimer’s disease (78.8%) and vascular dementia (23.2%). We used the Neuropsychiatric Inventory (NPI) to identify behavioral problems (hallucinations, agitation/aggression, depression, apathy, delusions, disorientation, irritability/ lability, and aberrant motor behavior). We evaluated severity of dementia using the Clinical Dementia Rating Scale (CDR). I found that older persons with dementia are significantly more likely to relocate to the nursing home in 2 years if they were severely demented (OR=1.3, p<0.05), or were on antipsychotic medications (OR=1.0 p<0.05), or were getting older (OR=0.1, p<0.05). But, those who were living with caregivers, were female and were on antipsychotic medications (OR=1.0-1.4 p<0.01) were significantly less likely to move to nursing homes. Alzheimer patients were significantly more likely to relocate to nursing home compared to vascular dementia patients (OR=1.4 p<0.01) or were on antipsychotics medications and, the dementia is more advanced

MH4 Clinical and Economic Outcomes of Memantine Used in Moderate or Severe Dementia Patients in China: Results from a Health Economic Model

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OBJECTIVES: In China, memantine is only reimbursed for severe dementia, while approved for moderately severe to severe dementia. The present model assesses the cost-effectiveness of extending indications for the use of memantine to moderate dementia. METHODS: A Markov model was developed to simulate transition between health states associated with dementia. Three altern- native scenarios were considered: no treatment, memantine prescribed from severe, and memantine prescribed in severe only - were compared over a five-year time horizon for a cohort of 1,000 patients with moderate dementia. The proportions of severe, dependent or aggressive patients, and caregivers’ time, were estimated as clinical input and compared as economic outcomes. Deterministic sensitivity analyses were conducted to test the robustness of model assumptions and parameters estimates. Data inputs were taken from multiple sources, including clinical trials and a Delphi panel. The model adopted societal perspective with only direct costs considered. RESULTS: After five years, the cohort of patients administered memantine from the moderate stage had developed the lowest proportions of severe (45%), dependent (52%) and aggressive (7%) patients, and necessitated less caregiver’s time (6.7 hours/day). In the cohort of patients administered memantine in the severe stage only, these estimates were higher (54%, 61%, 8% and 8.35 hours/day, respectively). There were higher in patients not treated (64%, 77%, 13% and 9.26 hours/day). Starting from the third year, memantine started in moderate stage incurred the lowest costs. By year five, total costs were RMB 182.5, 197.0 and 200.0 million for memantine from moderate, memantine in severe only and no treatment respectively. The sensitivity analysis produced comparable results. CONCLUSIONS: Over five years, memantine consistently demonstrated higher clinical benefit when administered in moderate to severe patients as compared to restricted to severe and showed increasing cost-saving after 2years mainly due to the avoided hospitalisations.

CARDIOVASCULAR DISEASE OUTCOMES RESEARCH STUDIES

CV1 Comparison of Oral versus Intravenous NSAIDs for the Treatment of Patient Ductus Arteriosus in Preterm and/or Low Birth Weight Infants: a Systematic Review and Meta-Analysis

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OBJECTIVES: Intravenous Indomethacin and Ibuprofen are treatment of choice for pharmacologic closure of patent ductus arteriosus (PDA) in preterm infants according to inhibitory effect on cyclooxygenase. However, unavailability of the intrave- nous formulations in many countries leads to off-label use of oral NSAIDs for PDA closure. This study therefore aimed to determine the effectiveness and safety of oral NSAIDs compared to their intravenous formulations for FDA closure in preterm and/or low birth weight infants. METHODS: Randomized or quasi-randomized (RCTs) and observational studies comparing oral NSAIDs to intravenous Indomethacin or Ibuprofen with reported result of closure rate were identified. Fixed and random effect models were used for meta-analyses. Heterogeneity test including fixed effect model, assessed the amount of pooling the data. Thirteen studies comparing the effectiveness and safety of oral NSAIDs (Indomethacin, Ibuprofen, and Sulindac) with intravenous NSAIDs (Indomethacin and Ibuprofen) were included. For the primary outcome (closure rate), no statistically significant difference between oral Ibuprofen and intravenous NSAIDs group [five RCTs of oral Ibuprofen versus Intravenous Ibuprofen group; RR = 1.12 (95% CI 0.99, 1.24, 12 23.15)] and [four RCTs of oral Ibuprofen versus Intravenous Indomethacin group; RR = 1.035 (95% CI 0.755, 1.418, 12 17.76)]. Results from the observational stud- ies were also similar to those of RCTs. Two observational studies comparing oral Indomethacin and intravenous Indomethacin and intravenous Ibuprofen revealed no statistically significant difference (RR = 0.927 [95% CI 0.704, 1.22, 0.09]). There was no significant dif- ference in adverse outcome between oral and intravenous NSAIDs treatment.