ling. METHODS: A cross-sectional study design using convenience sampling technique was used in this study. A validated self-administered questionnaire using 5 point Likert scale was distributed to 440 respondents in the State of Penang, Malaysia. The Statistical Package of Social Science (SPSS Inc., Chicago, IL) for Windows version 12.0 was used for all the statistical tests and a p-value of ≤0.05 was considered statistically significant. RESULTS: The result revealed that majority of the respondents (69.3%), understand the roles of community pharmacists in patients’ education and counselling. More than half of them (66.3%) are aware of the availability of medical counselling provided by community pharmacists. Majority of the respondents (66.8%) are aware that community pharmacists are well-trained to provide medical education and counselling. On the other hand, less than half of the respondents (46.6%) perceive that pharmacists are the best people to provide medical education and counselling to the public. About 70% of the respondents had mentioned that the pharmacist will ask them about their medical conditions and allergies before recommending any medications. Respondents also found that: pharmacists are very approachable for giving medical education and counselling (56.4%); community pharmacists help them to explain the misconceptions that they had in health care (59.0%); they have changed for healthier lifestyles after being exposed to medical education and counselling by community pharmacists (58.2%). CONCLUSIONS: The present study also found that the respondents are generally well aware and satisfied toward the medical education and counselling provided by community pharmacists in the state of Penang, Malaysia.

PCV45 MEDICAL MALPRACTICE AND LITIGATION: WHAT DOES THIS MEAN FOR THE COST-EFFECTIVENESS OF DIAGNOSING CHEST PAIN?çıpa AV, Stuflam PA, Marrwick TJ
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OBJECTIVES: To determine the effect of including the costs and risks of medical negligence claims on the results of a cost-utility model of diagnostic strategies for patients with chest pain presenting at the Emergency Room. Coronary computed tomography (CT) has been proposed as an initial screening technique for patients at low risk of coronary artery disease, because it may allow earlier discharge and cost savings compared with stress-based tests such as exercise single-photon emission computed tomography (SPECT) or exercise echocardiography (E E). METHODS: A decision-analytic model was designed to calculate the expected costs and health outcomes at 12 months for patients at low risk of coronary artery disease presenting at the Emergency Room with chest pain. Published data was used to predict the accuracies of the diagnostic tests. Costs were calculated from the perspective of the Australian health system, and a rate (30%) and cost of litigation ($160,000) was included for false negative diagnoses that incurred an event within the time frame. RESULTS: Ex: was the least costly strategy in the base case analysis. The results are sensitive to changes in the cost and likelihood of litigation, because these costs are high relative to the other costs in the model. At a 30% claim rate, if the expected payout for litigation was <$150,000, CT is the most cost-effective option, with lower costs and higher QALYs. The ICERs are high because the differences in QALYs are small. In contrast, at the expected cost of litigation in the United States ($1,000,000), CT is the most cost-effective option, with lower costs and higher QALYs. The ICERs are sensitive to changes in the cost and likelihood of litigation, because these costs are high relative to the other costs in the model. At a 30% claim rate, if the expected payout for litigation was <$150,000, CT is the most cost-effective option, with lower costs and higher QALYs. The ICERs are high because the differences in QALYs are small. In contrast, at the expected cost of litigation in the United States ($1,000,000), CT is the most cost-effective option, with lower costs and higher QALYs.

RESULTS: The framework is composed by five phases: theoretical (pre-clinical), identification of components of the intervention (phase I), definition of trial and intervention design (phase II), main trial execution (phase III), and follow-up (phase IV). RESULTS: The framework was applied to the evaluation of CP for strokes. Pre-clinical phase was aimed in synthesizing the evidences: three reviews were selected and showed that CP are theoretically applicable in stroke care and that mortality should be the main outcome to be evaluated. Phase I was done through a descriptive pilot. A total of 253 consecutive patients admitted for strokes in 29 hospitals were analyzed. Overall in-hospital stroke mortality was 19.76%. Stroke teams (OR = 0.25; P = 0.025), antithrombotic therapy (OR = 0.26; P = 0.009) and complications (OR = 6.40; P = 0.001) were independent predictors of in-hospital mortality. Therefore these variables were selected as...
components of CP or treated as covariates. Because CP are active both on organiza-
tional and individual (patients) level, a two-arm cluster Randomized Controlled
Trial with hospitals and long-term rehabilitation facilities as randomization units was
designed in phase II. Fourteen units were randomized either to arm 1 (CP) or to arm 2
(usual care) including 238 patients per group. The primary outcome measure was
mortality, the CP were also analyzed with key quality indicators. The trial has been
successfully performed (phase III) and in-hospital mortality has been reduced (OR =
0.10; P = 0.04). Because the adjusted results are not available yet, it was not possible
to identify active components of the CP and therefore phase IV has not been
performed. CONCLUSIONS: Even if the results are still partial, it seems possible to
apply this framework to the study of CP.

DIABETES/ENDOCRINE DISORDERS – Clinical Outcomes Studies

PD blindness demonstrate absolute HbA1c reduction of

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OBJECTIVES: 1) Compare efficacy and safety of sitagliptin and vildaglaptin in type 2 diabetes; and 2) Examine prescription of concomitant oral hypoglycemic agents (OHAs) and insulin. METHODS: We conducted a retrospective database study, drawing information from all patients treated at Singapore Health Services cluster institutions over 1.5-year study period. Inclusion criteria: HbA1C >7%, naive to

\( \chi^2 \) statistics were compared between both groups in HbA1c (mean difference = 0.57% (P = 0.44)). Subgroup analyses of a) patients with entry HbA1c = 9.5% (sitagliptin) versus 9.18% (vildaglaptin) (P = 0.15). At exit, sitagliptin arm demonstrated absolute HbA1c reduction of = 0.43% versus vildaglaptin -0.72% (P = 0.61); percent reduction in HbA1c was = 6.55% versus vildaglaptin -7.35% (P = 0.48). Subgroup analyses of a) patients with entry HbA1c = 9.5%; b) stratification of outcome by dose of glitizine; and c) addition or discontinuation of OHAs from baseline all did not demonstrate statistically significant difference. Majority of patients were not on maximal OHA doses at glitizine initiation, however total daily doses of OHALs were significantly different at exit versus baseline for both arms. Almost 90% of patients in both groups received multiple OHAs for diabetes control. Change in creatinine clearance was comparable in both arms. Safety endpoints micro-

albuminuria/creatinine ratio, average % weight change and incidence of pancreatitis were not significantly different between both arms (all P > 0.05). Five sitagliptin patients required hospital admission for severe hypoglycemia vs 0 vildaglaptin patients. CONCLUSIONS: We present our initial findings that vildaglaptin is non-inferior to sitagliptin in HbA1C-lowering efficacy. Both products are well-tolerated without signif-
icantly different differences in safety endpoints save severe hypoglycemia in sitagliptin arm.

LONG-TERM HEALTH OUTCOMES OF TREATMENT WITH LIRAGLUTIDE VERSUS GLIMEPRIDE IN TYPE 2 DIABETES PATIENTS IN ASIAN SETTING

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OBJECTIVES: To evaluate the long-term health outcomes associated with Liraglutide 1.2 and 1.8 mg combined with Metformin in Asian patients with type 2 diabetes (T2D). METHODS: A published and validated computer simulation model of diabetes (CORE Diabetes Model) was used to make the projection of long-term health outcomes (30 years). Simulated cohorts and treatment effects were derived from 928 T2D patients in the NCT00144142 trial held in China, South Korea and India. HbA1C was significantly reduced in Liraglutide 1.2 mg, Liraglutide 1.8 mg, and Glimepride groups (~1.3%, ~1.4%, and ~1.3% respectively). Liraglutide treat-
ments led to greater reduction in Body Mass Index and systolic blood pressure versus Glimepride. No major hypoglycemia was reported in Liraglutide groups, while the rate of major hypoglycemia for Glimepride was 0.029 per patient-year. The rate of minor hypoglycemia was lower in Liraglutide groups than Glimepride. An annual
discouraging rate of 3% was used for health and cost outcomes. One-way sensitivity analysis was performed. RESULTS: The treatments of Liraglutide compared with Glimepride were projected to reduce the cumulative incidences of diabetes complica-
tions and improve long term health outcomes for patients with T2D. For Liraglutide 1.2 mg, the cumulative incidences of background retinopathy, end stage renal disease, ulcer, and congestive heart failure event were reduced 0.22%, 0.096%, 0.022% and 0.53% respectively, discounted life expectancy was increased 0.058 year and quality adjusted life-years (QALY) was increased 0.11 QALY. For Liraglutide 1.8mg, the incidences reduction were 0.61%, 0.12%, 0.34% and 0.63% respectively, discounted life expectancy was improved 0.051 year, and 0.10 QALY. CONCLUSIONS: Lira-
glutide 1.2 mg and 1.8 mg therapy could delay the onset of diabetes complications and reduced related cumulative incidences over patient lifetimes compared with Glimepride. It improved the life expectancy and quality adjusted life expectancy in Asian patients with T2D.

DIABETES/ENDOCRINE DISORDERS – Clinical Outcomes Studies

PD83 EFFECTS OF EXTENDED-RELEASE VERSUS IMMEDIATE-RELEASE GLIPIZIDES IN PATIENTS WITH TYPE 2 DIABETES MELLITUS: A SYSTEMATIC REVIEW AND META-ANALYSIS

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OBJECTIVES: To address effects of extended-release versus immediate-release glipi-

side on components of the Gin secretion, and compliance. METHODS: We included parallel randomized trials and cohort studies (only for compliance assessment) com-
paring extended-release versus immediate-release glipizide for type 2 diabetes. We searched Medline, EMBASE, the Cochrane Library, and Chinese biomedical database, screened for reference lists, and contacted reference pharmaceutical company by using random-effect model and explored heterogeneity by pre-specified hypotheses. RESULTS: Sixteen trials involving 1062 patients and two retrospective cohort studies of 13,453 patients were included. Trials are of inadequate quality. No trials reported patient-important outcomes. The reduction in fasting plasma glucose from the baseline appeared larger in extended-release than immediate-release glipizide (mean difference = -0.30 mmol/L, 95% CI -0.57 to -0.03). The reduction was not significant different between two drugs in HbA1c (≤0.03%, -0.20% to 0.15%) and 2-hour postprandial plasma glucose (-0.28 mmol/L, -1.12 to 0.55). Extended-release glipizide appeared to reduce insulin secretion from the baseline, whereas immediate-release formulation increased the secretion (fasting insulin: -0.86 vs. 0.28 μU/mL; 2-hour postprandial insulin: -2.94 vs. 0.24 μU/mL). Patients administering extended-release glipizide had less hypoglycemia (Peto odds ratio 2.6%, 95% CI 0.60 to 8.21) and lower missed dosing (Peto odds ratio 10.24, 95% CI 1.22 to 20.08). The cohort studies showed results in compliance consistent with trials. CONCLUSIONS: The two drugs may have comparable effects on glucose control. Extended-release glipizide might achieve glucose control with decreased insulin secretion, and fewer hypoglycemic episodes. The findings are inconclusive due to inadequate study quality, short follow-up, and unavailability of patient important outcomes.

DIABETES/ENDOCRINE DISORDERS – Cost Studies

PD84 MEDICAL SERVICE COST ASSOCIATED WITH PIQGLITAZONE AND SULFONYLUREA TREATMENT AMONG TYPE 2 DIABETIC PATIENTS ENROLLED IN A US INTEGRATED HEALTH-CARE SYSTEM

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OBJECTIVES: To assess overall and diabetes-related medical service costs associated with pioglitazone (PIO) and sulfonylureas (SU) treatment among T2DM patients. METHODS: This is a retrospective cohort study based on electronic medical records (January 1, 2004–January 31, 2009) of the Geisinger Clinic in the Northeastern region of the United States. The date of the initial prescription for PIO or SU was denoted as the index date. Patients were required to be aged 18 years or older and prescribed an oral antidiabetic treatment in the 1 year prior to the index date. Patients with type 1 or gestational diabetes and prior insulin use were excluded, as were those who had prescriptions for the index drug in the 90 days prior. Propensity score 1:1 matching and a second stage of generalized linear regression were employed to assess overall and diabetes-related medical service costs (pharmacy costs were not available in the database) in the 2 years following the index date, adjusting for patient demographics, baseline comorbidities, medication use, and health-care resource utilization. RESULTS: A total of 2758 patients, 1379 each in the PIO and SU cohorts, were analyzed. For both cohorts, mean age was 62 years, 46% were male, and 96% were Caucasian. The two cohorts were similar in terms of current smoking status and diabetes-related comorbidities. The unadjusted total diabetes-related medical costs were $1258 and $703 for PIO versus SU patients. After adjusting for covariates, the overall and diabetes-related medical service costs remained higher for patients receiving SU versus PIO ($8360 vs. $7400 for overall, and $5577 vs. $5238 for diabetes-related costs, P < 0.05 for both comparisons). CONCLUSIONS: Over a 2-year follow-up, patients with T2DM initiated on PIO therapy in an integrated system incurred lower overall and diabetes-related medical service costs than patients initiated on SU. Further studies describing clinical and humanistic aspects of PIO versus SU are warranted.

DIABETES/ENDOCRINE DISORDERS – Cost Studies

PD85 TOTAL AND DIABETES-RELATED COSTS ASSOCIATED WITH HYPOGLYCEMIA IN TYPE 2 DIABETES MELLITUS PATIENTS INITIATED ON ORAL ANTIDIABETIC DRUGS FROM A LARGE US MANAGED CARE COHORT

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OBJECTIVES: To estimate annual health-care costs associated with hypoglycemia among T2DM patients initiated on oral antidiabetic drugs (OADs) in a large managed care cohort with managed care insurance benefits. METHODS: T2DM patients initi-
ated on OADs were selected from the Ingenix Impact database (1999–2008). Patients aged 18 years or older with at least 1 year of continuous eligibility following the index date (the first OAD prescription fill date) who were diagnosed with severe to moderate