and needle. RESULTS: 514 patients with T2DM were surveyed and 71.45% used SMBG. In the type 2 diabetes patients, the treatment costs of glucomers were CNY 212.99; annual costs of test strips were CNY 825.55, estimated by multiplying average price (CNY 4.41) and frequency (3.60 per week); in total, SMBG cost CNY 1038.54 per person per year; 2) For insulin users, annual cost of insulin pens were CNY 396.34, estimated by average price (CNY 281.09) and frequency (1.41 per year); annual cost of insulin users were 634.20, estimated by average price (CNY 3.14) and frequency (205.48 per year, average reuse=17.05 times); in total, self-injection cost CNY 1030.54 per person per year; 3) 49.55% of type 2 diabetes patients used both insulin and SMBG. For this subgroup, annual costs of glucomers were CNY 199.05, annual costs of test strips were CNY 941.99, estimated by average price (CNY 4.41) and frequency (4.08 per week); in total was CNY 1141.04 per person per year. CONCLUSIONS: SMBG and self-injection caused considerable economic burdens to patients in China. This study more attention should be given to the out-of-pocket payment incurred by self-used devices and supplies.

**PDB54**

**FREQUENCY, COST, AND INFLUENCE FACTORS OF INSULIN PEN NEEDLES REUSE FOR PATIENTS WITH DIABETES IN CHINA**

Li H1, Ruan Z2, Guan XD3, Guo ZG4, Sun F4, Shi LW1

1School of Pharmaceutical Sciences, Peking University, Beijing, China; 2Novo Nordisk (China) Pharmaceuticals Co., Ltd., Beijing, China; 3International Research Center of Medicinal Administration, Peking University, Beijing, China

**OBJECTIVES:** To investigate the frequency and cost of insulin pen needles reuse, and explore the factors that associated with needles reuse for insulin-treated diabetes patients in China. METHODS: A questionnaire-based survey was conducted in 7 medical centres across China from June to September of 2012. Type 1 and type 2 diabetes patients treated with insulin were included in the study. The data were analysed by descriptive analysis, Spearman correlation analysis, K-W and M-W U test using SPSS 19.0. RESULTS: 592 eligible respondents (30 type 1 and 562 type 2 diabetes patients) were included. One single needle was used 10.57 times based on 5% trimmed mean (8 times in median). 89.2% of patients reuse needles and 60.5% reuse >1 time/day, 36.7% and 61.7% respectively. Annual cost of needles was 237.0 CNY, estimated the total cost of needle use for price of 2013 (Novo Nordisk). The cost would be 2504.9 CNY/year if needles were used 1 time only. Economics burden was the most important factor of needles reuse for 69.9% of patients. Needles reuse was statistically and positively associated with age, diabetes duration, number of complications, value of fasting blood glucose, insulin injections times and dose, and was negative associated with income, with P-value<0.05. CONCLUSIONS: Needles reuse for injection insulin was a common phenomenon in insulin-treated diabetes patients in China. Economic burden was considerable. Factors influencing needles reuse. Other influencing factors of needles reuse included age, diabetes-related health status and insulin use.

**PDB55**

**PREVALENCE, FREQUENCY AND COST OF SELF-MONITORING OF BLOOD GLUCOSE AND ITS INFLUENCING FACTORS FOR INSULIN-TREATED DIABETES PATIENTS IN CHINA**

Li H1, Ruan Z2, Guan XD3, Guo ZG4, Sun F4, Shi LW1

1School of Pharmaceutical Sciences, Peking University, Beijing, China; 2Novo Nordisk (China) Pharmaceuticals Co., Ltd., Beijing, China; 3International Research Center of Medicinal Administration, Peking University, Beijing, China

**OBJECTIVES:** To describe the prevalence, frequency and cost of SMBG, and explore the factors that influence SMBG among insulin-treated diabetes patients in China. METHODS: A questionnaire-based survey was conducted in 7 medical centres across China from June to September of 2012. Type 1 and type 2 diabetes patients treated with insulin were included in the study. The data were analysed by descriptive analysis, Spearman correlation analysis, K-W and M-W U test using SPSS 19.0. RESULTS: 592 eligible respondents (30 type 1 and 562 type 2 diabetes patients) were included. 85.0% of patients participated SMBG with the frequency of 0.61±0.94 times/day. Among type 1 and type 2 diabetes patients, the prevalence and frequency of SMBG were 90.0% and 1.05 times/day, 84.8% and 0.59 times/day, respectively. Taking global recommended SMBG frequency into account, only 18.76% of type 2 diabetes patients conducted SMBG ≥1 times/day, and 74.0% of type 1 diabetes patients conducted SMBG ≥3 times/day. Annual cost of SMBG was 1170 CNY, estimated by the market price of 5 CNY/strip test. 20.5% of patients thought the cost of test strips was the most important factor to SMBG use. SMBG frequency was statistically and positively correlated with frequency and doses of insulin daily use, frequency and related cost of hypoglycaemia, drug cost, drug frequency and cost of hospitalization and clinical visit, with P-value <0.05. CONCLUSIONS: SMBG was not conducted enough in insulin-treated diabetes patients in China. Economic burden of test strips was one of the main barriers to SMBG use. Factors influencing SMBG included insulin use, hypoglycaemia, drug costs, frequency and cost of hospitalization and clinical visit.

**PDB56**

**DAPAGLIFLOZIN VERSUS SULFONYLUREA AS AN ADD-ON THERAPY TO METFORMIN: A COST-EFFECTIVENESS ANALYSIS IN COLOMBIA**

Elgar1, Ruffolo A2, Gonzalez L3, Ruan Z4, Guan X.D.4

1Diabetes Center & Endocrinology Department, 306th Hospital of PLA, Beijing, China; 2Shengjing Hospital of China Medical University, Shenyang, China; 3City East Hospital, Shanghai, China; 4Peking University, Beijing, China

**OBJECTIVES:** To evaluate the long-term cost effectiveness of once daily daptagliflozin aspart 30 (BIAsp 30) versus insulin glargine (IlgIarg) treating people with type 2 diabetes mellitus (T2DM) based on social perspective in China. METHODS: The study was based on the Chinese subgroup of the DIVA study. Disease progression and to determine the total direct medical cost, life years (LYs) and quality-adjusted life years (QALYs) over 30 years. Simulated cohorts and treatment effects were based on the Chinese subgroup (n=422) in the MaxStudy (identifier in ClinicalTrials.gov: NCT01123980) which was an open-label, randomized, two-arm and multi-centre trial among insulin-naive people with T2DM. Treatment costs were based on insulin doses in the trial and market retail prices in China. Management and consultation costs were estimated from Chinese published data in 2011 and adjusted to the price level of 2012 with consumer price index. An annual discounting rate of 3% was used for both costs and health outcomes. One-way sensitivity analyses were performed. RESULTS: Treatment with BIAsp 30 was associated with QV gain of 0.09 (13.66 vs. 13.57) and QALY gain of 0.08 (9.72 vs. 9.64) compared with Ilgarg over 30 years. In terms of total average cost per patient, BIAsp 30 was less costly than Ilgarg (CNY 4641, CNY 265, 166 and 311,607) which was mainly induced by insulin treatment cost (CNY 456,095 vs. CNY 205,800) and complication cost (CNY 3404, CNY 104,303 vs. 107,707). Sensitivity analyses demonstrated robustness of the results. CONCLUSIONS: For people with T2DM insulin was controlled on the current level, treatment of BIAsp 30 was projected to be associated with improved life expectancy and reduced direct medical cost compared to Ilgarg. BIAsp 30 represented a dominant treatment option compared to Ilgarg for people with T2DM failing to achieve adequate control with oral hypoglycemic agents in China.