

## PP164 Prescribed Medication Use, Complications, And Cost of Type 2 Diabetes Mellitus In The Real World

Shengqi Chen, Carolina Oi Lam Ung and Hao Hu  
([haohu@um.edu.mo](mailto:haohu@um.edu.mo))

**Introduction.** Type 2 diabetes mellitus (T2DM) is one of the major diseases threatening the health of Chinese residents. Insufficient glycemic control results in inevitable and sometimes irreversible complications. The condition can be more complicated for patients with comorbidities. To maintain appropriate glycemic control, patients may need to add or switch to different classes of drugs as the disease progresses. The complicated drug treatment for diabetes poses a high risk for drug-drug interactions and challenges patient compliance, which is the most important factor affecting the ability to achieve glycemic control. In addition, T2DM is a life-long disease that is associated with a heavy economic burden for patients' families and for society. Therefore, this paper aims to characterize the complexity of prescribed medications used to treat T2DM and to assess the trends in the number of complications, medications used, and costs incurred among these patients.

**Methods.** Data were retrieved from two tertiary hospitals. The population consisted of patients receiving at least one diagnosis of diabetes (International Classification of Diseases-10 codes: E11, E12, E13, and E14) between October 2007 and May 2017. Three measures were assessed, including the number of patients with different complications, concomitant drug use, and costs. Patients with a short disease duration (< 5 years) were compared with patients who had a longer disease duration ( $\geq 5$  years).

**Results.** Of 31,071 patients, about half of those with a longer disease duration had at least five concomitant diseases, compared with nine percent of patients with a shorter disease duration. The maximum number of concomitant diseases was nine for both disease duration groups. Patients with longer disease duration were more likely to use multiple classes of drugs, compared with patients in the short disease duration group. The average annual medical costs for patients without concomitant disease was CNY 1,894 (USD 265).

**Conclusions.** Overall, the results demonstrated that T2DM is a relatively complex disease. Firstly, patients have up to nine concomitant diseases and use twenty-two classes of drugs. Secondly, patients with more complications tended to use more medications. Thirdly, patients with a longer disease duration tend to have a higher number of concomitant diseases, use more classes of drugs, and have higher medical costs than patients with a shorter disease duration.

## PP181 Direct Comparison Of The Effectiveness And Safety Of Apixaban, Dabigatran, Rivaroxaban, And Warfarin: Subgroup Analyses Of Medicare Beneficiaries

Lanting Yang ([lay26@pitt.edu](mailto:lay26@pitt.edu)), Maria M. Brooks, Nancy W. Glynn, Yuting Zhang, Samir Saba and Inmaculada Hernandez

**Introduction.** No studies have directly compared the effectiveness and safety of direct oral anticoagulants (DOACs) and warfarin in patients with atrial fibrillation (AF), with or without a history of ischemic stroke and transient ischemic attack (TIA). This is important for two reasons: first, previous research reports important differences between DOACs and warfarin across other patient subgroups, and second, patients with previous stroke or TIA have a high risk of recurrent stroke.

**Methods.** Using 2012–2014 Medicare claims data, we identified patients newly diagnosed with AF in 2013–2014 who started taking apixaban, dabigatran, rivaroxaban, or warfarin. We categorized the patients according to whether they had a history of stroke or TIA. We constructed Cox proportional hazard models that included indicator variables for treatment groups, a history of stroke or TIA, and the interaction between them, and controlled for demographic and clinical characteristics.

**Results.** The hazard ratio (HR) for stroke with dabigatran, compared with warfarin, was 0.64 (95% confidence interval [CI]: 0.48–0.85) for patients with a history of stroke or TIA and 0.94 (95% CI: 0.75–1.16) for patients without a history of stroke or TIA (p-value for interaction = 0.034). In patients with previous stroke or TIA, the risk of stroke was lower with dabigatran (HR 0.64, 95% CI: 0.48–0.85) and rivaroxaban (HR 0.70, 95%CI: 0.56–0.87), compared with apixaban, but there was no difference for patients in the other subgroup.

**Conclusions.** DOACs were generally more effective than warfarin for preventing stroke. The superiority of dabigatran was more pronounced in patients with a history of stroke or TIA. The comparative effectiveness of DOACs differed substantially between patients with and without a history of stroke or TIA; specifically, apixaban was less effective in patients with a history of stroke or TIA. Our results reinforce the need to tailor anticoagulation to patient characteristics and to support the investigation of the underlying mechanisms associated with DOACs.

## PP185 Oral Health Status And Food Consumption Patterns In Selected Primary School Children

Nabhira Aftabi Binte Islam ([nabhira14@yahoo.com](mailto:nabhira14@yahoo.com)) and Mahmudul Haque

**Introduction.** Nutrition is critical to the oral health of the individual. From gestation through to end of life, nutrition influences the integrity and function of the dentition and supporting oral structures and has a direct effect on health in general. According to the World Health Organization, diet has an important role in the prevention of oral diseases such as dental caries, dental erosion, defects in oral development, diseases of the oral mucosa, and periodontal disease.

**Methods.** A study was conducted to assess the oral health status and food consumption patterns of students attending the Rotary School and College at Mirpur-14, Dhaka on November 2018. Consent was provided by the school headmaster and guardians. A purposive sample of seventy students was taken. A semi-structured questionnaire and checklist was developed in the English and Bengali languages. Data were presented in simple frequency tables.

**Results.** Among the respondents the following eating habits were reported:

- (i) Thirty-one percent drank milk and twenty-eight percent consumed chocolate four to six times per week;
- (ii) Forty-three percent consumed fast food least seven times per week; and
- (iii) Forty-two percent ate vegetables and thirty-four percent ate fruits one to three times per week.

In terms of oral hygiene practices, sixty-one percent of respondents used toothpaste and thirty-nine percent used tooth powder. Seventy-eight percent of respondents brushed their teeth once a day and twenty-four percent brushed twice daily. The mean number of decayed, missing (due to caries), and filled permanent teeth was 1.47.

**Conclusions.** The relationship between oral health, dietary practices, nutritional status, and general health is complex, with many interrelated factors. To help children develop healthy eating patterns from an early age, it is important that the food and eating patterns to which they are exposed, both inside and outside the home, promote positive attitudes to good nutrition.

## PP188 Prevalence And Severity Of Erectile Dysfunction In Patients With Benign Prostatic Hyperplasia In China: A Cross-Sectional Survey

Liqun Zhou, Zhengcun Pei, Xingqiao Wen, Yanlei Zhang ([zhang\\_yan\\_lei@lilly.com](mailto:zhang_yan_lei@lilly.com)), Peng Li and Siyan Zhan

**Introduction.** Erectile dysfunction (ED) and benign prostatic hyperplasia (BPH) are highly prevalent among aging men. However, the rate of coexistence of these two conditions in China is still unclear, especially among men aged 45 to 60 years. Instruments such as the abbreviated five-item version of the International Index of Erectile Function (IIEF-5) and the International Prostate Symptom Score (IPSS) can be used to determine the presence of ED and the symptoms and severity of BPH, respectively. This study aimed to estimate the prevalence of ED in men with BPH and to assess its impact on the quality of life (QoL) of these patients.

**Methods.** Between October 2018 and March 2019 we enrolled 650 patients aged 45 to 65 years who were diagnosed with BPH by a urologist in nine first- and second-tier cities in China. Information on patients' demographics, lifestyle, comorbidities, and medication use was collected through an electronic clinical outcome assessment tool. Patients with an IIEF-5 score of less than twenty-two were considered to have ED. The IPSS and the five-level EuroQol questionnaire (EQ-5D-5L) were used to assess BPH severity and overall health-related QoL.

**Results.** We enrolled 650 patients with BPH. Of these, only the 607 men who reported sexual intercourse attempts (mean age of 56.6 years, standard deviation 5.5) were included in the analysis because it was assumed that the other patients did not have ED. Signs of ED were present in ninety-seven percent of patients

(IIEF-5 score < 22), and eighty-four percent had at least mild to moderate impairment (IIEF score < 17). Up to nineteen percent reported having physician-diagnosed ED previously, and twenty-eight percent had used medication for ED in the past six months. Compared to men without ED, those with ED and BPH had higher IPSS scores (13.2 versus 6.7,  $p < 0.05$ ) and lower EQ-5D-5L scores (0.90 versus 0.97,  $p < 0.05$ ).

**Conclusions.** Although the prevalence of ED in men with BPH in China is high, it is still underdiagnosed and undertreated. Co-existing ED in patients with BPH is associated with more severe BPH symptoms and lower quality of life.

## PP189 Operational Evaluations Of Laminar Flow Cabinets

Benicio Grossling Vallejos ([beniciogrossling@hotmail.com](mailto:beniciogrossling@hotmail.com)), Ronald Rivas and Pedro Galván

**Introduction.** Laminar flow cabinets (LFC) are designed to maintain an area free of particles and contaminants that could damage the environment during the preparation of sensitive materials. Several regulations detail the types and frequency of tests that must be performed to ensure the proper functioning of LFCs. The objective of this work was to evaluate the operational and functional status of LFCs.

**Methods.** A descriptive study was carried out in which three tests were selected for evaluating LFCs: the high-efficiency particulate air (HEPA) filter integrity test; the air speed and uniformity test; and the general physical verification test. In selecting these tests, we relied on recommendations established in international standards and the manufacturers' technical manuals.

**Results.** During testing it was possible to verify the existence of leaks in the periphery of the HEPA filters due to a mismatch in their assembly, as well as a poor seal in the side panels of the cabinet through which particles were entering the work area. It was also discovered that the equipment lighting system (fluorescent tubes) was inadequate.

**Conclusions.** The use of these tests was very important for detecting certain faults in the equipment, which allowed us to introduce corrective actions to maintain sterile conditions in the cabinet. It is recommended to include these tests in the maintenance regimen of LFCs to pre-empt future failures.

## PP193 Research On The Correlation Mechanism Between The Psychological Contract Of Physicians In Public Hospitals And Their Medical Professionalism

Chao Lyu ([19211020103@fudan.edu.cn](mailto:19211020103@fudan.edu.cn)) and Ping Zhou

**Introduction.** Guiding and motivating doctors' attitudes and behaviors in the public welfare of public hospitals is the key to promoting medical reform. This study explored the correlation