Characteristics, treatment, and economic burden of disease of Chinese diabetic/non-diabetic patients with/without established cardiovascular disease, chronic kidney disease, or at high cardiovascular risk

First published: 12/11/2020

Last updated: 15/10/2026

Study Finalised

Administrative details

EU PAS number

EUPAS38026

Study ID

38027

DARWIN EU® study

No

Study countries

China

Study description

The study aimed to investigate the clinical characteristics, treatment, and economic burden of disease of Chinese diabetic/non-diabetic patients with/without established cardiovascular disease, chronic kidney disease, or at high cardiovascular risk, including: 1) describe the proportion of Chinese diabetic/non-diabetic patients with established cardiovascular disease, CKD, or at high cardiovascular risk including hypertension and hyperlipidaemia, 2) describe the demographic and clinical characteristics of Chinese diabetic/non-diabetic patients with/without established cardiovascular disease, CKD, or at high cardiovascular risk, 3) investigate the treatment patterns of Chinese diabetic/non-diabetic patients with/without established cardiovascular disease, CKD, or at high cardiovascular risk, 4) examine economic burden of disease of Chinese diabetic/non-diabetic patients with/without established cardiovascular disease, CKD, or at high cardiovascular risk, 5) explore the trends of clinical characteristics, treatment pattern, economic burden of inpatients over time (2015 and 2019 separately)

Study status

Finalised

Research institutions and networks

Institutions

West China Hospital

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Institution

Contact details

Study institution contact

Xin Sun sunxin@wchscu.cn

Study contact

sunxin@wchscu.cn

Primary lead investigator

Xin Sun

Primary lead investigator

Study timelines

Date when funding contract was signed

Planned: 01/12/2020

Study start date

Planned: 30/11/2020

Actual: 06/09/2021

Data analysis start date

Planned: 01/09/2021

Date of final study report

Planned: 30/11/2021

Actual: 12/11/2022

Sources of funding

- Pharmaceutical company and other private sector

More details on funding

Boehringer Ingelheim

Study protocol

1245-0203_CTP_final-rule_Redacted.pdf (5.07 MB)

Regulatory

Was the study required by a regulatory body?

No

Is the study required by a Risk Management Plan (RMP)?

Not applicable

Other study registration identification numbers and links

1245-0203

NCT04903496

Methodological aspects

Study type

Study type list

Study topic:

Disease /health condition

Study type:

Non-interventional study

Scope of the study:

Disease epidemiology

Drug utilisation

Data collection methods:

Secondary use of data

Study design:

Non-interventional cross-sectional study based on regional existing medical database.

Main study objective:

The study aimed to investigate the clinical characteristics, treatment, and economic burden of disease of Chinese diabetic/non-diabetic patients with/without established cardiovascular disease, chronic kidney disease, or at high cardiovascular risk.

Study Design

Non-interventional study design

Cross-sectional

Population studied

Short description of the study population

Chinese diabetic/non-diabetic patients with/without established cardiovascular disease, chronic kidney disease, or at high cardiovascular risk.

Age groups

- Adults (18 to < 46 years)
- Adults (46 to < 65 years)
- Adults (65 to < 75 years)
- Adults (75 to < 85 years)
- Adults (85 years and over)

Estimated number of subjects

100.000

Study design details

Setting

This study is based on Tianjin legional database which is a oved bv Tianjin Municipal Health Commission

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Outcomes

1. The number and proportion of diabetic/non-diabetic patients (outpatients and inpatients) with disease or risk from 2015 to 2019, patients will be defined as four groups (A-D) as mentioned above, 2. The demographic characteristics (including age, gender, ethic, insurance payment) of the lasted visiting for all patients, as well as the trends for inpatients over time (2015, 2017, and 2019), 1.The clinical characteristics of the studied population of the lasted visiting for all patients, as well as the trends for inpatients over time, 2.Treatment pattern

of inpatients and outpatients will be described respectively.

Data analysis plan

The analyses will mainly describe the patient demographic characteristics, comorbidities, complications, treatment pattern and economic burden based on 40 hospitals EMRs of Tianjin regional database. Characteristics presented as continuous data will be summarized through means, standard deviations, medians, minimum and maximum values, whereas, categorical data will be summarized as counts and proportions. All tests of statistical significance among different subgroups (age, gender, department, underlying diseases, etc.) will be two-sided unless otherwise specified, any test resulting in $p<0.05$ will be considered statistically significant.

Summary results

The proportions of patients with established CVD, CKD and at high cardiovascular risk among diabetic patients were high. In the year of 2019, the proportions of diabetic patients with established CVD, CKD and at high cardiovascular risk accounted for 54.0%, 10.8% and 57.0% respectively. In comparison, for non-diabetic patients
with established CVD, CKD and at high cardiovascular risk accounted for 34.2%, 3.2% and 39.6% respectively. Diabetic patients with comorbidities were older . In 2015, the mean age among diabetic patients with and without comorbidities was 64 and 49 years respectively.. Department of internal medicine was visited mostly by diabetic patients. In 2015, 61.4% outpatients and 69.5% inpatients visited or discharged from department of internal
medicine, the proportion was 60.9% and 65.4% in 2019 for diabetic patients with comorbidities. Diabetic patients with comorbidities had longer length of stay (9 [6, 14] days vs. 6 [4, 10] days), higher proportion of re-hospitalization (46.8% vs. 15.2%), higher hospitalization cost (RMB 28,218.0 vs. RMB 11,330.0) than those

without comorbidities. The total hospitalization cost increased from 2015 to 2019, while the outpatients cost decreased for all patients except non-diabetic patients without comorbidities.

Documents

Abstract of study report

1245-0203_Synopsis.pdf (375.37 KB)

Data management

ENCePP Seal

The use of the ENCePP Seal has been discontinued since February 2025. The ENCePP Seal fields are retained in the display mode for transparency but are no longer maintained.

Data sources

Data source(s), other

Tianjin legional database

Data sources (types)

Other

Data sources (types), other

Tianjin regional database from 2015 to 201 . Based on Tianjin regional database, basic dictionaries including drug, diagnosis and examination were

established from 40 hospitals in Tianjin.

Use of a Common Data Model (CDM)

CDM mapping

No

Data quality specifications

Check conformance

Unknown

Check completeness

Unknown

Check stability

Unknown

Check logical consistency

Unknown

Data characterisation

Data characterisation conducted

No