1. QUALITY OF CARE: EFFECTIVENESS

1.1. Hospital admissions for asthma (QE-1) and hospital admissions for uncontrolled diabetes or complication of diabetes (QE-2)

1.1.1. Documentation sheet

Description	A. Number of hospital admissions for asthma in people aged 15 years and over, per 100 000 population B. Number of hospital admissions for uncontrolled (or complication of) diabetes in people aged 15 years and over, per 100 000 population
Calculation	See technical definition section below. The indicator for diabetes admission is based on the sum of three indicators: admissions for short-term complications, for long-term complications and for uncontrolled diabetes without complications.
Rationale	Asthma and diabetes are two widely prevalent long term conditions. Common to both conditions is the fact that the evidence for effective treatment is well established and much of it can be delivered at the primary care level. A high performing primary care system can to a significant extent, therefore, avoid acute deterioration in people living with asthma, or diabetes and prevent their admission to hospital.[1] High hospital admission rates for these two conditions can thus serve as a proxy for pointing to poor effectiveness of primary care, as well as poor co-ordination or continuity of care.
Primary data source	RHM – MZG (hospital administrative discharge data), FPS Public Health
Source of results	FPS Public Health and OECD health data for international comparison. These indicators belong to the set of indicators on quality of care that are published in Health at a Glance by OECD.[2] A 2015 report from OECD on "Quality of care in cardiovascular diseases and diabetes" also discusses these indicators[3] The OECD set of "avoidable hospital admission" also contains indicators of admissions for hypertension, heart failure and COPD, but these have not been retained in this report to keep the number of indicators manageable.
Technical definitions	From OECD website: Definitions for Health Care Quality Indicators 2012-2013 HCQI Data Collection.[4] All ICD-9 CM and ICD-10 CM codes can be found on the OECD Quality indicator website. **Indicator A: Hospital admission for asthma** Coverage: Population aged 15 and older Numerator: All non-maternal/non-neonatal hospital admission with principal diagnosis code of asthma in a specified year Denominator: Population count Exclude cases: Transferring from another institution; MDC 14 (pregnancy, childbirth and puerperium); MDC 15 (newborn and other neonates); with cystic fibrosis and anomalies of the respiratory system diagnose code in any field; same day/day only admissions. **Indicator B: Admission of uncontrolled diabetes or complication of diabetes** Coverage: Population aged 15 and older Numerator: All non-maternal/non-neonatal hospital admission with principal diagnosis code of - Uncontrolled diabetes

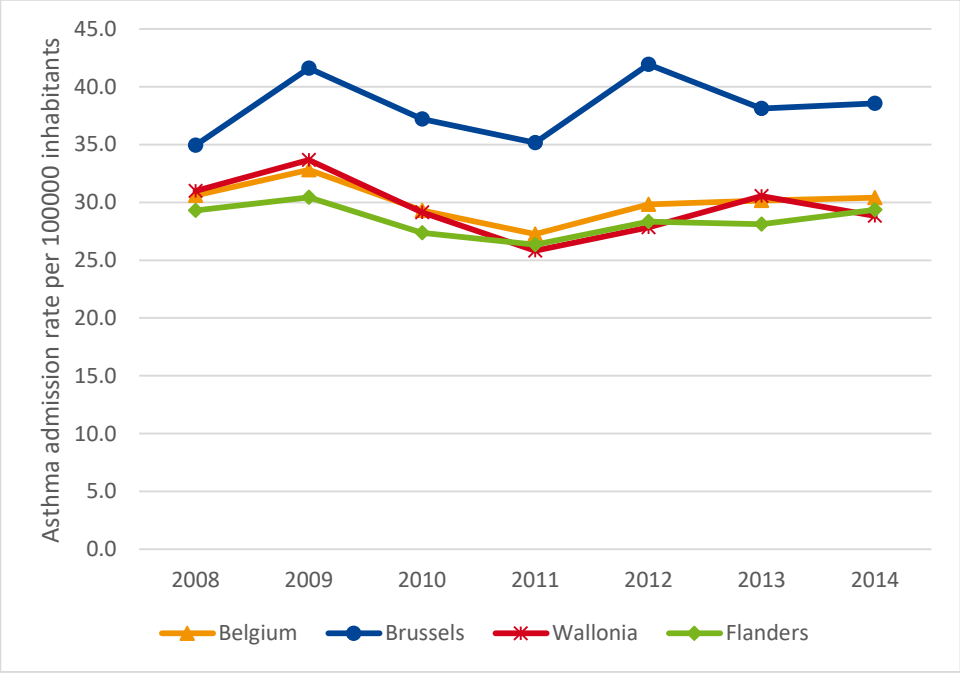
	- Diabetes Short-term complication (i.e. ketoacidosis, hyperosmolarity) - Long term complication (i.e. renal, eye; neurological, circulatory, or complication not otherwise specified). Denominator: Population count Exclude cases: Transferring from another institution; MDC 14 (pregnancy, childbirth and puerperium); MDC 15 (newborn and other neonates); Same day/day only admissions.
International comparability	These indicators do not take into account underlying differences in the prevalence of the different conditions. For example, with regard to diabetes, it is not always clear whether lower admission rates are due to a lower prevalence of diabetes in the population or a better management of people with diabetes. However, there are several ongoing OECD initiatives that focus on coding practices, dataset structure and data specification, with the aim of making the indicators more useful for international comparison. [5]
Dimensions	Effectiveness + Continuity (Management)

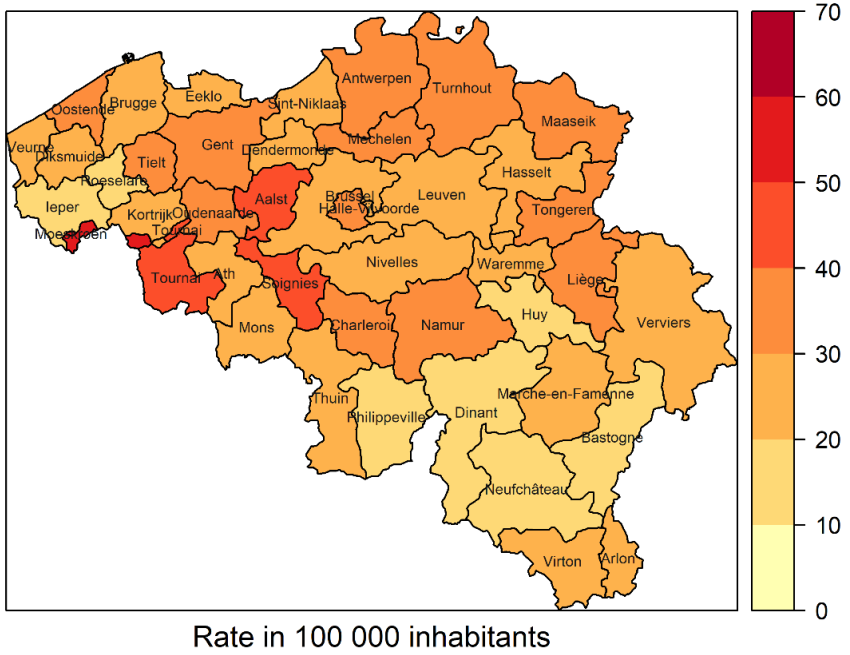
1.1.2. Results

1.1.2.1. Admissions at hospital for asthma

Data on asthma admissions on the 2008-2014 period show a stagnation (Figure 1): from 30.4 / 100 000 inhabitants in 2008 to 30.2 / 100 000 inhabitants in 2014, which is also observed in other EU countries (Figure 2). Rates are similar in Wallonia (28.8) and Flanders (29.4), but higher in Brussels (38.6) (Figure 1).

Figure 1 – Hospital admissions for asthma rate by patient's region per 100 000 population aged 15 years and older (2008-2014) and per district (2014)

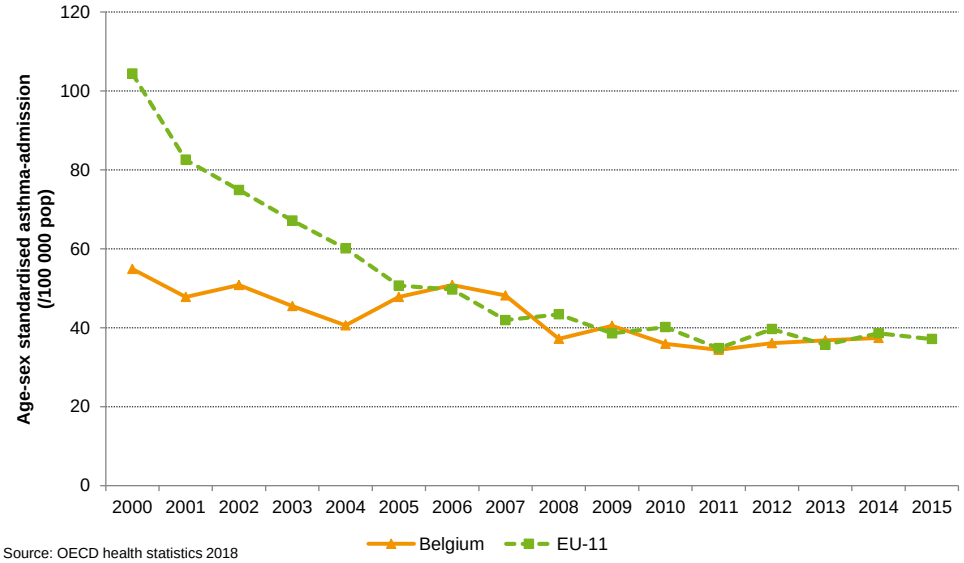




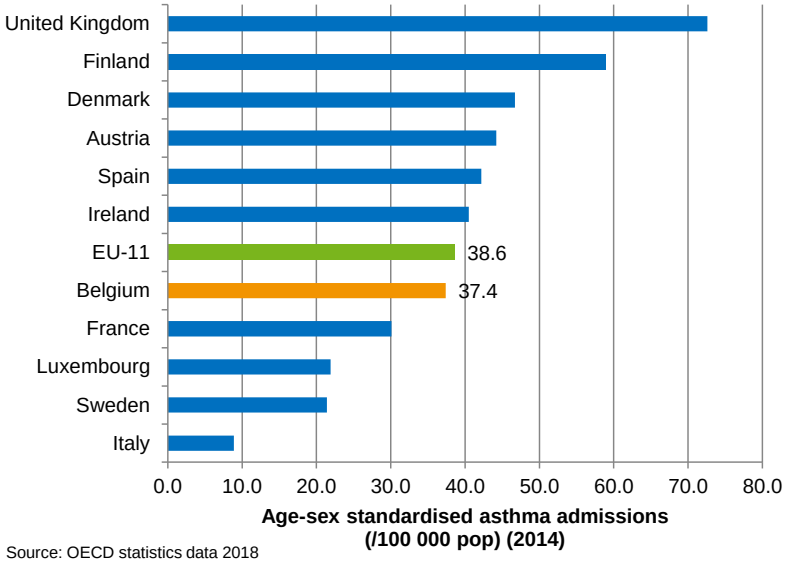
Source: FPS Public Health, hospital administrative discharge data

When comparing with other European countries, we see that rates have declined over time and that there is also variation across European countries (Figure 2).

Figure 2 – Age-sex standardized hospital admissions for asthma (for population aged 15 years and older): international comparison (2000-2015)



Source: OECD health statistics 2018



Source: OECD statistics data 2018

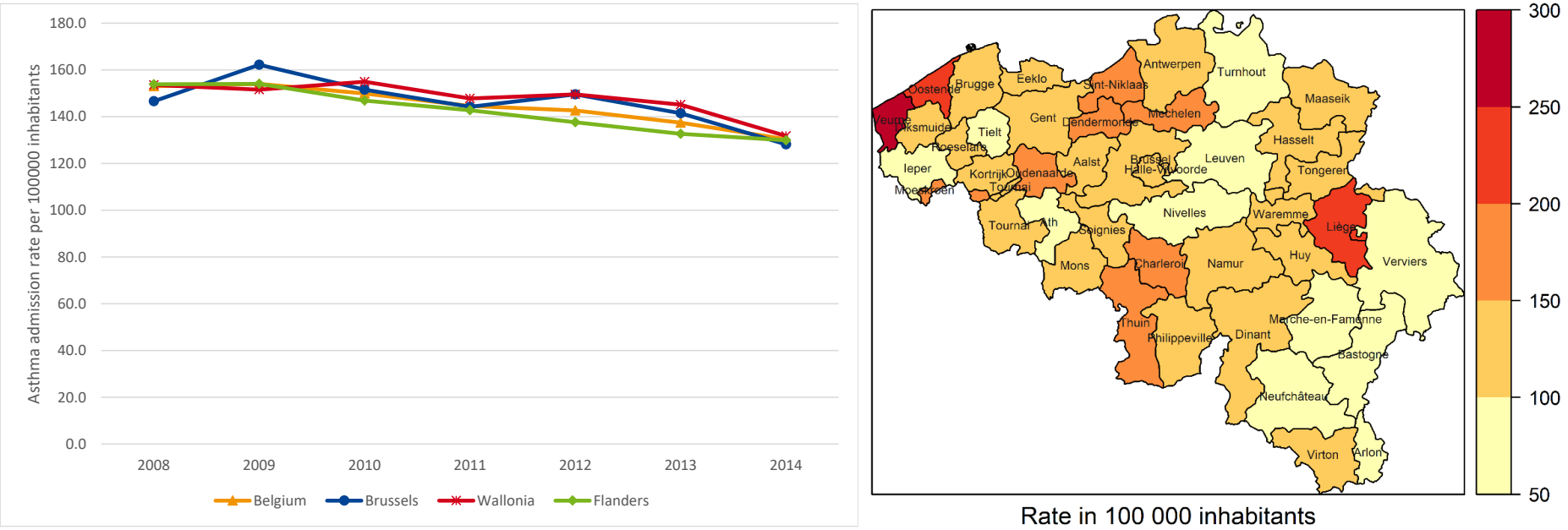
Source: OECD health statistics 2018.

1.1.2.2. *Admissions at hospital for uncontrolled diabetes, or complications of diabetes*

Data on diabetes admission (for uncontrolled diabetes or for complication of diabetes) exhibit a slow decrease in the recent years (2008-2014,Figure 3) which is also observed in other European countries (Figure 3).

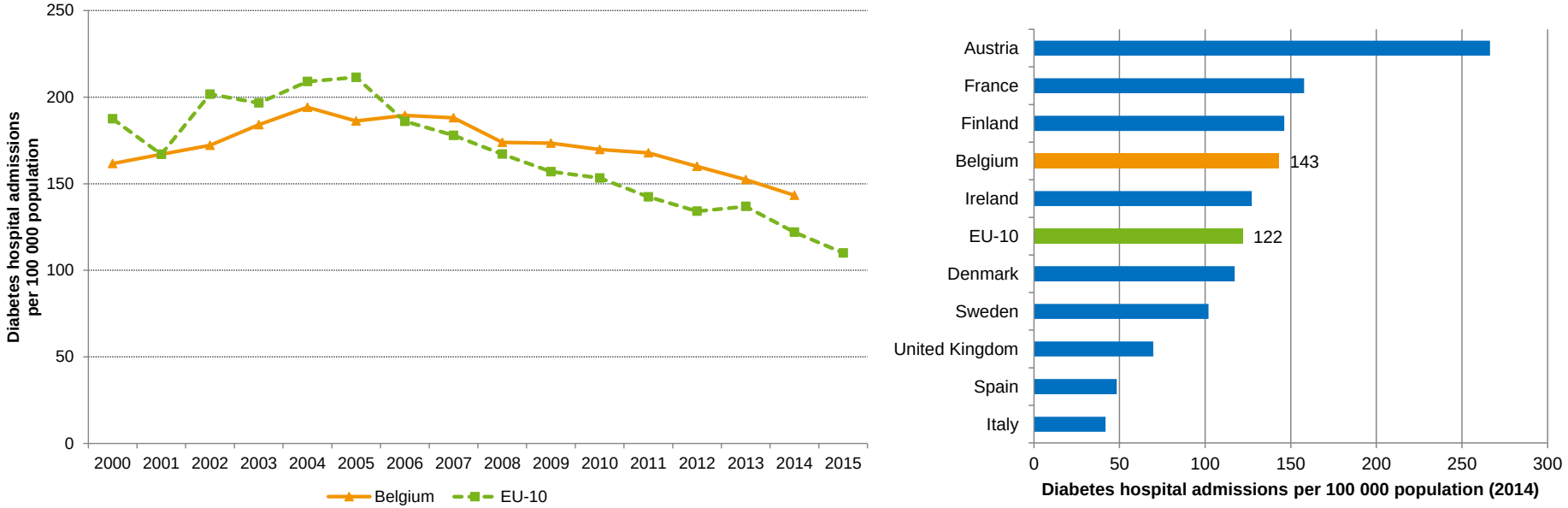
Rates are very similar in the 3 regions for the latest available year, around 130 admissions per 100 000 inhabitants (Figure 3).

Figure 3 – Hospital admissions for (complications of) diabetes rate by patient's region (per 100 000 population aged 15 years and older) (2008-2014) and by patient district (2014)



Source: FPS Public Health, hospital administrative discharge data

Figure 4 – Age-sex standardized hospital admissions for diabetes (for population aged 15 years and older): international comparison (2000-2014)



Source: OECD Health Statistics 2018

At European level the rates declined more rapidly that the rates for Belgium (Figure 4).

Key points

- **The relative rates of hospital admission for asthma and diabetes are often used as a measure of the extent to which people can access primary care and preventive care, and the quality of this care.**
- **For both indicators on avoidable hospital admissions, trends over time report a reduction in admission rates over recent years, which may represent an improvement in the quality of primary care. These decreasing trends are also observed in other European countries.**
- **Belgium is situated around the EU-15 average for both indicators, but this is not very informative, as differences between countries can be due to many other factors than quality of care. Trends over time are more informative in this case.**

References

1. OECD. Health at a Glance: Europe 2014. OECD Publishing; 2014.
2. OECD. Health at a Glance 2017: OECD Indicators. Paris: 2017. Available from: http://dx.doi.org/10.1787/health_glance-2017-en
3. OECD. Cardiovascular Disease and Diabetes: Policies for Better Health and Quality of Care. Paris: OECD; 2015. OECD Health Policy Studies
4. OECD. OECD Health Statistics 2018 [Web page]. [updated 8 November 2018; cited 22 November 2018]. Available from: http://www.oecd.org/els/health-systems/health-data.htm
5. Kossarova L, Blunt I, Bardsley M. Quality Watch: Focus on international comparisons of healthcare quality, What can the UK learn ? . The Health Foundation and the Nuffiled Trust; 2015.

1.2. 5 year relative survival after breast cancer (QE-3) and after colorectal cancer (QE-4)

1.2.1. Documentation sheet

Description	5-year relative survival by stage after a diagnosis of breast or colorectal cancer.
Rationale	In Belgium, breast cancer is the most frequent cancer type in females, and also the leading cause of death by cancer in females. Colorectal cancer is the third and second most frequent cancer type in males and females respectively. [1] In Belgium, for these two types of cancer, well-developed screening programmes exist, and evidence-based treatment strategies have been recommended in the national guidelines. [2-4] An increase in cancer survival reflects advances in public health interventions, such as greater awareness of the disease, successful screening programmes, and improved treatments.
Calculation	The 5-year relative survival is computed as the 5-year observed survival for the population diagnosed with the specified type of cancer (=proportion of people surviving 5 years after the diagnosis), divided by the 5-year expected survival of a comparable group from the general population residing in Belgium. The relative survival is expressed as a percentage, and estimates the excess mortality that can be attributed to the cancer. A 100% 5-year relative survival indicates that patients who were diagnosed with cancer had a mortality rate similar to the general population of the same age, sex and region.
Data source	Belgian Cancer Registry (BCR): incidence years 2004-2015.