THE TREATMENT OF SCHIZOPHRENIA AND SCHIZOAFFECTIVE DISORDERS: ANALYSIS OF REAL WORLD EVIDENCE

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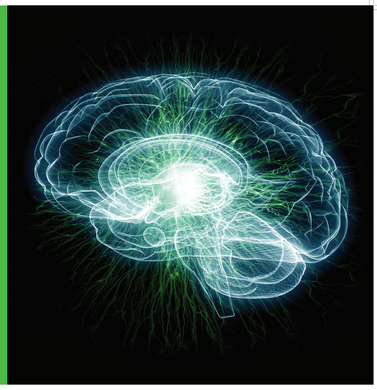

Background and Objectives

For the treatment of schizophrenia (F20) and schizoaffective disorders (F25) the long-acting antipsychotics of first (1G-LAI) and second generation (2G-LAI) in depot injectable forms are available. The advantages of 2G-LAI are embedded in less frequent use, stable plasma concentrations and manageable side effects, thus being the preferred treatment in non-adherent patients. The aim of the study was to analyse the real-world data to determine whether 2G-LAI prescriptions in the Czech Republic are exploited to their full potential.

Methods

The patient level anonymized data from 2009 to 2016 on prescriptions, hospitalizations and diagnosis of schizophrenia (F20) and schizoaffective disorder (F25) was collected from General Health Insurance Company (VZP) of the Czech Republic.

Approximately 6,000,000 patients are insured by VZP. VZP data were extrapolated to describe whole Czech population. The extrapolation was done via pairing of VZP patients age structure (VZP, 2017), the age structure of the Czech population (ČSÚ, 2017) and the age structure of patients with schizophrenia (F 20) or schizoaffective disorder (F 25).

First, the proportion of patients insured by VZP in individual age groups was determined by comparing the age structure of patients insured by VZP and the population of the Czech Republic. Each age group was then assigned a weighted proportion on the number of patients with schizophrenia and/or schizoaffective disorders based on VZP data and then weighted average. The following table shows the weighted proportion of patients with diagnosis F20 and F25 insured by VZP. Statistical processing was done in SQL and MS Excel.

	2009	2010	2011	2012	2013	2014	2015	2016
VZP share	63.14%	61.51%	61.41%	60.38%	59.57%	58.57%	58.33%	57.64%

Table 1: Transition probabilities (budesonide)

Results

Approximately 50 thousand patients have schizophrenia and schizoaffective disorders in the Czech Republic every year, with the increase of patients of around 14 % over the observed period of 8 years.

	2009	2010	2011	2012	2013	2014	2015	2016
F20 and/or F25	49 378	49 952	49 860	50 089	50 364	51 143	51 363	51 922
F20	36 664	37 147	37 009	37 245	37 728	38 570	38 896	39 412
F25	15 813	15 912	15 905	15 610	15 440	15 392	15 117	15 124

Table 2 Number of patients with diagnosis F20 and/or F25

Schizophrenia is more frequent in men, with a proportion of about 45.9% of women and 54.1% of men in 2016. On the contrary almost twice more women suffer from schizoaffective disorder, 63.9% of women and 36.1% of men in 2016.

Sex distribution 2016	Men	Women
F20	54.14%	45.86%
F25	36.12%	63.88%

Table 3 Patients characteristics

In the period between 2009 and 2016, the number of treated patients increased by 14%, but the cost of pharmacotherapy decreased by 15%, and in the year 2016 it amounted to EUR 28.5 million. A decrease in costs of almost EUR 5.1 million and a slight increase in the number of patients is evident in Figure 1. The reason for reducing the total cost of pharmacotherapy was caused by revisions of reimbursement of medicinal products.

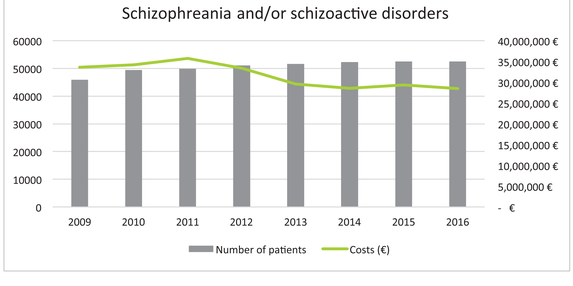

Figure 1 Number of patients and costs from 2009 to 2016

In the case of hospitalizations, the opposite trend can be observed. Total hospitalization costs increase during the time. Above that, they are several times higher compared to drug cost. Total hospitalization cost was 72.5 million EUR in 2016. The volume of money spent on hospitalization suggests that efforts to reduce the number and shorten the length of hospitalization are desirable not only for a higher quality of life for the patient but also for economic reasons. The development is evident from Figure 2.

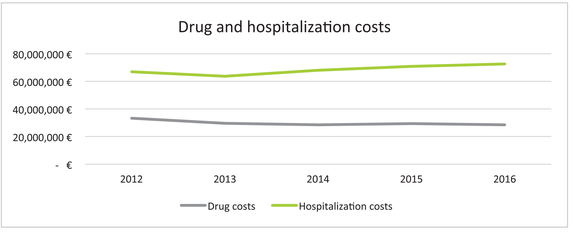

Figure 2 Hospitalization costs vs Treatment costs (2012–2016)

The most recent treatment was 2G-LAI, with only risperidone depot available until 2011, followingly paliperidone, olanzapine and aripirazole entered the market. In 2016, 2G-LAI represented 4%, 1G-LAI 16%, and orally administered antipsychotics 80% of the total number of patient-therapies. The proportion of each 2G-LAI is shown graphically. The number of patients treated with 2G-LAI is very low. The distribution of treatments used is shown in Figure 3.

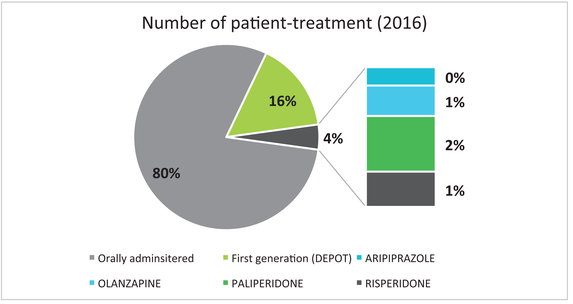

Figure 3 Share of prescribed treatment F20/F25

The total number of Health Care Providers (HCP) who prescribed antipsychotics reached 2087 in 2016. 89 HCPs prescribed 80 % of 2G-LAI. The numbers are seen in figure.

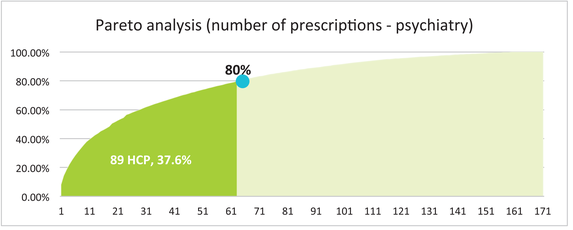

Figure 4 Pareto analysis: proportion of HCPS prescribing 2G-LAI

In case of non-adherence, which is estimated to occur in 40-50 % of patients, the health-care providers (HCP) should consider 2G-LAI.

Conclusion

Although the range of therapeutic interventions expanded with new 2G-LAIs that can reduce the length and number of hospitalizations, the conservative approaches in the treatment of schizophrenia and schizoaffective disorders remain and the introduction of new methods is very gradual. In order to improve the patient care with such diagnosis, it would be appropriate to identify the causes of this trend and to involve the mechanisms that will change it. Hospitalization costs exceed the drug costs several times and unlike the drug costs, hospitalization costs are still rising. Given that the regulatory limitations for psychiatric care that could have been a barrier to expensive medicinal products have been abolished in 2017, it is appropriate to carry out updates to this study in order to verify the extent to which regulatory constraints are a real limit to the introduction of new therapeutic interventions.

References

ČSÚ, 2017. Počet obyvatel - Metodika.
VZP, 2017. Data VZP F20 a F25.