Characteristics of Patients managed by PVI in an Upper Austrian Atrial Fibrillation cohort

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Introduction

This analysis is part of a PhD project at CARIM with the scope of a direct comparison of true health care expenditure and outcomes of drug therapy vs. catheter ablation therapy (PVI) for atrial fibrillation (AF) in an Upper Austrian cohort.

Methods

We included all patients who were first diagnosed with AF (LKF-codes I48.*) in the years 2005 to 2018 and were insured via the Upper Austrian Health Insurance Fund (OÖGKK). PVI patients were identified by the MEL-codes 6546 (2005-2007, 6547 (2008), and DE060 (from 2009 on). We aimed to describe demographic, socio-economic, and health care expenditure characteristics of PVI patients.

Results

The final dataset includes 1,624 patients – identified by their first hospitalization due to AF between Q1/2005 and Q4/2018 and the MEL-Code for PVI. In our sample, 1,222 had only one PVI and 404 individuals had multiple procedures (up to 5).

PVI numbers in Upper Austria are steadily increasing (Figure 1). Less than 30 % of eligible AF patients are treated by PVI in the first quarter after first hospitalization due to AF (Figure 2).. PVI patients are on average 60 years old, roughly 50 % belong to the working force, and only 31.6 % are female.

After PVI a slight increase in hospital days, inpatient costs, medication expenditure, and outpatient costs remain, whereas sick leave days tend to decrease to levels before AF diagnosis.

TABLE: Descriptive Statistics for PVI Patients

Variable	N	Mean	SD
Female	1,624	0.316	0.465
Age[†]	1,594	59.895	10.752
Age < 55[†]	1,594	0.285	0.452
Age $55 - 65$[†]	1,594	0.378	0.485
Age > 65[†]	1,594	0.336	0.473
Deceased until 2018 (HV)	1,624	0.081	0.273
Employed[†]	1,426	0.483	0.500
Unemployed[†]	1,426	0.023	0.150
Retired[†]	1,426	0.522	0.500
Heart Failure	1,624	0.142	0.349
Hypertension	1,624	0.123	0.328
Diabetes	1,624	0.034	0.181
TIA/Stroke	1,624	0.091	0.287
Coronary Artery Disease	1,624	0.280	0.449
Peripheral Artery Disease	1,624	0.033	0.178
Hyperlipidemia	1,624	0.011	0.105
Renal Failure	1,624	0.023	0.149

Conclusions

While the absolute number of PVIs in Upper Austria increases over time, only less than 30 % of eligible patients undergo the PVI within the first three months after AF diagnosis. To assess the cost effectiveness of the procedure, in- and outpatient costs must be compared to a matched cohort not undergoing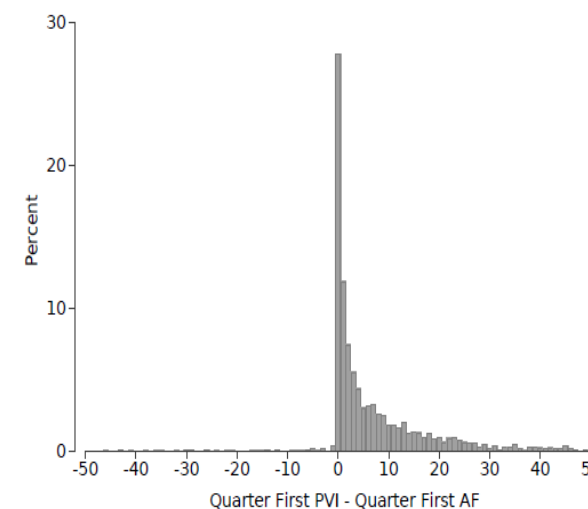 PVI in the next step of the project.