



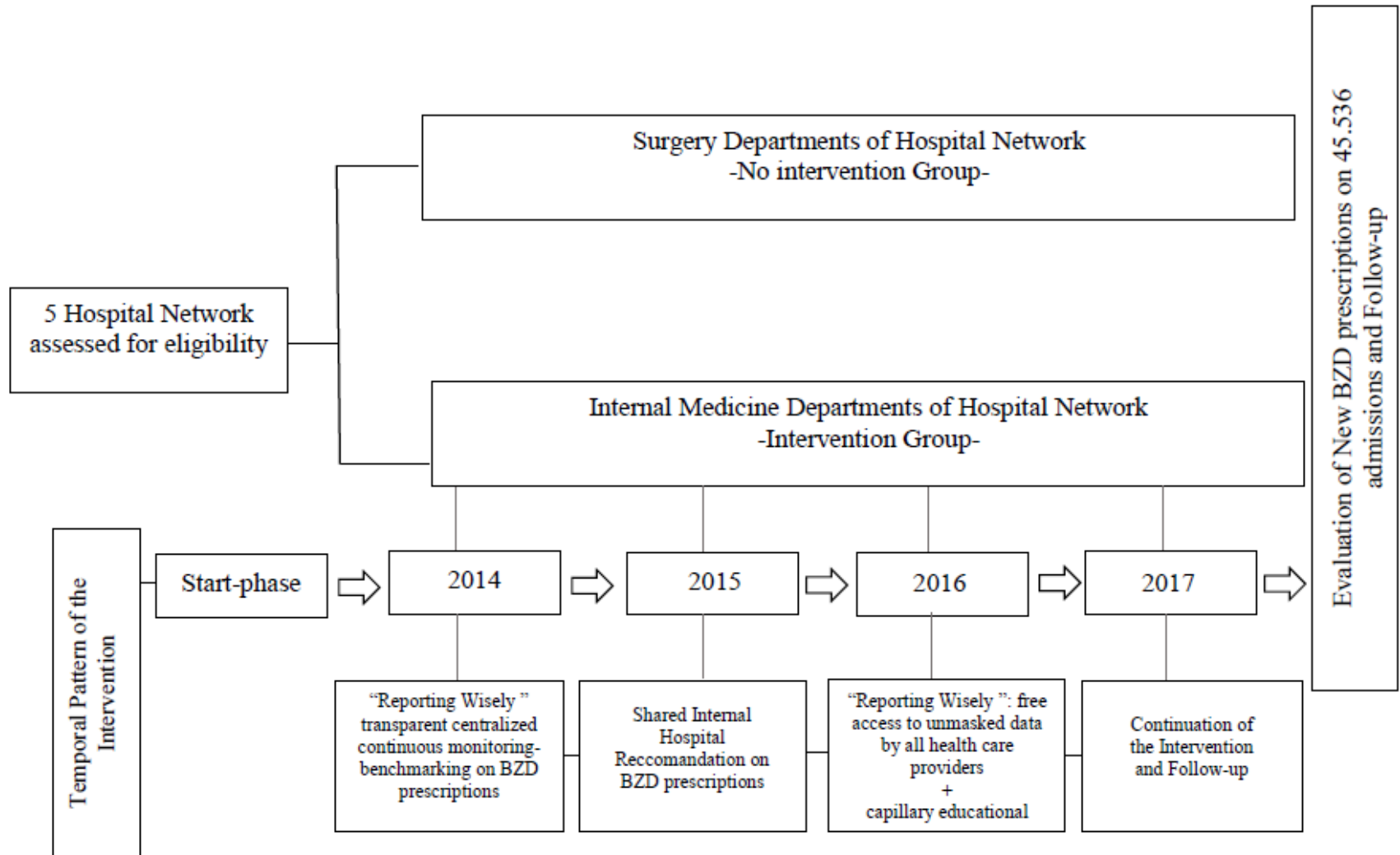
Ente Ospedaliero Cantonale

Transparent Monitoring-Benchmarking Intervention for the reduction of inappropriate Benzodiazepine prescriptions among Internal Medicine Departments,2014-2017. A Multicenter Quasi-Experimental Longitudinal Study in a Network of Swiss Public Hospitals.

Choosing Wisely Steering Committee and the Working Group on Sedatives of the network of public hospitals of southern Switzerland:

Anna Abbondanza, Fabrizio Barazzoni, Antoine Casabianca, Alessandro Ceschi, Danila Consoli Bravosi, Anna De Benedetti, Simone De Gottardi, Gianfranco Domenighetti, Rosaria Del Giorno, Luca Gabutti, Angela Greco, Rita Monotti, Guido Ongaro, Michela Pironi, Pierluigi Quadri, Graziano Ruggeri, Yvonne Willems Cavalli, Anna Zasa.

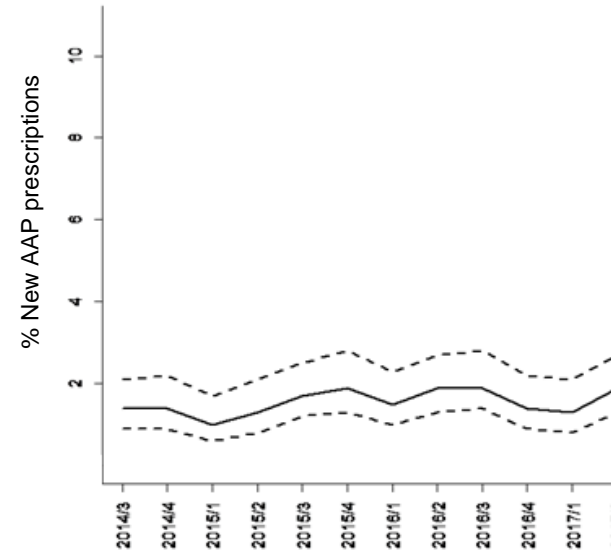
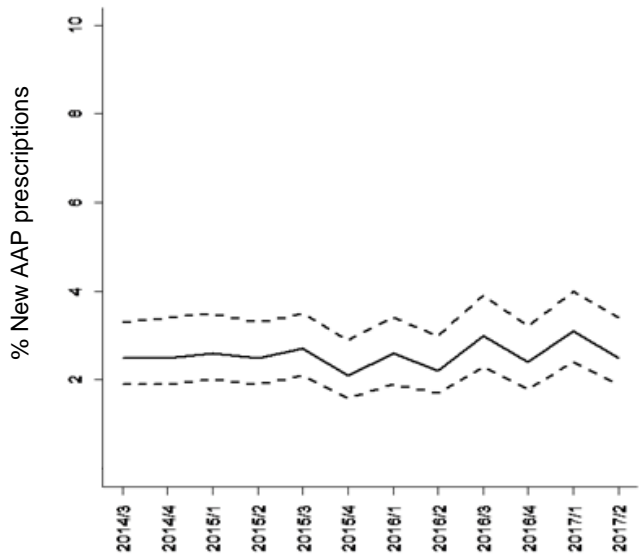
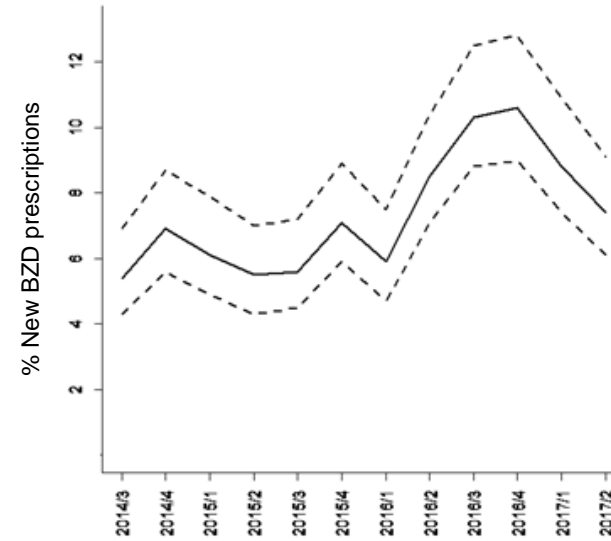
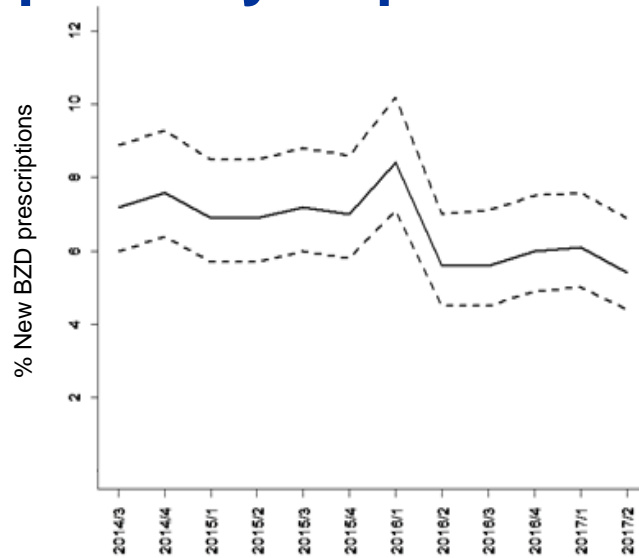
Flow Diagram of the study with the temporal pattern on the intervention



Characteristics of the study population by Departments

	All Departments of the Hospital Network	Internal Medicine Departments	Surgery Departments
Total Admissions (n.)	45.536	26.618	18.918
H1, n (%)	4.584 (10.1)	3.028 (11.4)	1.556 (8.2)
H2, n (%)	8.351 (18.4)	5.044 (18.9)	3.307 (17.5)
H3, n (%)	11.241 (24.7)	6.625 (24.9)	4.416 (24.4)
H4, n (%)	10.473 (22.9)	5.868 (22.1)	4.605 (24.3)
H5, n (%)	10.887 (23.9)	6.053 (22.7)	4.934 (25.6)
Age, years (median, Q1-Q3)	72 (57-82)	75 (63-83)	67 (50-78)
Age groups, n (%)			
<65, y	16.780 (36.8)	7.680 (28.8)	9.100 (48.1)
65-80, y	15.815 (34.7)	9.820 (36.9)	5.995 (31.7)
>80, y	12.941 (28.5)	9.118 (34.3)	3.823 (20.2)
Gender, females (%)	23.051 (50.6)	13.290 (49.9)	9.761 (51.5)
Case-mix (median, Q1-Q3)	0.74 (0.51-1.1)	0.70 (0.51-0.92)	0.80 (0.54-1.49)
BZD admission, n (%)	11.615 (25.5)	8.291 (31.1)	3.324 (17.6)
BZD discharge, n (%)	12.562 (27.6)	8.543 (32.1)	4.019 (21.2)
New BZD prescriptions, n (%)	2.365 (6.9)	1.221 (4.8)	1.144 (6.4)
Atypical antipsychotic admission, n (%)	3.627 (7.9)	2.718 (10.2)	909 (4.8)
Atypical antipsychotic discharge, n (%)	4.017 (8.8)	2.956 (11.1)	1.061 (5.6)
New atypical antipsychotic prescriptions, n (%)	891 (1.9)	611 (2.3)	280 (1.5)

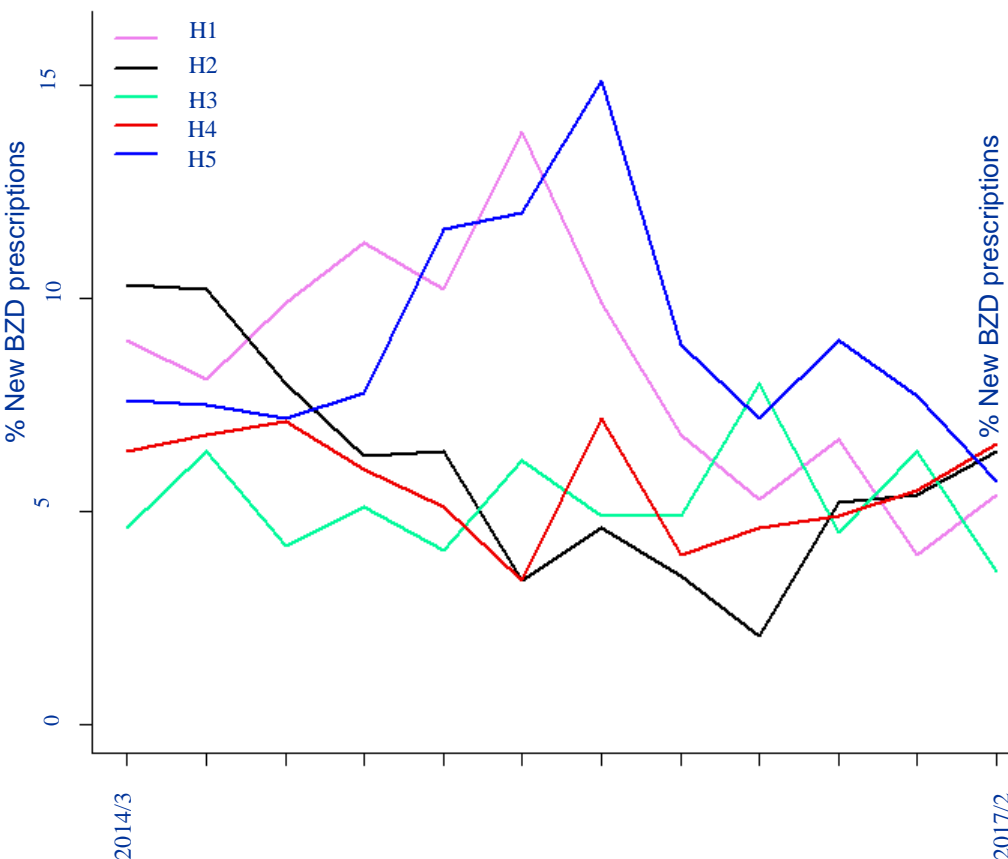
Trends in rates of new BZD and AAP prescriptions in all hospitals by Department over the years of the study



Intra- and inter-hospital variability of new BZD prescriptions during the study period by Departments

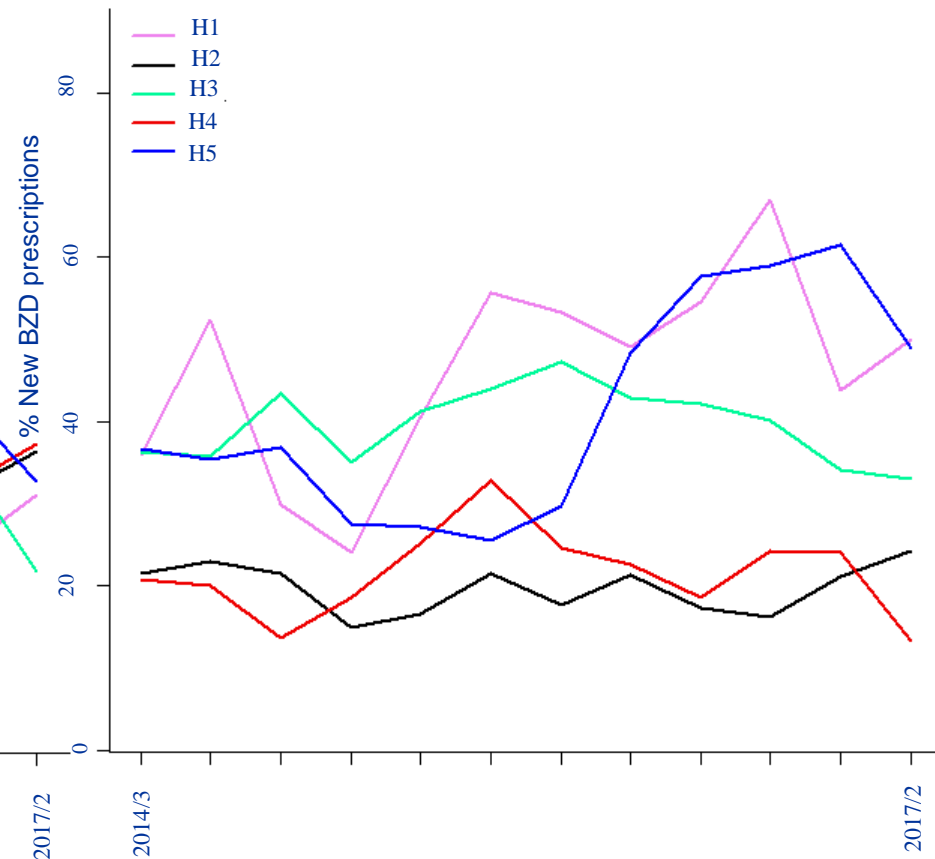
Internal Medicine Departments

-Hospital Level-



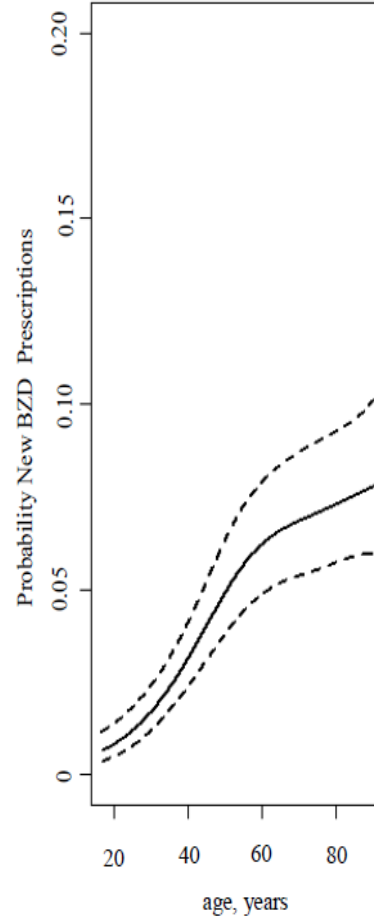
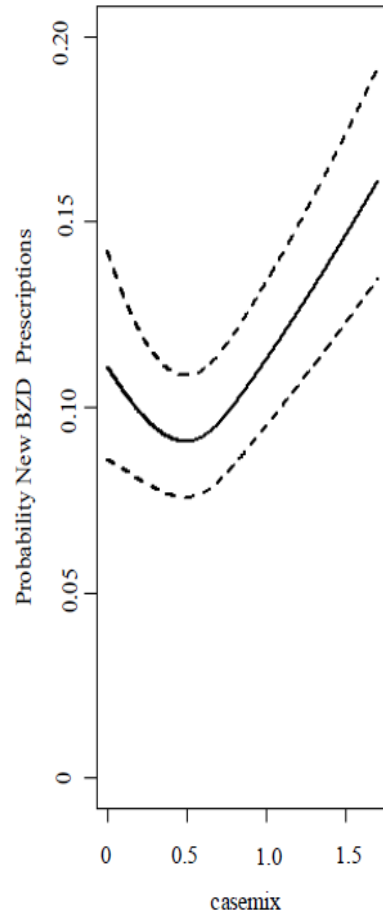
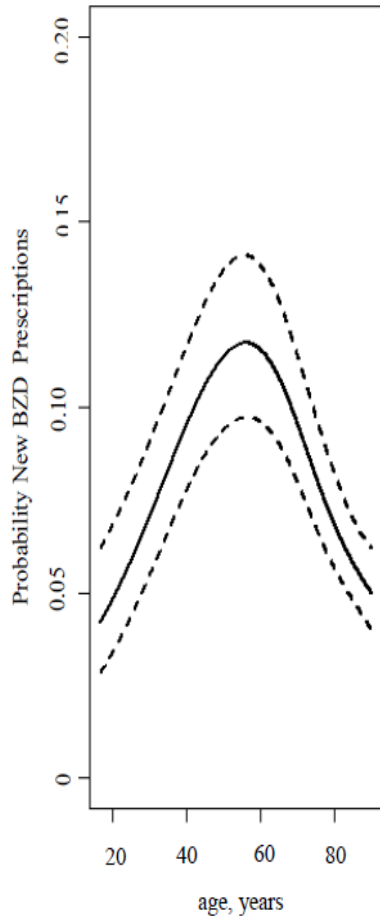
Surgery Departments

-Hospital Level-

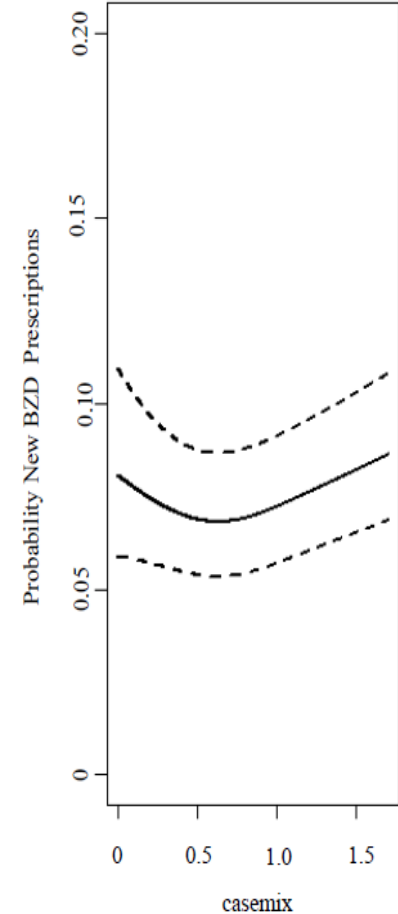


Factors associated with receiving a new BZD prescription

Internal Medicine



Surgery



Strengths and Limitations of this study

- ❑ A large multicenter study in a network of teaching hospitals with three years of follow-up.
- ❑ The first study aimed at assessing the efficacy of a transparent centralized continuous monitoring/benchmarking system in reducing benzodiazepine prescriptions among hospitalized patients.
- ❑ A significant reduction in benzodiazepine prescriptions among hospitalized patients was obtained.
- ❑ As a confounding factor, the improvement in the prescription trend over time could be partially attributed to the Choosing Wisely campaign itself.
- ❑ We cannot be sure that the observed reduction in new benzodiazepine prescriptions will persist over time.