



National trends of use of different classes of antiarrhythmic medications based on National Ambulatory Medical Care Survey (NAMCS 2008-2016)

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Background

With innovations in interventions such as implantable cardioverters/defibrillators and ablations, we sought to assess trends of use of anti-arrhythmic agents stratified from class 1 to 5.

Objective

To evaluate the trends of anti-arrhythmic uses during outpatient visits of adults in the US from 2008 to 2016.

Methods

Data from 2008-2016 were obtained using the National Ambulatory Medical Care Survey, which is nationally representative assessment of office-based visits. We assessed trends in antiarrhythmic medications classified as group 1, 2, 3, 4 and 5 in adult outpatient visits. The data is presented as percentages which represent total number of adult visits with antiarrhythmic use divided by total number of adult outpatient visits. Trends in the medications usage were assessed using logistic regression, with year as a sole predictor.

Results

Group 1 anti-arrhythmics increased from 1.25% to 2.13% of visits (P-trend <0.001), and Group 5 use decreased from 1.13% to 0.5% of visits (P-trend 0.001). Group 2(P-trend- 0.165), group 3(P-trend- 0.076) and group 4(P-trend- 0.676) usage remained stable throughout this study period. Table 1 summarizes the trends of prescriptions across all groups. Predictors for increased usage of anti-arrhythmic medications were Age [OR 1.02, p 0.001], female gender [OR 1.07, p 0.037], being on ≥5 medications [OR 5.30, p 0.001], with ≥ medical conditions [OR 1.05, p 0.001], congestive heart failure [OR 2.28, p 0.001] and hypertension [OR 1.32, p 0.001].

Conclusion

Group 5 use continues to decrease, and Group 1 use has been increasing while group 3,4 and 5 use has been steady across all years.

Table 1: Percentage prescriptions of anti-arrhythmic medications across ambulatory visits

	2008	2009	2010	2011	2012	2013	2014	2015	2016	P value
Group 1	1.25	1.25	1.8	1.83	1.45	1.76	1.97	2.62	2.13	<0.001
Group 2	0.51	0.58	0.53	0.49	0.5	0.57	0.57	0.67	0.63	0.165
Group 3	0.66	0.56	0.61	0.54	0.44	0.75	0.8	0.86	0.65	0.076
Group 4	1.87	1.61	1.62	1.57	1.37	1.78	1.73	1.8	1.79	0.676
Group 5	1.13	1.07	0.97	0.86	0.74	0.7	0.77	0.79	0.5	<0.001
All groups	4.98	4.69	5.21	5.04	4.16	5.21	5.38	6.23	5.14	0.058

Table 2: Predictors of prescriptions of anti-arrhythmic medications in adults

Variables	Odds Ratio	95% Confidence Interval		P value
		Lower	Upper	
Age	1.02	1.02	1.02	<0.001
Female	1.07	1.00	1.14	0.037
≥5 medications	5.30	4.76	5.90	<0.001
≥5 chronic conditions	1.05	1.02	1.08	0.001
Congestive heart failure	2.28	1.98	2.63	<0.001
Hypertension	1.32	1.22	1.42	<0.001
Hyperlipidemia	0.87	0.81	0.93	<0.001
Diabetes mellitus	0.74	0.69	0.80	<0.001