

COPD Patients Adherence to Prescribed Medication in Croatia

Prof Josip Culig, MD, PhD

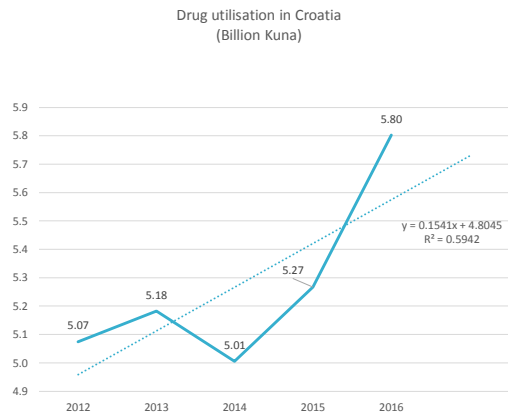
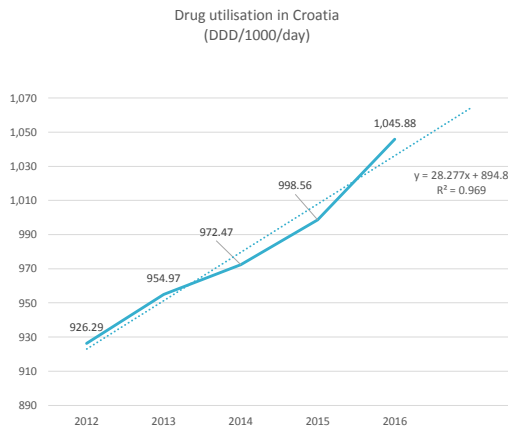
Research and Teaching Department

Division of Research, Pharmacoepidemiology and Pharmacoeconomics

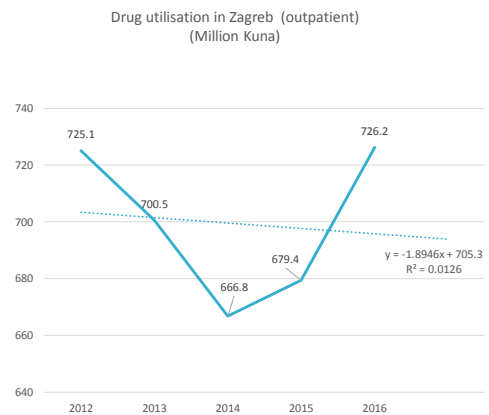
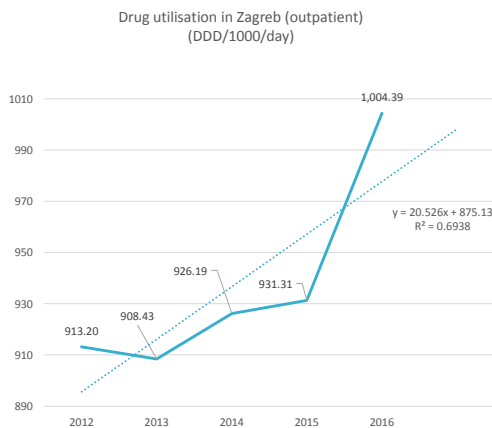
Notes about charts and data

- a line chart includes the regression line with equation and R-squared value (the coefficient of determination)
- the comma (,) is the decimal separator

Drug utilisation in Croatia 2012 – 2016



Drug utilisation in Zagreb (outpatient) 2012 – 2016



ATC R subgroups

R – respiratory system

R03 – drugs for obstructive airway diseases

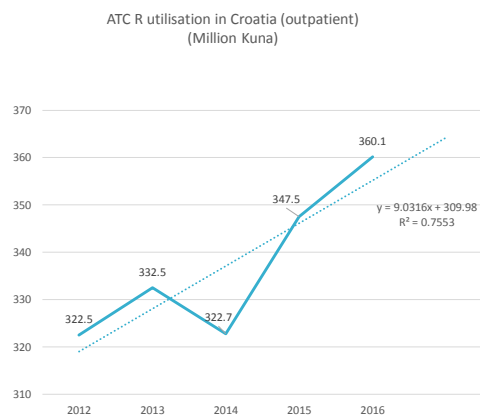
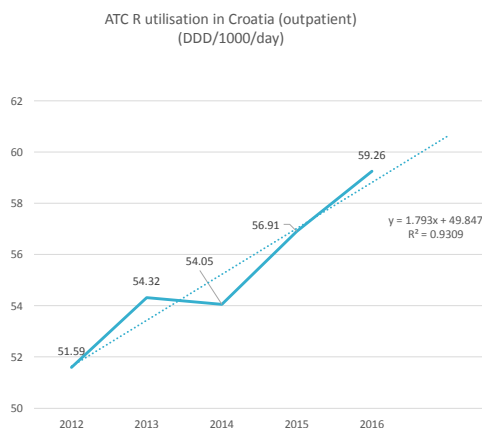
R03A – adrenergics, inhalants

R03B – other drugs for obstructive airway diseases, inhalants

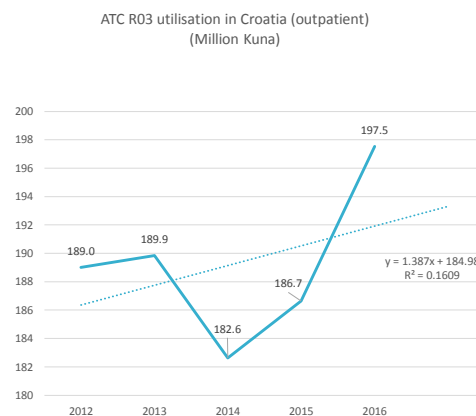
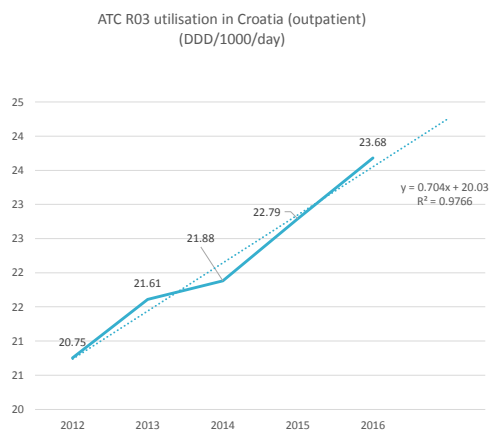
R03C – adrenergics for systemic use

R03D – other systemic drugs for obstructive airway diseases

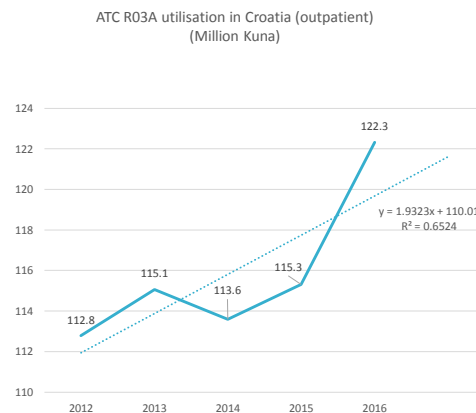
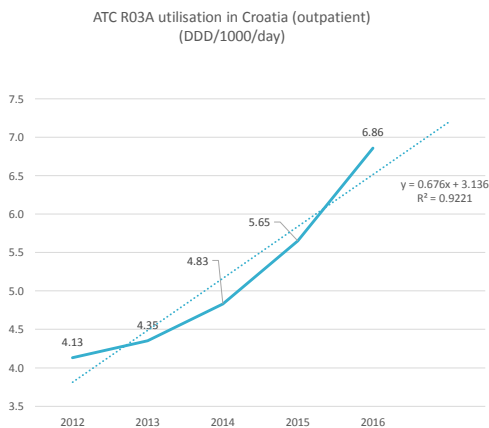
ATC R utilisation in Croatia (outpatient) 2012 – 2016



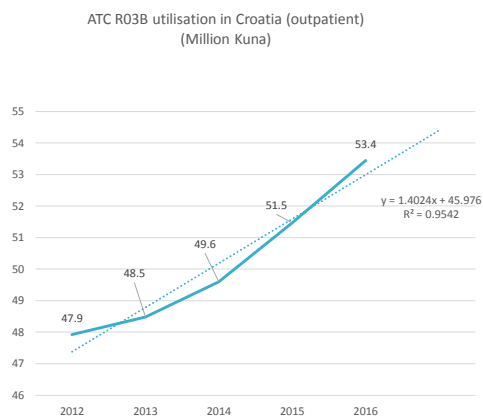
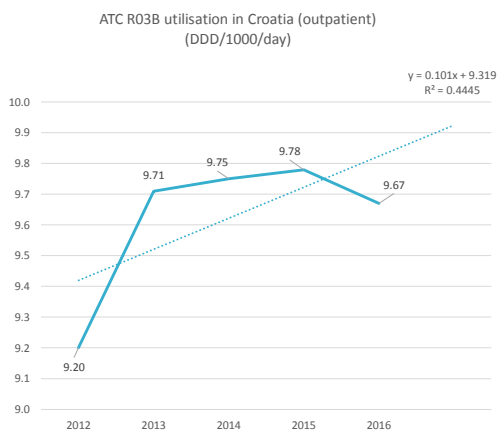
ATC R03 utilisation in Croatia (outpatient) 2012 – 2016



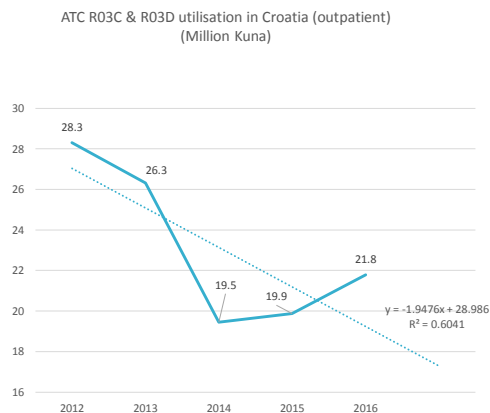
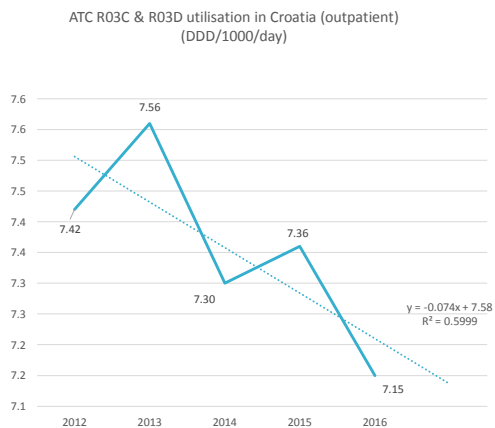
ATC R03A utilisation in Croatia (outpatient) 2012 – 2016



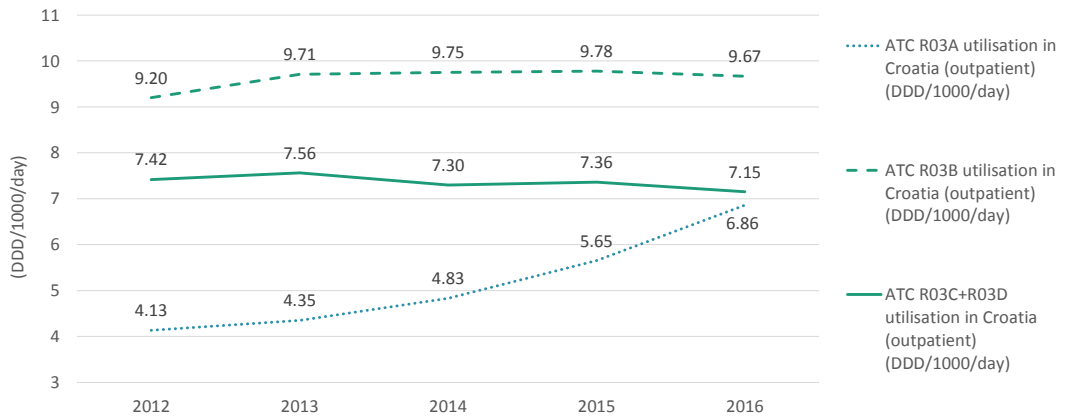
ATC R03B utilisation in Croatia (outpatient) 2012 – 2016



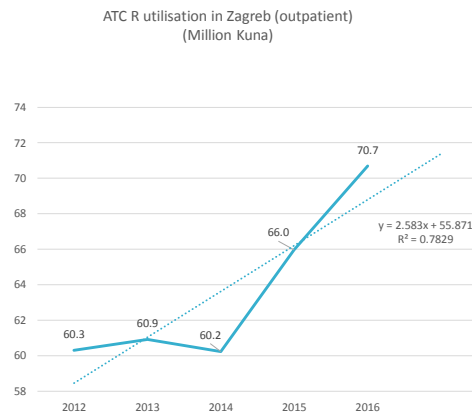
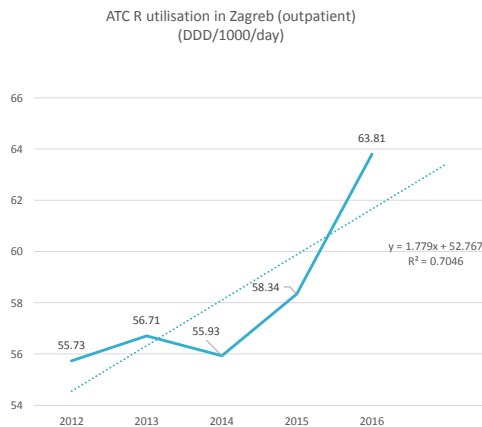
ATC R03C & R03D utilisation in Croatia (outpatient) 2012 – 2016



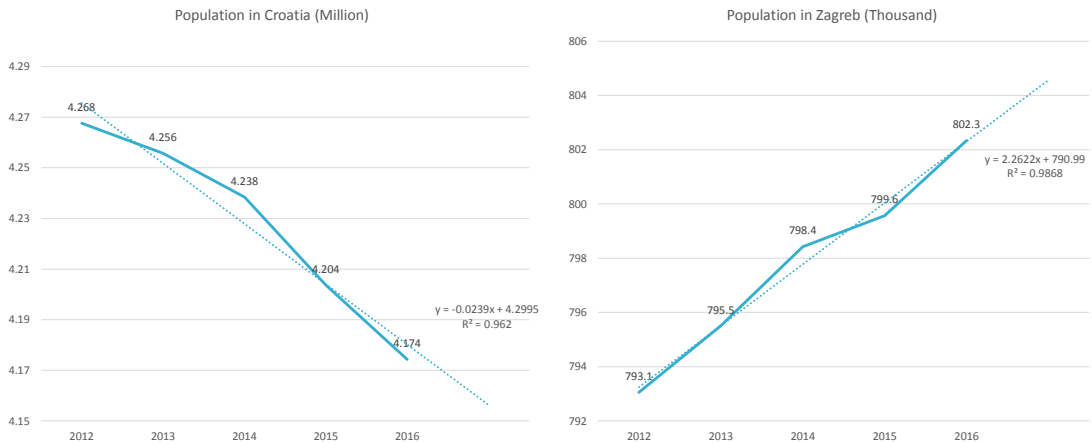
ATC R03A, R03B and R03C+R03D utilisation in Croatia (outpatient) 2012 – 2016



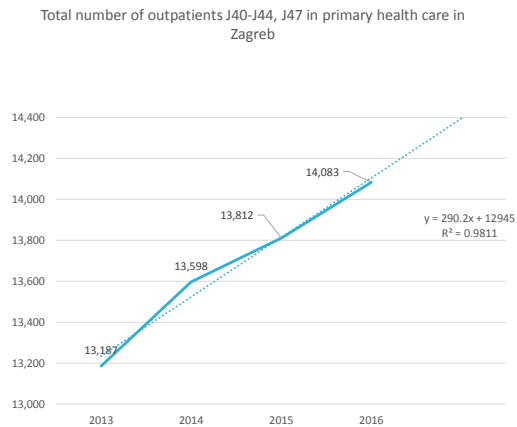
ATC R utilisation in Zagreb (outpatient) 2012 – 2016



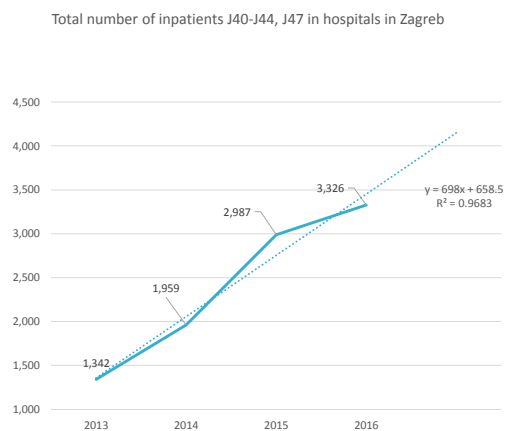
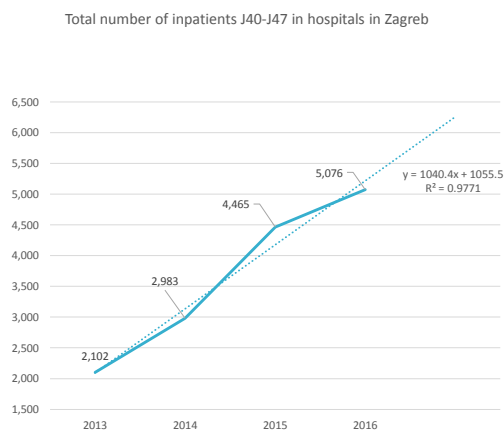
Population in Croatia and Zagreb 2012 – 2016



Total number of outpatients J40-J44, J47 in primary health care in Zagreb 2013 – 2016



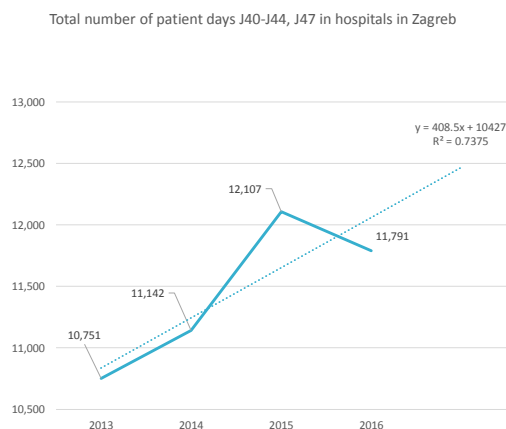
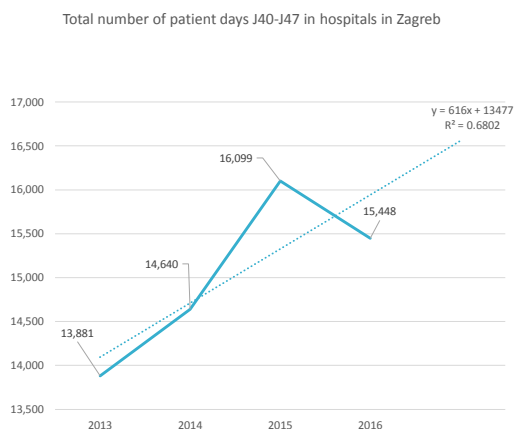
Total number of inpatients J40-J47 in hospitals in Zagreb 2013 – 2016



2016. Total number of bed days in Croatia

- 6, 235.190 bed days
- 8,5 days per patient

Total number of patient days J40-J47 in hospitals in Zagreb 2013 – 2016



COPD-Patient adherence behavior

- Pilot study was performed in two specialized COPD outpatients departments in Zagreb
- 103 patients accepted to participate
- Culig adherence scale was adapted for COPD patients
- FEV was used as health indicator
- Adherence rate was compared with FEV, diagnosis, number of drug prescriptions, medication treatment

Adherence & age

Age		
Answer :		
-64	29	28,2%
65+	74	71,8%
Sum	103	100,0%

Age	-64	65+	Sum
Adherence			
yes	23 28,0%	59 72,0%	82
	79,3%	79,7%	
no	6 28,6%	15 71,4%	21
	20,7%	20,3%	
Sum	29	74	103
χ^2	=	0,002	
df	=	1	
p	=	0,8245	** Not significant **

Adherence & total number of prescription drugs

Total number of prescription drugs		
Answer :		
-5	60	58,3%
6-9	31	30,1%
10+	12	11,7%
Sum	103	100,0%

Adherence	yes	no	Sum
Total number of prescription drugs			
-5	49 81,7%	11 18,3%	60
	59,8%	52,4%	
6-9	25 80,6%	6 19,4%	31
	30,5%	28,6%	
10+	8 66,7%	4 33,3%	12
	9,8%	19,0%	
Sum	82	21	103
χ^2	=	1,415	
df	=	2	
p	=	0,5198	** Not significant **

Adherence & medication group

Type of medication group			Adherence				
			yes	no	Sum		
Answer:							
Type of medication group							
alone-R	12	11,7%	9	75,0%	3	25,0%	12
R+other	79	76,7%	64	81,0%	15	19,0%	79
other	11	10,7%	8	72,7%	3	27,3%	11
nothing	1	1,0%	1	100,0%	0	0,0%	1
Sum	103	100,0%	82		21		103
			χ^2	=	0,567		
			df	=	2		
			p	=	0,7476	**	Not significant **

Conclusions

- COPB is a major public health problem in Croatia
- COPB burden increased
- Number of COPD patients increased
- Volume of prescribed medications was increased
- Total number of bed days was increased (average per patient decreased !)
- Financial burden increased
- Nonadherence was significant in patients with better FEV results!!!
- Significance of adherent behavior should be included in patient's education

COPB Research Team



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