

P-0748 – First stratified diabetes prevalence data for Republic of Macedonia derived from the National eHealth System



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Background: Republic of Macedonia is estimated to have the third highest diabetes prevalence in Europe [1]. National eHealth System has been introduced in the country since 2013 covering all citizens across primary, secondary and tertiary healthcare, integrating diabetes related data, and, for the first time, enabling stratified diabetes prevalence calculation based on diagnosed diabetes cases [2].

Aims: To find diabetes prevalence of diagnosed cases, stratified by gender, age and urban or rural population in Republic of Macedonia, based on data derived from the National eHealth System.

Method: National eHealth System was searched for all patients with ICD-10 diagnoses E10-E14 in their electronic healthcare records. Data records derived from the National eHealth System contained patient's gender, date of birth, place of living and ICD-10 code.

Results: Urban, rural and total population diagnosed with diabetes by age and gender are presented in Table 1, 2 and 3; *n* is the number of cases with diabetes in the group, and *N* is the total number of individuals (with and without diabetes) in the group. Total number of diagnosed diabetes cases was 84,568: 36,119 males (42.71%) and 48,449 females (57.29%). Diabetes prevalence of diagnosed cases in population 20-79 years was 5.01% (*n*=78,233; *N*=1,562,203).

References:

1. International Diabetes Federation. IDF Diabetes Atlas. 7th ed. Brussels, Belgium: International Diabetes Federation, 2015. <http://www.idf.org/diabetesatlas> (accessed April 26, 2017).

2. Smokovski I, Milenkovic T, Trapp C, Mitov A. Diabetes Care in Republic of Macedonia: Challenges and Opportunities. *Annals of Global Health*; 2015; 81(6): 792-802.

Table 1. Urban population diagnosed with diabetes by age and gender

Age Groups (years)	Male			Female			Total		
	<i>n</i>	<i>N</i>	%	<i>n</i>	<i>N</i>	%	<i>n</i>	<i>N</i>	%
< 20	275	194,362	0.14%	269	182,757	0.15%	544	377,119	0.14%
20-39	1,097	257,387	0.43%	1,114	247,693	0.45%	2,211	505,080	0.44%
40-59	8,792	233,220	3.77%	8,887	231,703	3.84%	17,679	464,923	3.80%
60-79	14,529	128,512	11.31%	20,316	149,747	13.57%	34,845	278,259	12.52%
80+	1,655	14,178	11.67%	2,652	21,970	12.07%	4,307	36,148	11.91%
Total	26,348	827,659	3.18%	33,238	833,870	3.99%	59,586	1,661,529	3.59%

Table 2. Rural population diagnosed with diabetes by age and gender

Age Groups (years)	Male			Female			Total		
	<i>n</i>	<i>N</i>	%	<i>n</i>	<i>N</i>	%	<i>n</i>	<i>N</i>	%
< 20	2	63,309	0.00%	3	58,423	0.01%	5	121,732	0.00%
20-39	430	75,572	0.57%	561	68,563	0.82%	991	144,135	0.69%
40-59	3,888	59,532	6.53%	4,994	55,842	8.94%	8,882	115,374	7.70%
60-79	4,989	25,677	19.43%	8,636	28,755	30.03%	13,625	54,432	25.03%
80+	462	3,562	12.97%	1,017	4,952	20.54%	1,479	8,514	17.37%
Total	9,771	227,652	4.29%	15,211	216,535	7.02%	24,982	444,187	5.62%

Table 3. Total population diagnosed with diabetes by age and gender

Age Groups (years)	Male			Female			Total		
	<i>n</i>	<i>N</i>	%	<i>n</i>	<i>N</i>	%	<i>n</i>	<i>N</i>	%
< 20	277	257,671	0.11%	272	241,180	0.11%	549	498,851	0.11%
20-39	1,527	332,959	0.46%	1,675	316,256	0.53%	3,202	649,215	0.49%
40-59	12,680	292,752	4.33%	13,881	287,545	4.83%	26,561	580,297	4.58%
60-79	19,518	154,189	12.66%	28,952	178,502	16.22%	48,470	332,691	14.57%
80+	2,117	17,740	11.93%	3,669	26,922	13.63%	5,786	44,662	12.96%
Total	36,119	1,055,311	3.42%	48,449	1,050,405	4.61%	84,568	2,105,716	4.02%

Discussion: These were the first findings on diabetes prevalence of diagnosed cases in Republic of Macedonia derived from the National eHealth System, stratified by age, gender and urban or rural population. Diabetes prevalence of diagnosed cases in total population was higher in females than in males (4.61% vs 3.42%); it was higher in rural than in urban population (5.62% vs 3.59%) and was highest in the age group 60-79 years (14.57%). These data could enable more precise estimation of the total diabetes prevalence in the country including both diagnosed and undiagnosed cases, and further analysis of the risk factors leading to higher diabetes prevalence in females and rural population in Republic of Macedonia.

