

Integrated Health Resources Information Database

Identify targets of potential interventions for management of multi-morbid patients



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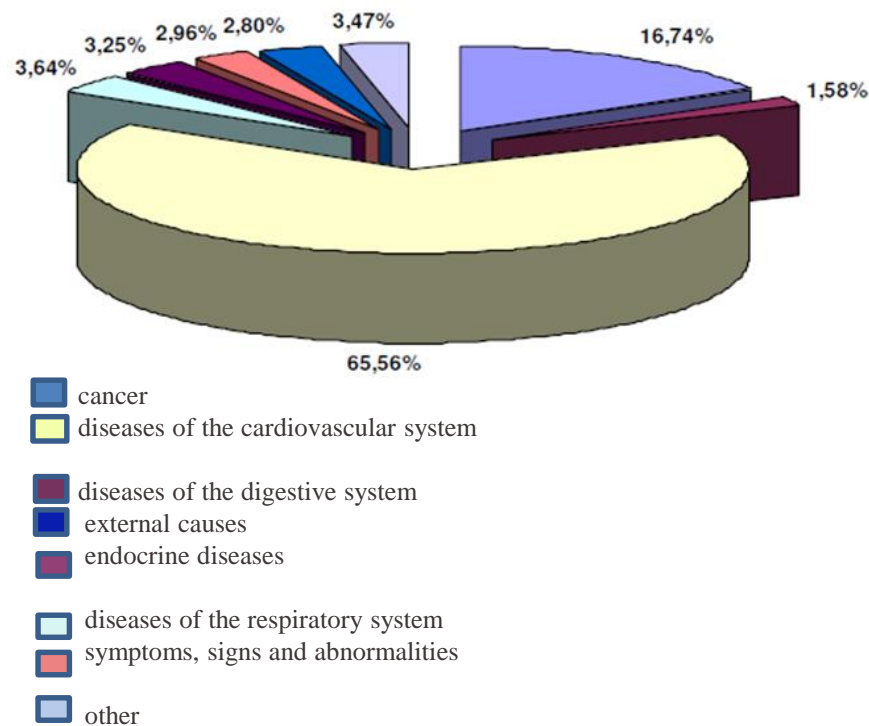
This presentation arises from the Joint Action addressing chronic diseases and healthy ageing across the life cycle (JA-CHRODIS) which has received funding from the European Union, under the framework of the Health Programme (2008-2013).

Characteristics of the healthcare system and its performance – overview

- A mixture of public and private, centralized and decentralized characteristics of financing medical care and healthcare providers
- National Health Insurance Fund (NHIF) – designed to cover all citizens, and through which are directed the major shares (70.8%) of public funds.
- Health services are provided by a network of contractors who work either in the public, or in the private sector. Outpatient medical care is delivered in individual or group practices in medical, diagnostic, and dental centers, most of which are private. Hospitals benefit from payments that are based on clinical pathways.
- Outpatient facilities for primary medical care – individual practices – 3445;
Outpatient facilities for primary medical care – group practices – 220.

Chronic Disease Burden in Bulgarian

- The ratio of people over 65 to people in active age is also steadily increasing, suggesting increased pressure on the healthcare sector
- The elderly are financially vulnerable and unable to afford medical care that requires full coverage of long-term care. The average cost for treatment of a pensioner is 85% higher than the treatment of an insured individual.
- The largest increase is in the proportion of mortality of cardiovascular diseases, cancers, diabetes and chronic pulmonary diseases



Integrated Health Resources Information Database

The current study was specifically designed for the aims of the Joint Action on Chronic Diseases and Promoting Healthy Ageing across the Life Cycle. Its objective is to collect data regarding patients with two or more chronic diseases and to analyze variables or specific characteristics of multi-morbid patients to their clinical outcomes and resources utilization. The analysis of the obtained data will be used for the preparation of recommendations on potential successful interventions addressing multimorbidity.

Study Design and Methodology

- Seven practices of GPs from a privately held primary care medical center, covering 10820 registered patients; 7082 – adult patients (19+)
- Inclusion criteria - aged 19+; having at least two registered chronic conditions; clinically consulted by their GP in the last 12 months
- 81 patients - man (50.6%), women (49.4%); three age categories – 39-44 (3.7%), 45-64 (38.3%) and 65+ (58%)
- 59.3% of our study sample were individuals with higher level of education. 71.6% were married, 27.2% - widowed, and 1.2% - divorced.
- Genetic predisposition factors and behavioural risk factors - obtained through inquiry cards -> incomplete reported data information and/or inconsistency
- GPs consultations, examinations, specialized consultation, hospitalization, disability (in days) were also investigated

Preliminary Results

- 24.7% - 2 registered chronic diseases, 29.6% - 3, and 45.7% - 4 or more chronic diseases. For the third age group (65+), the presence of 4 or more chronic diseases was prevalent (59.6% of all patients).
- In the first and the second age group, the mean number of chronic diseases was 3, whereas for the 65+ age group – 4, with a maximum number of chronic diseases 9 (*Tab.1*)
- The higher the number of diseases, the more GP consultations and specialized consultations (*Tab.2*);
- The means of examinations across the three groups did not vary.
- Hospitalizations and disability – inconsistent data.

		Age_groups											
		39-44			45-64			65+			Total		
		Gender			Gender			Gender			Gender		
		M	F	Total	M	F	Total	M	F	Total	M	F	Total
2 chronic_d is	Count	2	0	2	6	3	9	5	4	9	13	7	20
	Column N %	66.7%	.0%	66.7%	37.5%	20.0%	29.0%	22.7%	16.0%	19.1%	31.7%	17.5%	24.7%
3 chronic_d is	Count	0	0	0	7	7	14	5	5	10	12	12	24
	Column N %	.0%	.0%	.0%	43.8%	46.7%	45.2%	22.7%	20.0%	21.3%	29.3%	30.0%	29.6%
4 + chronic_d is	Count	1	0	1	3	5	8	12	16	28	16	21	37
	Column N %	33.3%	.0%	33.3%	18.8%	33.3%	25.8%	54.5%	64.0%	59.6%	39.0%	52.5%	45.7%
Total	Count	3	0	3	16	15	31	22	25	47	41	40	81
	Column N %	100.0%	.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Tab. 1

		2 chronic_dis	3 chronic_dis	4 + chronic_dis	Total
Concult_GP	Valid N	20	24	37	81
	Mean	9	10	11	10
	Minimum	2	2	4	2
	Maximum	25	23	40	40
Exam_num	Valid N	15	17	32	64
	Mean	2	2	2	2
	Minimum	1	1	1	1
	Maximum	4	4	5	5
Consult_spec	Valid N	13	19	35	67
	Mean	1	2	3	3
	Minimum	1	1	1	1
	Maximum	3	6	11	11

Tab. 2

Preliminary Results

- 79 different diagnoses (ICD-10), categorized into 23 groups
- Most common diseases - coronary artery diseases – 61.7% (including hypertension; stenocardia, ischaemic chest pain and other cardiac arrhythmias), diabetes – 38.3%, thyroid diseases – 9.9%, cerebrovascular disease – 27.2%, arthropathies – 12.3%
- Most common patterns - coronary artery diseases and cerebrovascular diseases was present for 72.8% of all patients, coronary artery diseases and diabetes – 82.7%, and cerebrovascular diseases and diabetes – 55.6%.
- The mean numbers for GP consultations and examinations for the three groups was 10 consultations and 2 examinations; for specialized consultations – the mean number for the first and the second group was 3, whereas for the third group was 2 consultations.

		Coronary_CVD		Coronary_Diabetes		CVD_Diabetes	
		no	yes	no	yes	no	yes
Consult_num	Valid N	22	59	14	67	36	45
	Mean	10	10	8	10	10	10
	Minimum	2	2	3	2	3	2
	Maximum	25	40	13	40	23	40
Exam_num	Valid N	19	45	12	52	28	36
	Mean	2	2	2	2	2	2
	Minimum	1	1	1	1	1	1
	Maximum	4	5	3	5	5	5
Consult_spec_num	Valid N	20	47	13	54	29	38
	Mean	2	3	2	3	3	2
	Minimum	1	1	1	1	1	1
	Maximum	6	11	3	11	11	7

The Joint Action on Chronic Diseases and promoting healthy ageing across the life cycle (JA-CHRODIS)*

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