



VILNIAUS UNIVERSITETO
MEDICINOS FAKULTETAS



Poliligoti pacientai šeimos gydytojo praktikoje

Vytautas Kasiulevičius

VU MF Vidaus ligų, šeimos medicinos ir onkologijos klinika

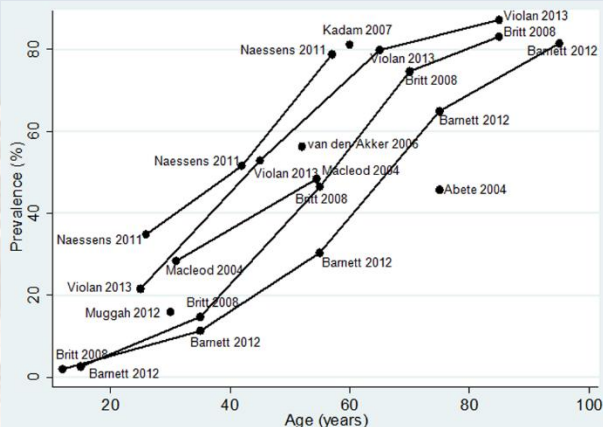
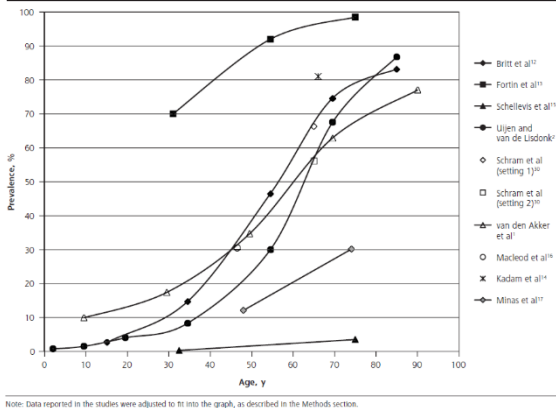
Poliligotumas (ang.:Multimorbidity)

Poliligotumas – nustatyti du ir daugiau lėtiniai susirgimai vienu metu tam pačiam asmeniui, kurių gydymui būtini reikšmingi žmogiškieji ir materialiniai resursai.

Increasing impact, worldwide contributions and the importance of multimorbidity. Health Expect 2014;17(5):603–4.

Poliligotumo paplitimas

Figure 2. Prevalence of multimorbidity (defined as ≥ 2 diseases) reported in primary care settings.



Fortin M, Stewart M, Poitras ME, Almirall J, Maddocks H. A systematic review of prevalence studies on multimorbidity: toward a more uniform methodology. // *Ann Fam Med*. 2012 Mar-Apr;10(2):142-51.

Violan C, Foguet-Boreu Q, Flores-Mateo G, Salisbury C, Blom J, Freitag M, Glynn L, Muth C, Valderas JM. Prevalence, determinants and patterns of multimorbidity in primary care: a systematic review of observational studies. *PLoS One*. 2014 Jul 21;9(7):e102149.

Poliligotų pacientų blogesnė gyvenimo kokybė, sutrikęs funkcinis savarankiškumas, dažnesnė depresija, jie vartoja daug medikamentų ir kenčia dėl vaistų sąveikų.

Fortin M, Lapointe L, Hudon C, Vanasse A, Ntetu AL, Maltais D. Multimorbidity and quality of life in primary care: a systematic review. *Health Qual Life Outcomes* 2004;2:51.

Townsend A, Hunt K, Wyke S. Managing multiple morbidity in mid-life: a qualitative study of attitudes to drug use. *BMJ* 2003;327:837.

Boyd CM, Darer J, Boulton C, Fried LP, Boulton L, et al. (2005) Clinical practice guidelines and quality of care for older patients with multiple comorbid diseases: implications for pay for performance. *JAMA* 294: 716–724

Nepaisant poliligotų pacientų skaičiaus didėjimo, visos gydymo rekomendacijos orientuotos į vieną ligą sergantį pacientą.

Fortin M, Bravo G, Hudon C, Vanasse A, Lapointe L. Prevalence of multimorbidity among adults seen in family practice. *Ann Fam Med* 2005;3:223-8.

The list of the selected chronic conditions associated with ICD-10-AM diagnostic codes.

Chronic conditions with ICD-10-AM diagnostic codes

- 1 Cancer C00–C96
- 2 Anaemia D50
- 3 Hypothyroidism E02; E03; E89.0
- 4 Diabetes E10.0–E10.9; E11.0–E11.9
- 5 Obesity E66
- 6 Dyslipidaemia E78
- 7 Dementia F00.0–F00.9; G30.0–G30.9; F01.0–F01.9; F02.0–F02.8; F03
- 8 Mental disorders F20.0–F20.9; F30.0–F39; F40.00–F40.9; F41.0–F41.9;
F42.0–F42.9; F43.0–F43.9
- 9 Parkinson's disease G20
- 10 Multiple sclerosis G35
- 11 Epilepsy G40.00–G40.91
- 12 Sleep apnoea G47.3
- 13 Back pain G54.1; G54.4; G55.1; M51
- 14 Glaucoma H40–H42
- 15 Blindness H53–H54
- 16 Hearing loss H90.0– H90.8; H91.0–H91.9
- 17 Hypertension I10–I15
- 18 Ischaemic heart disease I20–I25
- 19 Arrhythmias I44–I49
- 20 Heart failure I50.0–I50.9
- 21 Intracranial bleeding I61–I62
- 22 Stroke I63–I64; I69
- 23 Chronic obstructive pulmonary disease J44.0–J44.9; J96
- 24 Asthma J45.0–J45.9
- 25 Inflammatory bowel disease K50; K51
- 26 Psoriasis L40.0–L40.9
- 27 Rheumatoid arthritis M05–M06
- 28 Gout M10.0–M10.99
- 29 Osteoarthritis M15–M19
- 30 Systemic lupus erythematosus M32
- 31 Osteoporosis M80–M82
- 32 Renal failure N18–N19



Chrodis-JA rezultatai Lietuvoje

(duomenys gauti bendradarbiaujant su
VLK prie SAM)

VLK duomenų bazėje
atrinkome 452 769 pacientus
sergančius bent viena lėtine liga
esančia šiame ligų sąrašė.

Chrodis-JA rezultatai Lietuvoje
(duomenys gauti bendradarbiaujant su VLK prie SAM)
Dažniausios lėtinės ligos Lietuvoje

TOP	Chronic condition	Adults with chronic conditions (N=452769)		Lithuanian adult population (N=2410825)
		No. of diseased people	Percentage of diseased people	Prevalence in population
1	Hypertension	387781	85.65%	16.08%
2	Ischemic heart disease	304698	67.3%	12.64%
3	Heart failure	190791	42.14%	7.91%
4	Arrhythmias	177402	39.18%	7.36%
5	Diabetes	124416	27.48%	5.16%
6	Osteoarthritis	117972	26.06%	4.89%
7	Back Pain	101406	22.4%	4.21%
8	Dyslipidaemia	98082	21.66%	4.07%
9	Stroke	58858	13.00%	2.44%
10	Cancer	56260	12.43%	2.33%

Navickas R, Visockienė Ž, Purnaitė R, Rukšėnienė M, Kasiulevičius V, Jurevičienė E. Prevalence and structure of multiple chronic conditions in Lithuanian population and the distribution of the associated healthcare resources. // Eur J Intern Med. 2015 Apr;26(3):160-8.

Chrodis-JA rezultatai Lietuvoje

(duomenys gauti bendradarbiaujant su VLK prie SAM)

94.6% VLK duomenų bazėje esantiems pacientams nustatyta bent viena diagnozė.

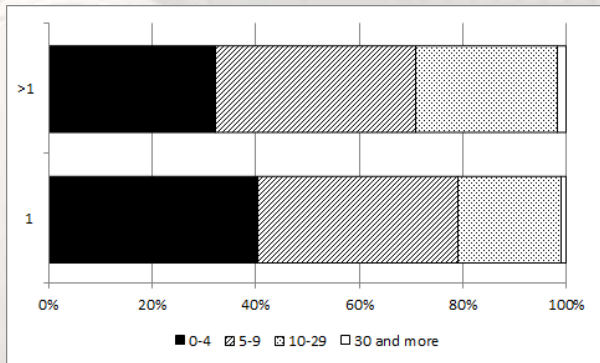
10% pacientų virš 45 metų serga bent dviem ligomis.

Lėtinių susirgimų skaičius smarkiai išauga 45–54 metų amžiaus grupėje, o vyrai daugybinėmis lėtinėmis ligomis serga dažniau negu moterys ($p < 0.001$).

Poliligoti pacientai miršta anksčiau, dažniau hospitalizuojami ir ilgiau gydomi stacionare.

Vogeli C, Shields AE, Lee TA, Gibson TB, Marder WD, Weiss KB, et al. Multiple chronic conditions: prevalence, health consequences, and implications for quality, care management, and costs. *J Gen Intern Med* 2007;22(suppl 3):391-5.

Menotti A, Mulder I, Nissinen A, Giampaoli S, Feskens EJ, Kromhout D. Prevalence of morbidity and multimorbidity in elderly male populations and their impact on 10-year all-cause mortality: the FINE study (Finland, Italy, Netherlands, Elderly). *J Clin Epidemiol* 2001;54:680-6.



Mūsų duomenys: hospitalizacijos trukmė

VLK prie SAM duomenų bazė

Chrodis-JA rezultatai Lietuvoje

(duomenys gauti bendradarbiaujant su VLK prie SAM)

Poliligtumas Lietuvoje susijęs su papildomu 258 761 lovadieniu ir 61% padidina rehospitalizacijos dažnį.

Poliligtų pacientų ambulatorinių konsultacijų dažnis išauga net 2.1 karto lyginant su viena liga sergančiais.

Poliligoti pacientai 9.6 karto dažniau Lietuvos šeimos gydytojų lankomi namuose negu viena liga sergantys.

Lėtinių ligų grupių deriniai (452 769 pacientų duomenų bazės analizė)

	Oncology	Hematology	Endocrinology	Neurology	Psychiatry	Ophthalmology	Otolaryngology	Cardiology	Pulmonology	Gastroenterology	Dermatology	Reumatology	Nephrology
Oncology	12,4	1,1	6,0	4,8	1,4	2,1	1,5	12,1	2,3	0,1	0,3	4,2	1,0
Hematology	1,1	5,2	2,1	2,2	0,7	0,8	0,6	5,1	1,0	0,0	0,1	2,1	0,7
Endocrinology	6,0	2,1	48,3	18,0	5,4	7,4	4,5	45,7	6,4	0,2	1,3	16,4	2,7
Neurology	4,8	2,2	18,0	38,4	5,4	5,9	4,3	36,5	6,1	0,2	0,9	15,4	2,1
Psychiatry	1,4	0,7	5,4	5,4	10,9	1,6	1,2	10,4	1,8	0,1	0,3	4,2	0,5
Ophthalmology	2,1	0,8	7,4	5,9	1,6	13,7	2,0	13,4	2,2	0,1	0,3	5,3	0,8
Otolaryngology	1,5	0,6	4,5	4,3	1,2	2,0	9,1	8,8	1,6	0,0	0,2	3,8	0,5
Cardiology	12,1	5,1	45,7	36,5	10,4	13,4	8,8	95,7	14,0	0,3	2,0	30,4	4,8
Pulmonology	2,3	1,0	6,4	6,1	1,8	2,2	1,6	14,0	14,2	0,1	0,4	5,2	1,1
Gastroenterology	0,1	0,0	0,2	0,2	0,1	0,1	0,0	0,3	0,1	0,4	0,0	0,2	0,0
Dermatology	0,3	0,1	1,3	0,9	0,3	0,3	0,2	2,0	0,4	0,0	2,1	0,8	0,1
Reumatology	4,2	2,1	16,4	15,4	4,2	5,3	3,8	30,4	5,2	0,2	0,8	31,1	2,1
Nephrology	1,0	0,7	2,7	2,1	0,5	0,8	0,5	4,8	1,1	0,0	0,1	2,1	4,8

Chrodis- JA Lietuvos duomenys. VLK prie SAM duomenų bazė.

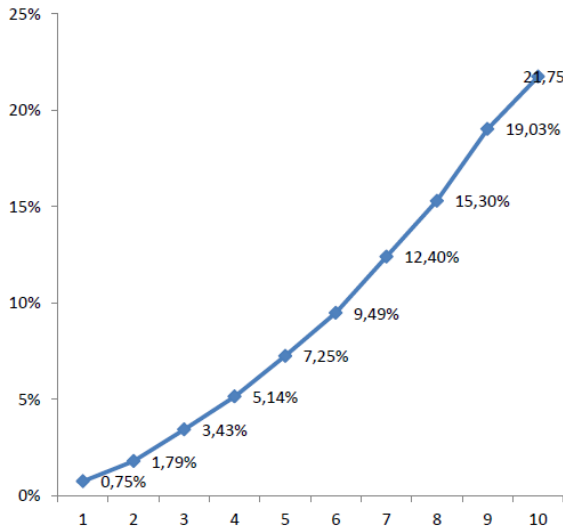
Lėtinių ligų grupių deriniai (452 769 pacientai)

	Oncology	Hematology	Endocrinology	Neurology	Psychiatry	Ophthalmology	Otolaryngology	Cardiology	Pulmonology	Gastroenterology	Dermatology	Rheumatology	Nephrology
Oncology													
Hematology	4844												
Endocrinology	27109	9623											
Neurology	21747	10131	81336										
Psychiatry	6293	3227	24412	24395									
Ophthalmology	9332	3630	33434	26720	7347								
Otolaryngology	6836	2568	20383	19549	5341	8984							
Cardiology	54633	22882	207070	165481	47305	60498	39984						
Pulmonology	10292	4529	29168	27623	7943	10101	7109	63201					
Gastroenterology	363	178	765	774	321	247	208	1582	300				
Dermatology	1359	452	5784	4156	1221	1550	1065	9261	1703	43			
Rheumatology	19231	9488	74438	69556	19146	24189	17166	137749	23732	700	3833		
Nephrology	4376	3297	12058	9478	2209	3709	2385	21706	5015	108	492	9490	

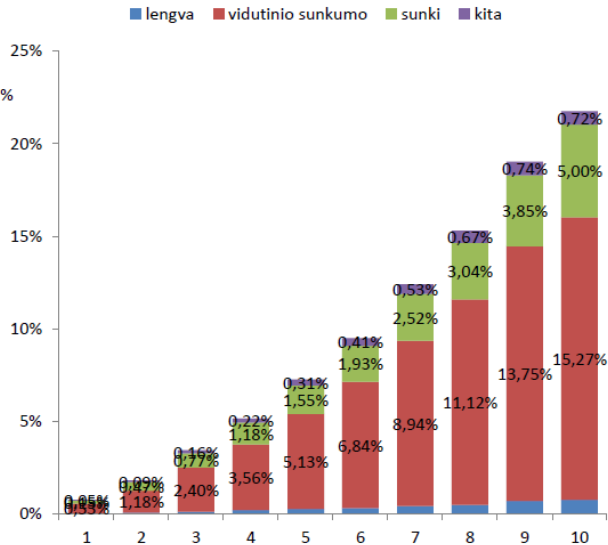
Chrodis- JA Lietuvos duomenys. VLK prie SAM duomenų bazė.

Depresijos paplitimas tarp lėtinėmis ligomis sergančių pacientų

Depresijos paplitimas tarp lėtinėmis ligomis sergančių



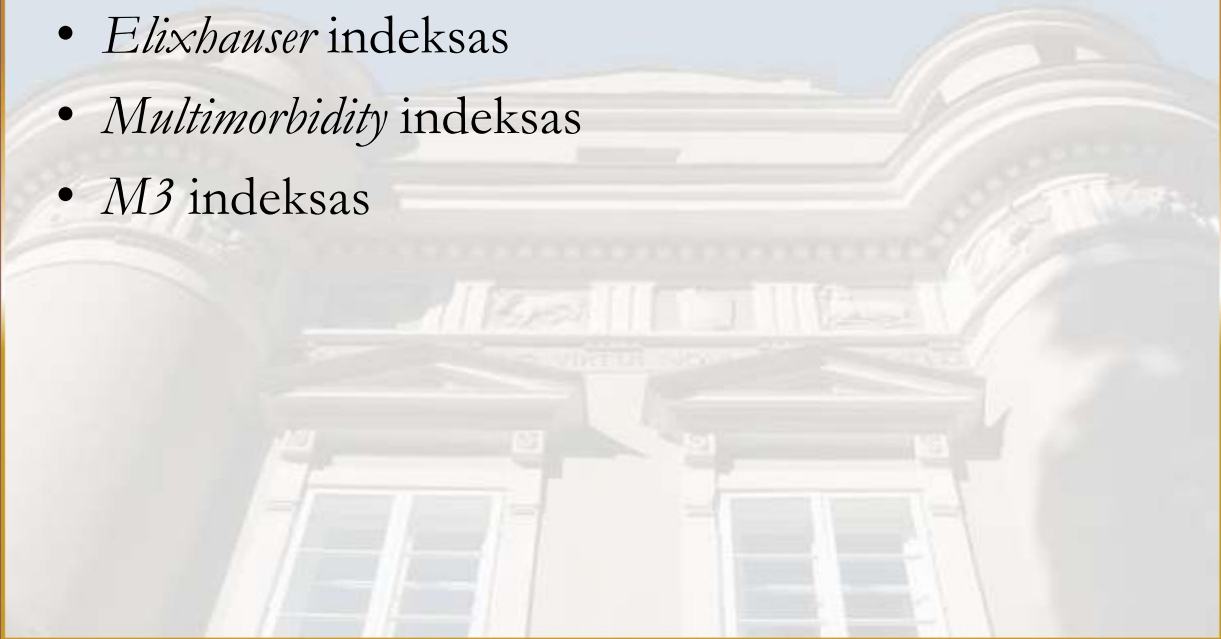
Depresijos paplitimas tarp lėtinėmis ligomis sergančių, pagal sunkumą



Chrodis- JA Lietuvos duomenys. VLK prie SAM duomenų bazė.

Kaip įvertinti poliligotų pacientų riziką?

- *Charlson* indeksas
- *Elixhauser* indeksas
- *Multimorbidity* indeksas
- *M3* indeksas



Charlsono komorbidiškumo indeksas

Table 1. Charlson Comorbidity Index Scoring System

Score	Condition
1	Myocardial infarction (history, not ECG changes only) Congestive heart failure Peripheral vascular disease (includes aortic aneurysm ≥ 6 cm) Cerebrovascular disease: CVA with mild or no residua or TIA Dementia Chronic pulmonary disease Connective tissue disease Peptic ulcer disease Mild liver disease (without portal hypertension, includes chronic hepatitis) Diabetes without end-organ damage (excludes diet-controlled alone)
2	Hemiplegia Moderate or severe renal disease Diabetes with end-organ damage (retinopathy, neuropathy, nephropathy, or brittle diabetes) Tumor without metastases (exclude if >5 y from diagnosis) Leukemia (acute or chronic) Lymphoma
3	Moderate or severe liver disease
6	Metastatic solid tumor AIDS (not just HIV positive)

NOTE. For each decade > 40 years of age, a score of 1 is added to the above score.

Abbreviations: ECG, electrocardiogram; CVA, cerebrovascular accident; TIA, transient ischemic attack; AIDS, acquired immunodeficiency syndrome; HIV, human immunodeficiency virus.

Table 2. M3 Index beta coefficients (log of hazard ratio and 95% CI) from development data set

Condition	Beta coefficient: log (HR) (95% CI)
AIDS	0.45 (-0.18 to 1.08)
Alcohol abuse	0.58 (0.47 to 0.68)
Anemia deficiency	0.18 (0.12 to 0.24)
Anxiety and behavioral disorders	0.12 (0.04 to 0.21)
Aortic and other aneurysms	0.26 (0.14 to 0.38)
Bone disorders	0.13 (0.03 to 0.24)
Bowel disease inflammatory	0.09 (0.03 to 0.14)
Breast cancer	0.41 (0.26 to 0.56)
Cardiac arrhythmia	0.17 (0.13 to 0.21)
Cardiac valve	0.26 (0.19 to 0.32)
Cerebrovascular disease	0.10 (0.04 to 0.16)
Chronic pulmonary	0.63 (0.58 to 0.67)
Chronic renal	0.33 (0.28 to 0.39)
Coagulopathy and other blood disorders	0.27 (0.22 to 0.31)
Colorectal cancer	0.37 (0.26 to 0.49)
Congestive heart failure	0.54 (0.49 to 0.59)
Connective tissue disease	0.29 (0.18 to 0.40)
Dementia	1.02 (0.97 to 1.07)
Diabetes (complicated)	0.27 (0.22 to 0.32)
Diabetes (uncomplicated)	0.30 (0.17 to 0.43)
Drug abuse	0.56 (0.38 to 0.74)
Endocrine disorder	0.11 (0.03 to 0.20)
Epilepsy	0.59 (0.47 to 0.72)
Eye problem long term	0.18 (0.12 to 0.24)
Gastrointestinal ulcer or upper GI disease	0.15 (0.07 to 0.23)
Gynecological cancers	0.71 (0.47 to 0.94)
Hepatitis, chronic viral	0.57 (0.42 to 0.72)
Hypertension uncomplicated	0.12 (0.06 to 0.17)
Immune system disorder	0.40 (0.18 to 0.61)
Inner ear disorder	0.06 (-0.02 to 0.14)
Joint or spinal disorder	0.10 (0.02 to 0.18)
Liver disease (moderate or severe)	0.47 (0.36 to 0.59)
Lung cancer	1.97 (1.85 to 2.09)
Lymphomas and leukemias	1.19 (1.08 to 1.30)
Major psychiatric disorder	0.21 (0.13 to 0.29)
Malignant melanoma	0.34 (0.21 to 0.47)
Malnutrition and other nutritional disorders	0.33 (0.25 to 0.41)
Mental and behavioral disorders due to brain damage	0.04 (-0.17 to 0.24)
Mental retardation	1.41 (1.21 to 1.60)
Metabolic disorder	0.01 (-0.05 to 0.06)
Metastatic cancer	2.47 (2.42 to 2.51)
Muscular peripheral nerve disorders	0.21 (0.11 to 0.31)
Myocardial infarction	0.20 (0.14 to 0.25)
Obesity	0.25 (0.16 to 0.34)
Osteoporosis (uncomplicated)	0.08 (-0.06 to 0.23)
Other cancers	1.10 (1.02 to 1.18)
Other neurologic disorders (excluding epilepsy)	0.56 (0.50 to 0.63)
Paralysis	0.28 (0.21 to 0.36)
Peripheral vascular disease	0.35 (0.28 to 0.42)
Prostate cancer	0.43 (0.33 to 0.53)
Pulmonary circulation disorders	0.40 (0.31 to 0.48)
Sleep disorder	0.25 (0.12 to 0.37)
Upper gastrointestinal cancer	1.94 (1.82 to 2.07)
Urinary tract problem (chronic)	0.05 (-0.05 to 0.15)
Venous insufficiency	0.21 (0.06 to 0.36)
Conditions excluded from final index	
Angina	-0.08 (-0.15 to -0.02)
Cardiac disease (other)	-0.10 (-0.17 to -0.04)
Infection chronic NOS	-0.24 (-0.63 to 0.15)
Intestinal disorder	-0.25 (-0.33 to -0.18)
Pancreatitis	-0.10 (-0.25 to 0.05)
Tuberculosis	-0.10 (-0.56 to 0.35)

Abbreviations: CI, confidence interval; HR, hazard ratio; NOS, not otherwise specified.

Table 3. Elixhauser comorbidities for hospitalizations studied. Brazil, 2003–2004.

Comorbidity	n	Deaths (%)	Odds ratio
Congestive cardiac failure	8488	11.5	1.12*
Cardiac arrhythmia	1622	16.8	1.74*
Valvular disease	294	9.2	0.87
Pulmonary circulation disease	214	25.7	2.98*
Peripheral vascular disease	168	14.3	1.44***
Arterial hypertension	16808	12.8	1.26*
Arterial hypertension with complications	1352	10.6	1.02
Paralysis	47	10.6	1.03
Other neurological disease	539	14.3	1.44*
Chronic pulmonary disease	4574	11.4	1.11***
Hypothyroidism	58	5.2	0.47
Kidney failure	1497	25.5	2.94*
AIDS	548	15.1	1.54*
Lymphoma	182	29.1	3.54*
Cancer with metastasis	85	45.9	7.30*
Tumor	1184	41.8	6.20*
Rheumatic diseases	150	8.0	0.75
Coagulopathies	44	20.5	2.21***
Obesity	51	11.8	1.15
Weight loss	857	32.2	4.10*
Hydro-electrolytic imbalance	724	25.0	2.87*
Iron-deficiency anemia	705	13.0	1.29**
Alcohol abuse	867	15.2	1.55*
Drug abuse	22	9.1	0.86
Psychosis	38	5.3	0.48
Depression	29	3.4	0.31
Diabetes	1686	12.9	1.28*
Diabetes with complications	3800	15.6	1.60*
Liver disease	634	23.8	2.69*
Peptic ulcer without bleeding	51	5.9	0.54
Anemia due to bleeding	52	7.7	0.72

*p < 0.005

**p < 0.025

***p < 0.10

Martins M. Comorbidity measures to predict death risk Rev Saúde Pública 2010; 44(3)

Table 1
Original list of components discussed during the 1st JA-CHRODIS WP6 Expert Meeting, identified by systematic review [10].

Type of component	Components
Delivery system design	<ul style="list-style-type: none"> - Regular comprehensive assessment - Multidisciplinary team - Individualized care plans - Appointment of a case manager
Decision support	<ul style="list-style-type: none"> - Implementation of evidence-based medicine - Team training - Developing a consultation system to consult professional experts outside of the core team^a
Self-management support	<ul style="list-style-type: none"> - Training of care providers to tailor self-management support for patients - Providing options for patients to improve their health literacy^b - Patient education^b - Involving family members and family education^b - Offering approaches to strengthen patients' self-management and self-efficacy - Involving patients in decision-making - Training patients to use medical devices, supportive aids and health monitoring tools correctly^b
Clinical information system	<ul style="list-style-type: none"> - Electronic patient records and computerized clinical charts - Exchange of patient information - Uniform coding of patients' health problems - Patient platforms allowing patients to exchange information with their care providers
Community resources	<ul style="list-style-type: none"> - Access to community resources - Involvement of social network - Psychosocial support^c

^a This component was added after discussion at the expert meeting.

^b These components were merged into others, as it was thought that they were not mutually exclusive.

^c This component was removed after discussion at the expert meeting.

- Ačiū už dāmesj!

