

Arbeidsnotater

T A T I S T I S K S E N T R A L B Y R Å

WORKING PAPERS FROM THE CENTRAL BUREAU OF STATISTICS OF NORWAY

IR 65/1

Oslo, 4 March 1965

Mortality from cardiovascular diseases in Norway

By

Ellen Blix

With the increasing proportion of persons living at later ages, cardiovascular diseases have formed a continually increasing proportion of all deaths in Norway during the last decades, and accounted for 51 per cent of all deaths in 1963.

The statistical material

The statistics on cause of death cover all deaths among population with permanent residence in Norway. Medical certificates are issued for 98.5 per cent of all deaths.

Cardiovascular diseases include vascular lesions of the central nervous system, diseases of the circulatory system and chronic nephritis, and are classified as underlying cause of death according to the detailed list and coding rules of the ICD. However, functional diseases of heart (conditions in no. 433), reported together with myocardial degeneration or arteriosclerosis (conditions in no. 422), are assigned to no. 422 also after the 7th Revision of the ICD was introduced.

For comparative purposes standardized death rates have been computed to adjust for regional differences in sex and age structure. The direct standardization method has been applied, and the sum of males and females, by 5-year age groups in the whole country per 1/11-1960, was used as standard population.

In 1963 about one-third of all cardiovascular deaths were assigned to vascular lesions of the central nervous system (no. 330-334), one-third to

coronary disease (420.1) and one-third to all other cardiovascular diseases. From tables 8 and 9 will be seen the autopsy rates, and additional information on the deaths assigned to coronary disease, which is not revealed by single-cause registration.

Mortality trend 1950-1960

After a decline in the general mortality rate for both sexes from 1950 to 1955, the rate for males had in 1960 again increased to the level of 1950, while the rate for females declined slightly also during the late 1950's. The death rate from cardiovascular diseases as a whole increased continually during the decade, the female death rate very slightly, with altogether 3 per cent from 1950 to 1960, the male death rate rapidly, with 20 per cent (see table 1). The increase was more pronounced in rural districts than in towns, and was principally due to the rising number of deaths assigned to the categories "arteriosclerotic and degenerative heart diseases" (no. 420-422), with an increase in the male death rate of altogether 60 per cent from 1950 to 1960.

To what extent this increase is due to changes in the diagnostic terminology used by the certifiers, is impossible to say. However, part of the increase is undoubtedly due to amelioration of the statistical material, with transfers from the categories "All other and unspecified heart diseases", and, in the age-groups 70 years and over, transfers also from the categories "Senility and other ill-defined or unknown causes" (see table 2).

Regional variations

The highest mortality rates for both males and females are found in our most northern county, Finnmark. Otherwise, the most striking feature of the geographical variations in general mortality, is the correlation between the male mortality level and the population density gradient from county to county. Higher mortality rates are found in towns, suburbs and other densely populated areas than in areas with a scattered population, and the type of habitation is more decisive than geographic region or climatic conditions. This factor does not, however, influence the mortality level of females to any great extent.

The population density gradient also holds for malignant neoplasms, diseases of the respiratory system and for cardiovascular diseases as a whole, but is most pronounced for arteriosclerotic and degenerative heart diseases, and in particular for the deaths within the latter categories assigned to coronary disease (420.1). When evaluating individual specific diagnoses, differences in medical supervision and diagnostic facilities in towns and

sparsely populated areas must be considered - reflected i.a. in the varying rates of ill-defined and unknown causes of death (see table 3). With due allowances for these facts, the standardised death rates for males, nevertheless, are considerably higher in towns than in densely populated rural areas, and higher in densely populated than in sparsely populated municipalities in all parts of the country. As far as the category "coronary disease" is concerned, there is apparently a certain difference also between the female rates in the different types of municipalities. In all types of municipalities the male death rates were more than twice the female death rates from coronary disease.

On the other hand, there was no significant difference in the male/female ratio of the deaths assigned to vascular lesions of the central nervous system - neither seem these deaths to be affected by differences in geographical region nor by population density gradient.

Corresponding variations in mortality were even more accentuated in the population at ages 40-69 years. When comparing the death rates in 1950 and 1960, the assumption of a transfer of deaths from ill-defined or unknown causes can be disregarded, as the deaths assigned to these categories have nearly doubled in towns, and also show a minor increase in the rural municipalities during the decade (see table 1). The male/female ratio of deaths from arteriosclerotic and degenerative heart diseases - of which 86 per cent were assigned to coronary disease (420.1) - was 3.85 for towns in all parts of the country, except in the most northern region, where the female death rates were considerably higher than elsewhere, the male/female ratio being 2.75 (see table 4).

According to the standardised death rates for the urban population in Norway in 1960, the mortality from cardiovascular diseases among men at ages 40-69 was higher than the mortality from all diseases among females, and equalled the general mortality of females at the same ages (see table 5).

With due reservations for a direct comparison of the individual types of municipalities in 1960 with the 1955 ones, the standardised death rates seem to indicate that the registered increase of 6 per cent in the general mortality among males at ages 40-69 during the second half of the 1950'ies probably is due to the increasing mortality from cardiovascular diseases, both in towns and in the different types of rural municipalities (see table 6).

Sex and age specific death rates at ages 40-69 are given in table 7.

Table 1. Total mortality and mortality from cardiovascular diseases in Norway. 1950-1960

Cause of death	Deaths per 100,000 population. Standardized rates ¹⁾					
	1951-1952		1954-1957		1959-1962	
	Males	Females	Males	Females	Males	Females
<u>All causes of death</u>						
Oslo	1,237	888	1,175	792	1,248	781
Bergen	1,239	854	1,188	845	1,216	832
Towns, total	1,225	901	1,158	809	1,234	803
Rural districts, total	985	870	952	802	989	786
The whole country	1,057	881	1,016	806	1,061	792
<u>Cardiovascular diseases, all groups</u> (no. 330-334, 400-468, 592)						
Oslo	566	407	568	394	631	396
Bergen	538	390	546	435	624	421
Towns, total	550	422	564	405	634	412
Rural districts, total	382	367	419	378	472	388
The whole country	431	385	464	387	518	395
<u>Vascular lesions of the central nervous system</u> (no. 330-334)						
Oslo	156	138	152	133	168	149
Bergen	162	140	136	146	178	148
Towns, total	168	150	157	144	178	153
Rural districts, total	122	140	132	144	142	149
The whole country	135	143	139	144	151	151
<u>Arteriosclerotic and degenerative heart disease</u> (no. 420-422)						
Oslo	263	143	315	160	372	168
Bergen	228	126	277	170	335	179
Towns, total	235	136	294	151	363	173
Rural districts, total	151	114	187	123	246	150
The whole country	176	121	219	132	282	158
<u>All other or unspecified circulatory diseases</u> (no. 400-416, 430-468, 592)						
Oslo	147	126	101	101	91	79
Bergen	148	124	133	119	111	94
Towns, total	147	136	113	110	83	86
Rural districts, total	109	113	100	111	84	89
The whole country	120	121	106	111	85	87

1) Standard population: Males + females, the whole country, per 1/11-1960.

Table 2. Increase (+) or decrease (-) in total mortality and mortality from cardiovascular diseases, senility and other ill-defined or unknown causes of death in towns and rural districts. 1950-1960

Cause of death	Standardized rates per 100,000 population							
	M a l e s				F e m a l e s			
	Towns		Rural districts		Towns		Rural districts	
	40-69 years	70 ys. +	40-69 years	70 ys. +	40-69 years	70 ys. +	40-79 years	70 ys. +
<u>All causes of death</u>								
1951-1952	1,218	9,642	827	7,986	744	7,982	697	7,577
1959-1962	1,321	9,607	905	8,069	651	7,379	613	7,243
Increase or decrease	+103	-35	+78	+83	-93	-603	-84	-334
<u>Cardiovascular dis., all groups (330-443, 400-468, 592)</u>								
1951-1952	528	5,058	323	3,744	301	4,433	269	3,810
1959-1962	642	5,674	426	4,475	261	4,485	254	4,186
Increase or decrease	+114	+616	+103	+731	-40	+52	-15	+376
<u>Vascular lesions of c.n. system (330-334)</u>								
1951-1952	121	1,757	78	1,329	103	1,605	102	1,476
1959-1962	104	1,982	82	1,579	83	1,744	90	1,650
Increase or decrease	-17	+225	+4	+250	-20	+139	-12	+174
<u>Arteriosclerotic and degenerative heart dis., (420-422)</u>								
1951-1952	274	1,943	154	1,360	93	1,461	79	1,213
1959-1962	447	2,883	279	2,081	116	1,868	100	1,630
Increase or decrease	+173	+940	+125	+721	+23	+407	+21	+417
<u>All other or un- specified circulatory diseases</u>								
1951-1952	133	1,358	91	1,055	105	1,367	88	1,121
1959-1962	91	809	65	815	62	873	64	906
Increase or decrease	-42	-549	-26	-240	-43	-494	-24	-215
<u>Senility n.o.s. (794)</u>								
1951-1952	-	261	-	710	-	360	-	928
1959-1962	-	135	-	363	-	171	-	439
Increase or decrease	-	-126	-	-347	-	-189	-	-489
<u>Other ill-defined or unknown causes, sudden death (res. 780-795)</u>								
1951-1952	46	188	43	317	11	101	21	276
1959-1962	83	280	49	342	19	153	20	214
Increase or decrease	+37	+92	+6	+25	+8	+52	-1	-62

Standard population: Males + females, the whole country, per 1/11-1960.

Table 3. Mortality from cardiovascular diseases by diagnostic groups in different types of municipalities. Standardized rates per 100,000 population. 1959-1962

Type of municipality ¹⁾	Diagnosis (international detailed list)						
	330-334, 400-468, 592	330- 334	420- 422	420.1	400-416, 430-468, 592	780- 795	782.4, 795.2
M a l e s							
Oslo	631	168	372	289	91	63	39
Bergen	624	178	335	250	111	54	28
Trondheim	633	173	372	292	88	57	43
1. All towns, average	634	178	363	274	83	63	37
2. Suburban municipalities ...	540	150	299	214	90	63	28
3. Industrial municipalities..	517	151	271	194	95	66	25
4. Other densely populated m..	520	161	271	204	88	86	30
5. Agricultural, fishing m. ..	418	132	213	137	74	88	27
6. Other sparsely populated m.	458	139	235	152	84	68	21
The whole country	518	151	282	199	85	71	28
F e m a l e s							
Oslo	396	149	168	105	79	26	12
Bergen	421	148	179	97	94	34	13
Trondheim	423	157	186	123	80	30	19
1. All towns, average	412	153	173	102	86	32	12
2. Suburban municipalities ...	403	152	159	89	92	36	9
3. Industrial municipalities..	402	146	168	91	88	57	9
4. Other densely populated m..	382	146	150	88	86	63	18
5. Agricultural, fishing m. ..	364	144	134	59	86	74	10
6. Other sparsely populated m.	388	150	150	70	88	59	9
The whole country	395	150	158	84	87	52	10

1) Definitions:

1. Towns.

2-6. Rural districts (municipalities).

2-4. Densely populated municipalities

A municipality is regarded as densely populated when at least 50 per cent of the resident population live in areas with a normal distance of less than 50 meter between the houses, and at least 200 persons in the agglomeration.

2. Suburban municipalities - at least one-third of the economically active population working in the nearest town.

3. Industrial municipalities - at least 50 per cent of the economically active population occupied in mining and quarrying, manufacturing, construction and electricity, gas, water and sanitary services.

4. Others

5-6. Sparsely populated municipalities

A municipality is regarded as sparsely populated when at least 50 per cent of the resident population live in not densely populated areas - as defined under 2-4.

5. Agricultural and fishing municipalities - at least 50 per cent of the economically active population occupied in agriculture and forestry, fishing, whaling and sealing.

6. Others

Table 4. Mortality from cardiovascular diseases at ages 40-69 years in densely and sparsely populated areas in different parts of the country. Standardized rates per 100,000 population. 1959-1962

Diagnostic groups Geographical areas	M a l e s				F e m a l e s			
	Towns	Rural districts		All muni- cipal.	Towns	Rural districts		All muni- cipal.
		Dense- ly pop.	Sparse- ly pop.			Dense- ly pop.	Sparse- ly pop.	
<u>No. 330-334, 400-468, 592</u>								
1. East country..	644	486	386	516	250	245	247	249
2. South country.	613	518	358	455	230	266	210	225
3. West country..	658	484	358	473	278	266	236	257
4. Trøndelag	730	480	387	471	275	262	261	266
5. North country.	618	598	476	524	369	291	285	301
The whole country.	649	498	395	498	261	257	249	256
<u>No. 330-334</u>								
1. East country..	107	82	85	94	80	80	93	84
2. South country.	84	68	58	67	64	72	72	70
3. West country..	95	79	71	80	86	88	77	82
4. Trøndelag	119	74	90	94	83	87	96	91
5. North country.	87	125	82	93	123	107	121	118
The whole country.	104	85	80	89	83	85	92	87
<u>No. 420-422</u>								
1. East country..	440	329	239	343	113	101	88	103
2. South country.	442	393	226	314	88	139	80	91
3. West country..	448	327	226	313	116	114	103	110
4. Trøndelag	512	327	226	311	133	113	100	111
5. North country.	468	398	326	362	170	128	92	113
The whole country.	447	339	239	333	116	110	94	106

Table 5. Mortality from malignant neoplasms and cardiovascular diseases compared to the total mortality at ages 40-69 years. Standardized rates per 100,000 population. 1959-1962

Type of municipality	Cause of death									
	Malignant neoplasm		Cardio-vascular diseases		All other diseases		Diseases Total		All causes of death	
	140-205		330-334, 400-468, 592		Residual 001-795		001-795			
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Oslo	333	233	651	244	292	123	1276	600	1358	629
Bergen	308	262	628	262	256	153	1192	677	1276	693
Trondheim	326	255	723	270	274	171	1327	696	1400	723
1. All towns, average..	306	237	649	261	269	126	1224	624	1225	647
2. Suburban municip. ..	247	234	512	246	196	113	955	593	1036	609
3. Industrial municip..	218	213	448	277	179	136	845	623	926	646
4. Other densely pop.m.	228	237	528	270	214	126	970	633	1071	654
5. Agricult., fishing m.	208	203	366	260	186	124	160	587	877	604
6. Other sparsely pop.m.	190	209	402	246	180	126	772	581	856	599
The whole country	241	224	498	256	216	126	955	606	1039	626

Table 6. Male mortality at ages 40-69 years by type of municipality in 1955 and 1960. Standardized rates per 100,000 population¹⁾

Type of municipality	Cause of death							
	Malignant neoplasms		Cardiovascular diseases		All other causes		All causes	
	140-205		330-334, 400-468, 592					
	1954-1957	1959-1962	1954-1957	1959-1962	1954-1957	1959-1962	1954-1957	1959-1962
Oslo	329	333	587	651	364	374	1280	1358
Bergen	318	308	551	628	424	340	1293	1276
Trondheim	306	326	657	723	387	351	1350	1400
1. All towns, average..	300	306	568	642	296	277	1154	1225
2. Suburban municip. ..	238	247	461	512	294	277	993	1036
3. Industrial municip..	245	218	428	448	306	260	979	926
4. Other densely pop.m.	221	228	423	528	301	315	945	1071
5. Agricult., fishing m.	207	208	322	366	262	303	791	877
6. Other sparsely pop.m.	213	190	347	402	279	264	839	856
The whole country	245	241	430	498	307	300	982	1039
Increase or decrease from 1954-1957 to 1959-1962 1954-1957 = 100								
Oslo		101		111		103		106
Bergen		97		114		80		99
Trondheim		107		110		91		104
1. All towns, average..		102		113		94		106
2. Suburban municip. ..		104		111		94		104
3. Industrial municip..		89		105		85		95
4. Other densely pop.m.		103		125		105		113
5. Agricult., fishing m.		100		114		116		111
6. Other sparsely pop.m.		89		116		95		102
The whole country		98		116		98		106

1) Standard population: Males + females, the whole country, per 1/11-1960.

Table 7. Sex- and age-specified death rates from cardiovascular diseases by geographical area and type of municipality 1959-1962

Geographical area Type of municipality	Deaths per 100,000 population												Stan- dardized rates 40-69 years	
	40-44 years		45-49 years		50-54 years		55-59 years		60-64 years		65-69 years			
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Nos. 330-334, 400-468, 592														
<u>East country</u>														
Towns	99	30	190	62	377	98	662	219	1270	469	1968	963	644	250
Densely pop.m.	91	30	134	48	291	86	497	235	922	481	1513	924	484	245
Sparsely " "	59	20	108	51	233	115	398	211	734	450	1225	983	386	247
T o t a l	83	27	147	55	307	100	532	220	1001	465	1589	962	516	249
<u>South country</u>														
Towns	100	45	263	-	586	141	618	242	912	373	1768	887	613	230
Densely pop.m.	114	20	170	71	394	138	549	126	940	481	1449	1161	518	266
Sparsely " "	96	40	113	58	227	61	434	234	562	316	1080	837	358	210
T o t a l	101	38	168	41	365	101	506	221	711	356	1312	896	455	225
<u>West country</u>														
Towns	83	29	206	63	400	113	745	263	1253	543	1966	1019	658	278
Densely pop.m.	50	30	191	64	270	115	426	210	994	458	1535	1105	484	266
Sparsely " "	55	26	127	55	216	111	365	150	591	434	1206	987	358	236
T o t a l	62	27	165	60	282	113	488	202	867	477	1494	1019	473	257
<u>Trøndelag</u>														
Towns	102	37	232	52	436	92	636	317	1668	420	2092	1106	730	275
Densely pop.m.	90	35	89	39	294	62	418	281	935	512	1646	1013	480	262
Sparsely " "	61	19	112	42	199	136	396	237	622	502	1423	992	387	261
T o t a l	75	26	133	44	262	114	448	265	872	483	1587	1025	471	266
<u>North country</u>														
Towns	52	31	154	110	429	102	733	324	1160	741	1850	1410	618	369
Densely pop.m.	98	34	174	88	352	97	734	170	1113	418	1754	1408	598	291
Sparsely " "	93	47	161	54	255	125	587	290	820	508	1450	1064	476	285
T o t a l	88	41	163	72	304	115	642	268	930	524	1570	1195	524	301
<u>The whole country</u>														
T o t a l	79	29	153	56	299	106	525	224	935	470	1550	1000	498	256

East country = Østfold, Akershus, Oslo, Hedmark, Oppland, Buskerud, Vestfold, Telemark.

South country = Aust-Agder, Vest-Agder.

West country = Rogaland, Hordaland, Bergen, Sogn og Fjordane, Møre og Romsdal.

Trøndelag = Sør-Trøndelag, Nord-Trøndelag.

North country = Nordland, Troms, Finnmark.

Table 7 (cont.). Sex- and age-specific death rates from cardiovascular diseases by geographical area and type of municipality

Geographical area Type of municipality	Deaths per 100,000 population												Stan- dardized rates 40-69 years	
	40-44 years		45-49 years		50-54 years		55-59 years		60-64 years		65-69 years			
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Nos. 330-334														
<u>East country</u>														
Towns	19	13	20	12	44	34	86	55	228	155	387	325	107	80
Densely pop.m.	15	11	11	15	29	24	48	81	154	179	360	278	82	80
Sparsely " "	9	7	21	22	33	48	61	75	169	151	340	390	85	93
T o t a l	14	10	18	16	37	36	69	66	191	159	363	337	94	84
<u>South country</u>														
Towns	-	34	26	-	45	28	73	54	166	109	303	240	84	64
Densely pop.m.	-	-	-	24	26	55	32	31	113	148	362	268	68	72
Sparsely " "	22	8	8	25	17	26	57	75	66	65	265	344	58	72
T o t a l	11	15	12	17	27	32	57	61	99	90	289	301	67	70
<u>West country</u>														
Towns	6	5	27	19	36	40	72	59	169	179	399	334	95	86
Densely pop.m.	6	7	26	11	13	40	64	46	180	196	299	363	79	88
Sparsely " "	9	11	18	18	34	36	60	45	112	140	292	323	71	77
T o t a l	7	8	23	17	30	38	64	50	142	164	325	334	80	82
<u>Trøndelag</u>														
Towns	10	9	55	21	48	31	55	79	324	117	362	364	119	83
Densely pop.m.	-	12	13	-	16	16	57	88	89	123	404	434	74	87
Sparsely " "	4	4	22	23	42	54	70	107	154	167	385	343	90	96
T o t a l	4	7	27	18	39	42	65	96	178	148	383	360	94	91
<u>North country</u>														
Towns	10	21	12	37	83	77	51	99	163	172	308	492	87	123
Densely pop.m.	18	7	40	30	23	26	117	85	225	143	503	523	125	107
Sparsely " "	12	16	18	14	16	61	67	171	153	205	353	407	82	121
T o t a l	13	14	23	21	27	55	77	139	170	186	382	447	93	118
<u>The whole country</u>														
T o t a l	11	10	20	17	34	39	68	77	171	158	354	347	89	87

Table 7 (cont.). Sex- and age-specific death rates from cardiovascular diseases by geographical area and type of municipality

Geographical area Type of municipality	Deaths per 100,000 population												Stan- dardized rates 40-69 years	
	40-44 years		45-49 years		50-54 years		55-59 years		60-64 years		65-69 years			
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Nos. 420-422														
<u>East country</u>														
Towns	64	4	135	20	278	37	468	97	852	208	1309	480	440	113
Densely pop.m.	59	8	90	13	211	21	383	89	630	193	951	444	329	101
Sparsely " "	31	2	72	9	150	36	281	72	453	170	706	379	239	88
T o t a l	51	4	101	15	218	33	383	88	659	194	1005	440	343	103
<u>South country</u>														
Towns	50	-	184	-	451	28	491	107	580	125	1313	407	442	88
Densely pop.m.	114	-	170	24	315	83	485	63	752	259	815	625	393	139
Sparsely " "	45	16	83	25	148	26	312	75	366	139	617	301	226	80
T o t a l	60	8	129	17	269	37	391	85	479	151	827	377	314	91
<u>West country</u>														
Towns	43	5	130	11	288	34	509	126	915	224	1276	467	448	116
Densely pop.m.	28	10	127	19	182	44	287	118	692	171	1021	495	327	114
Sparsely " "	29	4	80	22	139	34	246	56	387	209	735	459	226	103
T o t a l	33	6	106	18	192	36	331	93	604	207	950	468	313	110
<u>Trøndelag</u>														
Towns	51	19	176	10	375	61	526	149	1020	198	1448	546	512	133
Densely pop.m.	34	-	64	26	217	31	304	123	668	225	1056	434	327	113
Sparsely " "	43	4	76	4	142	46	281	74	376	187	843	447	226	100
T o t a l	43	7	94	9	201	47	335	102	544	196	993	472	311	111
<u>North country</u>														
Towns	31	-	119	49	332	13	614	127	854	465	1345	604	468	170
Densely pop.m.	61	-	100	37	274	26	489	74	762	227	1114	624	398	128
Sparsely " "	50	6	97	10	197	32	430	65	573	173	950	412	326	92
T o t a l	50	4	101	23	235	28	469	78	653	232	1034	490	362	113
<u>The whole country</u>														
T o t a l	46	5	103	16	215	34	377	96	626	198	984	451	333	106

Table 8. Sex- and age-specific autopsy rates from cardiovascular diseases

		Autopsies per 100 deaths at ages:					Total
		30-49 years	50-59 years	60-69 years	70-79 years	80 years and over	
No. 330-334							
Vascular lesions of central nervous system	Males	25.9	18.4	8.6	4.8	2.4	5.7
	Females	25.6	14.3	9.5	5.2	2.7	5.3
No. 420.1							
Coronary disease, heart infarction	Males	17.7	14.1	14.1	10.8	7.1	12.3
	Females	9.1	18.3	13.1	10.1	8.4	10.9
All other cardio- vascular diseases	Males	18.8	22.4	9.9	3.6	2.2	5.6
	Females	21.4	22.5	10.1	7.1	2.5	6.0

Table 9. Additional information on the medical death certificates in 1963 on deaths assigned to heart infarction, coronary disease

Cause of death assigned to 420.1	Number of deaths at ages:												Total	
	- 40 years		40-49 years		50-59 years		60-69 years		70-79 years		80 years and over			
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
<u>Infarctus cordis recens -</u>														
without previously known cardiovascular disease - based on														
1. external examination of body only	3	1	35	3	79	15	106	28	103	48	37	27	363	122
2. examination and/or treatment before death ¹⁾	8	3	75	9	222	39	403	169	435	296	211	184	1354	700
with previously known heart disease - conditions in														
1) 420.1, 420.2	7	1	71	4	258	33	483	153	389	232	111	98	1319	521
420.0, 422.1	3	-	2	1	27	5	69	23	103	91	85	89	289	209
433, 434, 422.2	-	-	8	1	20	5	39	14	41	37	31	36	139	93
440-447, 450	-	1	2	2	22	10	67	39	93	89	48	77	232	218
Coronary disease without mention of infarction ...	3	-	11	-	18	1	32	20	54	49	27	30	145	100
Late effects of infarctus cordis vetus, without mention of infarctus recens	-	-	8	-	40	5	88	21	61	53	30	29	227	108
T o t a l	24	6	212	20	686	113	1287	467	1279	895	580	570	4068	2071

1) with or without autopsy verification.