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PATTERNS AND PREDICTORS OF DRUG USE

A pharmacoepidemiologic study, linking the analgesic drug prescriptions to a population health survey in Tromsø, Norway.

by
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LIST OF PAPERS

The thesis is based on the following papers, which are referred to in the text by their Roman numerals.

I. Eggen, AE. Drug use in a free-living population - the influence of age, gender, diseases and place of residence on drug use in Norway. Submitted.

II. Eggen, AE. Pattern of drug use in a general population: Prevalence and predicting factors. The Tromsø Study. Int J Epidemiol 1994; 23: 00-00, in press.

III. Eggen, AE. The Tromsø Study: Frequency and predicting factors of analgesic drug use in a free-living population (12-56 years). J Clin Epidemiol 1993; 46: 1297-1304.

IV. Eggen, AE, Andrew M. Use of codeine analgesics in a general population. A Norwegian study of moderately strong analgesics. Eur J Clin Pharmacol 1994; 46: 491-6.

V. Eggen, AE. The use of controlled analgesics in a general population (15-59 years) - the influence from age, gender, morbidity, lifestyle- and sociodemographic factors. Submitted.

1. INTRODUCTION

Norwegian studies of drug use in the population are mainly based on aggregated data from drug sales and to a lesser extent on prescriptions. Norwegian drug sales statistics are the only information available today on a national or regional level. There have been very few published Norwegian studies [6,7,8,18,19,42,48,49].

Though the sales of drugs in Norway have been fairly stable over the years [99], the health workers through the mass media regularly focus on misuse and alarming increase in consumption of drugs.

Analgesics are an interesting drug group to study, since they are widely used, there is a marked gender difference in use [30,54,63,82,110,117,128], and some authors have interest of the existence of subgroups in the population with the very unhealthy habit of using high and frequent doses of these drugs [34,60,81,91,93-95,102-103]. There has been a particular focus on codeine preparations. These have a misuse potential, and should also be used with care in the elderly [38,52,62,87,118,145].

There have also been substantial interest shown in the reported regional differences in drug use [99]. As an annual event the Norwegian Medicinal Depot publishes its drug sales statistics, and the media show great interest in these regional differences. Several Nordic studies [8,18,19,58,142] have supported this observation.

However, the explanations regarding these differences are very few.

Variation in the use of drugs in the population, prediction of the use, together with the generation of hypotheses exploring that variation, is the object of pharmacoepidemiology. While drug utilization studies employ various sources of information focusing on drugs, e.g. wholesale and prescription registers, the term "epidemiology" implies that pharmaco-epidemiologic studies are population-based, and link health events to drug use [13,14]. Porta and Hartzema define the discipline as **"the application of epidemiologic knowledge, methods and reasoning to the study of the uses and effects of drugs in human populations"** [104].

Therefore, combining information from both population-based health surveys and prescription registers, using the already existing epidemiologic methods for analyzing individually based information on drug use in the population, were some of the main challenges in this work.

The purpose of the study may be summarized as follows:

- What is the frequency of drug use in the population, frequency of analgesic drug use in general and particularly the use of controlled analgesics?
- How will morbidity, demographic pattern and lifestyle characteristics influence this drug use, and which factors explain the observed differences in drug use?

2. STUDY POPULATIONS AND METHODS

The Tromsø Study was the fundamental in this study. The controlled analgesics prescriptions were collected from the pharmacies in Tromsø, and the information were accumulated on the individual users. The information were linked to the Tromsø Study. The Norwegian Health survey was analyzed to compare the drug use in Tromsø with national figures. Table 1 shows the different study populations included.

Table 1. A description of the studies included in the thesis.

THE STUDY POPULATION	DRUG USE MEASUREMENT	DRUGS INCLUDED
Paper I **THE NORWEGIAN HEALTH SURVEY** 1985 Norwegian population Household survey All age 5202 random households In home interview The attenders: 5454 women, 5122 men Attendance: 78.7%	Self-reported drug use. Drug use 14 days prior to the interview, due to disease/illness/injury arising before the interview.	Non-prescribed & prescribed drugs Other variables: Region Morbidity Sociodemography
Paper II and III **THE TROMSØ STUDY** 1986-87 The Tromsø population All invited 12-56 years Health screening and questionnaire I Questionnaire II filled in at home The attenders: 9864 women, 9273 men Attendance: 75 % Response rate to questionnaire: 91.7%	Self-reported drug use Have You taken any of the following medicines during the preceding 14 days?: Analgesics? Fever medication? Anti-migraine medication? Antiepileptic medicine? Eczema skin ointment? Sleeping pills? Nerve pills? Antihypertensive medication? Nitroglycerine? Heart medicine? Other?	Non-prescribed & prescribed drugs Other variables: Morbidity Lifestyle Sociodemography Consumption of health services
Paper IV **THE PRESCRIPTION STUDY OF CONTROLLED ANALGESICS** 1989-90 The population of Tromsø and surrounding municipalities All age All prescriptions from pharmacies in Tromsø serving a population of about 68 000 inhabitants 10 824 prescriptions The users: 3083 women, 2223 men	Prescriptions collected from the pharmacy Drug user = a subject purchased one or more prescriptions of controlled analgesics during one year Drug use measured in amount of defined daily doses (DDD)	Prescribed drugs Controlled analgesics, not narcotics or anti-migraine. Defined daily doses (DDD) Other variables: Age Sex Place of living Prescriber Dispensing date
Paper V **THE LINKAGE STUDY:** **The Tromsø Study and The Prescription Study** 1990 The Tromsø population 15-59 years Number of subjects: 9670 women, 9141 men The users of controlled analgesics:1000 women 701 men	As paper II, III and IV.	As paper II, III and IV

2.1 *The Norwegian Health Survey 1985 (I).*

The data for the Health Survey 1985 were collected by Statistics Norway through interviews with the members of private households [125]. Persons residing in health institutions, homes for the elderly etc. were excluded from the sample. The households were selected in two stages. The whole country was first divided into sample areas (based on the municipalities). Towns of more than 30.000 inhabitants were treated as separate strata, while the remaining sample areas were stratified by type of municipality (i.e. industrial structure and centrality) and number of inhabitants. The sample areas were grouped into 102 strata, where one sample area was drawn from each stratum.

First stage sampling was done by selecting all sample areas which constituted separate strata, and then sample areas within the remaining strata were selected with a probability equal to the share of the population within the stratum. At the second stage the 5202 private households were drawn at random. An interviewer visited the household members at home, asking questions regarding health conditions, opinion of own health, lifestyle and contact with the health services. The survey covered a period of 14 days before the interview. Questionnaires to persons 0-15 years were answered by their parents or another adult responsible for the child.

The response was 78.7 per cent of the gross sample of 13,438 persons. There were 5,454 women and 5,122 men included in the survey.

2.2 *The Tromsø Study 1986-87 (II, III and V)*

In 1986-87 all men and women aged 20-61 and 20-56, respectively, and a 10% sample of the population aged 12-19, living in the municipality of Tromsø, northern Norway, were invited to participate in a health survey. The municipality of Tromsø is large in area (2500 km^2), and has a population of about 50 000 citizens. However, the population is mainly concentrated in the town of Tromsø, and residents outside the town live mainly on farming and fishing.

The subjects in Tromsø were drawn from the Central Population Register, which includes all persons registered as resident in Norway, and is based on population censuses and yearly data on births, deaths and migrations. 21 647 (75%) of the invited population attended the examination. However, after exclusion of subjects who were dead, had moved or were temporarily absent at the time of the survey, the adjusted response rate became 81.4%. The invited persons completed a self-administered questionnaire covering smoking habits, physical activity in leisure time and status of employment before the screening. The questionnaire was checked at the examination and inconsistency was corrected. Height, blood pressure, and weight were measured. A non-fasting blood sample was collected measuring among other factors (serum cholesterol and gamma-gt). A second questionnaire was handed out to be filled in at home and to be returned by mail. This included more detailed questions about the subject's use of health services, dietary habits, sociodemographic characteristics, diseases and symptoms, and a set of questions about use of different drugs during the preceding 14 days. The questionnaire was returned by 91.7% of those who attended the screening (i.e. 74.6% of the invited population). The study included subjects younger than 57 years of age answering questionnaire I and II, i.e. 9864 women and 9273 men.

Responders who answered "yes" to the question on drug use were defined as users. The others were defined as non-users, because when the responders answered the list of questions on drug use in the questionnaire, some reported only "yes" on drugs they used and left out all the "no"-answers.

2.3 *The Prescription Study (IV and V)*

All prescriptions for controlled analgesics dispensed during one year (01.03.89 to 28.02.90) from the three pharmacies in the municipality of Tromsø, Norway, were collected from pharmacy records. The controlled analgesics included mainly the combined codeine preparations, i.e. 30 mg codeine in combination with either 500 mg paracetamol, acetylsalicylic acid or phenazone (see table 2). Others were pentazocine, buprenorphine and plain codeine preparations. Some few combination products with only 8-10 mg codeine per dose were excluded from the study. They are not controlled analgesics and rarely prescribed.

The three pharmacies serve the municipality of Tromsø, as well as five surrounding, sparsely populated municipalities without a pharmacy. Totally, the pharmacies cover approximately 68 000 inhabitants.

Persons were identified through name, address and birth date, and drug use was accumulated on each individual. In this part the Central Population Register was used, which includes all persons registered as resident in Norway. Prescriptions to persons living outside the study area and prescriptions without a specific patient name were excluded.

The information from the prescription survey, was linked to the Tromsø Health Study population (V). The number of subjects was corrected for migration in the period 1987-90 (status per 31.12.90). The study sample comprised 9670 women and 9141 men between 15 and 59 years of age. There were 1000 and 701 women and men, respectively, who had purchased one or more prescription of controlled analgesics during the year.

Table 2. Drugs sales in 1990 in Norway and in Troms county (from wholesaler to pharmacies) according to type of analgesic drug (Norwegian drug statistics and Solveig Sakshaug, personal communication).

ATC-number	GENERIC DRUG NAME	NORWAY DDD/1000 INHABITANTS/DAY	TROMS COUNTY DDD/1000 INHABITANTS/DAY
NARCOTIC ANALGESICS			
N02 AA01	Morphine	0.73	0.96
N02 AB02	Pethidine	0.06	0.06
N02 AC02	Metadone	0.03	0.01
N02 AC03	Piritramide	0.002	-
N02 AG01	Morphine+spasmolytics	0.03	0.007
N02 AG02	Ketobemidone+spasmolytics	0.19	0.09
N02 AC54	Dextroprophoxyphene	1.62	0.77
Sum narcotics:		2.66(6.8%)	1.90(6.6%)
CONTROLLED MODERATELY STRONG) ANALGESICS			
N02 AE01	Buprenorphine[1]	0.13	0.05
N02 AD01	Pentazocine	0.22	0.05
N02 BA51	30mg Codeine+ASA[2]	0.06	0.02
N02 BB51	20mg Codeine+phenazone	0.15	0.21
N02 BE51	30mg Codeine+paracetamol	11.13	8.70
Sum controlled analgesics:		11.69(30%)	9.03(31%)
NON-RESTRICTED MINOR) ANALGESICS			
N02 BA01	ASA+10mg codeine/coffein.	0.02	0.01
N02 BA11	Diflunisal	0.20	0.05
N02 BA01	ASA[3]	5.12	4.40
N02 BB01	Phenazone[3]	0.03	0.03
N02 BB51	Phenazone+coffeine[3]	5.96	2.66
N02 BB54	Propyphenazone[3]	1.78	1.60
N02 BE01	Paracetamol[3]	11.72	9.30
Sum non-restricted analgesics:		24.83(63%)	18.05(62%)
Total N02 A+B		39.18(100%)	28.98(100%)

[1] Classified as a narcotic analgesic after July 1st 1990
[2] ASA= Acetylsalicylic acid
[3] Available without a prescription.

2.4 *Units of measurement*

The drug user. The drug user is defined as a subject reporting use of one or more drugs during the preceding 14 days (I,II, and III). This included both prescribed and non-prescribed drugs (see below).

In paper I: Drug use in the survey period (= the 14 days prior to the interview) included drug use for both diseases (= diseases/illness/injuries) arising before the survey period started and/or diseases (= diseases-/illness/injuries) arising during the survey period.

In paper II and III: Drug use was recorded using the following questions: Have you taken any of the following medicines during the preceding 14 days? (yes/no): Analgesics? Fever medication? Anti-migraine medication? Antiepileptic medicine? Eczema skin ointment? Sleeping pills? Nerve pills? Antihypertensive medication? Nitroglycerine? Heart medicine? Other?

In paper IV and V: The drug user is defined as a subject purchasing one or more prescriptions of controlled analgesics during the preceding year, but will not include non-prescribed drug use.

The prescribed drugs. These include all prescribed drug use, i.e. all drugs taken following more or less the doctor's prescription. The prescribed drugs may include both prescription and non-prescription drugs, but the latter are rarely prescribed.

The non-prescribed drugs. These include the non-prescribed drugs, i.e. all drugs taken on the subject's own initiative, and may partly be on the recommendation of health personnel or a lay person. The non-prescribed drugs cover all drugs taken from the medicine cupboard at home or at work, or obtained from others (e.g. the family, colleagues or friends). These drugs include both prescription and non-prescription drugs.

Defined daily doses (DDD). Drug use is measured in Defined Daily Doses (IV and V). One DDD is defined as the assumed average dose per 24 hours, used for the main indication of the preparation. Taking combined codeine preparations as an example, one DDD equals four tablets, each containing 30 mg codeine and e.g. 500 mg paracetamol.

Defined daily doses /per 1000 inhabitants/per day is normally used as a general population drug exposition measure, when one has only aggregated drug data, with no information on the number of users or the definite size of the population [28]. DDD/1000 inhabitants/day may only be used as an estimate of the proportion of drug users in the population, provided that the drugs are taken continuously and that the defined daily dose is in agreement with the prescribed dose of the drug [143].

2.5 *Sources of aggregated drug use data.*

No figures from the Norwegian drug statistics have been published in the papers I-V. However, the use of aggregated drug data are widely discussed in section 3.1. The data sources are therefore presented in this method section.

Norwegian wholesaler's sales statistics. Data on the total drug sales in Norway are published annually, and are provided by the continuous monitoring of all drugs supplied from the wholesaler (Norwegian Medicinal Depot) to the pharmacies. Each delivery of a drug is registered by an article number - which identifies the drug by brand name, dosage form, strength and pack-size - and the pharmacy receiving the drug.

This information is continuously processed to provide the data for the total sales statistics, both on a national and regional level. The drug sales statistics give measurements in cash value or defined daily doses of drugs sold. The size of the population or the number of users in the population is not known, and the unit of measurement is normally the exposition measure "number of defined daily doses per 1000 inhabitants per day". This unit of measurement is used to compare drug use in different countries, regions and municipalities and also in hospitals and hospital departments [99]. However, since January 1st 1994 the Norwegian Medicinal Depot (NMD) no longer has the monopoly of drug sales to the pharmacies, and soon at least a few competing wholesalers will be selling drugs in Norway. NMD still intends to continue publishing sales statistics covering all drugs sold in Norway (Solveig Sakshaug, Norwegian Medicinal Depot, personal communication). However, the data collection in the future will probably be followed by problems, since the Norwegian Medicinal Depot will have to ask for sales data from competing firms. Statistics from Norwegian Medicinal Depot is the only published information on drug use in Norway.

The Diagnosis-Therapy Survey. The Diagnosis-Therapy Survey started in 1990, and is the Norwegian part of an international survey mainly financed by the pharmaceutical industry. The survey is based on a continuously rotating sample of practicing doctors in Norway [12]. There are 250 doctors participating in the study for one week twice a year (not always the same doctors). The doctors are taken from a list of the 4000 general practitioners and specialists working outside institutions. They prescribe on self-copying forms, and the following information is recorded on each consultation: The indication for treatment classified by the ICD-9 diagnosis classification, the name of the drug which is prescribed (if any), age and sex of the patient. The survey provides information on which drugs are used for different specific indications, and which indications are treated with a specific drug. The survey may be considered practically as unpublished, though Øydvin has published some sparse information in the 1993 edition of "Drug consumption in Norway" [99].

The Norwegian Association of Proprietor Pharmacists' database. The Norwegian Association of Proprietor Pharmacists collects all sales data from 22 pharmacies of the 339 pharmacies (314 "primary" pharmacies and 25 hospital pharmacies) in Norway.

These pharmacies are sampled from different strata reflecting differences in function (hospital or community pharmacy, night services, or location urban or rural pharmacies).

They must also have a special data system (NAF-I-NETT system). About 95% of the pharmacies are computerized, but only about 50% of the pharmacies have NAF-I-NETT system. The following information is recorded on each prescription: the drug (brand name, dosage form, strength, pack-size) and number of items, dosage, directions for use, date of birth of the patient, and one of 40 different disease-groups reimbursed by the National Insurance Administration. About 45% of pharmacies turnovers are drugs reimbursed by the National Insurance Administration. The database contains about seven per cent of the prescriptions dispensed in Norway (Helge Meidell, The Norwegian Association of Proprietor Pharmacists, personal communication). The database may provide representative information on pharmaceuticals dispensed in Norway, and information needed to make estimates of national expenditure for different drug groups. No information from the database is published.

3. MAIN RESULTS AND DISCUSSION

3.1 *Methodological considerations*

3.1.1 Measurements of drug use in the population

Aggregated versus individual data.

There are two principally different methods of measuring drug use in the population, aggregated data and individual based drug use data. The best Norwegian example of aggregated drug data are the **sales statistics from The Norwegian Medicinal Depot**, which are based on drug sales from this wholesaler to Norwegian pharmacies. Drug sales statistics have been used in several nordic studies [2,7,8,13,18,58,73,130,142].

Aggregated data may also be based on prescriptions. Statistics from **The Norwegian Association of Proprietor Pharmacists' database**, give additional information on the age of the drug users. However, sex-specific statistics are not available, although gender is an important factor when analyzing drug use. The database is not validated, and nothing is published.

Statistics from the **Diagnosis and Therapy Survey** may give the diagnosis profile for a specific drug product and the product profile for a specific diagnosis/symptom. However, the statistics are limited to information from general practice and few studies have been published based on them [9,12,53,129,132,142].

None of the information described above is individually based. Information about drug use in the Norwegian population based on data collected on an individual level, can only be available through specific surveys in the doctor's case records, dispensed prescriptions or interviews.

The use of aggregated data (e.g. the sales statistics) in measuring drug use in the population has obvious limitations. The sales statistics include drugs sold both to institutions and to the free-living population. Sales statistics are not adjusted for age or gender or for differences in morbidity, and they report only where drugs are sold, not where the drug users live. This leads to an overestimation of the drug consumption in places with many medical specialists, institutions and hospital beds, many work-places, places with an elderly population, or places attracting subjects with heavy social and medical problems. The region including the capital is an example of this phenomenon. The capital has very high drug sales compared to other regions. However, in our study (I) the adjusted frequency of drug users in the capital was not significantly ($p>0.05$) higher than in the rest of the country. This phenomenon has greatest impact on areas near the capital, but will certainly influence all regions in Norway. The regional differences in drug use would probably be markedly reduced if the regional drug statistics could be adjusted for age and gender, and controlled for where people actually live.

Drug sales statistics are useful for estimating drug costs and evaluating drug consumption on a national level, and for generating hypotheses on drug use when comparing, for example international figures on the total amount of drug products sold in different populations. However, information on the number of actual drug users in the different populations and individually based drug use data is essential, when discussing subjects such as drug use differences in subgroups of the population, doctors' practices and regions. Knowledge about the drug users' age and gender would be necessary, and the value of drug statistics without this information has to be limited. Lacking this information one would have to ask how substantial demographic and mobility factors are in explaining the observed differences in drug use.

If the information on drug use are on an individual level and morbidity data are available, we have the opportunity to adjust for both demographic and morbidity differences. Then we may discuss differences in drug use due to other factors, such as differences in doctor's prescribing habits, differences in the subjects attitudes to using drugs, overuse or misuse problems in the region, access to drugs and health services.

The conclusion is that when searching for explaining factors in the individual (user or prescriber), one should collect information on the individual level.

Drug use accumulated on the individual level. Individually based drug use data may be collected both through dispensed prescriptions and interview.

Dispensed prescriptions. In densely populated areas with large towns and suburbs, one has to collect prescription data from many pharmacies in order to have nearly complete records of prescription drug use. Parts of the population may live in one municipality, work in a second, and do daily shopping in a third municipality. The drugs may be bought in all of these places. The pharmacies represent an easy and effective way of collecting drug use data on an individual level, and they have the total prescribed drug history in their data files. However, the prescriptions lack a patient and a doctor identity number.

Individual drug use data may also be collected from doctors' records, but this can overstate the prescription drug use. The patients never buy between 6 and 20 per cent of the drugs prescribed, also called primary non-compliance [10,12,57,97]. This includes prescriptions which never reach the pharmacy, with a marginal contribution from dispensed prescriptions the patients never buy. Drug exposure can therefore probably be more accurately estimated from dispensing rather than prescribing data.

Interview. The "total" drug use, including the non-prescribed drugs and adjusted for non-compliance with the prescribed regimens, may only be gathered by interviewing the subjects. Personal interview or postal questionnaires may influence the level of reported drug use. The methods give the possibility of interviewing both the users and non-users of drugs, including morbidity, health service consumption, demographic and lifestyle characteristics in the data collection.

Recall may be a problem. The questions in an interview survey cover different periods of drug use (drug use the preceding 24 hours, week, two weeks, month, six months, 12 months). Both the reported results and recall problems vary with the period chosen. When choosing a short period preceding 24 hours) the drugs used regularly will dominate, but will probably give high recall. A longer period will probably include both regularly and occasionally used drugs, but will also probably lead to more recall problems. In general, the reliability of drug use information is probably poor for drugs taken intermittently, good for drugs taken on a regular basis, and more consistently reported when duration of use is prolonged [72].

The agreement between self-reported drug use and prescription data varies with type of drug studied [23,101]. Recall of regularly used drugs decreases with increasing age and number of prescribed drugs per subject, and improves when the drugs are analyzed according to therapeutic main groups, rather than on chemical entity level [23].

We conclude that interview on drug use is the only way of recording both prescribed and non-prescribed drugs. The main disadvantages are recall problems, and the potential differences in the subjects' individual interpretation of the term "drug".

Interpretation of drug use.

The pharmacists may have precise opinions on what is to be defined as a pharmaceutical preparation, but the judicial definition is very wide (remedies to treat, prevent or detect diseases or illnesses). Lay persons may have different interpretations of the term "drug" than pharmacists, and these may vary among the individuals [47]. The various interpretations may have significance for the reported level of drug use, especially regarding non-prescribed drug use. The population studies may therefore differ with respect to what is included as drug use.

Oral contraceptives. These are prescribed by doctors, and maybe interpreted as drugs by interviewees, though these remedies do not treat, prevent or detect diseases or illnesses. The studies are not consistent regarding the inclusion or exclusion of oral contraceptives, which have the strongest influence on the level of drug use in the younger adults (15-35 years of age). When reporting gender differences in drug use, it is important to make it clear whether or not this typical sex-specific drug is included.

Iron, vitamins and mineral preparations - drugs or dietary supplements? All iron, vitamins and some mineral preparations are drugs by the general definition. However, only a part of them are sold exclusively at the pharmacy. Most of them, i.e. cod liver oil, the multi-vitamin and mineral preparations with low doses of vitamins/minerals /iron, are given an exception from the regulations and may be sold in ordinary shops as dietary supplements. Preparations used for medically diagnosed deficiencies or specific diseases are probably interpreted as drugs, while the dominant part of these preparations will be considered as a dietary supplement (non-drug). Studies of drug use are not consistent regarding the inclusion of these preparations. This has strong influence on the level of drug use in all age groups, especially in the youngest age groups (see table 3).

The gender difference may also be strongly influenced. One way of handling this problem is to include separate questions about dietary supplements.

Herbal, natural and other alternative remedies. This is a group among the non-prescribed drugs, which probably has limited relevance for the level of drug use. For example drinking horsetail tea to prevent cystitis, or fennel/camomile tea for upset stomach may be interpreted as drug use. Treatment based on unconventional principles like anthroposophic and homeopathic drugs may also be included in drug use. Use of these "alternative" drug treatments has increased significantly since the seventies, but few products are sold through the pharmacies. The level of drug use will most probably be influenced by the use of these products. However, the extent of use will be determined by national therapeutical tradition.

Table 3. Proportions of users of different remedies the preceding 14 days according to age and sex. Norwegian Health Survey.

Age	No of responders W	M	Drugs only W	M	Drugs and iron preparations W	M	Drugs, iron-vitamin/mineral preparations W	M	Vitamins/ minerals only W	M	Iron supplement only W	M
0-4	299	287	27.2	26.6	29.2	27.7	76.3	81.5	73.1	80.1	2.6	3.3
5-9	358	362	20.4	19.1	21.8	21.0	64.5	58.0	62.3	55.2	1.7	2.5
10-14	467	432	18.6	19.7	23.1	23.8	53.1	50.0	46.0	40.5	5.9	5.0
15-19	398	427	31.9	18.3	39.7	22.7	57.8	39.8	38.7	30.4	12.9	6.8
20-24	356	293	31.7	23.9	44.9	27.3	65.7	42.0	47.2	24.9	19.9	4.1
25-29	400	343	34.0	22.4	48.8	25.9	69.5	45.2	51.0	32.4	21.8	5.0
30-34	414	379	31.6	26.4	45.4	28.5	72.9	47.0	56.3	32.7	19.9	3.4
35-39	442	433	32.4	27.3	43.4	31.2	64.7	49.4	49.8	33.0	18.3	5.8
40-44	314	372	36.3	28.5	44.9	31.5	68.5	46.0	53.5	33.1	16.0	4.3
45-49	259	256	39.4	39.1	49.8	41.4	69.1	53.9	52.5	35.5	22.5	3.9
50-54	234	233	47.9	34.3	58.5	36.9	77.4	54.5	57.7	31.3	19.7	3.9
55-59	267	254	52.1	44.5	58.8	46.5	74.9	59.4	53.6	35.4	10.6	4.3
60-64	287	274	57.1	51.1	61.0	55.5	78.4	66.8	58.9	43.8	10.5	9.2
65-69	300	248	61.7	58.8	67.3	62.5	84.3	72.6	58.7	45.6	13.0	7.8
70-74	226	234	73.9	58.5	77.0	62.0	89.4	71.4	63.3	40.6	20.0	6.5
75-79	204	125	72.5	56.0	75.5	60.8	86.8	74.4	57.8	44.0	20.6	10.4
80+	186	111	73.1	60.4	77.4	64.9	90.3	73.0	65.1	38.7	21.5	11.7
0-80+	5454	5122	39.8	32.2	47.5	35.4	70.9	55.4	54.6	39.8	14.7	5.3
Age adjusted			40.9	31.8	48.6	35.2	71.5	54.6	54.8	39.1	15.1	5.2
TEST gender 0-80+ p<			.0001		.0001		.0001		.0001		.0001	
age trend 15-80+ p<			.0001	.0001	.0001	.0001	.0001	.0001	.0001	. 0001	.0001	.0001

3.1.2 The cross-sectional studies

Selection bias.

It is usually not possible to determine the magnitude of selection bias, but the probable direction of the bias may be indicated. Although the overall attendance rates in the population studies were fairly high, the adjusted response rate was only 60% in 20-24 year old Tromsø men [26], and about 67% in the age group 16-24 years of age [125].

The attenders to a health screening may differ from non-attenders in many respects. Non-attenders tend to be men, in the younger age-group, with social and medical problems, and higher morbidity and mortality than the attenders [63,116,134,136].

However, at least two sorts of non-attendance may influence the estimates quite differently: healthy subjects temporarily out of town due to schooling or military service, and subjects with high morbidity and no interest in a health screening, maybe because they are too ill to travel or they already have regular health examinations. The Tromsø Study covers the young and middle-aged population with the highest proportion of non-attenders in the youngest and healthiest part of the population. The bias is therefore considered to be of minor importance and not affecting the main trends and conclusions.

Paper IV and V included only prescribed drug use. Drug-using subjects living in institutions are not included, who probably have more health problems and higher drug use than those living outside institutions.

The selection bias may be different in elderly men and women. More men suffering from illness than women (compared with all men and women) live outside health institutions i.e. more men than women have their spouse alive to look after them. The observed gender difference among the eldest subjects may therefore be underestimated.

The non-attenders to the health screening. A higher drug use was observed among the non-attenders i.e. invited subjects who did not attend the screening in The Tromsø Study, than among the attenders. Almost all migration in Norway is registered by the authorities, since registration is obligatory. However, some subjects may have moved temporarily without registration. Since the registered migration was higher among non-attenders than attenders, this indicates that the difference in codeine drug use may be even higher (V). Our estimates on drug use should therefore be considered as conservative.

The non-responders to the health questionnaires. These non-responders attended the screening, but did not return the questionnaire to be filled in at home. In the Tromsø Study 91.7% of the attenders to the screening returned the questionnaire. The response rate was lowest in men aged 20-29 years of age (87%) and highest in age groups aged 50 years or more (94%). The non-responders were younger than the responders in both sexes ($p<.0001$). The proportion of controlled analgesic users was higher among the non-responders (13.0% users (women), 10.5% users (men)) than responders (10.3% users (women), 7.7% users (men)). The difference was significant in both women ($p=.010$) and men ($p=.002$).

More daily smokers were observed among the non-responders (56.5% smokers (women), 53.8% smokers (men)) than the responders (44.9% smokers (women), 44.3% smokers (men)). The difference was significant in both sexes ($p<.0001$). A slightly higher mean gamma-glutamyltransferase (GGT) level was observed among the non-responders (mean ggt = 24.2(men), 14.9(women)) than in the responders (mean ggt 22.1(men), 13.7(women)). The difference was significant in both sexes ($p=.02$). The proportions were age-adjusted with ANOVA.

Jacobsen [66] concluded that the differences between responders and non-responders to health questionnaires were minor, and they found that the responders tended to be married, non-smokers with minor or non-existent differences in age, body mass index, blood lipids, blood pressure and gamma-glutamyltransferase (GGT) level. A later study confirmed these results [67]. Our study showed that the non-responders differed from the responders with respect to a lower mean age, higher proportion of controlled analgesic drug users and daily smokers, and higher mean gamma-glutamyltransferase (GGT) level. However, due to the low number of non-responders, the bias introduced is likely to have only a modest influence on the estimates. This selection bias probably leads to an underestimation of the association between the predicting factors and drug use. The extent of regular drug use in the general population is probably conservative, since the heaviest drug users are underrepresented in the health survey population.

Information bias.

The length of the time period. The reported drug use from the cross-sectional studies, asking for drug use during the preceding 14 days, is dominated by the regularly used drugs i.e. drugs for chronic conditions. The sporadically used drugs, i.e. drugs used now and then for treatment of menstrual discomfort, infrequent headache problems, upset stomach, are only included by the few who had these problems recently.

Recall. In general the longer the time period to recall, the more problems with remembering all the drugs used. The recall problem in a two-week time period is widely used in health surveys. The subjects in the Tromsø Study were specifically asked, with a few exceptions like analgesics, about drugs only available on prescription. Asking more specifically about use of non-prescription drugs, as was done in the Finnmark Study [48], may help the subjects to remember more sporadic drug use. This may have an impact on the reported level of drug use, and may be one explanation why Finnmark county has a higher level of drug use than was found in the Tromsø study (II). However, the recall problem is assumed to be small in the Tromsø study, since the subjects were young and healthy.

The information on drug use was collected in two different ways in the cross-sectional studies. The Tromsø Study collected the information mainly through questionnaires, while in the Norwegian Health Survey an interviewer interviewed the subjects in their homes. This difference may influence the results on the level of drug use. One may speculate that if the questionnaire gives the subject a feeling of being anonymous, this may increase the report of drug use

such as the non-prescribed prescription drugs obtained from others, or of more sensitive drug use such as use of nerve pills etc. On the other hand, using an interviewer may increase the recall, and the home interview gives subjects the opportunity to look into their medicine cupboard. However, both surveys have the time period in common, and the questions in both surveys emphasized regularly used drugs.

Misclassification bias.

In the Tromsø Study the subjects were considered to be non-users of drugs if they had not answered the question on drug use. This may lead to an overestimation of non-users and an underestimation of the effect from variables where a high proportion of subjects had not answered the question. When excluding subjects with missing information on analgesic drug use, the proportions of analgesic drug users increased in all variables. However, this had no significant influence on the odds ratios.

The term "drug use" mainly included only regular pharmaceutical preparations in the Norwegian Health Survey. Herbal remedies were probably excluded, since the question on where the subjects had obtained the drugs was focused on prescribed drugs or drugs from the pharmacy. Herbal remedies are only to a very limited extent sold through Norwegian pharmacies. The Tromsø Study questionnaire was also focused on medicines from the pharmacy.

Information on use of vitamins, mineral supplements etc. was collected through separate questions in the Norwegian Health Survey, while the Tromsø Study questionnaire only asked for use of cod liver oil. Drug use in the Tromsø Study will therefore most probably cover use of the iron preparations for medical purposes. This has most probably a very modest influence of the level of drug use.

Use of oral contraceptives was not included in drug use in the Norwegian Health Survey, while this was more ambiguous in the Tromsø Study. Most women who reported use of oral contraceptives in the Tromsø Study (interviewed at the screening), did <u>not</u> report use of "Other medicine during the preceding 14 days". Very few of the women who were users of oral contraceptives were drug users due to use of "Other medicine" only.

Table 4 shows the extreme situation after adjustments were made excluding all women using contraceptives, who report <u>only</u> use of "Other medicine the preceding 14 days". We assume that all use of "other drugs" is due to oral contraceptives. The adjustments show that this had only a modest influence on the level of drug use in the age groups 15-34 years of age.

Table 4. Adjustment of the proportions of users for potential use of oral contraceptives by excluding the contraceptive users who report only use of "Other drugs". The Tromsø Study.

Age (years)	Popu-lation	USERS OF ORAL CONTRACEPTIVES TOTAL	Users of "other drugs" Total	Only	Adjusted drug users
12-14	175	0	0	0	25.1
15-19	355	89	17	13	38.0
20-24	1153	448	37	14	40.8
25-29	1435	291	32	12	42.2
30-34	1690	146	14	10	44.6
35-39	1558	35	4	2	46.2
40-44	1393	9	2	2	45.4
45-49	975	4	4	0	50.7
50-56	1130	3	1	1	52.1
12-56	9864	1002	111	54	45.1

The independent variables. The quality of the questionnaire information from the Tromsø Study is mainly validated for specific chronic diseases (cardiovascular diseases, diabetes). Studies comparable with the Tromsø Study concluded that this information is reliable for epidemiological purposes [90,135]. The validity of the interviews in the Norwegian Health Survey has also been studied [17]. It was found that the patient's report on disease (all types of diseases), for all practical purposes, was consistent with the doctor's diagnoses in 90 per cent of the cases (I).

Confounding.

Age is said to be a confounding variable since it is related to both the variable of interest (drug use) and to the groups being compared urban/rural, smoking/non-smoking, headache sufferers/non-sufferers. A control of age should always be done in drug use analyses, and women and men should be analyzed separately.

Number of visits to the doctor was one of the most significant single predictors of drug use (II), also after adjustments for morbidity. However, an inclusion of this variable are not without problems, since there is a strong association between visits to the doctor and health problems. The inclusion will reduce the influence from the morbidity variables in the analysis. The access to the doctor and pharmacy may also be a variable of interest.

Socioeconomy may influence drug use, but to measure this factors are complicated. The Tromsø Study had education level as the socioeconomic variable, but there may be others of interest (income, type of work). The influence from lifestyle, demographic and socioeconomic variables most probably will vary with drug group studied.

3.1.3 The Prescription Study

The study included all prescriptions to the municipality of Tromsø and the surrounding municipalities. The prescriptions to Tromsø alone were not sorted out. The work was consentrated on those who were included in the Tromsø Study population.

Completeness.

Almost all people living in the study area have considerable travelling distances to pharmacies outside the area, and "leakage of prescriptions" out of the area is assumed to be small. The pharmacies outside the study area report that they seldom receive prescriptions from subjects living in the municipality of Tromsø. People are temporarily out of the area due to work, visits to family and friends, education, military service etc. On the other hand, Tromsø is the regional capital of northern Norway and a center for education, health services and business, attracting people to the town. The material will also include subjects living more or less temporarily in Tromsø. Assuming that the mobility is highest in the younger age groups, and that older people who dominate the drug use mainly use the pharmacy where they live permanently, this mobility in the population should not seriously affect our estimates.

The prescriptions are subject to special regulations as regards record-keeping, and retrieval from the computerized pharmacy record is assumed to be complete.

Drugs purchased will not necessarily be the same as drugs used. The drug may be used only in part or not at all, or it may be used by others (or even sold). This is a general interpretation problem in most prescription studies, which we do not consider to have any impact on the observed trends or differences.

Prescription forgeries.

Bergman conclude that prescription forgery is mainly an urban phenomenon, and that benzodiazpines dominate the forgeries. In relation to the utilization of the drugs (total sales or number of prescriptions), forgery was much more frequent in the case of analgesics codeine, pentazocine and ketobemidone [15]. However, the number of prescription forgeries is assumed to be negligible due to the control routines that apply to these prescriptions, the fact that drug users have small opportunity to visit many pharmacies, and that the customers are mostly known to the pharmacists.

External validity.

The material from Tromsø is considered to be fairly representative for controlled analgesic drug use in the Norwegian general population. The sales statistics show that the sale of analgesics in Troms county is lower than the national average for most analgesics (see table 2). The pharmacies in Troms bought 74% of the national average (in DDD/1000 inhabitants/day) of controlled codeine preparations in 1990. Although the figures are not age-adjusted, this indicates that the estimates may be conservative.

In international comparisons it is important to

compare the same analgesic segments, e.g. strong, moderately strong and minor analgesics, taking into account the prescribing restrictions. Prescribing restrictions are one of the strongest factors influencing drug use. The segment 'moderately strong analgesics' may for these and other reasons include different drugs in various countries.

3.1.4 The Linkage Study

The proportion of users and mean defined daily doses of controlled analgesics used by the users in paper IV and V are compared in table 5. This shows that the estimates of drug use were on the same level in both studies, though a little lower in the linkage study with the defined population (V). The total population (IV) included all persons staying in the municipality of Tromsø temporarily, which means that the eligible population in paper IV most probably includes more people than were registered by Statistics Norway.

Table 5. The proportion of users and mean defined daily doses (DDD) of controlled analgesics The paper IV and V.

Age (years)	% users W	% users M	Mean DDD by users W	Mean DDD by users M
PAPER V The Tromsø Study population				
20-39	8.7	6.4	21.3	17.3
40-59	12.6	9.5	29.7	27.6
PAPER IV Tromsø and surroundings				
20-39	9.0	6.7	20.1	20.0
40-59	13.8	9.9	33.1	28.2

Migration in the Tromsø population 1987-90.

Three years passed from the Tromsø Study screening (1986-87) to the collection of prescriptions from the pharmacies from 01.03.89 to 28.02.90, and people could have migrated out of the municipality. We therefore had to make adjustments for migration during this period (see table 6). As expected, migration was highest in the youngest age groups and in the population who did not participate in the Tromsø Study.

Table 6. The attenders and non-attenders to The Tromsø Study before and after adjustment for migration per 31.12.90 according to age and sex.

	The Tromsø Study 1986-7				Adjusted per 31.12.90			
	Attenders		Non-attenders		Attenders		Non-attenders	
Age	WOMEN	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN	MEN
(years)	No.	No.	No.	No.	No.	No.	No.	No.
15-19	308	315	93	79	323	322	77	64
20-29	1888	1605	1152	1410	1772	1581	694	966
30-39	3195	2874	1008	1481	3044	2753	591	959
40-49	2784	2760	436	845	2835	2781	307	601
50-59	1689	1719	182	342	1696	1704	125	257
15-59	9864	9273	2871	4157	9670	9141	1794	2847

3.2 *Main results*

3.2.1 Drug use in the population

The study showed that more than a third of the population had used drugs the preceding 14 days (I). Drug use was a common phenomenon in the population, but was very age and sex dependent (I, II). The proportion of drug users in the Tromsø Study population was on the same level as the national figures.

It is difficult to compare the prevalence of drug user in different studies. Some studies collect only information on prescribed drugs. They state different period-prevalences, they have various definitions of the term "drug," making it very difficult to determine the drugs included, and the methods for collecting information may be quite different in-home-interview, telephone-interview, postal questionnaire, interview combined with health examinations etc. However, drug use in Norway is most probably low compared to other countries [31,40,53,60,98,108,110,124]. Table 8 gives an overview of studies of analgesic drug use, which demonstrates the problems described above.

Combined use of prescribed and non-prescribed drugs may be regarded as a potential health problem, especially among the elderly. However, our study showed that use of prescribed drugs increased with increasing age, while use of the non-prescribed decreased with age. The frequency of combined use of both prescribed and non-prescribed drugs was low (I). The use of non-prescribed drugs among the elderly in our study was especially low compared with others [44,55,59]. This may be due to differences in use, but different national regulation of prescribing may also have an impact, and our study may have a conservative definition of drug use.

Age and gender.

The Norwegian Health Survey has been presented earlier [125], but more specific analyses have been made in paper I.

This showed that drug use decreased with age in childhood, but the overall use trend showed a strong increase with age. The proportion of users was considerably higher in women than in men. However, the gender difference varied through life, and the substantial difference was observed through the child-bearing years (15-49 years) and above 70 years of age (table 7).

Table 7. Proportions (%) of drug users in a 14 day period according to age and sex. Norwegian Health Survey.

Age	Number of subjects W	M	Proportion of users(%) Women	Men
0-4	299	287	27.2	26.6
5-9	358	362	20.4	19.1
10-14	467	432	18.6	19.7
15-19	398	427	31.9	18.3
20-24	356	293	31.7	23.9
25-29	400	343	34.0	22.4
30-34	414	379	31.6	26.4
35-39	442	433	32.4	27.3
40-44	314	372	36.3	28.5
45-49	259	256	39.4	39.1
50-54	234	233	47.9	34.3
55-59	267	254	52.1	44.5
60-64	287	274	57.1	51.1
65-69	300	248	61.7	58.8
70-74	226	234	73.9	58.5
75-79	204	125	72.5	56.0
80+	186	111	73.1	60.4
0-80+	5454	5122	39.8	32.2
Age adjusted			40.9	31.8
Tests				
0-80+ years				
p(age trend)=			<.0001	<.0001
p (gender)=			<.0001	
0-14 years				
p(age trend)=			.0044	.025
p(gender)=			.994	

Drug use decreased with age (0-14 years), confirming other studies [6,141]. However, in contrast to the prescription studies, no gender difference was found. Andrew and Toverud found higher prescription drug use in boys than girls [6]. This discrepancy was probably due to the high frequency of non-prescribed drug use among children.

The increase in drug use among women was concurrent with changes in reproductive life, that is onset of menstruation and menopause. This is in accordance with data from the Tromsø study showing that drug use due to menstruation was highest in the age group 15-19 years [42]. Almost 30 per cent of the women had used drugs due to menstruation problems. Svarstad has explained women's higher drug use with women's reproductive role [128,144]. However, the gender difference was also distinct after menopause and may only be part of the explanation.

The second gender difference appeared above 70 years of age, which is contradictory to other prescription-based studies showing only a small gender difference in the proportion of drug users after 70 years of age [70,129,141]. The gender difference in our study (I) may be underestimated due to different selection bias among men and women.

More women than men used drugs, especially prescribed drugs, but also more women than men have a diagnosis of disease. The study showed that women also visited the doctor more than men, confirming other studies [40,64,110,137]. However, still more women than men with a diagnosis of disease used drugs. Different characteristics have been discussed in an attempt to explain the gender difference, though most studies have been done on the use of psychotropic drugs. The higher drug use is explained through different hypotheses such as women-are-more-expressive and report their complaints since society allows them to do so; women have more time to be ill; their social roles are more compatible with the sick role; or explaining higher drug use by women's greater likelihood of episodes of illness and by their greater number of visits to the doctor [24,27,56,113,114,138]. Some authors have stated that prescribers are more willing to prescribe drugs to women than men with the same level of health problems [92,139].

Our study (II) showed that the odds of being a drug user was twice as high for women as for men (odds ratio=2), but the odds ratio was significantly reduced when adjusted for self-reported morbidity and other factors (odds ratio=1.4).

The conclusion is that both the higher frequency of diagnosis and the higher drug use among those women with a diagnosis result in higher drug use in women than men. Women's higher drug use were mainly due to higher level of physical distress, higher proportion of subjects reporting chronic diseases, and more frequent visits to the doctor. Lifestyle and demographic factors were of marginal importance. Though most of the gender differences disappear when adjusted for gender differences in morbidity, there was still a 40 per cent higher drug use in women than men.

The drugs. The prevalences of the different drug groups included in the total drug use were determined through the Tromsø Study (II). The type of drugs used varied strongly through life. While use of analgesics and eczema skin ointment dominated totally in the young age groups, use of psychotropics and cardiovascular drugs became more important with increasing age. There was a higher proportion of women among drug users for all the drug groups except the antihypertensives, nitroglycerine and heart medicine.

Analgesics. Paper III showed that about one fifth of the population had used analgesics during the preceding 14 days. Use of analgesics was the most common reason for being a drug user in all age groups, but particularly among young people.

This confirms other studies [4,21,22,25,31,34,40,55,59, 60,70,75,78,83,107,110,119,127,128,133,140]. More than twice as many women than men reported analgesic drug use, a difference observed from early childhood [61,78,88,112]. Table 8 show some of the population based studies on analgesic drug use published from 1982 to 1994.

The results from our study showed that analgesic drug use in Norway is most probably lower than in other European and American countries (table 8). Our results were also lower than Finnmark county [48] and Denmark [110]. However, it may be difficult to compare the prevalence reported from different studies, since the definition of analgesics and type of drugs included in the different studies may vary.

There was no trends associated with age above 20 years of age. The higher use among women compared with men was found consistently in nearly all subgroups of the different variables studied, which suggests an overall effect of gender. The gender difference was still large after exclusion of women reporting regular use of analgesics during menstruation. The gender difference in analgesic drug use could not solely be explained by women's use of analgesics due to menstrual discomfort.

The observed age and gender trends confirmed other population studies [63,111], but were inconsistent with the prescription-based studies [3,21.54,102]. This is due to the inclusion of non-prescribed drugs, which are not associated with the same increase with increased age as the prescribed drugs [86]. When studying use of analgesics it is essential to include both groups, since several analgesics with the same pharmacological effects are available without prescription and are easily obtained from other people.

Table 8. Analgesic drug use studies (population studies, prescription studies) published between 1982-94. Rx = Prescription drugs OTC = Over-the-counter drugs i.e. available without prescription

Author	Year Country	Period prevalence	Proportion (%) users Women	Men	All	Age group Sample size	Analgesics included
AGE GROUPS < 65 YEARS							
Rossiter 1983	US 1977 Household survey In-home interview Recording drugs	Current use Rx	17.0	12.6	14.9	All 40000	All pain relievers Analgesics,narcotic antagonists. Agents used to treat specific painful disorders
Ahonen et al 1993	Finland 1987 Household survey In-home interview Recording drugs	Current use Rx Rx and/or OTC (2 days) Combining both Rx and OTC	16.9 28.8 ~4.0	10.6 17.4 ~2.0	3.0	15+ 13136	ATC N02 and M01A
	" 1976	Current use Rx Rx and/or OTC (2 days) Combining both Rx and OTC	8.8 20.9 ~2.0	5.6 13.6 ~1.0	1.7	15+ 16413	ATC N02 and M01A
Ahonen et al 1991	Finland 1979 Farmers health Questionnaire	Current use Rx 1 week OTC	13.2 29.3	8.7 19.6		18-64 12056	ATC N02 and M01-03
Hemminki et al 1989	US Massachusetts Health Study 1982-6 Interviews	Current use Rx Daily Rx Current use OTC Daily OTC	9.3 4.2 84.6 8.0			45-55 2565 women	All
Tennis 1990	Germany 1984 2 cohorts Interview Recording drugs	last week Rx and/or OTC	14.3 13.7	9.5 9.5		30-64 2359 Lübeck 1805 Augsburg	Salicylates pyrazolones, opioids, narcotics(N02B) NSAIDS(M01)
Rasmussen et al 1988	Denmark 1986-7 National Health Survey In-home interview	last 2 weeks 16-24 Rx and/or OTC 25-44 45-66 67+ **16+**	31 37 38 35 **36**	21 24 25 26 **24**	**30**	16+ 4753	All
Furu 1993	Norway 1987-88 Finnmark county Screening & Questionnaires	last 2 weeks Rx and/or OTC	32.3	17.1		20-59 15986	All
Holmen et al 1990	Nord- Trøndelag Health Survey 1984-6 Questionnaire	last month	37.6	22.0	30.1	20+ 64543	All
Meyer et al 1990	Denmark Questionnaire	last 3 months 13yrs Rx and/or OTC 15yrs	58 72	45 48		13 and 15 4044	All
AGE GROUPS 65+							
Chrischilles et al 1992	US, 1982 Household survey In-home interview Recording drugs	last 2 weeks Rx last week OTC Rx and/or OTC	12-21 43-53 52-64	7-15 31-46 37-55		65+ 13837	All

Author	Year Country	Period prevalence	Proportion (%) users Women	Men	All	Age group Sample size	Analgesics included
Chrischilles et al 1990	US Iowa 1982 In-home interview Recording drugs	last 2 weeks Rx and/ or last week OTC Combining both Rx and OTC	46.2 11.3	41.7 6.4		65+ 3097	All
Stewart et al 1982	US Dunedin 1978-80 In-home interview Recording drugs	Current use Rx and/or OTC	44.3	32.6	40.0	65+ 3192	All
Hale et al 1987	US, Dunedin 1983-85 In-home interview Recording drugs	Current use Rx and/or OTC	25.2	17.4	22.5	65+ 2834	Non-narcotic analgesics only
Cartwright et al 1988	England 1984 Questionnaire In-home interviews Recording drugs	last 24 hr/current use Rx only OTC only Combining both	19	11	16 28 1.5	65+ 805	non-narcotic analgesics for mild to moderate pain,compound analgesics narcotic and others for severe pain, antimigraine drugs(N 02)
Laukkanen et al 1992	Finland 1988 Jyväskylä In-home interview recording drugs	Current use Rx	23.7	19.3	21.7	65-84 1224	All Rx
Landahl 1987	Sweden Göteborg 1971,-76, -80,-83 Interview	Current use 70yrs Rx and/or OTC 75yrs 79yrs 82yrs	20 29 38 56	12 21 17 39		70,75,79,82 973	ATC N02B
Jylhä 1994	Finland 1979,1989 Tampere Longitudinal Study on Ageing Interview Recording drugs	last week Rx and/or OTC 1979 1989 1979 1989	24 23 29 26	15 20 16 4		60-69yrs 364 (1979) 70-79yrs 374 (1979)	All
Holstein et al 1990	Denmark 1987 Questionnaire "Open" question on drug use	last month Rx and/or OTC	28	20	25	70-95 1261	All
Enlund et al 1990	Finland 1984 Interview Recording drugs	last 3 months Rx Analgesics Anti-inflammatory			13.0 13.0	65-84 675	ATC N02B and M01-03 separately
PRESCRIPTION STUDIES							
Ahonen et al 1992	Finland 1986 Primary health care center >27000 inhab. Computerized patient registry	1 yr Rx	25.9	20.7	23.5	All 4577	ATC N02 and M01-03

Author	Year Country	Period prevalence		Proportion (%) users Women	Men	All	Age group Sample size	Analgesics included
Gustafsson et al 1982	Jämtland Study 1970-1978 Computerized out-patient prescriptions	1 yr Rx	Variation in the study period	18-19	14-16	17	All 17000 1/7 of the population	Narcotics, salicylates, paracetamol, pyrazolones (N02), indomethacin, arylalcanoic acid (M01)
Jörgensen et al 1993	Sweden 1986 Tierp Computerized out-patient prescriptions	1 yr Rx		29.8	24.4		65+ 4769	All Rx Analgesics NSAID
Svarstad et al 1987	US Wisconsin Computerized out-patient prescriptions	2 yrs Rx		23.0	17.0		18+ 862	Analgesics, probably not anti-inflammatory drugs
Controlled analgesics								
Blackburn et al 1990	Canada 1985 Saskatchewan Computerized out-patient prescriptions	1 yr				8.6	All >980000	**Controlled analgesics** codeine,pentazocine propoxyphene,meperidine morphine,anileridine
Ray* et al 1986	US Tennessee Medicaid 1977-1981 Computerized out-patient prescriptions	1 yr	0-1 2-3 4-5 6-7 8-9 10-11 12-13 14-15 16-17	1.3 1.9 2.5 3.0 3.5 4.5 7.5 12.5 17.0	1.3 1.9 2.5 3.0 3.5 4.0 5.5 9.5 11.0		0-17 341422	**Controlled analgesics** codeine,pentazocine propoxyphene,pethidine (opioid derivatives)
* Estimated from figure 1 [112]								
Sørensen et al 1992	Denmark 1989 North Jutland Computerized out-patient prescriptions	1 month				0.2	All >480000	**Narcotics** dextromoramid, pethidine nicomorphine, morphine, ketobemidone, opium, methadone

Although the population data indicate a low proportion of analgesic drug users in Norway compared with other countries, the sales of analgesics have increased during the last 20 years (see table 9). However, this is due to the group non-steroidal anti-inflammatory drug (NSAID) and to the group narcotics. The NSAIDS are not defined as an analgesic drug, but are used to treat some of the same conditions and the patients probably regard them as analgesics. The use of minor analgesics and controlled analgesics have been fairly stable.

Table 9. Sales of analgesics and NSAIDS in Norway 1975-93 in DDD/1000 inhabitants/day. Source: Norwegian drug statistics[1]

	1975	-80	-85	-88	-89	-90	-91	-92	-93
Narcotic analgesics (strong) ATC N02AA-C,G	< 1	< 1	2.2	2.5	2.6	2.8	2.9	2.9	3.0
Controlled analgesics (moderately strong) Inc. ATC N02BE51, N02BA51, N02AD-E	9.8	11.5	10.7	11.8	11.5	11.6	11.7	11.5	11.5
Non-restricted (minor) analgesics Inc. ATC N02BA01, N02BA11,N02BB,N02BE01	25.6	28.5	27.2	26.5	25.9	24.8	25.0	25.0	26.8
NSAIDS[2] Inc. ATC M01A	7.5	13.1	17.5	18.0	18.5	20.0	20.2	21.1	22.2

[1] Dextropropoxyphene is classified as a controlled analgesic in 1975 and -80, and buprenorphine is classified as a controlled analgesic in all years.
[2] Non-steroidal anti-inflammatory drugs.

Controlled analgesics. About eight per cent of the population had purchased one or more prescriptions in a one-year period (IV). This was on the same level as reported by Blackburn [20], but far lower than Ray [112]. Use of controlled analgesics constituted only a small portion of the total analgesic use in the population. The users were between 10 and 99 years of age, 3083 (58%) women and 2223 (42%) men. The proportion of users increased with increasing age (odds ratio approx. 2).

The use was mainly sporadic, and use on a regular basis was low. About 85% of the users obtained one or two prescriptions, or up to fifty defined daily doses during one year.

About one per cent of the population were 'weekly' users (50 DDD or more during the year). The proportion of "weekly users" increased significantly with age, and there were more 'weekly' users among women than men.

There were 34 subjects had purchases corresponding to use of one DDD or more every day through the whole year ('every day' users). This confirms the existence of very high and frequent use of controlled analgesics.

Combined codeine preparations were the dominating controlled analgesics. Table 10 shows that the users of buprenorphine and pentazocine were very few, predominately men, and they had a higher drug use than the codeine users. However, these drugs may be used by patient with severe pain problems.

Table 10. Proportion (%) of controlled analgesic users according to type of drug. Tromsø 1989.

Users of	CODEINE	PENTAZOCINE/ BUPRENORPHINE
% female	58.2	37.8
(total number)	(5302)	(82)
p(drug type)	.0003	
mean age	48.9	47.8
(sd)	(18.64)	(18.80)
p(drug type)	ns	
mean total DDD /year	30.3	76.8
(sd)	(60.5)	(114.9)
95% CI(drug type)	46.5 [21.6-71.43]	
Proportion (%) used 50+ DDD /year	15.5	39.0
p(drug type)	<.0001	
Proportion (%) used 7+ doctors /year	0.6	4.9
p(drug type)	<.0001	

There was a gender difference in use of controlled analgesics, confirming Ray [112]. The difference was moderate (odds ratio=1.5) compared with the total drug use (odds ratio=2.0). After adjustment for morbidity and self-evaluated health the women had still 15% higher drug use than men. Though women had a slightly higher drug use than men with the same degree of health problems, the gender difference was mainly due to women's higher morbidity and lower self-evaluated health.

Controlled analgesic use in the elderly.

Use of controlled analgesics (i.e. codeine) was more prevalent in the elderly, especially among women. About half of the 'weekly' users were 60 years or older, and in the age group 80 years of age or older one in three were 'weekly' users. This corresponds well with reports of high analgesic drug use and health problems in the elderly [1,29,32,33,59,64,126]. Constipation and dizziness are frequently reported problems among elderly people, symptoms which clearly increase with age [29,64]. Constipation problems are more prevalent in women than men, the women are less physically active, and use more laxatives than men [42,48,64,82,110]. Codeine may cause nausea, dizziness or sedation, vomiting and constipation, even in small doses [52], and thus contribute to these problems. Ryynänen showed that use of analgesics was related to falling in elderly women [120]. Susceptibility to both the effects and side-effects of opioid analgesics increases with age, and it is therefore recommended that older people use lower codeine doses [11,52,62]. In addition, a high proportion of the elderly are multiple drug users, and are therefore potential victims of harmful drug interactions [32,33,82,126].

Age and gender are significant factors when evaluating use of controlled analgesics. Elderly women with 'weekly' drug use, will probably gain the greatest benefit from a codeine dose reduction or intermittent treatment with other drugs, e.g. paracetamol in adequate doses.

Use of codeine and other opioids in the treatment of non-malignant pain is widely debated [46,105,121]. However, in a randomized study of the efficacy and safety of long term treatment with codeine plus paracetamol versus paracetamol in the elderly, it was concluded that long term use of codeine preparations cannot be recommended due to heavy side-effects [74].

Misuse of analgesics.

The Tromsø study (III) discriminated only between users and non-users, and gave no information on drug consumption. However, our study revealed that subgroups in the population had a very high proportion of analgesic drug users. In the Danish population five per cent use analgesics regularly (ATC-group N02B), the proportion increased with age and the highest proportion of regular users was found in women [37]. The problems of high analgesic drug use have been discussed continuously [34,91,93,95,102,103].

Paper IV and V gave the opportunity to evaluate the individual consumption of controlled analgesics. Codeine has a similar propensity to produce dependence as other narcotics such as morphine, but is associated with a lower addiction potential [52,87,118,145]. Although the incidence of addiction to codeine alone has been low, misuse of codeine is also discussed [15,38,65], and codeine use among multi-drug substance abusers is frequent [68,85]. Paper IV confirms that drug users may visit many doctors. In this context of "drug shopping," the practice of telephone consultations, and especially the transferral of authority to receptionists, should be questioned. Authors who recommend opioid therapy for non-malignant pain underline the importance of seeing the patient regularly and control that no other doctors prescribe more drugs [46,105].

The study confirms the existence of a group of people with very high drug use. These are very few, and the proportion of these 'every day users' may increase although the sales statistics are fairly stable. We do not have much information about the 'every day' users, and it is difficult to make an indisputable differentiation between use and misuse, but we conclude that these individuals would benefit from having their treatment reexamined.

Region and urbanization.

Paper I showed that the regional differences in drug use were mainly due to variation in the frequency of the self-reported diseases. National drug statistics have shown low drug consumption in the western and northern region and highest drug use in the capital [99]. This considerable regional variation in drug consumption has been widely discussed [18,58,84,142].

Factors with a potential impact on regional differences were investigated by Haugen et al [58]. They only found age difference as a significant explaining factor, and assumed that the missing explanation was due to differences in doctor's prescribing habits. However, the use of sales statistics as a measure of drug use has obvious limitations.

The study (I) also showed a slight tendency towards increased drug use with increasing urbanization, confirming Rabin [107]. However, the impact from urbanization disappeared when adjusted for frequency of diagnoses and for the regions. This is in accordance with Bowker [22] and Rasmussen [110] who concluded that the small towns have adopted the same drug use pattern as the more urban areas.

However, to conclude whether or not the observed regional differences in drug sales are substantial, and to figure out which are the explaining factors, we need drug information data accumulated on the individual users and preferably linked to their diagnoses.

3.2.2 Predictors for the use of drugs

Morbidity and self-evaluated health were the most significant predictors for drug use. Sociodemographic and lifestyle factors were normally significant, but were of marginal importance compared with the others. There were only modest differences in the variables which predicted drug use in men and women.

Morbidity.

Self-reported morbidity was the most significant predictor of drug use, confirming other studies [5,60,75,76,77,108], more significant in men than women. Having a chronic disease or physical distress were both more significant predictors for drug use in men than women, probably because women use these drugs for more varied symptoms than men (eg. menstrual discomfort).

The mental distress variables expressed suffering from depression and/or sleep problems. These variables had a significant, but very modest influence on drug use, compared with the others referred to above. They tended to be more significant in women than men

There were only marginal differences in variables predicting use of controlled analgesics in men and women.

The study of analgesics (III) showed a strong association between analgesic drug use and headache, and less for infections, backache and neck/shoulder pain and the mental distress variables.

Headache. Subjects suffering frequently from headache had the highest proportion of analgesic drug users (and controlled analgesic users), confirming other studies showing heavy analgesic drug use among subjects reporting high frequency of headache [34,36,39,41, 43,80,89,93,100,115]. The proportion of users was far higher than in subjects having the most serious problems with the other types of physical distress. The odds ratio of being a drug user when reporting high frequency of headache was highest among men, since more women used analgesics for other problems than headache.

Depression. The women suffering from depression showed a tendency towards higher analgesic drug use than others (III), though the predictor was less significant than the physical distress variables. Analgesics were used by people reporting depression, maybe to treat the depression. High use of analgesics among subjects reporting depression or other mental problems has been reported earlier [4,16,51,69,81,95,96,109]. Nerve problems, sleeplessness and depression have also been reported as stated reasons for analgesic use [34,94].

Self-evaluated health.

Low self-evaluated health was a highly significant single predictor for drug use in our studies as in others [48,60,69,71,111,117], but contributed little to the total variation in drug use. The determinants of self-evaluated health in the Tromsø population were found to be closely related to symptoms from the musculoskeletal system and psychosocial problems, and less with age and the chronic diseases, probably reflecting the individual's perception of own physical performance and efficiency in general [50].

Low self-evaluated health contributed more than morbidity to the prediction of controlled analgesic use in women, but the differences were marginal. This may indicate that controlled analgesics may be used as treatment for more or less diffuse pain conditions.

Lifestyle and sociodemography.

The associations between lifestyle and sociodemographic variables and drug use have been studied, but the studies varied whether or not adjustments for differences in morbidity were done. Some reported that lower socioeconomic status was associated with high use of prescription drugs, others showed that sociodemographic and lifestyle variables were poor predictors of drug use [5,19,34,35,44,69,71,75,107,111].

The relation between drug use and lifestyle/sociodemographic factors varies with the drug group and population studied, most probably also between prescription or non-prescription drugs.

Education level. Education level is shown to be inversely related to health status (rated wonderful (1) to terrible (10))[137]. The univariate analyses of total drug use (II) and of controlled analgesics (V) showed decreasing drug use with increasing education level, while the analysis of analgesics (III) showed that education level had no influence on drug use. After adjustments for morbidity, high education level became a predictor of analgesic drug use in both sexes (III), but for total drug use only significant in men (II). This showed that use of analgesics, which is dominated by the non-prescribed analgesics, is higher among the highly-educated than the low-educated when adjusted for morbidity. The use of controlled analgesics was inversely related to level of education in both the univariate and the multivariate analyses (V). After adjustments for differences in morbidity, education level was a significant predictor in women only. The same pattern was observed for the use of tranquillizers [113]. This result was inconsistent with the results from the analysis of analgesic drug use. An explanation may be that the highly-educated do use more analgesics than the low-educated for their health problems. However, they either use other kinds of prescribed analgesics than the controlled analgesics, or following Segall's conclusions; the highly-educated tend to self-medicate i.e. use non-prescribed analgesics.

Drinking coffee. The Tromsø Study showed that analgesic drug use increased with increasing coffee consumption (III). Since analgesic drug use may be regarded as a habit, it would perhaps seem reasonable to expect associations to be found with use of other stimulants like tobacco, coffee and alcohol. Studies do not confirm this relationship [4,34], except in reports from hospital renal units [106,122]. No association between drinking alcohol and analgesic drug use (or controlled analgesics) was found in our population studies, though problem users of alcohol have often been found to have dependency on drugs [79,113].

Smoking. The controlled analgesic drug users tended to be daily smokers. A complex of smoking, headache and controlled analgesic drug use was observed (V). However, a cross-sectional study does not differentiate between smoking and drug use as coinciding habits, or daily smoking as an inducer of headache and drug use.

The lack of significant relationship between smoking and analgesic drug use in the multivariate analysis was due to intercorrelation with coffee consumption (III). Smoking was a weak predictor when coffee consumption was excluded. This underlines the importance of being careful about putting all emphasis on the single variables.

In general one should take care when putting emphasis on the odds ratios for the single variables alone, but observe the general trend and the order of magnitude of the group of related variables (i.e. chronic disease, physical distress, sociodemographic, lifestyle, see paper II).

Contacts with health-care system.

Our study showed that the number of visits to the doctor increased the likelihood of receiving a drug after morbidity adjustments. This is confirmed in other studies [4,5]. This shows that people start being drugs users after they have visited the doctor. Alternatively, it indicates that if a person often visits the doctor, he or she may be perceived as a "problem patient" and receive drugs for those unspecific symptoms which cannot be cured. The predictor was more significant in men than women. However, in the case of controlled analgesics (V) the frequency of visits to the doctor was an independent predictor in women only.

Former drug use. Former use of analgesics/anti-migraine preparations and psychotropics contributed equally to the prediction of controlled analgesic drug use. This indicates that analgesic drug use is a persistent habit, and a significant association between use of psychotropics and controlled analgesics was found. However, former use of other kinds of medicines did not predict use of controlled analgesics.

5. CONCLUSIONS

More than a third of the population had used drugs the preceding 14 days, but the use was to a great extent age and sex dependent. Drug use decreased with age in childhood, but the overall age trend showed a strong increase with age. The proportion of users was considerably higher in women than men. However, the gender difference varied through life, and substantial differences were observed in women through the child-bearing years (15-49 years) and above 70 years of age.

Drug use was dominated by the use of analgesics, and one fifth of the population had used an analgesics the preceding 14 days. The use of analgesics was independent of age from 20 years of age, and twice as common among women than men.

The use of controlled analgesics represented only a small portion of the total analgesic use. About eight per cent of the population had used the drug in a one-year period. The highest drug use was found among the elderly, especially elderly women.

The gender differences in drug use were significantly reduced when adjusted for differences in morbidity, self-evaluated health, demographic pattern and lifestyle characteristics.

The regional differences were mainly due to variation in the frequency of self-reported health problems. Drug use depended mainly on need, i.e. chronic diseases and physical/mental distress. However, number of visits to the doctor and self-evaluated were independent predictors. Lifestyle and demographic factors were significant but of less importance than morbidity.

Adjusting for health problems when studying predictors in drug use is crucial, and population studies provide one meaningful way of connecting drug use with a broad variety of health, lifestyle and sociodemographic factors.

6. PHARMACOEPIDEMIOLOGY: THE FUTURE

The analgesics. This study has focused on the use of analgesics, widely used drug group which has been studied by several researchers. Further studies should be concentrated on the small group of regular users of these drugs, on their health problems, on potential health risks from their high drug use, and more on exploring the predictors for regular drug use.

Misuse of analgesics is probably a very limited, but undoubtedly a serious problem. The health authorities may for particular reasons see the need for looking into the use and prescribing of controlled analgesics. It would then be necessary to collect prescriptions from all pharmacies serving the target population, accumulate prescriptions on an individual level, and identify the extent of high drug use as done in this study (IV). The pharmacies in Norway possess the basic data needed for monitoring doctors' prescribing and patients' use of drugs.

However, there are several other drug groups which deserve attention in future of pharmacoepidemiologic studies, e.g. use of antidiabetic drugs and antasthmatics; investigating the relation between drug use, side-effects and disease control. The increased use of antidepressants would be an other interesting field, particularly since the use of benzodiazepines is decreasing.

Drug use research. Further research on drug use in the Norwegian population is essential, since very few Norwegian studies have been published [6,7,8,18,19,42,48,49]. The drug sales statistics are the only regular information available today. However, the aggregated drug use data are insufficient if we want to evaluate the medical rationality of prescribing and drug use patterns, search for possible explanatory variables for differences in drug use, or explore the effects or side-effects of drug use. The yearly published drug sales statistics should be extended with information from population-based studies, e.g. the proportion of users of a drug or treatment in the population

and/or the proportion using the drug regularly.

The future development of pharmacoepidemiology in Norway depends mainly on improved access to drug prescription data for research purposes. The Norwegian pharmacies are computerized and have the necessary prescription data in their data files. However, in Norway today only persons working in the pharmacies have access to prescription data, since the information is bound by the pharmacies' professional secrecy. The drug legislation gives no possibility to use the prescriptions for research purposes, while corresponding legislation does permit information from patient records in hospitals or primary health care to be used in research. These data are potentially more "sensitive" than drug use data. The prescriptions which are reimbursed by the social security system are available for research purposes. Still the only practical way to get access to the drug use data are through the pharmacy owner, and he or she does not have to give away any information for research purposes. My conclusion is that the legislation need revision, and guidelines for access to individual prescription data should be developed.

A field of great interest would be to compare the discrepancy between doctor's records and prescribing, and the drugs the patients get dispensed at the pharmacy. Studies have shown great discrepancies [10,57,97]. However, very little has been done to penetrate the problem, except for calling it "underuse" or defining it as a "non-compliance problem". More information about the drug users and non-users and their problems are needed.

The Danish drug sales statistics, as drug statistics from all nordic countries, were based on the wholesalers' information. The statistics have turned out to be insufficient after liberation of the drug import (Niels Kristian Rasmussen, Danish Institute of Clinical Epidemiology, personal communication). We may experience the same with our sales statistics, since our import regulations have undergone a comparable liberation. However, the Danish health authorities have now instructed the pharmacies to send in their data files monthly with personal identification of both drug user and prescriber. They are making a drug database primarily for statistical purposes. Unfortunately the drug information cannot be linked to other health registers.

The national health authorities should therefore have many reasons for taking an initiative in the question of individual drug use data, and take more responsibility for the use of drugs in the population after drug registration. The discussion will include both researchers and institutions as the National Insurance Administration, The Norwegian Association of Proprietor Pharmacists and the Data Inspectorate.

The most preferable solution is apparently that the health authorities collect prescription data themselves, in order to ensure access to essential drug use data to follow up the medical rationality and the economic consequences of drug use.

However, in pharmacoepidemiologic research one requires not only access to drug use data, but also the possibility to link the data to other information such as socioeconomy, demography, morbidity and mortality data, both through specific population studies and through linkage to other health registers.

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Appendix 1
QUESTIONNAIRES 1 AND 2
The Tromsø Study 1986-87

HELSEUNDERSØKELSEN I TROMSØ

(Gjelder bare den person som brevet er adressert til.)

Helseundersøkelsen kommer nå til Deres distrikt.

Tid og sted for frammøte vil De finne nedenfor.

De finner en orientering om undersøkelsen i den vedlagte brosjyren.

Vi ber Dem vennligst fylle ut spørreskjemaet på baksiden og ta med dette til undersøkelsen.

Vi ber Dem eventuelt melde fra om fravær på den vedlagte fraværsmeldingen.

Med hilsen

KOMMUNEHELSETJENESTEN I TROMSØ
FYLKESLEGEN I TROMS UNIVERSITETET I TROMSØ
STATENS HELSEUNDERSØKELSER

Født dato | Personnr. | Kommune | Kretsnr.

Møtested | Kjønn | Første bokstav i etternavn | Dag og dato | Klokkeslett

HØYDE ␣␣␣ VEKT ␣␣␣␣ ANM 70 ␣	M ␣ P ␣ Ø ␣ KODE 75 ␣␣	AVVIK ␣ ARM ␣␣ MAN ␣ APP.NR. ␣␣ TSM 82 ␣
MÅLING 1	**MÅLING 2**	**MÅLING 3**
MAR ____ 85 S ____ 88	MAR ____ 91 S ____ 94	MAR ____ 97 S ____ 100
HR ____ 103 D ____ 106	HR ____ 109 D ____ 112	HR ____ 115 D ____ 118

Hccos. Oslo

A FAMILIE

Har en eller flere av foreldre eller søsken hatt hjerteinfarkt (sår på hjertet) eller angina pectoris (hjertekrampe)? 12

JA	NEI	VET IKKE

B EGEN SYKDOM

Har De, eller har De hatt:

	JA	NEI
Hjerteinfarkt? 13		
Angina pectoris (hjertekrampe)? 14		
Hjerneslag? 15		
Sukkersyke? 16		

Er De under behandling for:

Høyt blodtrykk? 17

Bruker De:

Nitroglycerin? 18

C SYMPTOMER

Får De smerter eller ubehag i brystet når De:

	JA	NEI
Går i bakker, trapper eller fort på flat mark? 19		
Går i vanlig takt på flat mark? 20		

Dersom De får smerter eller vondt i brystet ved gange, pleier De da:

Stoppe? 21	1
Saktne farten?	2
Fortsette i samme takt?	3

Dersom De stopper eller saktner farten, går da smertene bort:

Etter mindre enn 10 minutter? 22	1
Etter mer enn 10 minutter?	2

Har De vanligvis:

	JA	NEI
Hoste om morgenen? 23		
Oppspytt fra brystet om morgenen? 24		

D MOSJON

Bevegelse og kroppslig aktivitet i Deres fritid. Dersom aktiviteten varierer mye, f.eks. mellom sommer og vinter, så ta ett gjennomsnitt. Spørsmålet gjelder bare det siste året.

Sett kryss i den ruten som passer best.

Leser, ser på fjernsyn eller annen stillesittende beskjeftigelse? 25	1
Spaserer, sykler eller beveger Dem på annen måte minst 4 timer i uken? ..... (Her skal De også regne med gang eller sykling til arbeidsstedet, søndagsturer m.m.)	2
Driver mosjonsidrett, tyngre hagearbeid e.l.? .. (Merk at aktiviteten skal vare i minst 4 timer i uken.)	3
Trener hardt eller driver konkurranseidrett regelmessig og flere ganger i uken?	4

E SALT/FETT

Hvor ofte bruker De salt kjøtt eller salt fisk til middag?

Sett kryss i den ruten som passer best.

Aldri eller sjeldnere enn en gang i måneden 26	1
Inntil en gang i uken	2
Inntil to ganger i uken	3
Mer enn to ganger i uken	4

Hvor ofte pleier De å strø ekstra salt på middagsmaten?

Sett kryss i den ruten som passer best.

Sjelden eller aldri 27	1
Av og til eller ofte	2
Alltid eller nesten alltid	3

Hva slags margarin eller smør bruker De vanligvis på brødet?

Sett kryss i den ruten som passer best.

Bruker ikke smør eller margarin på brød 28	1
Smør	2
Hard margarin	3
Myk (Soft) margarin	4
Smør/margarin blanding	5

Hva slags fett blir vanligvis brukt til matlaging i husholdningen Deres?

Sett kryss i den ruten som passer best.

Smør eller hard margarin 29	1
Myk (Soft) margarin eller olje	2
Smør/margarin blanding	3

F RØYKING

	JA	NEI
Røyker De daglig for tida? 30		

Dersom svaret er «JA», svar da på dette:

Røyker De sigaretter daglig? ..... 31 (håndrullede eller fabrikkfremstilte)	

Dersom De ikke røyker sigaretter nå, svar da på dette:

Har De røykt sigaretter daglig tidligere? 32	

Dersom De svarte «JA», hvor lenge er det da siden De sluttet?

Mindre enn 3 måneder? 33	1
3 måneder – 1 år?	2
1–5 år?	3
Mer enn 5 år?	4

Skal besvares av de som røyker nå eller som har røykt tidligere:

Hvor mange år til sammen har De røykt daglig? 34	År
Hvor mange sigaretter røyker eller røykte De daglig? Gi opp antallet sigaretter daglig ..... 36 (håndrullede + fabrikkframstilte)	Sigaretter

Røyker De noe annet enn sigaretter daglig?

Sigarer eller serutter/sigarillos? 40	
Pipe? 41	

Dersom De røyker pipe, hvor mange pakker tobakk (50 gram) bruker De i pipen på en uke?

Gi opp gjennomsnittlig tall på pakker i uken 42	Tobakkspk.

G KAFFE

Hvor mange kopper kaffe drikker De vanligvis hver dag?

Sett kryss i den ruten som passer best.

Drikker ikke kaffe, eller mindre enn en kopp 45	1
1 – 4 kopper	2
5 – 8 kopper	3
9 eller flere kopper	4

Hva slags kaffe drikker De vanligvis hver dag?

Kokekaffe 46	
Filterkaffe 47	
Pulverkaffe 48	
Koffeinfri kaffe 49	
Drikker ikke kaffe 50	

H ARBEID

	JA	NEI
Har De i de siste 12 månedene fått arbeidsledighetstrygd? 51		
Er De for tiden sykemeldt, eller får De attføringspenger? 52		
Har De full eller delvis uførepensjon? 53		
Har De vanligvis skiftarbeid eller nattarbeid 54		

Har De i det siste året hatt:

Sett kryss i den ruten som passer best.

For det meste stillesittende arbeid? ..... 55 (f.eks. skrivebordsarb., urmakerarb., montering)	1
Arbeide som krever at De går mye? ..... (f.eks. ekspeditørarb., lett industriarb., undervisn.)	2
Arbeide der De går og løfter mye? ..... (f.eks. postbud, tyngre industriarb., bygningsarb.)	3
Tungt kroppsarbeid? ..... (f.eks. skogsarb., tungt jordbruksarb., tungt bygningarb.)	4

	JA	NEI
Er husmorarbeid hovedyrket Deres? 56		

I ETTERUNDERSØKELSE

Har noen i husstanden Deres (utenom Dem selv) vært innkalt til nærmere undersøkelse hos lege etter den siste hjertekarundersøkelsen? 57	

Dersom denne helseundersøkelsen viser at De bør undersøkes nærmere: Hvilken almenpraktiserende lege ønsker De da å bli henvist til?

Skriv navnet på legen her →

..... 58

Ingen spesiell lege 61

Ikke skriv her

Ikke skriv her

Tilleggsspørsmål til Helseundersøkelsen i Tromsø 1986-87.

Hjerte-karsykdommene, som Hjerte-karundersøkelsene i 1974 og 1979–80 spesielt tok opp, er en mangeartet sykdomsgruppe med tildels dårlig kjente årsaksforhold. I Tromsø vil vi derfor forsøke å få en mer fullstendig kartlegging av forhold som kan være av betydning for sykdommens forløp, f.eks. kosthold, psykisk press «*stress*», sosiale forhold og sykdomsforekomst blant slektninger. En slik kartlegging er også viktig for å finne fram til sykdomsskapende forhold for kreftsykdommene, som er en sykdomsgruppe vi også vil prøve å bekjempe i årene som kommer.

Sammen med innkallingen fikk De et spørreskjema som De leverte ved undersøkelsen. Dette spørreskjema kartlegger helseforholdene bedre og inkluderer spørsmål om noen forskjellige sykdommer og fysiske/psykiske plager. Spesielt er det tatt med spørsmål vedrørende svangerskap, fødsel og menstruasjon.

Dessuten er vi interessert i å få oversikt over hvordan folk bruker helsetjenesten, for å få kunnskap om hvordan helsetjenesten kan bedres.

Vi håper De vil være brydd med å fylle ut også dette skjemaet, og sende det tilbake til Tromsø Helseråd i den utleverte konvolutt. Alle opplysninger i forbindelse med Helseundersøkelsen vil bli behandlet strengt konfidensielt. Har De noen kommentarer til undersøkelsen kan De skrive dem i kommentarfeltet på siste side.

Med hilsen

Tromsø Helseråd Fagområdet medisin

HELSETILSTAND

Hvordan er Deres helsetilstand?
Sett kryss i den ruten der «Ja» passer best.

		Ja
Meget dårlig	12	☐ 1
Dårlig		☐ 2
Hverken god eller dårlig, middels		☐ 3
Bra		☐ 4
Utmerket		☐ 5

SYKDOM

Har De, eller har De hatt:
Kryss av «Ja» eller «Nei» for hvert spørsmål.

		Ja	Nei
Hudsykdommen psoriasis	13	☐	☐
Astma	14	☐	☐
Allergisk eksem	15	☐	☐
Høysnue	16	☐	☐
Kronisk bronkitt	17	☐	☐
Sår på magesekken	18	☐	☐
Sår på tolvfingertarmen	19	☐	☐
Blindtarms-operasjon	20	☐	☐
Magesårs-operasjon	21	☐	☐
Leddgikt (kronisk revmatoid artritt)	22	☐	☐
Kreftsykdom	23	☐	☐
Epilepsi (fallesyke)	24	☐	☐
Migrene	25	☐	☐

INFEKSJON

		Antall / Ja	Nei
Hvor mange ganger har De hatt infeksjon slik som forkjølelse, influensa, «ræksjuka» og lignende siste halvår?	26	☐	
Har De hatt slik infeksjon siste 14 dager?	27	☐	☐

SYKDOM HOS FORELDRE OG SØSKEN

Kryss av for de slektningene som har eller har hatt noen av sykdommene:

		Mor	Far	Bror	Søster
Hjerneslag eller hjerneblødning	28	☐	☐	☐	☐
Sukkersyke	32	☐	☐	☐	☐
Leddgikt (revmatoid artritt)	36	☐	☐	☐	☐
Kreft	40	☐	☐	☐	☐
Psoriasis	44	☐	☐	☐	☐
Magesår eller tolvfingertarmsår	48	☐	☐	☐	☐
Astma	52	☐	☐	☐	☐

		Ja	Nei
Kryss av dersom slektningene ikke har eller har hatt noen av disse sykdommene	56	☐	☐

MEDISINER

		Ja	Nei
Har De siste år brukt tabletter, sprøyter eller astmaspray mot astma eller allergi	60	☐	☐

Har De brukt følgende medisiner siste 14 dager?

		Ja	Nei
Smertestillende	61	☐	☐
Febersenkende	62	☐	☐
Eksemsalve	63	☐	☐
Blodtrykksmedisin	64	☐	☐
Hjertemedisin	65	☐	☐
Sovemedisin	66	☐	☐
Nervemedisin	67	☐	☐
Migrenemedisin	68	☐	☐
Medisin mot epilepsi (fallesyke)	69	☐	☐
Annen medisin	70	☐	☐

KONTAKT PGA. EGEN HELSE ELLER SYKDOM

Hvor mange besøk har De hatt siste år på grunn av egen helse eller sykdom?

		Antall besøk
Hos vanlig lege	71	☐
Hos spesialist utenfor sykehuset	72	☐
På legevakta	85	☐
Hos bedriftslege	87	☐
Hos fysioterapeut	89	☐
Hos kiropraktor	81	☐
Hos naturmedisiner (homeopat, soneterapeut o.l.)	83	☐
På sykehusets poliklinikk	85	☐
Antall innleggelser på sykehus siste år	87	☐

KOSTHOLD

Hvor mange brødskiver spiser De vanligvis daglig?
Sett kryss i den ruten der «Ja» passer best

		Ja
Mindre enn 2 skiver	88	☐ 1
2 – 4 skiver		☐ 2
5 – 6 skiver		☐ 3
7 – 12 skiver		☐ 4
13 eller flere skiver		☐ 5

Hva slags melk drikker de vanligvis?
Sett kryss i den ruten der «Ja» passer best.

		Ja
Drikker ikke melk	89	☐ 1
Melk (helmelk), søt, sur		☐ 2
Lettmelk		☐ 3
Skummet melk, søt, sur		☐ 4

Hvor mange glass/kopper melk drikker De vanligvis daglig?

		Ja
Mindre enn ett glass/kopp	90	☐ 1
1 – 2 glass/kopper		☐ 2
3 – 4 glass/kopper		☐ 3
5 eller flere glass/kopper		☐ 4

FISKEMAT

Hvor ofte spiser De torsk/sei eller annen mager fisk til middag eller som pålegg?
Sett kryss i den ruten der «Ja» passer best.

		Ja
Sjeldnere enn en gang i uken	91	☐ 1
1 gang i uken		☐ 2
2 ganger i uken		☐ 3
3 eller flere ganger i uken		☐ 4

Hvor ofte spiser De fet fisk som sild, kveite, uer, makrell, laks, ørret til middag eller som pålegg?
Sett kryss i ruten der «Ja» passer best.

		Ja
Sjeldnere enn en gang i uken	92	☐ 1
1 gang i uken		☐ 2
2 ganger i uken		☐ 3
3 eller flere ganger i uken		☐ 4

Bruker De tran regelmessig?
Sett kryss i ruten der «Ja» passer best.

		Ja
Nei	93	☐ 1
I mørketida		☐ 2
Hele året		☐ 3

FROKOST

		Ja	Nei
Spiser De vanligvis frokost daglig?	94	☐	☐

MIDDAGSMAT

Hvor ofte spiser De vanligvis kjøtt til middagen?
Sett kryss i ruten der «Ja» passer best.

		Ja
Sjeldnere enn en gang i uken	95	☐ 1
1 – 2 ganger i uken		☐ 2
3 – 4 ganger i uken		☐ 3
5 eller flere ganger i uken		☐ 4

Hvor ofte bruker De fett (smør, margarin, remulade, majones og lignende) til eller på middagsmaten?
Sett kryss i ruten der «Ja» passer best.

		Ja
Sjeldnere enn en gang i uken	96	☐ 1
1 – 2 ganger i uken		☐ 2
3 – 4 ganger i uken		☐ 3
5 eller flere ganger i uken		☐ 4

		Ja	Nei
Bruker De vanligvis grønnsaker som del av middagsmaten?	97	☐	☐

FRUKT

Hvor ofte spiser De vanligvis frukt?
Sett kryss i ruten der «Ja» passer best.

		Ja
Sjeldnere enn en gang i uken	98	☐ 1
Omtrent en gang i uken		☐ 2
2 – 3 ganger i uken		☐ 3
4 – 5 eller flere ganger i uken		☐ 4
Omtrent daglig		☐ 5

ALKOHOL

		Ja	Nei
Er De total avholdsmann/-kvinne		☐	☐

Hvis nei,
– Hvor ofte pleier De å drikke øl?
Sett kryss i ruten der «Ja» passer best.

		Ja
Aldri, eller noen få ganger i året	100	☐ 1
1 – 2 ganger i måneden		☐ 2
Omtrent 1 gang i uken		☐ 3
2 – 3 ganger i uken		☐ 4
Omtrent hver dag		☐ 5

Hvor ofte pleier De å drikke vin?
Sett kryss i ruten der «Ja» passer best.

		Ja
Aldri, eller noen få ganger i året	101	☐ 1
1 – 2 ganger i måneden		☐ 2
Omtrent 1 gang i uken		☐ 3
2 – 3 ganger i uken		☐ 4
Omtrent hver dag		☐ 5

– Hvor ofte pleier De å drikke brennevin?
Sett kryss i ruten der «Ja» passer best.

		Ja
Aldri, eller noen få ganger i året	102	☐ 1
1 – 2 ganger i måneden		☐ 2
Omtrent 1 gang i uken		☐ 3
2 – 3 ganger i uken		☐ 4
Omtrent hver dag		☐ 5

Omtrent hvor ofte har De i løpet av siste år drukket alkohol tilsvarende minst 5 halvflasker øl, en helflaske vin eller ¼ flaske brennevin?
Sett kryss i ruten der «Ja» passer best.

		Ja
Ikke siste år	103	☐ 1
Noen få ganger		☐ 2
1 – 2 ganger i måneden		☐ 3
3 eller flere ganger i uken		☐ 4

FYSISK AKTIVITET

Hvor ofte utfører De fysisk aktivitet av minst 20 minutters varighet og som fører til at De blir svett eller andpusten?
Sett kryss i ruten der «Ja» passer best.

		Ja
Sjelden eller aldri	104	☐ 1
Ukentlig		☐ 2
Flere ganger i uka		☐ 3
Daglig		☐ 4

Dersom De vanligvis utfører slik aktivitet minst en gang i uka, hvor mye tid bruker De ukentlig til slik aktivitet?
Sett kryss i ruten der «Ja» passer best.

		Ja
Mindre enn 30 minutter i uka	105	☐ 1
Mellom 30 minutter og 1 time i uka		☐ 2
Mellom 1 og 2 timer i uka		☐ 3
Mer enn 2 timer i uka		☐ 4

VANE- OG KOSTENDRINGER

Har De endret Deres vaner/kosthold i løpet av de siste 5 år når det gjelder:(Sett kryss for hvert spørsmål)

		Bruker nå mer	som før	mindre
Fett i kosten	106	☐	☐	☐
Soyamargarin eller matoljer	107	☐	☐	☐
Skummet melk eller lettmelk	108	☐	☐	☐
Kaffe-forbruk	109	☐	☐	☐
Alkohol-forbruk	110	☐	☐	☐
Fysisk aktivitet	111	☐	☐	☐

EKTESKAPS-/SAMBO-FORHOLD

		Ja	Nei
Er De gift eller samboende	112	☐	☐

Hvor gammel var De da De første gang giftet Dem eller innledet et samboerforhold? ... 113 ☐ år

HUSSTAND

		Antall
Hvor mange personer bor det i deres husstand?	115	☐

		Ja	Nei
Er noen i Deres husstand 10 år eller yngre?	117	☐	☐
Trenger noen i Deres husstand spesielt tilsyn/pleie – *utenom barna?*	118	☐	☐

SKOLEGANG

Hvor mange års skolegang har De (ta også med folkeskole og ungdomsskole)? ..... 119 ☐ år

ARBEID

Har De hatt lønnet arbeid hele siste år?
Sett kryss i ruten der «Ja» passer best.

		Ja
Fulltidsarbeid	121	☐ 1
Deltidsarbeid		☐ 2
Ikke lønnet arbeid		☐ 3

Hvor stor del av det daglige arbeid i hjemmet gjør De vanligvis selv?
Sett kryss i ruten der «Ja» passer best.

Alt eller nesten alt	122	☐ 1
Minst halvparten		☐ 2
Mer enn en fjerdedel		☐ 3
Mindre enn en fjerdedel		☐ 4

RYGG- OG LEDDPLAGER

		Ja	Nei
Har De i løpet av siste år vært plaget av smerter i ryggen som har vart lenger enn 4 uker?	123	☐	☐
Hvis ja, bedrer ryggsmertene seg dersom De beveger Dem?	124	☐	☐
Har De vært plaget av stivhet i ryggen om morgenen som varte lenger enn 30 minutter?	125	☐	☐

Har De i løpet av siste 3 år vært plaget av smerter i noen av de følgende ledd i mer enn 3 måneder?

		Ja	Nei
Kneleddene	126	☐	☐
Albueleddene	127	☐	☐
De innerste fingerleddene	128	☐	☐
Andre ledd	129	☐	☐

		Ja	Nei
Hvis ja, merket De stivhet i leddene om morgenen av mer enn 30 minutters varighet	130	☐	☐

PLAGER I HODE, NAKKE OG SKULDRE

Hvor ofte er De plaget av hodepine?
Sett kryss i ruten der «Ja» passer best.

		Ja
Sjelden eller aldri	131	☐ 1
En eller flere ganger i måneden		☐ 2
En eller flere ganger i uken		☐ 3
Daglig		☐ 4

Hvor ofte er De plaget av smerter i nakke eller skuldre?
Sett kryss i ruten der «Ja» passer best.

		Ja
Sjelden eller aldri	132	☐ 1
En eller flere ganger i måneden		☐ 2
En eller flere ganger i uken		☐ 3
Daglig		☐ 4

Reduserer plagene i hodet, nakken eller skuldrene Deres arbeidsevne?
Sett kryss i ruten der «Ja» passer best.

		Ja
Aldri, eller i ubetydelig grad	133	☐ 1
I noen grad		☐ 2
I betydelig grad		☐ 3
Klarer ikke vanlig arbeid		☐ 4

		Ja	Nei
Har De noen gang fått røntgenundersøkt ryggen, nakken og/eller skuldre	134	☐	☐

SØVNLOSHET/BEVISSTLOSHET

		Ja	Nei
Hender det at De er plaget av søvnløshet	135	☐	☐

Hvis ja, når på året er De mest plaget?
Sett kryss i ruten der «Ja» passer best.

		Ja
Ingen spesiell tid	136	☐ 1
Særlig mørketiden		☐ 2
Særlig i midnattsoltiden		☐ 3
Særlig høst og vår		☐ 4

		Ja	Nei
Har De gjennom hele siste år vært plaget av søvnighet slik at det går ut over arbeidsevnen?	137	☐	☐
Har De siste år hatt anfall med plutselig tap av bevissthet?	138	☐	☐
Har De merket anfall med plutselig endring i pulsen eller hjerterytmen siste år	139	☐	☐

REAKSJONER PÅ PROBLEMER

Hvis De får store personlige problemer, regner De da med å få hjelp og støtte fra ektefelle, samboer eller familie? ... 140 — ☐ Ja ☐ Nei

Har De i lengere tid følt behov for å oppsøke noen på grunn av personlige problem siste år, uten at De har tatt slik kontakt? ... 141 — ☐ Ja ☐ Nei

Har De i de siste 14 dager følt Dem ute av stand til å takle Deres vanskeligheter?
Sett kryss i ruten der «Ja» passer best.
- Aldri eller sjelden ... 142 — ☐ Ja 1
- Av og til ... ☐ 2
- Ofte ... ☐ 3
- Nesten hele tida ... ☐ 4

Har De i de siste 14 dager følt Dem ulykkelig og nedtrykt (deprimert)?
Sett kryss i ruten der «Ja» passer best.
- Aldri eller sjelden ... 143 — ☐ Ja 1
- Av og til ... ☐ 2
- Ofte ... ☐ 3
- Nesten hele tida ... ☐ 4

Hender det ofte at De føler Dem ensom?
Sett kryss i ruten der «Ja» passer best.
- Meget ofte ... 144 — ☐ Ja 1
- Av og til ... ☐ 2
- Aldri eller nesten aldri ... ☐ 3

RESTEN AV SKJEMAET BESVARES BARE AV KVINNER

MENSTRUASJON

Hvor gammel var De da De fikk menstruasjon første gang? ... 145 — ☐ år

Når begynte Deres siste menstruasjon? .. 147 — dag mnd. år / /

Hvor mange dager er/var det vanligvis fra menstruasjonens 1. blødningsdag til neste menstruasjons 1. blødningsdag (= tiden mellom to menstruasjoners begynnelse)? . 153 — ☐ dager

Pleier/pleide menstruasjonen å være regelmessig ... 155 — ☐ Ja ☐ Nei

Bruker De vanligvis smertestillende tabletter under menstruasjonen? ... 156 — ☐ Ja ☐ Nei

PLAGER FOR MENSTRUASJON

Har De før menstruasjon noen av disse plagene:
– Er De nedtrykt (deprimert) eller irritabel?
Sett kryss i ruten der «Ja» passer best.
- Ubetydelig ... 157 — ☐ Ja 1
- Merkbart ... ☐ 2
- Plagsomt ... ☐ 3

– Har De smertefulle bryst?
Sett kryss i ruten der «Ja» passer best.
- Ubetydelig ... 158 — ☐ Ja 1
- Merkbart ... ☐ 2
- Plagsomt ... ☐ 3

– Har De hovne hender/føtter, vektøkning, eller følelse av å «ese ut»?
Sett kryss i ruten der «Ja» passer best.
- Ubetydelig ... 159 — ☐ Ja 1
- Merkbart ... ☐ 2
- Plagsomt ... ☐ 3

Forsvinner plagene når menstruasjonen kommer? ... 160 — ☐ Ja ☐ Nei

Bruker De mot slike plager:
- vanndrivende tabletter? ... 161 — ☐ Ja ☐ Nei
- andre medisiner? ... 162 — ☐ Ja ☐ Nei

SVANGERSKAP

Hvor mange barn har De født? ... 163 — Antall ☐

Hvor gammel var De første gang De var gravid? ... 164 — ☐ år

PREVENSJON

Bruker eller har De brukt P-piller eller spiral? ... 166 — ☐ Ja ☐ Nei

Hvis ja, hvor mange år har De tilsammen brukt:
- P-piller? ... 167 — ☐ år
- Spiral? ... 169 — ☐ år

Hvor gammel var De da De begynte med:
- P-piller? ... 171 — ☐ år
- Spiral? ... 173 — ☐ år

Hvis De har sluttet med P-piller, uteble da menstruasjonen i mer enn 6 måneder uten at De var gravid? ... 175 — ☐ Ja ☐ Nei

Har de måttet slutte med P-piller fordi De fikk høyt blodtrykk? ... 176 — ☐ Ja ☐ Nei

KREFTPRØVE

Hvor mange ganger har De fått tatt kreftprøve (celleprøve) fra livmorhalsen siste 3 år? ... 177 — Antall prøver ☐

Hvor mange år siden er det siden siste prøve? ... 178 — ☐ år

Deres kommentarer: ... 179

Takk for hjelpen! Husk å postlegge skjemaet idag!

Tromsøundersøkelsen 1986-7

Appendix 2
HOUSEHOLD AND PERSON QUESTIONNAIRES
The Norway Health Survey 1985

Annex 4

STATISTISK SENTRALBYRÅ
Intervjukontoret
Postboks 8131 Dep, 0033 Oslo 1
Tlf. (02) 41 38 20

UNDERLAGT TAUSHETSPLIKT

Prosjekt nr. 2 3 9 — 1- 3
Kommune nr. — 4- 7
Utvalgsområde nr. — 8-10
Husholdning nr. — 11-14
FOR KONTORET — 15-17
Skjematype 1 — 18
Intervjuer nr. — 19-22

Fødselsnr. for husholdningsmedlem nr. 01 (1 spm. 1): Fødsels-dag mnd. år / Personnummer — 23-33

14-dagersperioden ..... Dato Mnd. Fra — 34-37; Til — 38-41

HELSEUNDERSØKELSE 1985

HUSHOLDNINGSSKJEMA

A. *BOSTEDSSTRØK (HUSHOLDNINGEN'S ADRESSE) — 42

1 Spredtbygd strøk
Tettbygd strøk med:
2 200- 1 999 bosatte
3 2 000-19 999 "
4 20 000-99 999 "
5 100 000 eller flere bosatte

B. DATO FOR UTFYLLING AV SKJEMAET: 43-46 (Dag, Mnd.)

C. RESULTATET AV FELTARBEIDET: — 47

1 Intervju - foretatt ved besøk på adressen → E
2 Intervju - foretatt over telefon → E
3 Frafall/avgang (OPPGI GRUNN NEDENFOR:) → G

D. FOR KONTORET (VED OPPFØLGING): — 48

1 Intervju oppnådd over telefon fra kontoret → E
2 Frafall/avgang (OPPGI GRUNN NEDENFOR:) → G

E. REGISTRERING VED OPPNÅDD INTERVJU:

Intervjuet startet kl.: 49-52 (Time, Min.) og varte til kl.: 53-56 (Time, Min.) dvs, i alt: 57-58 Minutter

F. ANTALL OPPNÅDDE PERSONINTERVJU OG FRAFALL I HUSHOLDNINGEN

61-62 Antall oppnådde personintervju i husholdningen

63-64 Antall personer med frafall i husholdningen

SUMMEN SKAL VÆRE LIK ANTALLET PERSONER I HUSHOLDNINGEN SLIK DEN ER REGISTRERT I SPM. 1.

G. REGISTRERING VED FRAFALL/AVGANG FOR HELE HUSHOLDNINGEN:

FRAFALLSGRUNN — 59-60

00 IO/husholdningen nekter
20 Sykdom/dødsfall i familien/husholdningen
30 IO/husholdningen er bortreist
33 IO/husholdningen er ikke å treffe ved besøk/over telefon
40 Ikke funnet IO's/husholdningens bolig/adresse
70 Annet, spesifiser: _____

AVGANGSGRUNN — 59-60

91 Tomt hus, revet, nedbrent
94 Bor på institusjon

FOR KONTORET — 59-60

50 Husholdningen er ikke oppsøkt (kostnader, avstander mv.)
52 Mangler intervjuer som kan oppsøke IO/husholdningen

FOR KONTORET: 65-66

RA 8054 8.85.7500

*1. Vi vil først gjerne ha noen opplysninger om hver enkelt person i husholdningen. Til husholdningen regner vi alle personer som er fast bosatt i boligen. Personer som er fast bosatt i boligen, men som er midlertidig fraværende, f.eks. på grunn av arbeid, skolegang, ferie, sykehusopphold, militærtjeneste e.l., skal regnes med.

Vi begynner med den som står som eier/leier av boligen, og vil gjerne for hver enkelt få vite navn, fødselsår, slektskap til eier/leier og om vedkommende er midlertidig fraværende.

EIER/LEIER FØRES SOM HUSHOLDNINGSMEDLEM NR. 01. FOR MIDLERTIDIG FRAVÆRENDE SETTES KRYSS I KOLONNEN FOR FRAVÆR.

HUSHOLDNINGS-MEDLEM NR. (OVERFØRES TIL PERSONSKJEMA)	NAVN ETTERNAVN: FORNAVN:	FØDSELSÅR	SLEKTSKAP TIL EIER/LEIER (SE KODELISTE NEDENFOR)	MIDLERTIDIG FRAVÆRENDE
67-68 0,1 EIER/LEIER		69-70		71
72-73 0,2		74-75	76-77	78
79-80 0,3		81-82	83-84	85
86-87 0,4		88-89	90-91	92
93-94 0,5		95-96	97-98	99
100-101 0,6		102-103	104-105	106
107-108 0,7		109-110	111-112	113
114-115 0,8		116-117	118-119	120
121-122 0,9		123-124	125-126	127
128-129 1,0		130-131	132-133	134
135-136 1,1		137-138	139-140	141
142-143 1,2		144-145	146-147	148

SLEKTSKAPSKODE:

02 EKTEFELLE
03 SAMBOENDE
04 SØNN/DATTER (OGSÅ STEBARN)
05 BROR/SØSTER
06 FORELDRE/SVIGERFORELDRE
07 SVIGERSØNN/-DATTER
08 BESTEFORELDRE
09 BARNEBARN
10 ANNEN SLEKTNING
11 IKKE-SLEKTNING

☐☐ FOR KONTORET 149-150

*2. Hva slags hustype bor dere i?

KAN AVMERKES AV INTERVJUER UTEN SPØRSMÅL

151
1 ☐ VÅNINGSHUS I TILKNYTNING TIL GÅRDSDRIFT (HOVEDBYGNING, KÅRBOLIG, FORPAKTERBOLIG E.L.)
2 ☐ FRITTLIGGENDE ENEBOLIG (ENEBOLIG MED MINST EN HALV METERS AVSTAND TIL NÆRMESTE HUS)
3 ☐ HUS I REKKE, KJEDE, ATRIUM, TERASSE ELLER VERTIKALT DELT TOMANNSBOLIG
4 ☐ HORISONTALT DELT TOMANNSBOLIG
5 ☐ ANNET BOLIGBYGG MED MINDRE ENN 3 ETASJER
6 ☐ BLOKK, LEIEGÅRD ELLER ANNET BOLIGBYGG MED 3 ETASJER ELLER MER
7 ☐ FORRETNINGSBYGG, VERKSTEDBYGG E.L.
8 ☐ HOTELL, PENSJONAT, ALDERSHJEM, BARNEHJEM, SYKEHUS, MILITÆRFORLEGNING ELLER ANNET BYGG FOR FELLESHUSHOLDNING

*3. Hvor mange rom er det i boligen/leiligheten?
Ta ikke med kjøkken, bad, entré eller små rom under 6 kvadratmeter.

152-153 ☐☐ ANTALL ROM

4. Er noen av beboelsesrommene i boligen/leiligheten:

		JA ALLE 1	JA, NOEN AV ROMMENE 2	NEI, INGEN 3
Fuktige?	154	☐	☐	☐
Kalde, vanskelig å varme opp?	155	☐	☐	☐

*5. Finnes noe av følgende utstyr i boligen/leiligheten?

		JA 1	NEI 2	HAR IKKE LØSE TEPPER/ BADEROM 3
Røykvarsler?	156	☐	☐	
Brannslokkingsutstyr?	157	☐	☐	
Skjivern under løse tepper?	158	☐	☐	☐
Skjivern i baderom?	159	☐	☐	☐
Stødig, god gardintrapp/trappestige e.l.	160	☐	☐	
Låsbart medisinskap?	161	☐	☐	

6. Hva slags gate/vei ligger mindre enn 25 meter fra huset? Er det en lite trafikkert vei, en gate/vei med middels trafikk eller er det en hovedvei/riksvei/hovedgate med stor trafikk? Hvis det er flere slags gate/vei som ligger så nær huset, er vi bare interessert i den mest trafikkerte.

BARE ETT SVAR KAN AVMERKES.

162

1 ☐ HOVEDVEI, RIKSVEI, HOVEDGATE, GJENNOMFARTSÅRE MED STOR TRAFIKK
2 ☐ GATE/VEI MED MIDDELS TRAFIKK
3 ☐ LITE TRAFIKKERT VEI, GÅRDSVEI, GANGVEI/STI E.L.

*7. Hva slags områder finnes rett utenfor huset?

KAN AVMERKES AV INTERVJUER UTEN SPØRSMÅL (SE INSTRUKS)

VIS KORT 1 DERSOM SPØRSMÅLET STILLES

I

163 ☐ EGEN HAGE, PLEN, NATURTOMT
164 ☐ EGEN GÅRDSPLASS
165 ☐ FELLES GÅRDSPLASS, GÅRDSROM E.L. INNRETTET SOM OPPHOLDSSTED FOR BARN OG VOKSNE
166 ☐ FELLES GÅRDSPLASS, GÅRDSROM ELLERS
167 ☐ FELLES PLEN ELLER GRØNTANLEGG SOM KAN BRUKES SOM OPPHOLDSSTED FOR BARN OG VOKSNE
168 ☐ FELLES PLEN ELLER GRØNTANLEGG ELLERS
169 ☐ FORTAU, BILVEI
170 ☐ PARKERINGSPLASS
171 ☐ ANNET (SPESIFISER): _____

*8. Hva er den vanligste reisemåte og reisetid for husholdningen til nærmeste:

	Lege-kontor? 172	Tann-lege-kontor? 173	Syke-hus? 174	Apotek/ medisin-utsalg? 175
TIL FOTS	1 ☐	1 ☐	1 ☐	1 ☐
BIL	2 ☐	2 ☐	2 ☐	2 ☐
BUSS/TRIKK	3 ☐	3 ☐	3 ☐	3 ☐
TOG/FORSTADSBANE	4 ☐	4 ☐	4 ☐	4 ☐
BÅT	5 ☐	5 ☐	5 ☐	5 ☐
BIL/BUSS OG BÅT	6 ☐	6 ☐	6 ☐	6 ☐
ANNEN KOMBINERT REISEMÅTE	7 ☐	7 ☐	7 ☐	7 ☐
REISETID I MINUTTER (INKL. GANGTID) ..	☐☐☐ 176-178	☐☐☐ 179-181	☐☐☐ 182-184	☐☐☐ 185-187

Vedlegg 5
Annex 5

STATISTISK SENTRALBYRÅ
Intervjukontoret
Postboks 8131 Dep, 0033 Oslo 1
Tlf. (02) *41 38 20

UNDERGITT TAUSHETSPLIKT

IO's fødselsnr. Fødsels-dag -mnd -år Personnummer 27-32 33

14-dagersperioden Dato Mnd. fra 34-35 til 36-37

Prosjektnr. 2 3 9 1- 3
Kommune nr. 4- 7
Utvalgsomr. nr. 8-10
Husholdning nr. 11-14
IO's hush.medl. nr. 15-16
IO's kjønn (1=m, 2=k) 17
Skjematype nr. 2 18
Intervjuer nr. 19-22

HELSEUNDERSØKELSE 1985

PERSONSKJEMA FOR PERSONER 16 ÅR OG OVER (FØDT 1969 ELLER TIDLIGERE)

A. KONTAKTEN MED IO.

Antall tlf.kontakter ☐ 42
Antall besøk på adr. ☐ 43

B. DERSOM ANNEN ADRESSE ENN I IO-LISTE

44
1 ☐ IO er kontaktet på midlertidig adresse
*Kommune: _____
Komm.nr. ☐☐☐☐ 45-48

C. DATO FOR UTFYLLING AV SKJEMAET.

49-52 Dag Mnd.
FOR KONTORET ☐ 53-54

D. RESULTAT AV FELTARBEIDET:

55
1 ☐ Intervju - foretatt ved besøk på adressen → F
2 ☐ Intervju - foretatt over telefon → F
3 ☐ Frafall/avgang (OPPGI GRUNN NEDENFOR!) → H

E. FOR KONTORET (VED OPPFØLGING)

56
1 ☐ Intervju oppnådd over telefon fra kontoret → F
2 ☐ Frafall/avgang (OPPGI GRUNN NEDENFOR) → H

F. REGISTRERING VED OPPNÅDD INTERVJU:

Intervjuet startet kl. 57-60 Time Min. og varte til kl. 61-64 Time Min. dvs. i alt 65-66 Minutter

G. Ble det avtalt tid for intervjuet på forhånd med IO selv eller en annen i husholdningen?

67
1 ☐ Ja, over telefon
2 ☐ Ja, ved besøk på adressen
3 ☐ Nei, avtalte ikke tid på forhånd

H. REGISTRERING VED FRAFALL/AVGANG

FRAFALLSGRUNN 68-69

00 ☐ IO nekter
02 ☐ Andre nekter for IO
11 ☐ IO er fysisk syk, hjemme
12 ☐ IO er psykisk syk, hjemme
13 ☐ IO er på sykehus
20 ☐ Sykdom/dødsfall i IO's familie
30 ☐ IO er bortreist på arbeid, skole, ferie osv.
33 ☐ IO er ikke å treffe ved besøk/over telefon
34 ☐ IO er til sjøs/på fiske
53 ☐ Språkvansker
70 ☐ Annet, spesifiser: _____

AVGANGSGRUNN 68-69

80 ☐ IO er død
90 ☐ IO er flyttet permanent
94 ☐ IO bor på institusjon
95 ☐ Annet, spesifiser: _____

FOR KONTORET 68-69

50 ☐ IO er ikke oppsøkt (kostnader, avstander mv.)
52 ☐ Mangler intervjuer som kan oppsøke IO

FOR KONTORET ☐☐ 70-71

RA 8055 8.85.15000

SPØRSMÅL 1 OG 2 KAN BESVARES AV INTERVJUER NÅR EKTESKAPS-/SAMBOERFORHOLD GÅR KLART FRAM AV SPM. 1 I HUSHOLDNINGSSKJEMAET.

*1. Er du gift?

74

1 ☐ JA, MED HUSH.MEDLEM NR. ☐ (75-76) (FRA SPM. 1 I HUSH.SKJEMA) → 4

2 ☐ JA, MED PERSON UTENFOR HUSHOLDNINGEN → 4

3 ☐ NEI → 2

*2. Er du samboende?

77

1 ☐ JA, MED HUSH.MEDLEM NR. ☐ (78-79) (FRA SPM. 1 I HUSH.SKJEMA)

2 ☐ NEI

*3. Hva er din formelle ekteskapelige status, er du ugift, enke/enkemann, separert eller skilt?

80

1 ☐ UGIFT
2 ☐ ENKE/ENKEMANN
3 ☐ SEPARERT
4 ☐ SKILT

4. Hvor har du bodd det meste av tiden før du fylte 16 år?

81

1 ☐ NORGE, KOMMUNE/FYLKE: _____

2 ☐ UTLANDET

FOR KONTORET: ☐ (82-85)

*5. Utførte du inntektsgivende arbeid av minst 1 times varighet i forrige uke? Som inntektsgivende arbeid regner vi også arbeid som familiemedlem uten fast lønn på gårdsbruk, i forretning og i familiebedrift ellers.

86

1 ☐ JA → 7

2 ☐ NEI → 6

6. Har du inntektsgivende arbeid som du var borte fra eller hadde fri fra i forrige uke?

87

1 ☐ JA → 7

2 ☐ NEI → 20

7. Hvor, dvs. i hvilken bedrift/virksomhet arbeider du vanligvis?

MIDLERTIDIG FRAVÆRENDE FRA ARBEIDET SKAL OPPGI DET ARBEIDSSTEDET HVOR VEDKOMMENDE PLEIER Å HA SITT INNTEKTSGIVENDE ARBEID

BEDRIFTENS NAVN: _____

BEDRIFTENS ADRESSE: _____

_____

*8. Hva slags virksomhet er dette?

GI EN BESKRIVELSE AV VIRKSOMHETENS ART

VIRKSOMHETENS ART: _____

_____

FOR KONTORET ☐ (88-90) NÆRINGSKODE

9. Hvor lenge har du arbeidet i denne virksomheten?

91

1 ☐ MINDRE ENN 1 ÅR
2 ☐ 1 - 4 ÅR
3 ☐ 5 - 9 ÅR
4 ☐ 10 ÅR ELLER MER

*10. Hva er ditt hovedyrke i denne virksomheten?

HOVEDYRKE: _____

☐☐☐☐ (92-94) (95) YRKESKODE

Kan du kort beskrive dine arbeidsoppgaver?

_____

_____

_____

11. Hvor lenge har du hatt dette yrket?

96

1 ☐ MINDRE ENN 1 ÅR
2 ☐ 1 - 4 ÅR
3 ☐ 5 - 9 ÅR
4 ☐ 10 ÅR ELLER MER

*12. Arbeider du i hovedyrket ditt som selvstendig, som ansatt eller som familiemedlem uten fast lønn?

97

1 ☐ SELVSTENDIG
2 ☐ ANSATT
3 ☐ FAMILIEMEDLEM

*13. Hvor mange timer pr. uke arbeider du vanligvis i alt i hovedyrket og eventuelle biyrker?

Regn også med betalte overtidstimer og ekstraarbeid hjemme i forbindelse med dette arbeidet.

98-99

☐☐ TIMER PR. UKE

100

1 ☐ HAR VANLIGVIS IKKE INNTEKTSGIVENDE ARBEID → 20

HVIS IO HAR STERKT VARIERENDE ARBEIDSTID PR. UKE, FØR OPP ET ANSLAG FOR GJENNOMSNITTLIG ARBEIDSTID PR. UKE OG KRYSS AV HER:

101

1 ☐ STERKT VARIERENDE ARBEIDSTID

*14. Hvilken ordning har du vanligvis med hensyn til arbeidstid i hovedyrket og i viktigste biyrke hvis du har biyrke?

VIS KORT 2. HVIS TELEFONINTERVJU: LES FRA KORT 2.

	HOVEDYRKE (102)	BIYRKE (103)
A. DAGSARBEID (MELLOM KL. 06 OG 18)	1 ☐	1 ☐
B. ARBEID SOM STARTER FØR KL. 06 OG SLUTTER MELLOM KL. 06 OG 18	2 ☐	2 ☐
C. ARBEID SOM STARTER MELLOM KL. 06 OG 18, MEN SOM SLUTTER ETTER KL. 18	3 ☐	3 ☐
D. FAST KVELDSARBEID	4 ☐	4 ☐
E. FAST NATTARBEID	5 ☐	5 ☐
F. 2-SKIFTSARBEID	6 ☐	6 ☐
G. 3-SKIFTSARBEID	7 ☐	7 ☐
H. TURNUSORDNING	8 ☐	8 ☐
I. ANNEN ORDNING (SPESIFISER): _____	9 ☐	9 ☐
HAR IKKE BIYRKE		104 1 ☐

15. Hvilken av beskrivelsene på dette kortet passer best på arbeidet du vanligvis utfører i hovedyrket?
VIS KORT 3 MVIS TELEFONINTERVJU: LES OPP FRA KORT 3.

105
1 ☐ OVERVEIENDE STILLESITTENDE ARBEID, (F.EKS. SKRIVEBORDSARBEID, URMAKERARBEID, MONTERING)
2 ☐ ARBEID SOM KREVER AT DU STÅR ELLER GÅR MYE (F.EKS. EKSPEDISJONSARBEID, LETT INDUSTRIARBEID, UNDERVISNING)
3 ☐ ARBEID HVOR DU GÅR OG LØFTER MYE (F.EKS. POSTBUD, TYNGRE INDUSTRIARBEID, BYGNINGSARBEID)
4 ☐ TUNGT KROPPSARBEID (ARBEID SOM ER MER ANSTRENGENDE ENN Å GÅ OG LØFTE MYE, F.EKS. SKOGSARBEID, TUNGT JORDBRUKSARBEID, TUNGT BYGNINGSARBEID)

*16. Er du på arbeidsplassen din mye, litt eller ikke plaget av GJELDER HOVEDYRKET

	MYE	LITT	IKKE	
Støy?	1	2	3	106
Forurenset luft? (røyk, støv, lukt mv.)	1	2	3	107
Vonde arbeidsstillinger?	1	2	3	108
Trekk?	1	2	3	109
Høyt arbeidstempo?	1	2	3	110

17. Har du vært skadet eller utsatt for noen ulykke i arbeidet ditt i løpet av de siste 12 måneder? Regn med alle ulykker som førte til kontakt med lege og/eller fravær fra arbeidet.

111
1 ☐ JA → 18
2 ☐ NEI → 19

*18. Hvor mange arbeidsdager i alt var du fraværende fra arbeidet på grunn av arbeidsulykke i løpet av de siste 12 måneder?

☐☐☐ ANTALL ARBEIDSDAGER 112-114

1
115 ☐ VAR IKKE FRAVÆRENDE

19. Tror du det er fare for at du kan bli arbeidsledig?

116
1 ☐ JA
2 ☐ NEI
→ 22

20. Har du hatt inntektsgivende arbeid i løpet av de siste 12 måneder?

117
1 ☐ JA → 21
2 ☐ NEI → 23

21. Hva var de viktigste grunnene til at du sluttet i dette arbeidet?
OPPTIL 3 GRUNNER KAN KRYSSES AV

	1. SVAR 118-119	2. SVAR 120-121	3. SVAR 122-123
INNGÅELSE AV EKTESKAP, SVANGERSKAP, FØDSEL	01 ☐	01 ☐	01 ☐
OMSORG FOR BARN/ANNET OMSORGSARBEID	02 ☐	02 ☐	02 ☐
DÅRLIGE FYSISKE ELLER SOSIALE ARBEIDSFORHOLD	03 ☐	03 ☐	03 ☐
UBEKVEM ARBEIDSTID/FOR LANG ARBEIDSREISE	04 ☐	04 ☐	04 ☐
KORTVARIG SESONGARBEID	05 ☐	05 ☐	05 ☐
ARBEIDET VAR DÅRLIG BETALT	06 ☐	06 ☐	06 ☐
BEDRIFTEN BLE NEDLAGT/INNSKRENKET	07 ☐	07 ☐	07 ☐
FAMILIEN FLYTTET	08 ☐	08 ☐	08 ☐
ØNSKET Å FLYTTE TIL ANNET STED	09 ☐	09 ☐	09 ☐
VIDERE UTDANNING	10 ☐	10 ☐	10 ☐
SVEKKET HELSE	11 ☐	11 ☐	11 ☐
BLE ALDERSPENSJONERT/FØRTIDSPENSJONERT	12 ☐	12 ☐	12 ☐
ANNET (SPESIFISER) _____	13 ☐	13 ☐	13 ☐

ANTALL GRUNNER OPPGITT:

124
0 ☐ INGEN GRUNNER
1 ☐ 1 GRUNN
2 ☐ 2 GRUNNER
3 ☐ 3 GRUNNER

22. Var det noen periode i løpet av de siste 12 måneder da du var ufrivillig permittert uten lønn for hele eller for en del av den vanlige arbeidstiden?

125
1 ☐ JA, HELT PERMITTERT
2 ☐ JA, PERMITTERT FOR EN DEL AV DEN VANLIGE ARBEIDSTIDEN
3 ☐ NEI

*23. Var det noen periode i løpet av de siste 12 måneder da du var uten arbeid og samtidig søkte etter arbeid, f.eks. ved å oppsøke arbeidskontor, lese annonser, søke selv eller hadde søknad inne på arbeid?
Regn bare med søking på arbeid som du kunne tatt på kort varsel.

126
1 ☐ JA
2 ☐ NEI

*24. STILLES TIL PERSONER SOM HAR SVART JA PÅ SPM. 22 ELLER 23. FOR ANDRE GÅ TIL SPM. 25.
Hvor mange uker sammenlagt var du arbeidssøkende eller ufrivillig permittert uten lønn de siste 12 måneder? Ta også med perioder da du ventet på svar på søknad.

ANTALL UKER ☐☐, 127-128

*25. Passer noen av disse beskrivelsene for deg?
VIS KORT 4. HVIS TELEFONINTERVJU, LES FRA KORT 4.

	JA (1)	NEI (2)	
A. MOTTAR ALDERSPENSJON, TJENESTEPENSJON	☐	☐	129
B. MOTTAR UFØREPENSJON, ETTERLATTEPENSJON/ENKEPENSJON ELLER STØNAD TIL UGIFT MOR	☐	☐	130
C. GÅR PÅ SKOLE ELLER STUDERER, VANLIGVIS I 10 TIMER ELLER MER PR. UKE	☐	☐	131
D. ER ARBEIDSLEDIG NÅ OG HAR VÆRT DET SAMMENHENGENDE DE SISTE 3 MÅNEDER	☐	☐	132
E. ER INNE TIL 1. GANGS MILITÆRTJENESTE ELLER SIVILARBEIDERTJENESTE	☐	☐	133
F. UTFØRER HUSARBEID OG OMSORGSARBEID HJEMME, VANLIGVIS I 10 TIMER ELLER MER PR. UKE	☐	☐	134

FOR KONTORET ☐ 135

*26. Har du vært sengeliggende eller hatt nedsatt aktivitet i de daglige gjøremål i løpet av 14-dagersperioden på grunn av sykdom, skade eller lidelse?
Vi tenker ikke bare på sykdom/skade som har oppstått i 14-dagersperioden, men også på sykdom/skade som har oppstått tidligere og som har ført til sengeleie eller nedsatt aktivitet i løpet av perioden.
VIS DEN AKTUELLE PERIODEN PÅ KALENDEREN. HVIS TELEFONINTERVJU: GJØR IO KLART OPPMERKSOM PÅ HVILKEN 14-DAGERSPERIODE DET ER SNAKK OM

136
1 ☐ JA → 27
2 ☐ NEI → 30

*27. Hvor mange dager i 14-dagersperioden var du:

	DAGER I 14-DAGERS PERIODEN	
Innlagt i helseinstitusjon?	☐☐	137-138
Helt sengeliggende hjemme?	☐☐	139-140
Delvis sengeliggende hjemme?	☐☐	141-142
Oppegående, men ikke i full aktivitet	☐☐	143-144
I full aktivitet	☐☐	145-146
SUM SKAL BLI:	1 4	DAGER

28. Hvordan var situasjonen siste dag i 14-dagersperioden?
147
1 ☐ INNLAGT I HELSEINSTITUSJON
2 ☐ HELT SENGELIGGENDE
3 ☐ DELVIS SENGELIGGENDE
4 ☐ OPPEGÅENDE, MEN IKKE I FULL AKTIVITET
5 ☐ I FULL AKTIVITET

*29. Hva slags sykdom, skade eller lidelse var årsak til at du var sengeliggende eller hadde nedsatt aktivitet i perioden?
HVIS FLERE ÅRSAKER, SPØR OM EN ÅRSAK OM GANGEN

29A. ÅRSAK: _____

FOR KONTORET ☐☐ 148-150

FORTSETT MED TILLEGGSSPØRSMÅLENE PÅ DE NESTE 2 SIDENE.

*1. Når fikk du sykdommen, skaden, lidelsen?

	1	
I 14-DAGERSPERIODEN	☐	151
MÅNED I 1985 FØR 14-DAGERSPERIODEN	☐☐	152-153
ÅRSTALL FØR 1985	☐☐	154-155

156
MEDFØDT 1 ☐
HUSKER IKKE 2 ☐

*2. Er lege (i eller utenfor sykehus) noen gang kontakt i forbindelse med sykdommen/skaden?
157
1 ☐ JA → 3
2 ☐ NEI → 4

3. Hvor lenge er det siden sist du hadde kontakt med lege i forbindelse med sykdommen/skaden?
TIDEN REGNES BAKOVER FRA SISTE DAG I 14-DAGERSPERIODEN
158
1 ☐ I 14-DAGERSPERIODEN
2 ☐ OVER 14 DAGER, MEN MINDRE ENN 1 MÅNED
3 ☐ 1 MÅNED TIL UNDER 6 MÅNEDER
4 ☐ 6 MÅNEDER TIL UNDER 1 ÅR
5 ☐ 1 ÅR TIL UNDER 5 ÅR
6 ☐ 5 ÅR ELLER MER

4. Har du i 14-dagersperioden brukt piller, tabletter, mikstur, salve eller annen medisin i forbindelse med sykdommen/skaden?
159
1 ☐ JA → 5
2 ☐ NEI → 6

*5. Hvordan fikk du den medisinen du brukte i 14-dagersperioden, var det medisin som du kjøpte på resept eller fikk av legen for dette tilfellet, hadde du reseptpliktig medisin stående, var det medisin kjøpt på apotek eller medisinutsalg uten resept eller fikk du medisinen på annen måte?
160
1 ☐ KJØPTE PÅ RESEPT/FIKK AV LEGEN FOR DETTE TILFELLET
2 ☐ HADDE RESEPTPLIKTIG MEDISIN STÅENDE
3 ☐ KJØPTE PÅ APOTEK/MEDISINUTSALG UTEN RESEPT
4 ☐ FIKK MEDISINEN PÅ ANNEN MÅTE

TILLEGGSSPØRSMÅL 6 KAN AVMERKES AV INTERVJUER HVIS DET IKKE ER TVIL OM TILFELLET ER EN SYKDOM ELLER EN SKADE

*6. Er det tilfellet du har fortalt om en sykdom eller en skade?
161
1 ☐ SYKDOM → 29 (FORTS.)
2 ☐ SKADE → 7

7. Var bil, motorsykkel, sykkel eller annet kjøretøy innblandet i ulykken?
162
1 ☐ JA
2 ☐ NEI

*8. Hvor skjedde skaden?

1oj

1 ☐ GATE, VEI, FORTAU
2 ☐ ANNET TRAFIKKOMRÅDE (JERNBANE, KAI M.V.)
3 ☐ EGEN ELLER ANDRES BOLIG, HAGE, GÅRDSPLASS, LEKEPLASS I EGET ELLER ANNET BOLIGOMRÅDE
4 ☐ FABRIKK, VERKSTED, ANLEGGS-, JORDBRUKS- ELLER ANNET PRODUKSJONSOMRÅDE
5 ☐ SKOLE, SKOLEGÅRD, BARNEHAGE, OFF. INSTITUSJON
6 ☐ IDRETTS-/SPORTSANLEGG, SVØMMEHALL, GYMNASTIKKSAL (OGSÅ PÅ SKOLE/INSTITUSJON)
7 ☐ SKOG, FJELL, STRAND, VANN
8 ☐ FORSAMLINGSLOKALE, PARK ELLER ANNET OMRÅDE IKKE NEVNT OVENFOR (SPESIFISER)

9. Hva holdt du på med da skaden skjedde?

164

1 ☐ INNTEKTSGIVENDE ARBEID
2 ☐ REISE TIL/FRA ARBEID
3 ☐ SKOLE, STUDIER (INKL. REISE TIL/FRA OG INKL. FRIMINUTTER/PAUSER)
4 ☐ UBETALT HUSARBEID/OMSORGSARBEID/VEDLIKEHOLDSARBEID
5 ☐ IDRETT, SPORT, MOSJON, HOBBY, LEK ELLER ANNEN FRITIDSAKTIVITET
6 ☐ ANNET (SPESIFISER) _____

*10. Hvem var det som behandlet skaden?

1

165 ☐ BEHANDLET SELV ELLER AV ANNET IKKE-HELSEPERSONELL
166 ☐ BEDRIFTSLEGE/AFDRIFTSSYKEPLEIER/UTPEKT FØRSTEHJELPER PÅ BEDRIFTEN
167 ☐ SKOLELEGE/ANDRE PÅ SKOLELEGEKONTOR/UTPEKT FØRSTEHJELPER PÅ SKOLEN
168 ☐ PRAKTISERENDE LEGE, KOMMUNELEGE, LEGESENTER
169 ☐ TANNLEGE
170 ☐ LEGEVAKT, POLIKLINIKK
171 ☐ FYSIOTERAPEUT
172 ☐ INNLAGT PÅ SYKEHUS
173 ☐ ANNET HELSEPERSONELL
174 ☐ SKADEN BLE IKKE BEHANDLET

FOR KONTORET ☐☐☐☐ 175-179

29. (FORTS.) Var det andre årsaker til at du var sengeliggende eller hadde redusert aktivitet i 14-dagersperioden?

180

1 ☐ JA —→ 29A
2 ☐ NEI —→ 30

29A. ÅRSAK _____

FOR KONTORET ☐☐☐ 181-183

BRUK EN AV DE SPESIELT TILLEGGSBLANKETTENE BAK I SKJEMAET. HUSK Å FØRE OPP SPM. 29A. OG ÅRSAKEN PÅ TILLEGGSBLANKETTEN

29. (FORTS.) Var det andre årsaker til at du var sengeliggende eller hadde redusert aktivitet i perioden enn de du har fortalt om?

184

1 ☐ JA —→ 29C
2 ☐ NEI —→ 30

29C. ÅRSAK _____

FOR KONTORET ☐☐☐ 185-187

BRUK EN AV DE SPESIELLE TILLEGGSBLANKETTENE BAK I SKJEMAET. HUSK Å FØRE OPP SPM. 29C. OG ÅRSAKEN PÅ TILLEGGSBLANKETTEN

*30. Har du i 14-dagersperioden hatt kontakt med lege, sykepleier eller annen behandler eller med helse institusjon for undersøkelse, behandling eller kontroll på grunn av egen sykdom, skade eller lidelse som ikke har ført til redusert aktivitet i perioden?

HVIS SYKDOM ELLER SKADE ER OPPGITT TIDLIGERE, FORTSETT SPØRSMÅLET MED

Her tenker vi altså på annen sykdom, skade eller lidelse enn den(de) du har fortalt om.

188

1 ☐ JA —→ 31
2 ☐ NEI —→ 32 (SIDE 12)

*31. Hva slags sykdom, skade eller lidelse var årsak til kontakten?

HVIS FLERE ÅRSAKER, SPØR OM EN ÅRSAK OM GANGEN

31A. ÅRSAK _____

FOR KONTORET ☐☐ 189-190

FORTSETT MED TILLEGGSSPØRSMÅLENE PÅ DE NESTE 2 SIDENE

*1. Når fikk du sykdommen, skaden, lidelsen?

I 14-DAGERSPERIODEN	1	192
MÅNED I 1985 FØR 14-DAGERSPERIODEN		193-194
ANTALL FØR 1985		195-196
	197	
HUSKER IKKE	2	

*2. Er lege (i eller utenfor sykehus) noen gang kontaktet i forbindelse med sykdommen/skaden?

198
1 JA ⟶ 3
2 NEI ⟶ 4

3. Hvor lenge er det siden sist du hadde kontakt med lege i forbindelse med sykdommen/skaden?
TIDEN REGNES BAKOVER FRA SISTE DAG I 14-DAGERSPERIODEN.

199
1 I 14-DAGERSPERIODEN
2 OVER 14 DAGER, MEN MINDRE ENN 1 MÅNED
3 1 MÅNED TIL UNDER 6 MÅNEDER
4 6 MÅNEDER TIL UNDER 1 ÅR
5 1 ÅR TIL UNDER 5 ÅR
6 5 ÅR ELLER MER

4. Har du i 14-dagersperioden brukt piller, tabletter, mikstur, salve eller annen medisin i forbindelse med sykdommen/skaden?

200
1 JA ⟶ 5
2 NEI ⟶ 6

*5. Hvordan fikk du den medisinen du brukte i 14-dagersperioden, var det medisin som du kjøpte på resept eller fikk av legen for dette tilfellet, hadde du reseptpliktig medisin stående, var det medisin kjøpt på apotek eller medisinutsalg uten resept eller fikk du medisinen på annen måte?

201
1 KJØPTE PÅ RESEPT/FIKK AV LEGEN FOR DETTE TILFELLET
2 HADDE RESEPTPLIKTIG MEDISIN STÅENDE
3 KJØPTE PÅ APOTEK/MEDISINUTSALG UTEN RESEPT
4 FIKK MEDISINEN PÅ ANNEN MÅTE

TILLEGGSSPØRSMÅL 6 KAN AVMERKES AV INTERVJUER HVIS DET IKKE ER TVIL OM TILFELLET ER EN SYKDOM ELLER SKADE.

*6. Er det tilfellet du har fortalt om en sykdom eller skade?

202
1 SYKDOM ⟶ 31 (FORTS.)
2 SKADE ⟶ 7

7. Var bil, motorsykkel, sykkel eller annet kjøretøy innblandet i ulykken?

203
1 JA
2 NEI

* 8. Hvor skjedde skaden?

204
1 GATE, VEI, FORTAU
2 ANNET TRAFIKKOMRÅDE (JERNBANE, KAI MV.)
3 EGEN ELLER ANDRES BOLIG, HAGE, GÅRDSPLASS, LEKEPLASS I EGET ELLER ANNET BOLIGOMRÅDE
4 FABRIKK, VERKSTED, ANLEGGS-, JORDBRUKS- ELLER ANNET PRODUKSJONSOMRÅDE
5 SKOLE, SKOLEGÅRD, BARNEHAGE, OFF. INSTITUSJON
6 IDRETTS-/SPORTSANLEGG, SVØMMEHALL, GYMNASTIKKSAL (OGSÅ PÅ SKOLE/INSTITUSJON)
7 SKOG, FJELL, STRAND, SJØ
8 FORSAMLINGSLOKALE, PARK ELLER ANNET OMRÅDE IKKE NEVNT OVENFOR (SPESIFISER)

9. Hva holdt du på med da skaden skjedde?

205
1 INNTEKTSGIVENDE ARBEID
2 REISE TIL/FRA ARBEID
3 SKOLE, STUDIER (INKL. REISE TIL/FRA OG INKL. FRIKVARTER/PAUSER)
4 ULØNNET HUSARBEID/OMSORGSARBEID/VEDLIKEHOLDSARBEID
5 IDRETT, SPORT, MOSJON, HOBBY, LEK ELLER ANNEN FRITIDSAKTIVITET
6 ANNET (SPESIFISER): _____

* 10. Hvem var det som behandlet skaden?
FLERE SVAR KAN AVMERKES

1
206 BEHANDLET SELV ELLER AV ANNET IKKE-HELSEPERSONELL
207 BEDRIFTSLEGE/BEDRIFTSSYKEPLEIER/UTPEKT FØRSTEHJELPER PÅ ARBEIDSTEN
208 SKOLELEGE/ANDRE PÅ SKOLELEGEKONTOR/ UTPEKT FØRSTEHJELPER PÅ SKOLEN
209 PRAKTISERENDE LEGE, KOMMUNELEGE, LEGESENTER
210 TANNLEGE
211 LEGEVAKT, POLIKLINIKK
212 FYSIOTERAPEUT
213 INNLAGT PÅ SYKEHUS
214 ANNET HELSEPERSONELL
215 SKADEN BLE IKKE BEHANDLET

31. (FORTS.) Var det andre sykdommer, skader eller lidelser du ennå ikke har fortalt om, som var årsak til at du i 14-dagersperioden hadde kontakt med lege, sykepleier eller annen behandler?

216
1 ☐ JA ⟶ 31B
2 ☐ NEI ⟶ 32

31A. ÅRSAK _____

FOR KONTORET ☐☐☐ 217-219

BRUK EN AV DE SPESIELLE TILLEGGSBLANKETTENE BAK I SKJEMAET. HUSK Å FØRE OPP SPM. 31B. OG ÅRSAKEN PÅ TILLEGGSBLANKETTEN

31. (FORTS.) Var det andre sykdommer, skader eller lidelser du ennå ikke har fortalt om, som var årsak til at du i 14-dagersperioden hadde kontakt med lege, sykepleier eller annen behandler?

220
1 ☐ JA ⟶ 31C
2 ☐ NEI ⟶ 32

31C. ÅRSAK _____

FOR KONTORET ☐☐☐ 221-223

BRUK EN AV DE SPESIELLE TILLEGGSBLANKETTENE BAK I SKJEMAET. HUSK Å FØRE OPP SPM. 31C. OG ÅRSAKEN PÅ TILLEGGSSKJEMAET

*32. Har du i 14-dagersperioden brukt piller, tabletter, mikstur, salve eller annen medisin på grunn av sykdom, skade eller lidelse som verken har ført til nedsatt aktivitet eller kontakt med helsevesenet i perioden?

Her tenker vi altså på eventuell sykdom, skade eller lidelse som du ennå ikke har fortalt om.

224
1 ☐ JA ⟶ 33
2 ☐ NEI ⟶ 34 (SIDE 15)

*33. Hva slags sykdom, skade eller lidelse var årsak til at du brukte medisin?

HVIS FLERE ÅRSAKER, SPØR OM EN ÅRSAK OM GANGEN

33A. ÅRSAK: _____

FOR KONTORET: ☐☐ 225-227

FORTSETT MED TILLEGGSSPØRSMÅLENE PÅ DE NESTE 2 SIDENE

*1. Når fikk du sykdommen, skaden, lidelsen?

1
I 14-DAGERSPERIODEN ..... ☐ 228
MÅNED I 1985 FØR 14-DAGERSPERIODEN ..... ☐☐ 229-230
ÅRSTALL FØR 1985 ..... ☐☐ 231-232

233
HUSKER IKKE ..... 1 ☐
2 ☐

*2. Er lege (i eller utenfor sykehus) noen gang kontaktet i forbindelse med sykdommen/skaden?

234
1 ☐ JA ⟶ 3
2 ☐ NEI ⟶ 4

3. Hvor lenge er det siden sist du hadde kontakt med lege i forbindelse med sykdommen/skaden?

TIDEN REGNES BAKOVER FRA SISTE DAG I 14-DAGERSPERIODEN

235
1 ☐ I 14-DAGERSPERIODEN
2 ☐ OVER 14 DAGER, MEN MINDRE ENN 1 MÅNED
3 ☐ 1 MÅNED TIL UNDER 6 MÅNEDER
4 ☐ 6 MÅNEDER TIL UNDER 1 ÅR
5 ☐ 1 ÅR TIL UNDER 5 ÅR
6 ☐ 5 ÅR ELLER MER

FOR KONTORET ☐ 236

*5. Hvordan fikk du den medisinen du brukte i 14-dagersperioden, var det medisin som du kjøpte på resept eller fikk av legen for dette tilfellet, hadde du reseptpliktig medisin stående, var det medisin kjøpt på apotek eller medisinutsalg uten resept eller fikk du medisinen på annen måte?

237
1 ☐ KJØPTE PÅ RESEPT/FIKK AV LEGEN FOR DETTE TILFELLET
2 ☐ HADDE RESEPTPLIKTIG MEDISIN STÅENDE
3 ☐ KJØPTE PÅ APOTEK/MEDISINUTSALG UTEN RESEPT
4 ☐ FIKK MEDISINEN PÅ ANNEN MÅTE

TILLEGGSSPØRSMÅL 6 KAN AVMERKES AV INTERVJUER HVIS DET IKKE ER TVIL OM TILFELLET ER EN SYKDOM ELLER EN SKADE.

*6. Er det tilfellet du har fortalt om en sykdom eller en skade?

238
1 ☐ SYKDOM ⟶ 33 (FORTS.)
2 ☐ SKADE ⟶ 7

7. Var bil, motorsykkel, sykkel eller annet kjøretøy innblandet i ulykken?

239
1 ☐ JA
2 ☐ NEI

* 8. Hvor skjedde skaden?

240

1 ☐ GATE, VEI, FORTAU
2 ☐ ANNET TRAFIKKOMRÅDE (JERNBANE, KAI MV.)
3 ☐ EGEN ELLER ANDRES BOLIG, HAGE, GÅRDSPLASS, LEKEPLASS I EGET ELLER ANNET BOLIGOMRÅDE
4 ☐ FABRIKK, VERKSTED, ANLEGGS-, JORDBRUKS- ELLER ANNET PRODUKSJONSOMRÅDE
5 ☐ SKOLE, SMÅBARNSGARD, BARNEHAGE, OFF. INSTITUSJON
6 ☐ IDRETTS-/ SPORTSANLEGG, SVØMMEHALL, GYMNASTIKKSAL (OGSÅ PÅ SKOLE/INSTITUSJON)
7 ☐ SKOG, FJELL, STRAND, SJØ
8 ☐ FORSAMLINGSLOKALE, PARK ELLER ANNET OMRÅDE IKKE NEVNT OVENFOR (SPESIFISER): _____

9. Hva holdt du på med da skaden skjedde?

241

1 ☐ INNTEKTSGIVENDE ARBEID
2 ☐ REISE TIL/FRA ARBEID
3 ☐ SKOLE, STUDIER (INKL. REISE TIL/FRA OG INKL. FRIKVARTER/PAUSER)
4 ☐ ULØNNET HUSARBEID/OMSORGSARBEID/VEDLIKEHOLDSARBEID
5 ☐ IDRETT, SPORT, MOSJON, HOBBY, LEK ELLER ANNEN FRITIDSAKTIVITET
6 ☐ ANNET (SPESIFISER): _____

* 10. Hvem var det som behandlet skaden?

1

242 ☐ BEHANDLET SELV ELLER AV ANNET IKKE-HELSEPERSONELL
243 ☐ BEDRIFTSLEGE/BEDRIFTSSYKEPLEIER/UTPEKT FØRSTEHJELPER PÅ BEDRIFTEN
244 ☐ SKOLELEGE/ANDRE PÅ SKOLELEGEKONTOR/UTPEKT FØRSTEHJELPER PÅ SKOLEN
245 ☐ PRAKTISERENDE LEGE, KOMMUNELEGE, LEGESENTER
246 ☐ TANNLEGE
247 ☐ LEGEVAKT, POLIKLINIKK
248 ☐ FYSIOTERAPEUT
24C ☐ INNLAGT PÅ SYKEHUS
250 ☐ ANNET HELSEPERSONELL
251 ☐ SKADEN BLE IKKE BEHANDLET

FOR KONTORET: ☐☐☐ 252-254

33. (FORTS.) Var det andre årsaker til at du brukte medisin enn det tilfellet du har fortalt om?

255

1 ☐ JA ⟶ 33B
2 ☐ NEI ⟶ 34

33B. ÅRSAK: _____

FOR KONTORET: ☐☐☐ 256-258

BRUK EN AV DE SPESIELLE TILLEGGSBLANKETTENE BAK I SKJEMAET. HUSK Å FØRE OPP SPM. 33B. OG ÅRSAKEN PÅ TILLEGGSBLANKETTEN

33. (FORTS.) Var det andre årsaker til at du brukte medisin i 14-dagersperioden enn de tilfellene du har fortalt om?

259

1 ☐ JA ⟶ 33C
2 ☐ NEI ⟶ 34

33C. ÅRSAK: _____

FOR KONTORET: ☐☐☐ 260-262

BRUK EN AV DE SPESIELLE TILLEGGSBLANKETTENE BAK I SKJEMAET. HUSK Å FØRE OPP SPM. 33C. OG ÅRSAKEN PÅ TILLEGGSBLANKETTEN

*34. Har du noen medfødt lidelse eller en sykdom, skade eller lidelse av varig natur som du ennå ikke har fortalt om?

VIS KORT 5 NÅR IO IKKE MUSKER FLERE TILFELLE

HVIS TELEFONINTERVJU: LES OPP FRA KORT 5

263

1 ☐ JA ⟶ 35
2 ☐ NEI ⟶ 36 (SIDE 18)

*35. Hva slags sykdom, skade eller lidelse dreier det seg om?

HVIS FLERE, SPØR OM EN OM GANGEN

35A. _____

FOR KONTORET: ☐☐☐ 264-266

FORTSETT MED TILLEGGSSPØRSMÅLENE PÅ DE NESTE 2 SIDENE

*1. Når fikk du sykdommen, skaden, lidelsen?

I 14-DAGERSPERIODEN ..... 1 [ ] 267
MÅNED I 1985 FOR 14-DAGERSPERIODEN ..... [ ][ ] 268-269
ÅR FALT FOR 1985 ..... [ ][ ] 270-271

MENNESKE ..... 272 1 [ ]
INNSEER IKKE ..... 2 [ ]

*2. Er (ble du) lege eller utenfor sykehus) noen gang kontaktet i forbindelse med sykdommen/skaden?

273
1 [ ] JA → 3
2 [ ] NEI → 4

3. Hvor lenge er det siden sist du hadde kontakt med lege i forbindelse med sykdommen/skaden?
(DIDN MINNES, BARNER FRA SISTE DAG I 14-DAGERSPERIODEN

274
1 [ ] I 14-DAGERSPERIODEN
2 [ ] OVER 14 DAGER, MEN MINDRE ENN 1 MÅNED
3 [ ] 1 MÅNED TIL UNDER 6 MÅNEDER
4 [ ] 6 MÅNEDER TIL UNDER 1 ÅR
5 [ ] 1 ÅR TIL UNDER 5 ÅR
6 [ ] 5 ÅR ELLER MER

4. Har du i 14-dagersperioden brukt piller, tabletter, mikstur, salve eller annen medisin i forbindelse med sykdommen/skaden?

275
1 [ ] JA → 5
2 [ ] NEI → 6

*5. Hvordan fikk du den medisinen du brukte i 14-dagersperioden, var det medisin som du kjøpte på resept eller fikk av legen for dette tilfellet, hadde du reseptpliktig medisin stående, var det medisin kjøpt på apotek eller medisinutsalg uten resept eller fikk du medisinen på annen måte?

276
1 [ ] KJØPTE PÅ RESEPT/FIKK AV LEGEN FOR DETTE TILFELLET
2 [ ] HADDE RESEPTPLIKTIG MEDISIN STÅENDE
3 [ ] KJØPTE PÅ APOTEK/MEDISINUTSALG UTEN RESEPT
4 [ ] FIKK MEDISINEN PÅ ANNEN MÅTE

TILLEGGSSPØRSMÅL 6 KAN AVMERKES AV INTERVJUER HVIS DET IKKE ER TVIL OM TILFELLET ER EN SYKDOM ELLER EN SKADE

*6. Er det tilfellet du har fortalt om en sykdom eller en skade?

277
1 [ ] SYKDOM → 35(FORTS.)
2 [ ] SKADE → 7

7. Var bil, motorsykkel, sykkel eller annet kjøretøy innblandet i ulykken?

278
1 [ ] JA
2 [ ] NEI

* 8. Hvor skjedde skaden?

279
1 [ ] GATE, VEI, FORTAU
2 [ ] ANNET TRAFIKKOMRÅDE (JERNBANE, KAI MV.)
3 [ ] EGEN ELLER ANDRES BOLIG, HAGE, GÅRDSPLASS, LEKEPLASS I EGET ELLER ANNET BOLIGOMRÅDE
4 [ ] FABRIKK, VERKSTED, ANLEGGS-, JORDBRUKS- ELLER ANNET PRODUKSJONSOMRÅDE
5 [ ] SKOLE, SKOLEGÅRD, BARNEHAGE, UFF. INSTITUSJON
6 [ ] IDRETTS-/SPORTSANLEGG, SVØMMEHALL, GYMNASTIKKSAL (OGSÅ PÅ SKOLE/INSTITUSJON)
7 [ ] SKOG, FJELL, STRAND, SJØ
8 [ ] FORSAMLINGSLOKALE, PARK ELLER ANNET OMRÅDE IKKE NEVNT OVENFOR (SPESIFISER)

9. Hva holdt du på med da skaden skjedde?

280
1 [ ] LØNNSKGIVENDE ARBEID
2 [ ] REISE TIL/FRA ARBEID
3 [ ] SKOLE, STUDIER (INKL. REISE TIL/FRA OG INKL. FRIKVARTER/PAUSER)
4 [ ] ULØNNET HUSARBEID/OMSORGSARBEID/VEDLIKEHOLDSARBEID
5 [ ] IDRETT, SPORT, MOSJON, HOBBY, LEK ELLER ANNEN FRITIDSAKTIVITET
6 [ ] ANNET (SPESIFISER). _____

*10. Hvem var det som behandlet skaden?

1
281 [ ] BEHANDLET SELV ELLER AV ANNET IKKE-HELSEPERSONELL
282 [ ] BEDRIFTSLEGE/BEDRIFTSSYKEPLEIER/UTFØRT FØRSTEHJELP PÅ BEDRIFTEN
283 [ ] SKOLELEGE/ANDRE PÅ SKOLELEGEKONTOR/UTFØRT FØRSTEHJELP PÅ SKOLEN
284 [ ] PRAKTISERENDE LEGE, KOMMUNELEGE, LEGESENTER
285 [ ] TANNLEGE
286 [ ] LEGEVAKT, POLIKLINIKK
287 [ ] FYSIOTERAPEUT
288 [ ] INNLAGT PÅ SYKEHUS
289 [ ] ANNET HELSEPERSONELL
290 [ ] SKADEN BLE IKKE BEHANDLET

35 (FORTS.) Har du andre medfødte lidelser eller sykdommer, skader eller lidelser av varig natur som du ennå ikke har fortalt om?

291
1 ☐ JA → 35B
2 ☐ NEI → 36

VIS KORT 5 NÅR IO IKKE HUSKER FLERE TILFELLE HVIS TELEFONINTERVJU: LES OPP FRA KORT 5

35B. _____

FOR KONTORET: ☐☐☐ 292-294

BRUK EN AV DE SPESIELLE TILLEGGSBLANKETTENE BAK I SKJEMAET. HUSK Å FØRE OPP SPM. 35B. OG ÅRSAKEN PÅ TILLEGGSBLANKETTEN

35 (FORTS.) Har du andre medfødte lidelser eller sykdommer, skader eller lidelser av varig natur som du ennå ikke har fortalt om?

295
1 ☐ JA → 35C
2 ☐ NEI → 36

VIS KORT 5 NÅR IO IKKE HUSKER FLERE TILFELLE HVIS TELEVOMINTERVJU: LES OPP FRA KORT 5

35C. _____

FOR KONTORET: ☐☐☐ 296-298

BRUK EN AV DE SPESIELLE TILLEGGSBLANKETTENE BAK I SKJEMAET. HUSK Å FØRE OPP SPM. 35C. OG ÅRSAKEN PÅ TILLEGGSBLANKETTEN

35 (FORTS.) Har du andre medfødte lidelser eller sykdommer, skader eller lidelser av varig natur som du ennå ikke har fortalt om?

299
1 ☐ JA → 35D
2 ☐ NEI → 36

VIS KORT 5 NÅR IO IKKE HUSKER FLERE TILFELLE HVIS TELEFONINTERVJU: LES OPP FRA KORT 5

35D. _____

FOR KONTORET: ☐☐☐ 300-302

BRUK EN AV DE SPESIELLE TILLEGGSBLANKETTENE BAK I SKJEMAET. HUSK Å FØRE OPP SPM. 35D. OG ÅRSAKEN PÅ TILLEGGSBLANKETTEN

*36. Har du noen funksjonshemming som du ikke regner som sykdom, skade eller lidelse og som du derfor ennå ikke har fortalt om?

303
1 ☐ JA → 37
2 ☐ NEI → 38

*37. Hva slags funksjonshemming er dette?

TYPE FUNKSJONSHEMMING _____

_____

FOR KONTORET: ☐☐☐ 304-306

*38. STILLES TIL PERSONER SOM HAR MINST ETT SYKTILFELLE ELLER EN FUNKSJONSHEMMING (HAR JA PÅ SPM. 26, 30, 32, 34 ELLER 36). FOR ANDRE GÅ TIL SPM. 46A.

NÅ følger noen spørsmål om mer varige konsekvenser av sykdom eller funksjonshemming. For hvert spørsmål vil vi gjerne at du skal svare enten "ja, svært vanskelig" eller "ja noe vanskelig" eller "nei".

Har du på grunn av varige helseproblemer eller funksjonshemming

	JA, SVÆRT VANSKELIG 1	JA, NOE VANSKELIG 2	NEI 3	
a. vansker med å bevege deg rundt i eller bruke boligen?	☐	☐	☐	307
b. vansker med å bevege deg ut av boligen på egen hånd?	☐	☐	☐	308
c. vansker med å bruke offentlige transportmidler?	☐	☐	☐	309
d. vansker med å delta i foreningsliv?	☐	☐	☐	310
e. vansker med å delta i andre fritidsaktiviteter?	☐	☐	☐	311
f. vansker med å få kontakt med eller snakke med andre mennesker?	☐	☐	☐	312
g. hatt vansker med å gjennomføre eller sette i gang med en ønsket utdanning eller opplæring?	☐	☐	☐	313
h. hatt vansker med å finne en jobb du kunne klare?	☐	☐	☐	314
FOR PERSONER MED INNTEKTSGIVENDE ARBEID (JA PÅ SPM. 5 ELLER 6)				
i. vansker med å klare den jobben du har?	☐	☐	☐	315

319 1 ☐ SPØRSMÅLET IKKE STILT IFØLGE INSTRUKS → 41

FOR KONTORET ☐☐☐ 316-318

*39. STILLES TIL PERSONER I FLERPERSONHUSHOLDNINGER, OG SOM HAR MINST ETT SYKETILFELLE ELLER EN FUNKSJONSHEMMING. FOR ANDRE GÅ TIL SPM. 41.

Fører din sykdom, skade eller funksjonshemming til at andre i husholdningen vanligvis har ekstra omsorgsarbeid for deg som hjelp til daglige gjøremål, stell eller tilsyn?

320
1 ☐ JA → 40
2 ☐ NEI → 41

40. Hvem av de andre i husholdningen er det som vanligvis utfører arbeidet eller har tilsynet?

HUSHOLD MEMBS-MEDL.NR.		TIMER PR. UKE
321-322 ☐☐	Hvor mange timer pr. uke vil du si at dette husholdningsmedlemmet vanligvis utfører ekstra omsorgsarbeid for deg? →	☐☐☐ 323-325
326-327 ☐☐	Hvor mange timer pr. uke vil du si at dette husholdningsmedlemmet vanligvis utfører ekstra omsorgsarbeid for deg? →	☐☐☐ 328-330
331-332 ☐☐	Hvor mange timer pr. uke vil du si at dette husholdningsmedlemmet vanligvis utfører ekstra omsorgsarbeid for deg? →	☐☐☐ 333-335

*41. STILLES TIL ALLE PERSONER SOM HAR MINST ETT SYKETILFELLE ELLER EN FUNKSJONSHEMMING. FOR ANDRE GÅ TIL SPM. 46B.

Har husholdningen hatt behov for hjelp utenfra til pleie eller husarbeid i 14-dagersperioden på grunn av din sykdom, skade eller funksjonshemming?

336
1 ☐ JA, TIL PLEIE
2 ☐ JA, TIL HUSARBEID → 42
3 ☐ NEI, IKKE BEHOV FOR HJELP UTENFRA → 44

42. Fikk husholdningen hjelp utenfra?

337
1 ☐ JA ⟶ 43
2 ☐ NEI ⟶ 44

43. Hvem fikk husholdningen hjelp av, og i hvor mange timer i alt i 14-dagersperioden ble det gitt hjelp i forbindelse med din sykdom?

HJELP AV		TIMER
SLEKTNINGER	⟶	☐☐ 338-339
NABOER, VENNER	⟶	☐☐ 340-341
HUSMORVIKAR	⟶	☐☐ 342-343
HJEMMEHJELP	⟶	☐☐ 344-345
HJEMMESTREPLEIER	⟶	☐☐ 346-347
ANDRE (SPESIFISER): _____		☐☐ 348-349

SPM. 44-46 STILLES TIL PERSONER SOM HAR INNTEKTSGIVENDE ARBEID (HAR JA PÅ SPM. 5 ELLER 6). FOR ANDRE GÅ TIL SPM. 47.

44. STILLES TIL PERSONER (MED INNTEKTSGIVENDE ARBEID) SOM HAR HATT NEDSATT AKTIVITET I 14-DAGERS-PERIODEN. FOR ANDRE GÅ TIL SPM. 46B.

Har du vært fraværende fra arbeidet ditt i løpet av 14-dagersperioden på grunn av egen sykdom, skade eller lidelse?

350
1 ☐ JA ⟶ 45
2 ☐ NEI ⟶ 46B

45. Hvor mange dager var du fraværende i perioden?

351-352
☐☐ ANTALL ARBEIDSDAGER ⟶ 46A

*46. STILLES OGSÅ TIL PERSONER UTEN NEDSATT AKTIVITET I PERIODEN

a. Hvor mange arbeidsdager skulle du normalt ha arbeidet i perioden?

b. Hvor mange arbeidsdager har du arbeidet i 14-dagersperioden?

353-354
☐☐ ANTALL ARBEIDSDAGER

SPM. 47-49 STILLES TIL PERSONER SOM ER SKOLEELEV/STUDENT (HAR JA I PRT. C, SPM. 25). FOR ANDRE GÅ TIL SPM. 50.

47. STILLES TIL PERSONER (SOM ER SKOLEELEV/STUDENT) SOM HAR HATT NEDSATT AKTIVITET I 14-DAGERSPERIODEN. FOR ANDRE GÅ TIL SPM. 49B.

Har du vært fraværende fra skole/studier i løpet av 14-dagersperioden på grunn av egen sykdom, skade eller lidelse?

355
1 ☐ JA ⟶ 48
2 ☐ NEI ⟶ 49B

*48. Hvor mange skole-/studiedager var du fraværende i perioden?

356-357
☐☐ ANTALL SKOLE-/STUDIEDAGER ⟶ 49A

*49. STILLES OGSÅ TIL PERSONER UTEN NEDSATT AKTIVITET I PERIODEN

a. Hvor mange dager skulle du normalt ha vært på skole/studert i perioden?

b. Hvor mange dager har du vært på skole/studert i 14-dagersperioden?

358-359
☐☐ ANTALL SKOLE-/STUDIEDAGER

FOR KONTORET: ☐☐☐☐ 360-364

*50. STILLES TIL PERSONER MED MINST ETT SYKETILFELLE ELLER EN FUNKSJONSHEMMING (HAR JA PÅ SPM. 26, 30, 32, 34 ELLER 36). FOR ANDRE GÅ TIL SPM. 51.

Så følger et spørsmål om dine kontakter med helsetjenesten eller med andre behandlere i 14-dagers-perioden på grunn av egen sykdom, skade, lidelse eller funksjonshemming.

Det første spørsmålet gjelder kontakt med vanlig lege, ikke bedriftslege, spesialist eller lege på sykehus.

Har du i 14-dagersperioden besøkt eller hatt hjemmebesøk av vanlig lege på grunn av egen sykdom, skade, lidelse eller funksjonshemming? I tilfelle, hvor mange førstegangsbesøk har det vært og hvor mange gjenbesøk?

HVIS KONTAKT, FØR OPP ANTALL GANGER (IKKE KRYSS!). HVIS IO ikke har hatt en bestemt kontakt, skriver du 0 (null).

REGN IKKE MED KONTAKT MED TANNLEGE

	ANTALL GANGER I 14-DAGERS-PERIODEN
FØRSTEGANGSBESØK HOS/AV VANLIG LEGE	☐ 365
GJENBESØK HOS/AV VANLIG LEGE	☐ 366

FORTSETT: Har du besøkt bedriftslege i 14-dagersperioden på grunn av eget sykdomstilfelle, og i tilfelle hvor mange ganger?

367
BESØK HOS BEDRIFTSLEGE (FOR EGET SYKETILFELLE) ☐ ANTALL

HVIS BESØKSINTERVJU. VIS KORT 6. På dette kortet har vi listet opp noen flere typer kontakter. Kan du for hver enkelt type kontakt si om du har hatt slik kontakt i 14-dagersperioden på grunn av egen sykdom, skade, lidelse eller funksjonshemming, og i tilfelle hvor mange ganger?

HVIS TELEFONINTERVJU. FORTSETT: Har du i 14-dagersperioden ...

	ANTALL GANGER
a. Hatt telefonkonsultasjon med lege, ikke bare for timebestilling?	☐ 368
b. Henvendt deg til apotek/medisinutsalg for å få råd ved sykетilfelle?	☐ 369
c. Besøkt sykepleier ansatt i bedriftshelsetjenesten (ved sykетilfelle)?	☐ 370
d. Hatt kontakt med sykepleier, helsesøster, jordmor (ved sykетilfelle)?	☐ 371
e. Besøkt psykolog?	☐ 372
f. Besøkt eller fått hjemmebesøk av fysioterapeut?	☐ 373
g. Besøkt akupunktør?	☐ 374
h. Besøkt soneterapeut?	☐ 375
i. Besøkt homeopat?	☐ 376
j. Besøkt kiropraktor?	☐ 377
k. Besøkt naturmedisiner/naturmedisinsk senter?	☐ 378
l. Besøkt/hatt besøk av andre behandlere (spesifiser hva slags)?: _____	☐ 379
m. Besøkt/hatt hjemmebesøk av privatpraktiserende spesialist?	☐ 380
n. Besøkt lege på sykehus/poliklinikk uten å være innlagt?	☐ 381
o. Besøkt sykehus/poliklinikk uten å være innlagt og uten kontakt med lege?	☐ 382
p. Besøkt privat laboratorium/røntgeninstitutt?	☐ 383
q. Vært innlagt på sykehus, sykestue mv.?	☐ 384

*51. Neste spørsmål gjelder dine kontakter med helsevesenet i 14-dagersperioden, som ikke har sammenheng med sykdomstilfelle.

Har du etter eget initiativ vært hos lege for helsekontroll for å utelukke eller forebygge sykdom eller helseproblem? Regn også med prevensjonsveiledning, ikke-rutinemessig vaksinasjon mv. Kan du i tilfelle si hvor mange ganger i 14-dagersperioden?

HVIS KONTAKT, FØR OPP ANTALL GANGER (IKKE KRYSS!). HVIS IO IKKE HAR HATT EN BESTEMT KONTAKT, SKRIVER DU 0 (NULL).

	ANTALL GANGER I 14-DAGERS-PERIODEN	
HOS LEGE FOR Å UTELUKKE/FOREBYGGE SYKDOM/HELSEPROBLEM MV.	☐	385
FORTSETT Har du vært hos lege for å få helseattest, til legeundersøkelse i forbindelse med førerkort eller sesjon eller til helseundersøkelse før opptak i skoler mv. I tilfelle hvor mange ganger i 14-dagersperioden?		
HELSEATTEST/FØRERKORT/SESJON/OPPTAK I SKOLER MV.	☐	386

HVIS BESØKSINTERVJU, VIS KORT 7A. På dette kortet har vi listet opp noen flere typer kontakter. Kan du for hver enkelt type kontakt si om du har hatt slik kontakt i 14-dagersperioden, og i tilfelle hvor mange ganger?

HVIS TELEFONINTERVJU, FORTSETT: Har du i 14-dagersperioden ....

	ANTALL GANGER		KRYSS AV (UTEN SPM.) HVIS IKKE AKTUELT/ UPASSENDE	
a. hatt telefonkontakt med lege eller sykepleier for råd, veiledning mv. uten i forbindelse med sykdomstilfelle?	☐	387		
b. besøkt eller fått hjembesøk av helsesøster/jordmor for råd og veiledning?	☐	388	1 ☐	389
c. vært til anbefalt eller rutinemessig svangerskapskontroll?	☐	390	1 ☐	391
d. vært til anbefalt eller rutinemessig kontroll ved skolehelsetjenesten? .	☐	392	1 ☐	393
e. vært til anbefalt eller rutinemessig kontroll ved bedriftshelsetjenesten?	☐	394	1 ☐	395
FOR KONTORET	☐☐	396-397		
g. vært til annen anbefalt eller rutinemessig helsekontroll?	☐	398		
h. hatt annen kontakt? Spesifiser: _____	☐	399		

52. Har du en fast lege eller et fast legesenter som du pleier å bruke når du trenger legehjelp?

400
1 ☐ JA, FAST LEGE
2 ☐ JA, ET FAST LEGESENTER/HELSESENTER
3 ☐ NEI
4 ☐ VET IKKE

53A. Har du hatt kontakt med tannlege i 14-dagersperioden?

401
1 ☐ JA → 53B
2 ☐ NEI → 54

53B. For hver type kontakt med tannlege jeg leser opp, ønsker vi å vite hvor mange ganger du har hatt slik kontakt i 14-dagersperioden.

HVIS IO IKKE HAR HATT EN BESTEMT KONTAKT, SKRIV 0 (NULL) I RUTEN. FØR ELLERS INN ANTALL GANGER (IKKE KRYSS!)

Har du vært hos tannlegen	ANTALL GANGER I 14-DAGERS-PERIODEN	
-for rutinemessig kontroll og behandling?	☐☐	402
-for behandling av skade på tenner, tannverk og andre akutte tannproblemer?	☐☐	403
-for innsetting av tenner?	☐	404
-for annet? (SPESIFISER) _____	☐	405

54. Hvor lenge er det siden du var i kontakt med lege og med tannlege?

LEGE- OG/ELLER TANNLEGEKONTAKT I 14-DAGERSPERIODEN KRYSSES AV UTEN SPØRSMÅL (SPM. 50/51/53A). TIDEN REGNES BAKOVER FRA SISTE DAG I PERIODEN.
DET SKAL BARE KRYSSES AV FOR ETT SVARALTERNATIV FOR LEGE OG ETT FOR TANNLEGE.

	MED LEGE I ELLER UTENFOR SYKEHUS 406		MED TANN-LEGE 407	
I 14-DAGERSPERIODEN	1 ☐	1	☐	1
OVER 14 DAGER, MEN MINDRE ENN 1 MÅNED	2 ☐	2	☐	2
1 MÅNED TIL UNDER 6 MÅNEDER	3 ☐	3	☐	3
6 MÅNEDER TIL UNDER 1 ÅR	4 ☐	4	☐	4
1 ÅR TIL UNDER 5 ÅR	5 ☐	5	☐	5
5 ÅR ELLER MER	6 ☐	6	☐	6
HUSKER IKKE	7 ☐	7	☐	7
HAR ALDRI HATT KONTAKT	8 ☐	8	☐	8

*55. Omtrent hvor mange av dine egne tenner har du igjen, har du 20 eller flere, 10 til 19, 1 til 9 eller ingen?

408
1 ☐ 20 ELLER FLER
2 ☐ 10 - 19 → 56
3 ☐ 1 - 9 → 56
4 ☐ INGEN → 57

56. Bruker du noen av de følgende tannpleiemidlene, og bruker du dem i tilfelle daglig eller av og til?

	Daglig 1	Av og til 2	Aldri 3	
a. Tannbørste?	☐	☐	☐	409
b. Fluortannkrem?	☐	☐	☐	410
c. Fluortabletter?	☐	☐	☐	411
d. Fluorskyllevann?	☐	☐	☐	412
e. Tanntråd?	☐	☐	☐	413
f. Tannstikker?	☐	☐	☐	414

Vi skal nå stille noen spørsmål om førlighet, syn og hørsel. I disse spørsmålene tenker vi ikke på helt forbigående problemer du eventuelt har akkurat nå, men mer varige problemer.

*57. Kan du gå i trapper (opp og ned) uten vansker?

415
1 ☐ JA
2 ☐ NEI

*[illegible] Kan du gå en 5 minutters tur i noenlunde rask tempo uten vansker?

416
1 ☐ JA
2 ☐ NEI

*[illegible] Kan du løpe en kortere strekning, si 100 meter, hvis du har det travelt?

417
1 ☐ JA
2 ☐ NEI

*[illegible] Kan du uten vansker lese vanlig tekst i aviser?

MED BRILLER OM NØDVENDIG

418
1 ☐ JA
2 ☐ NEI

*[illegible] Kan du uten vansker høre hva som blir sagt i en normal samtale med minst 2 andre?

MED HØREAPPARAT OM NØDVENDIG

419
1 ☐ JA
2 ☐ NEI

*62. STILLES TIL PERSONER SOM HAR MINST ETT NEI PÅ SPM. 57-61. FOR ANDRE GÅ TIL SPM. 63

Kan du uten hjelp av andre klare følgende daglige gjøremål

	JA 1	NEI 2	
a. Innkjøp av dagligvarer?	☐	☐	420
b. Matlaging?	☐	☐	421
c. Vask og rengjøring av boligen/leiligheten?	☐	☐	422
d. Av- og påkledning?	☐	☐	423
e. Daglig personlig hygiene?	☐	☐	424

Så har vi noen spørsmål om kosthold

*63. Hvor mange dager i siste uke

	DAGER I SISTE UKE	
- spiste du middag hjemme hos deg selv eller hos andre?	☐	425
- spiste du middag ute (på restaurant, kafé)?	☐	426
- spiste du ikke middag i det hele tatt?	☐	427
SUM:	7	DAGER

FOR KONTORET ☐☐☐☐☐ 428-434

*64. Hvor mange dager i siste uke spiste du følgende til middag?

	DAGER I SISTE UKE	
-Kokt fisk?	☐	435
-Posesuppe?	☐	436
-Pølser?	☐	437
-Koteletter?	☐	438
-Fiskegrateng?	☐	439
-Grøt?	☐	440

*65. Hvor mange dager i siste uke spiste eller drakk du

	DAGER I SISTE UKE	
-Frisk frukt?	☐	441
-Grønnsaker (rå eller kokte)?	☐	442
-Kaker, vafler, boller, kjeks?	☐	443
-Saft, juice?	☐	444
-Mineralvann (med eller uten sukker)?	☐	445

66. Har du spist følgende regelmessig i siste uke

	JA 1	NEI 2	
- Vitaminpiller, Sanasol, Biovit o.l.?	☐	☐	446
- Tran, tranpiller?	☐	☐	447
- Jernpreparat?	☐	☐	448
- Annet vitamin- eller mineraltilskudd?	☐	☐	449

*67. Hvilken type melk bruker du vanligvis mest av til drikke og i maten?

450
1 ☐ HELMELK, KEFIRMELK, YOGHURT
2 ☐ OMTRENT LIKE MYE SKUMMET MELK OG HELMELK MV.
3 ☐ LETTMELK
4 ☐ SKUMMET MELK/SKUMMET KULTURMELK
5 ☐ BRUKER SJELDEN ELLER ALDRI MELK

68. Hvilken type smør eller margarin bruker du oftest på brødskivene?

451
1 ☐ MEIERISMØR O.L.
2 ☐ SMØR-MARGARINBLANDING
3 ☐ VANLIG MARGARIN (HARD)
4 ☐ MYK MARGARIN
5 ☐ SPESIELT FETTFATTIG MARGARIN
6 ☐ BRUKER VANLIGVIS IKKE NOE

*69. Hender det at du røyker?

452
1 ☐ JA ⟶ 70
2 ☐ NEI ⟶ 71

70. Røyker du daglig eller av og til?

453
1 ☐ DAGLIG ⟶ 72
2 ☐ AV OG TIL ⟶ 71

71. Har du noen gang røykt daglig?

454
1 ☐ JA ⟶ 72
2 ☐ NEI ⟶ 73

72. Hvor mange år sammenlagt har du røykt daglig?

455-456
☐☐ ANTALL ÅR

73. Har du i løpet av de siste 12 måneder drukket øl, vin eller brennevin?

457
1 ☐ JA ⟶ 74
2 ☐ NEI ⟶ 77

*74. Omtrent hvor ofte drikker du noen form for alkohol?

458
1 ☐ SJELDNERE ENN EN GANG I MÅNEDEN
2 ☐ OMTRENT EN GANG I MÅNEDEN
3 ☐ 2-3 GANGER I MÅNEDEN
4 ☐ OMTRENT EN GANG I UKEN
5 ☐ 2-4 GANGER I UKEN
6 ☐ HVER DAG ELLER NESTEN HVER DAG

*75. Omtrent hvor mange ganger i året drikker du så mye alkohol at det tilsvarer 5 halvflasker øl eller 1 helflaske rød-/hvitvin eller 1/2 flaske hetvin eller 1/4 flaske brennevin?

459
1 ☐ INGEN GANGER
2 ☐ 1-4 GANGER I ÅRET
3 ☐ 5-10 GANGER I ÅRET
4 ☐ OMTRENT EN GANG I MÅNEDEN (11-19 GANGER I ÅRET)
5 ☐ 2-3 GANGER I MÅNEDEN (20-49 GANGER I ÅRET)
6 ☐ OMTRENT EN GANG I UKEN (50-99 GANGER I ÅRET)
7 ☐ 2-4 GANGER I UKEN (100-299 GANGER I ÅRET)
8 ☐ HVER DAG ELLER NESTEN HVER DAG (300 GANGER ELLER MER I ÅRET)

76. Er ditt forbruk av alkohol de siste 12 måneder større, uendret eller mindre sammenlignet med tidligere år?

460
1 ☐ STØRRE
2 ☐ UENDRET
3 ☐ MINDRE

SPØRSMÅL 77-78 GJELDER DEN BOLIGEN SOM IO ER REGISTRERT FAST BOSATT I.

*77. Er du her i boligen vanligvis utsatt for

	JA (1)	NEI (2)	
- Støy fra naboleilighet, trappeoppgang eller støy fra vannrør o.l.? ...	☐	☐	461
- Støy fra gate/vei? ...	☐	☐	462
- Støy fra tog? ...	☐	☐	463
- Støy fra fly? ...	☐	☐	464
- Støy fra industri/anleggsvirksomhet? ...	☐	☐	465
- Støy fra andre støykilder? (spesifiser) _____	☐	☐	466

*78. Er du her ved boligen vanligvis utsatt for

	JA (1)	NEI (2)	
- Støv, lukt eller eksos fra veitrafikk ...	☐	☐	467
- Røyk, støv eller nedfall fra industri eller andre kilder? ...	☐	☐	468
- Lukt fra industri eller andre kilder? ...	☐	☐	469

*79. Driver du vanligvis noen form for mosjon eller trening, f.eks jogger, går lengre turer/skiturer, driver gymnastikk, sykler, svømmer, spiller fotball, tennis o.l.

470
1 ☐ JA ⟶ 80
2 ☐ NEI ⟶ 82

80. Hva vil du si er de viktigste grunnene til at du mosjonerer eller trener?
INNTIL 3 GRUNNER KAN NOTERES

	1. GRUNN 471	2. GRUNN 472	3. GRUNN 473
GIR FØLELSE AV VELVÆRE ...	1 ☐	1 ☐	1 ☐
GIR BEDRE HELSE ...	2 ☐	2 ☐	2 ☐
HOLDE VEKTEN NEDE ...	3 ☐	3 ☐	3 ☐
GJØRE DET BEST MULIG I KONKURRANSER ...	4 ☐	4 ☐	4 ☐
DET ER GØY/MORO ...	5 ☐	5 ☐	5 ☐
DET ØKER ARBEIDSEVNEN ...	6 ☐	6 ☐	6 ☐
FORDI JEG FØLER AT JEG BØR ...	7 ☐	7 ☐	7 ☐
FOR Å VÆRE SAMMEN MED ANDRE ...	8 ☐	8 ☐	8 ☐
ANDRE GRUNNER (SPESIFISER) _____	9 ☐	9 ☐	9 ☐

ANTALL GRUNNER OPPGITT:

474
0 ☐ INGEN GRUNNER
1 ☐ 1 GRUNN
2 ☐ 2 GRUNNER
3 ☐ 3 GRUNNER

81. Hvor ofte mosjonerer eller trener du vanligvis?

475
1 ☐ SJELDNERE ENN 1 DAG PR. UKE
2 ☐ 1-2 DAGER PR. UKE
3 ☐ 3-4 DAGER PR. UKE
4 ☐ 5-7 DAGER PR. UKE
⟶ 83

82. Hva vil du si er de viktigste grunnene til at du ikke trener eller motionerer?
(MAKSIL 3 GRUNNER KAN NOTERES)

	1. grunn 4/11	2. grunn 4/12	3. grunn 4/13
FAR NOK MOSJON I ARBEIDSFRITIDEN I HAVE I	1	1	1
FOR SLITEN ETTER JOBBEN	2	2	2
HAR IKKE TID	3	3	3
SYKDOM/HANDIKAP	4	4	4
MANGLER NOEN A TRENE/MOSJONERE SAMMEN MED	5	5	5
MANGLER TILTAKSLYST, VANSKELIG A KOMME I GANG	6	6	6
SYNES DET ER LITE VIKTIG	7	7	7
ANDRE GRUNNER (SPESIFISER): _____	8	8	8

ANTALL GRUNNER OPPGITT: 479

0 ☐ INGEN GRUNN
1 ☐ 1 GRUNN
2 ☐ 2 GRUNNER
3 ☐ 3 GRUNNER

83. Hvor ofte i løpet av de siste 12 måneder gjorde du følgende i fritiden din:

	ANTALL GANGER I LØPET AV DE SISTE 12 MANEDER: Ingen 1	1-2 2	3-9 3	10 eller flere 4	
- Var på møte eller deltok i forening eller sammenkomst (f.eks. faglig, politisk eller religiøs)?	☐	☐	☐	☐	480
- Deltok i sangkor, orkester, korps, spillemannslag?	☐	☐	☐	☐	481
- Var på teater, kino, konsert, utstilling, museum?	☐	☐	☐	☐	482

84. Hvor ofte er du i fritiden sammen med gode venner, slekt eller familie utenom husholdningen? 483

1 ☐ HAR INGEN
2 ☐ SJELDNERE ENN 1 GANG I ARET
3 ☐ 1 ELLER FLERE GANGER I ARET, MEN IKKE HVER MANED
4 ☐ OMTRENT HVER MANED, MEN IKKE HVER UKE
5 ☐ OMTRENT HVER UKE, MEN IKKE DAGLIG
6 ☐ SA A SI DAGLIG

85. Hvor mange familier/husstander i nabolaget kjenner du så godt at dere besøker hverandre av og til? 484

1 ☐ INGEN
2 ☐ 1
3 ☐ 2 - 4
4 ☐ 5 ELLER FLERE

86. Så følger noen spørsmål om du har hatt bestemte problemer eller plager, som ikke knytter seg til kortvarig sykdomstilfelle, i 14-dagersperioden.

Først, har du i 14-dagersperioden hatt vondt i skuldre, nakke, armer eller hender?

HVIS NEI, KRYSS AV FOR "IKKE PLAGET"
HVIS JA: Vil du si at du var litt plaget, ganske mye eller veldig mye plaget?

	IKKE PLAGET 1	LITT PLAGET 2	GANSKE MYE PLAGET 3	VELDIG MYE PLAGET 4	
VONDT I SKULDRE, NAKKE, ARMER ELLER HENDER	☐	☐	☐	☐	485
FORTSETT: Har du hatt vondt i ryggen? FØLG INSTRUKSEN OVER FOR NEI/JA OG KRYSS AV					
VONDT I RYGGEN	☐	☐	☐	☐	486

HVIS RESPONSINTERVJU: Her er et kort med en liste over noen flere problemer og plager. Kan du for hver av dem si om du i 14-dagersperioden ikke var plaget, eller om du var litt, ganske mye eller veldig mye plaget. VIS KORT B.

HVIS TELEFONINTERVJU, FORTSETT: Hva med ...

1. Vondt i hoftene eller bena?	☐	☐	☐	☐	487
2. Vondt i brystet?	☐	☐	☐	☐	488
3. Vondt i magen?	☐	☐	☐	☐	489
4. Halsbrann, sure oppstøt?	☐	☐	☐	☐	490
5. Diarè (minst tre løse avføringer i løpet av en dag)?	☐	☐	☐	☐	491
6. Hard mage?	☐	☐	☐	☐	492
7. Eksem, allergi?	☐	☐	☐	☐	493
8. Hodepine?	☐	☐	☐	☐	494
9. Kvalme?	☐	☐	☐	☐	495
10. Matthet eller svimmelhet?	☐	☐	☐	☐	496
11. Nervøsitet, indre uro?	☐	☐	☐	☐	497
12. Plutselig frykt uten grunn?	☐	☐	☐	☐	498
13. Stadig redd eller engstelig?	☐	☐	☐	☐	499
14. Hjertebank, hjerteslag som løper avgårde?	☐	☐	☐	☐	500
15. Følelse av å være anspent, oppjaget?	☐	☐	☐	☐	501
16. Anfall av angst eller panikk?	☐	☐	☐	☐	502
17. Så rastløs at det er vanskelig å sitte stille?	☐	☐	☐	☐	503
18. Mangel på energi, alt går langsommere enn vanlig?	☐	☐	☐	☐	504
19. Lett for å klandre deg selv?	☐	☐	☐	☐	505
20. Lett for å gråte?	☐	☐	☐	☐	506
21. Dårlig matlyst?	☐	☐	☐	☐	507
22. Søvnproblemer?	☐	☐	☐	☐	508
23. Følelse av håpløshet med tanke på fremtiden? .	☐	☐	☐	☐	509

PÅ (forts.)

24. Nedtrykt, tungsindig?	☐☐☐☐	510
25. Følelse av [illegible]?	☐☐☐☐	511
26. Følelse av å være lurt i en felle eller fanget?	☐☐☐☐	512
27. Mye bekymret eller urolig?	☐☐☐☐	513
28. Uten interesse for noe?	☐☐☐☐	514
29. Følelse av at alt er et slit?	☐☐☐☐	515
30. Følelse av å være unyttig?	☐☐☐☐	516

*97. Hvorledes vurderer du din egen helse sånn i sin almindelighet. Vil du si at den er meget god, god, verken god eller dårlig, dårlig eller meget dårlig?

517
1 ☐ MEGET GOD
2 ☐ GOD
3 ☐ VERKEN GOD ELLER DÅRLIG, MIDDELS
4 ☐ DÅRLIG
5 ☐ MEGET DÅRLIG

FOR KONTORET: ☐☐☐☐☐☐ 518-524

Skjemaet inneholder 8 tilleggsblanketter.

TILLEGGSBLANKETT FOR SYKETILFELLE

SPØRSMÅL NR. ☐☐☐ (525-526) ÅRSAK: _____

FOR KONTORET: ☐☐☐ 527-529

*1. Når fikk du sykdommen, skaden, lidelsen?

1
1 14-DAGERSPERIODEN ..... ☐ 530
MÅNED I 1985 FØR 14-DAGERSPERIODEN ..... ☐☐ 531-532
ÅRSTALL FØR 1985 ..... ☐☐ 533-534

535
MEDFØDT ..... 1 ☐
HUSKER IKKE ..... 2 ☐

*2. Er lege (i eller utenfor sykehus) noen gang kontaktet i forbindelse med sykdommen/skaden?

536
1 ☐ JA ⟶ 3
2 ☐ NEI ⟶ 4

3. Hvor lenge er det siden sist du hadde kontakt med lege i forbindelse med sykdommen/skaden?
TIDEN REGNES BAKOVER FRA SISTE DAG I 14-DAGERSPERIODEN.

537
1 ☐ I 14-DAGERSPERIODEN
2 ☐ OVER 14 DAGER, MEN MINDRE ENN 1 MÅNED
3 ☐ 1 MÅNEDER TIL UNDER 6 MÅNEDER
4 ☐ 6 MÅNEDER TIL UNDER 1 ÅR
5 ☐ 1 ÅR TIL UNDER 5 ÅR
6 ☐ 5 ÅR ELLER MER

TILLEGGSSPØRSMÅL 4 STILLES IKKE I SAMBAND MED HOVEDSPM. 33.

4. Har du i 14-dagersperioden brukt piller, tabletter, mikstur, salve eller annen medisin i forbindelse med sykdommen/skaden?

538
1 ☐ JA ⟶ 5
2 ☐ NEI ⟶ 6

*5. Hvordan fikk du den medisinen du brukte i 14-dagersperioden, var det medisin som du kjøpte på resept eller fikk av legen for dette tilfellet, hadde du reseptpliktig medisin stående, var det medisin kjøpt på apotek eller medisinutsalg uten resept eller fikk du medisinen på annen måte?

539
1 ☐ KJØPTE PÅ RESEPT/FIKK AV LEGEN FOR DETTE TILFELLET
2 ☐ HADDE RESEPTPLIKTIG MEDISIN STÅENDE
3 ☐ KJØPTE PÅ APOTEK/MEDISINUTSALG UTEN RESEPT
4 ☐ FIKK MEDISINEN PÅ ANNEN MÅTE

TILLEGGSSPØRSMÅL 6 KAN AVMERKES AV INTERVJUER HVIS DET IKKE ER TVIL OM TILFELLET ER EN SYKDOM ELLER EN SKADE

*6. Er det tilfellet du har fortalt om en sykdom eller en skade?

540
1 ☐ SYKDOM ⟶ GÅ TILBAKE TIL NESTE HOVEDSPØRSMÅL
2 ☐ SKADE ⟶ 7

PAPER I

DRUG USE IN A FREE-LIVING POPULATION - THE INFLUENCE OF AGE, GENDER, DISEASES AND PLACE OF RESIDENCE ON DRUG USE IN NORWAY.

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ABSTRACT

Data from the Norwegian Health Survey were collected through interviews, including 5,454 women and 5,122 men (0-80+ years). Drug use decreased with age in childhood, but the overall age trend showed an increase with age. The gender differences were observed through the childbearing years (15-49 years) and above 70 years of age. Higher drug use in women compared with men was due to a higher frequency of diagnoses of diseases/illnesses/injuries and a higher drug use among those women with a diagnosis. Use of both prescribed and non-prescribed drugs is sporadic, and self-medication decreased in both sexes when obtaining drugs from the doctor. The regional differences in drug use were mainly due to variation in the frequency of self-reported diagnoses of disease. Accumulated drug use data on the individual users are needed, to conclude whether the observed regional differences in drug sales are substantial and to find explaining factors.

Key words: drug use, pharmacoepidemiology, demographic factors, prescribed-, non-prescribed, gender differences.

INTRODUCTION

Several attempts have been made to describe drug users by such characteristics as age, sex and morbidity. Two consistent findings of these studies have been that prevalence of prescription drugs increased with age and that women have a higher prevalence than men [1-9]. Studies have shown an exception from this age trend, due to higher drug use among the youngest children [2,7,9-12]. Use of non-prescribed drugs shows no clear age trend [6-9,12-14]. The gender gap in use of prescribed drugs has been shown to be stable from adolescence [1,2,4], with the greatest gap in the child-bearing years, 15 to 44 years of age [3,6,12,15]. The drug sales statistics have revealed great differences in drug use between different regions, and this has been widely discussed in the last fifteen years [4,16-18]. One review concludes that people in urban areas buy or consume more drugs than people living in rural regions [6], but the differences were not significant.

The Norwegian Health Survey 1985 [19] is a national survey of health conditions based on interviews, also providing information about drug use and the actual users of drugs and their characteristics.

The main purposes of this study were to determine the relation between prescribed and non-prescribed drug use in the Norwegian population, and find factors that can explain the differences in drug use.

MATERIALS AND METHODS

The data for the Norwegian Health Survey 1985 were collected through interviews with the members of private households. The survey was planned and collected by the Central Bureau of Statistics of Norway. Persons residing in health institutions, homes for the elderly etc. were consequently excluded from the sample. The households were selected in two stages. The whole country was first divided into sample areas (based on the municipalities). Towns of more than 30.000 inhabitants were treated as separate strata, while the remaining sample areas were stratified by type of municipality (i.e. industrial structure and centrality) and number of inhabitants. The sample areas were grouped into 102 strata, where one sample area was drawn from each stratum. First stage sampling was done by selecting all sample areas which constituted separate strata, and then sample areas within the remaining strata were selected with a probability equal to the share of the population within the stratum. At the second stage the 5202 private households were drawn at random. An interviewer visited the household members at home, asking questions regarding health conditions, opinion of own health, lifestyle and contact with the health services. The survey covered a period of 14 days before the interview. Questionnaires to persons 0-15 years were answered by their parents or another adult responsible

for the child.

The response was 78.7 per cent of the gross sample of 13,438 persons. There were 5,454 women and 5,122 men included in the survey.

Dependent variable "drug use the preceding 14 days". Drug use in the survey period (= the 14 days prior to the interview) included drug use due for both diseases (=diseases/illness/injuries) arising before the survey period started and/or diseases (=diseases/illness/injuries) arising during the survey period. The cases of disease (diseases/illness/injuries) were coded by the 3-digit code of the International Classification of Diseases of 1968 (ICD 8. revision).

Prescribed and non-prescribed drugs. The drug users were asked where they had obtained the drugs:

- A prescribed drug, obtained on a prescription from a physician during the survey period.
- A prescribed drug already at hand.
- A non-prescribed drug bought at a pharmacy.
- A non-prescribed drug from other sources (included both non-prescription and prescription drugs).

Regions. Norway was divided into six regions (see figure 1):

1. The capital region (inhabitants per km^2 (i/km^2) = 166.3)
2. Eastern region (i/km^2 = 14.0).
3. Southern region (i/km^2 = 15.3)
4. Western region (i/km^2 = 18.9)
5. Mid-region (i/km^2 = 9.6)
6. Northern region (i/km^2 = 4.4).

Urbanization. The persons were grouped according to information as to whether the household lived in remote areas with less than 2000 inhabitants, in villages with 2.000 to 20.000 inhabitants, or in towns with more than 20.000 inhabitants.

Statistical analyses. Cross tabulation and analyses of variance were made with the SPSSx statistical package [20]. Age-trends were tested by the Chi-squared test for trends. Age adjustments were performed by the direct method and with the Norwegian population (01.01.86) as standard population.

RESULTS

Drug use in the population. About one third (3,818 subjects) of the population (10,576 subjects) used drugs during the 14 day survey period. Drug use was dominated by drugs taken due to diseases that had arisen before the survey period started (3,211 subjects).

Figure 2 shows that although the proportions of drug users had a significant decrease with age ($p = .0044$(women) $p = .025$(men)) in childhood (0-14 years), the overall age trend (0-80+ years) showed a significant increase with age ($p < .0001$). No gender difference in drug use was observed in childhood

(p=.994). The proportion of drug users in males showed a steady increase with age from 15 to 65 years of age, and then remained stable (about 60% drug users). A fundamental change appeared in females' drug use from 15 years of age, where a sharp increase appeared in the proportion of drug users. Drug use then showed only a minor increase up to the age of menopause (45-49 years), and then increased with age up to 70 years of age. From this age a stable proportion of drug users (about 75 %) was observed in women. The gender differences were therefore observed through the childbearing years (15-49 years) and above 70 years of age.

Non-prescribed and prescribed drugs. Table 1 shows the age- and sex-specific proportions of drug users (16-80+ years) using prescribed or non-prescribed drugs. Prescribed drugs dominated drug use in all age groups. The use of prescribed drugs in drug users increased with age (p<.0001), while the proportion of non-prescribed drug users decreased with age (p<.0001) and was relatively small among the elderly. The gender difference in use of non-prescribed drugs varied, while women had a significantly higher proportion of prescribed drug users (p=.008). The frequency of combined use of non-prescribed and prescribed drugs was low, was independent of age, and was significantly higher in women than in men (p=.0001).

Diagnosis and drug use. Table 2 shows that more women than men had a diagnosis of disease, 57.6 per cent and 52.7 per cent in women and men, respectively (p<.0001). There were significant regional differences in both sexes (p<.0001).

Table 3 shows drug use among subjects with one or more diagnoses of disease. More women were drug users than men (p<.0001), but there were no significant regional differences in drug use among those with one or more diagnoses (p=.818 (women) p=.437(men))

Place of residence and drug use. Table 4 shows the proportion of drug users in the different regions (see figure 1), and in areas with a low, medium or high degree of urbanization.

There were significant differences (p=.001(women) p=.003(men)) in the proportion of drug users in the regions. The capital region had the highest proportion of drug users among women, followed by the mid-region and the southern part of Norway. The northern region had the lowest frequency of drug users after the western region.

The order was almost the same for men, except that men in the western region had the lowest frequency of drug use. However, the difference disappeared when adjustments were made for urbanization and frequency of one or more diagnoses.

There were small differences between areas with a high and low degree of urbanization, there being a tendency towards higher drug use in areas with the highest degree of urbanization. This trend almost disappeared when adjustments were made for geographical regions and frequency of diagnosis (only marginally significant for men (p=.043)).

Variation in travelling time to the nearest pharmacy (divided into groups: 0-14, 15-29, 30+ minutes) had no influence on drug use in either women (p=.651) or men (p=.294). The same results were found when analyzing travelling time to the nearest doctor (data not shown).

DISCUSSION

Bias. In interview surveys some of the non-response is due to refusal, or absence from home during the interview period. The response of the Norwegian Health Survey 1985 was 78.7%. The response was relatively low for persons 16-24 years (67.2%) but quite high for children under 16 years (87.9%). Men were slightly underrepresented compared with women [19]. However, the bias was small and hardly of any significance.

Subjects 0-15 years were excluded from the analysis of prescribed versus non-prescribed drugs, because of missing information about how they had obtained the drugs. After exclusion there were 28 cases (0.9%) of drug users with missing information equally distributed between the sexes and age groups (16+). This did not influence the results.

Reliability. The reliability of the interviews has been studied earlier [21]. The patient's report on disease, was consistent with the doctor's diagnoses in 90 per cent of the cases. The consistency was highest for the youngest age groups, and somewhat higher for men than women. Highest consistency was found for ear-nose-throat diseases, diseases of the blood and tuberculosis, and lowest for injuries, diseases of the digestive system and tumors. Morbidity appeared to be underestimated at the interview by 13 per cent. Although acceptable with respect to total morbidity, underreporting represented a problem in the cases of certain diseases. For example for mental disorders the under-reporting was found to be more than 40 per cent. However, a disagreement between the doctor and the patient on what is a mental disorder is not surprising. The doctor may give the patient this diagnosis when prescribing tranquillizers or antidepressants, but the patient may consider the problems as part of a life crisis.

The term "drug" will mainly include only regular pharmaceutical preparations. The herbal remedies were probably excluded, since the question on where they had obtained the drugs was concentrated on the prescribed drugs or drugs from the pharmacy. Herbal

remedies are only to a very limited extent sold through the Norwegian pharmacies. In addition, information on use of vitamins, mineral supplements etc. were collected in separate questions.

The relation between prescribed and non-prescribed drugs. In the existing literature use of non-prescribed drugs may be described either as a substitute for use of prescribed drugs and formal health care, or the focus is on problems linked to combined use of prescribed and non-prescribed drugs. However, this study showed that self-medication decreased with age, and prescribed drug use increased with age. This indicates that illnesses escalate in number and intensity with increasing age, requiring more aggressive treatment than non-prescribed drugs.

Some authors are greatly concerned about the high use of non-prescription drugs combined with prescription drugs among the elderly [22-24], but our study showed no increase in combined use with increasing age. However, persons living in institutions, who probably have more problems than the others living outside, are not included in the study. Confirming other studies [14,23], more women than men were combined users.

Subgroups with serious health problems may include a high proportion of combined drug users, but this population-based study shows that the frequency of combined use of prescribed and non-prescribed drugs is low. The proportions of combined users in the youngest and oldest age groups deviate from the trends, probably due to the small numbers of subjects. Self-medication decreases significantly ($p < .0001$) in both sexes when drugs are obtained from a doctor. This is probably due to an easy access to health care services, where the drugs prescribed are mainly sold under the Drug benefit scheme.

Regional differences in drug use. Drug sales statistics have shown great differences between doctors' practices, counties and regions. Regional drug statistics have shown low drug consumption in the western and northern region and highest drug use in the capital. This considerable regional variation in drug consumption (based on the amount of drugs sold to the pharmacies from the wholesaler) has been widely discussed [16-18]. Factors with a potential impact on regional differences (sociodemographic variables, use of health services, number of hospital beds etc) were investigated by Haugen et al. [17]. They only found age difference in the populations as an significant explaining factor, and that a large proportion of the regional differences in drug consumption was left unexplained. They considered these unexplained variations to be due to different drug prescribing habits among doctors.

The use of sales statistics as a measure of drug use has obvious limitations. Sales statistics are not adjusted for age or gender, or for the frequency of diseases, and reports where drugs are sold, not where the drug users live. This leads to an overestimation of the drug consumption in places with many medical specialists, institutions and hospital beds, many work-places, and in places with an elderly population. The region including the capital is an example of this phenomenon. The capital has very high drug sales compared to other regions [16]. However, in our study the adjusted frequency of drug users in the capital was not significantly ($p > .05$) higher than in the rest of the country. This phenomenon has greatest impact on areas near the capital, but will certainly influence all regions in Norway. Most of the regional differences in drug use would probably disappear if the regional drug statistics could be adjusted for age and gender, and controlled for where people actually live.

Drug sales statistics are useful for estimating drug costs and evaluating drug consumption on a national level, and for generating hypotheses on drug use when comparing e.g. international figures on the total amount of drug products sold in different populations. However, when discussing drug use on an individual level, differences between subgroups in the population, doctors' practices and regions etc., information on the number of actual drug users in the different populations is essential. Knowledge about the drug users' age and gender would be necessary, and the value of drug statistics without this information has to be considered as limited.

Confirming another study [6], these results showed a weak tendency towards increased drug use with increasing urbanization. However, the impact from urbanization disappeared when adjusted for frequency of diagnoses and the regions. The tendency towards higher drug use in villages (2,000-20,000 inhabitants) was too small to suggest any possible explanation.

We conclude that regional differences in drug use were mainly due to variation in the frequency of self-reported diagnosis of disease, since the observed differences disappeared after adjustments. To conclude whether the observed differences in drug sales are substantial and to find the explaining factors, drug information data, accumulated on the individual users and preferably linked to their diagnoses, are needed. The pharmacy records already include a great deal of valuable information we need for these purposes.

The gender differences in drug use. More women than men had used drugs, especially prescribed drugs, and more women than men had a diagnosis of disease. However, more women than men with a diagnosis of disease used drugs. The conclusion is that both the higher frequency of diagnosis and higher drug use

among those women with a diagnosis result in a higher drug use in women than men.

The increase in drug use among women was concurrent with changes in reproductive life, that is onset of menstruation and menopause. This indicates that the first gender difference due to use of drugs among women to regulate discomfort from normal biological events. This was in accordance with data from the Tromsø study 1986-7 showing that drug use due to menstruation was highest in the age group 15-19 years [25]. Almost 30 per cent of the women had used drugs due to menstruation problems, mainly analgesics, while only about four per cent of women aged 50-59 years reported use of oestrogen therapy. Other studies have explained women's higher drug use with women's reproductive role [15]. The gender difference was, however, distinct after menopause, so this can only be a part of the explanation.

The second gender difference appeared above 70 years of age. Elderly women reported more diagnoses of disease than men, confirming the Danish study [26].

Living alone is reported as a critical factor associated with disease and high drug use among old people [26,27]. In this study more elderly women than men (70 years of age or more) live alone, and the women living alone had a higher drug use than other women. However, this effect from living alone was not observed in those aged 70 or more (data not shown).

People living in institutions were not included i.e. the healthiest subjects in the general population were included in the survey. However, probably more men suffering from illness than women (compared with all men and women) live outside health institutions, since more men than women have their spouse alive to look after them. The estimates for the gender difference among the eldest subjects may therefore be too small, and may have increased if all subjects had been included.

More than 25 per cent of the youngest children (age group 0-4 years) had used drugs the preceding 14 days, and drug use decreased with age (0-14 years). The age trend was in accordance with other studies [11,28], but the frequency was higher compared with Norwegian studies based on prescriptions [11] or based on interviews of mothers with newborn infants [29]. In contrast to the prescription study [11], no gender difference was found. This difference was probably due to the high frequency of non-prescribed drug use among children (eg. analgesics/antipyretic drugs, cough and cold medication).

This population study has revealed that drug use is common and has distinct gender differences. The higher drug use in women is due to a higher frequency of diagnoses of disease than men, and higher proportion of drug users among women reporting a diagnosis. Combined use of both prescribed and

non-prescribed drugs is infrequent among drug users, and non-prescribed drug use decreased when drugs were obtained from the doctor. The regional differences in drug use were mainly due to variation in the frequency of the self-reported diseases. To decide whether the reported differences in drug sales are true regional differences and to find possible explanatory variables, drug data accumulated on the individual users are essential.

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TABLE 1. Proportion (%) using prescribed or non-prescribed drugs among drug users according to age and sex. Norwegian Health Survey 1985.

Age (years)	No of drug users[1]		PROPORTION (%) OF DRUG USERS USING prescribed drugs		non-prescribed drugs		both prescribed and non-prescr.	
	Women	Men	W	M	W	M	W	M
16-19	102	60	66.7	70.0	44.1	31.7	10.8	1.7
20-29	248	143	70.2	71.3	37.5	32.9	7.7	4.2
30-39	270	216	73.7	67.6	34.1	38.0	7.8	5.6
40-49	212	205	78.3	73.7	31.6	30.2	9.9	3.9
50-59	248	191	88.7	82.7	15.3	19.9	4.0	2.6
60-69	349	286	92.0	89.9	14.6	15.4	6.6	5.2
70-79	313	206	93.9	89.3	18.2	14.6	12.1	3.9
80+	135	66	94.8	89.4	11.1	24.2	5.9	13.6
16-80+	1877	1373	83.6	80.0	24.4	24.6	8.0	4.7
Age-adjusted			80.8	76.6	24.4	24.6	8.0	4.7
TEST								
p(age trend)=			<.0001	<.0001	<.0001	<.0001	.96	.12
p(gender)=			.008		.88		0.0001	

[1] 28 missing cases

TABLE 2. Age-adjusted proportions (%) of subjects with one or more diagnoses of disease according to sex and region. Norwegian Health Survey 1985.

	WOMEN (n)	WOMEN % with a diagnosis	MEN (n)	MEN % with a diagnosis
Regions in Norway				
1.Capital	(1094)	62.5	(983)	58.0
2.Inland east	(1575)	58.3	(1490)	52.4
3.South	(714)	58.2	(686)	52.9
4.West	(958)	52.4	(911)	46.7
5.Mid-region	(538)	59.2	(470)	58.4
6.Northern	(575)	53.1	(582)	49.5
Total	(5454)	57.6	(5122)	52.7
TEST p(region)=		<.0001		<.0001
p(gender)			<.0001	

TABLE 3. Age-adjusted proportions (%) of drug users among subjects with a diagnosis of disease, according to sex and region. Norwegian Health Survey 1985.

Region	WOMEN (n)	WOMEN % drug users	MEN (n)	MEN % drug users
1.Capital	(683)	70.1	(572)	63.7
2.Inland east	(929)	68.3	(792)	61.0
3.South	(407)	69.9	(352)	60.0
4.West	(502)	67.3	(426)	59.2
5.Mid-region	(315)	71.0	(275)	57.2
6.Northern	(307)	68.7	(283)	63.0
Total with a diagnosis	(3143)	69.0	(2700)	61.0
TEST				
p(region)		.818		.437
p(gender)		<.0001		

TABLE 4. Proportions (%) of drug users according to region, area of residence, and diagnosis, each factor adjusted for age and the other factors. Norwegian Health Survey 1985.

Factors	WOMEN (n)	% drug users adjusted for age	age+other[1]	MEN (n)	% drug users adjusted age	age+other[1]
Regions in Norway						
1.Capital	(1094)	43.6	40.4	(983)	36.4	34.2
2.Inland east	(1575)	39.8	39.3	(1490)	32.1	32.0
3.South	(714)	40.6	40.4	(686)	32.0	31.9
4.West	(958)	35.5	38.9	(911)	27.7	31.2
5.Mid-region	(538)	42.1	41.2	(470)	33.5	30.5
6.Northern	(575)	36.6	39.4	(582)	31.4	33.2
p(region)=		.001	.824		.003	.434
Urbanization						
Remote areas (-1999inhab.)	(1360)	38.3	39.5	(1396)	29.8	31.5
Villages (2000-20.000inhab.)	(2236)	39.0	40.1	(2108)	32.4	33.8
Towns (20.000+inhab.)	(1834)	41.9	39.7	(1508)	34.2	30.8
p(urbanization)=		.057	.896		.028	.043
One or more diagnosis						
Yes	(3143)	69.0	67.5	(2700)	61.0	60.0
No	(2311)		0.0	(2422)		0.0
p(diagnosis)			<.0001			<.0001

[1] Adjusted for age and all the other factors

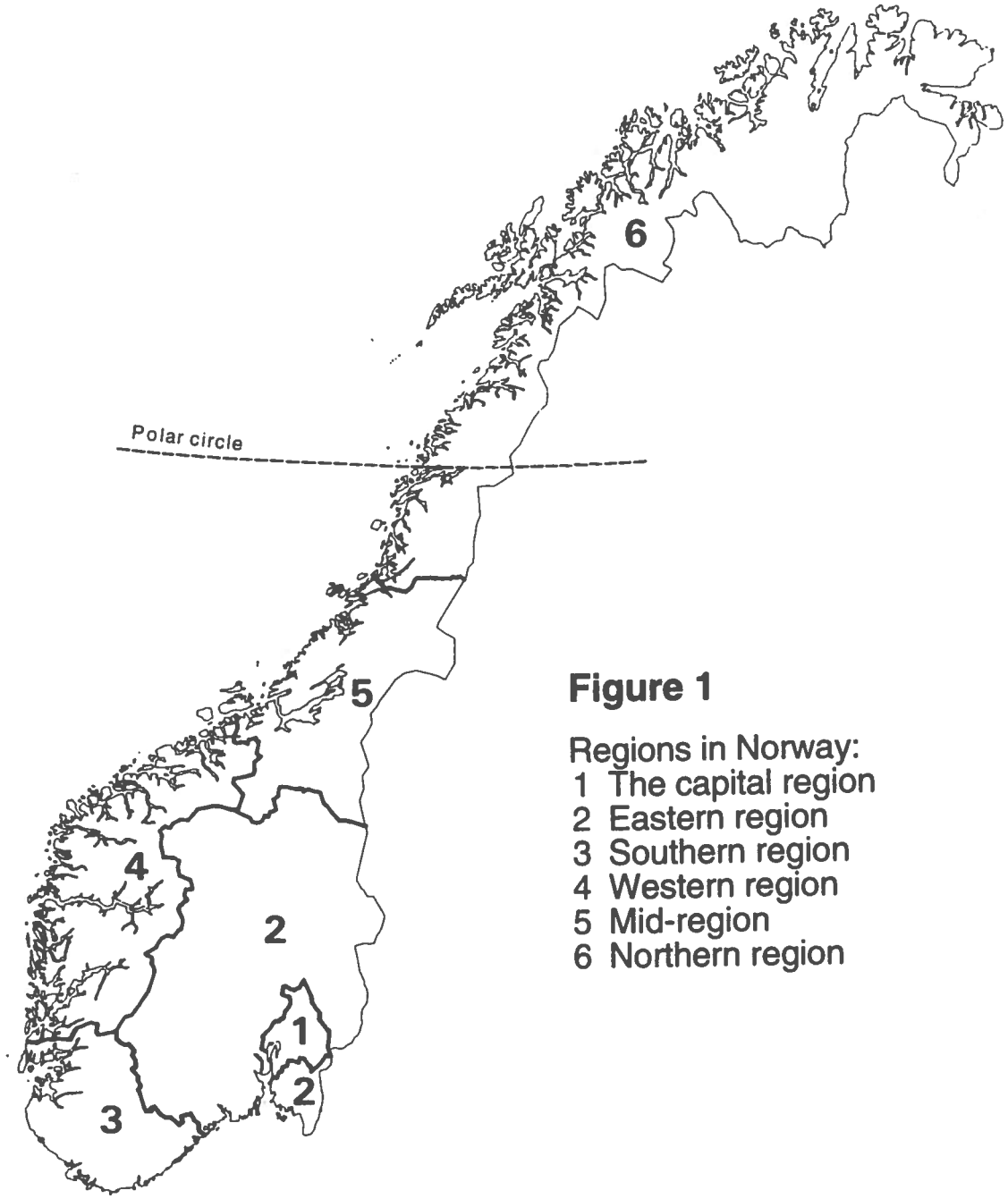

Figure 1

Regions in Norway:
1 The capital region
2 Eastern region
3 Southern region
4 Western region
5 Mid-region
6 Northern region

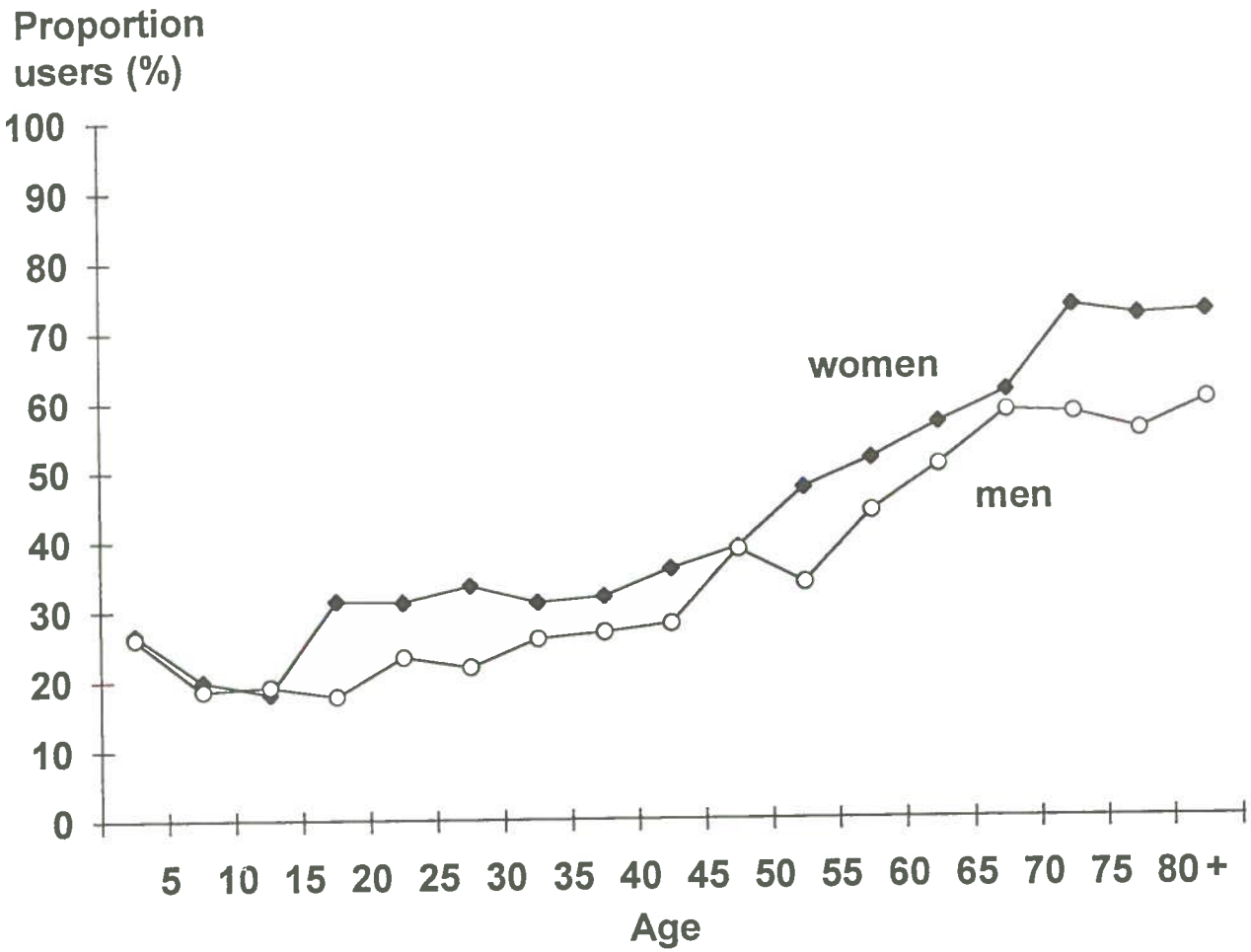

FIGURE 2. Proportions (%) of drug users in a 14 day period according to age and sex. Norwegian Health Survey 1985. (◆—◆) women (○—○) men.

PAPER II

PAPER III

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THE TROMSØ STUDY: FREQUENCY AND PREDICTING FACTORS OF ANALGESIC DRUG USE IN A FREE-LIVING POPULATION (12–56 YEARS)

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Abstract—In a cross-sectional survey carried out in Tromsø in 1986–7, 19,137 men and women aged 12–56 years from the general population were asked about their use of drugs during the preceding 14 days. Use of analgesics was very common. On average 28% of the women and 13% of the men had used analgesics. Drug use due to menstruation discomfort contributed only partly to the gender difference. Drug use was independent of age from 20 years of age. Factors having an impact on analgesic drug use were analyzed by logistic regression. The most significant predictors of analgesic use were suffering from headache ((OR = 14.2(women) OR = 24.4(men)) and infections ((OR = 2.0(women) OR = 2.4(men)). Drug users also tended to suffer from symptoms of depression (women) and sleeplessness (men). Lifestyle and sociodemographic factors were also significant predictors, but were of marginal importance (OR < 1.5) compared with occurrance of pain and infections.

Analgesics General population Pharmacoepidemiology Gender differences
Headache Demographic factors

INTRODUCTION

Analgesics are among the most commonly used drugs in the population, more common among women than men [1–7]. Use of prescribed analgesics increases with age [1, 7–11], however, use of non-prescribed analgesics is also common among children and adolescents [12–14]. Gender differences in non-prescribed drug use were found to be accounted for by analgesics [15]. Users of analgesics are mostly incidental users, only a small proportion of the population being daily users [9, 13, 16–18].

Most of the studies are based on either prescriptions [1–3, 9–11], sales statistics [19], or highly selected populations [20–22]. Few population studies have been performed to provide information about the actual use of analgesics and characteristics of the users, and only a few characteristics have been studied [3, 4, 18, 23].

People use analgesics for pain and infections. However, mental distress, sociodemographic and lifestyle factors may also have an influence on use of analgesics. The aims of this study were to determine the frequency of analgesic drug use in a general population in Norway, and to analyze the impact of demographic patterns, health characteristics, sociodemographic conditions and lifestyle on use of analgesic drugs.

MATERIAL AND METHODS

In 1986–87 all men and women aged 20–61 and 20–56 respectively, and a sample of subjects aged 12–19 living in the municipality of Tromsø, Norway, were invited to participate in a health survey. All subjects were drawn from the Central Population Register, which includes all persons registered as resident in Norway, according to information from outline updated population registers of births, deaths and migrations. In the inviting letter to the health survey all the tests and procedures were presented in advance. The subjects were offered a health screening as

part of the survey. 21,647 (75%) of the invited population attended the examination. The invited persons filled in a self-administered questionnaire covering smoking habits, physical activity in leisure time and status of employment before the screening. The questionnaire was checked at the examination and inconsistency was corrected. Height, blood pressure and weight were measured, and a non-fasting blood sample was collected. A second questionnaire was handed out to be filled in at home and to be returned by mail. In this questionnaire, more detailed questions about use of health services, dietary habits, diseases and symptoms, a number of sociodemographic characteristics, and use of different drugs during the preceding 14 days were asked. Altogether 91.7% of the attenders to the screening returned the questionnaire [24]. In this study only subjects younger than 57 years of age who answered both questionnaires were included.

Use of analgesics was recorded using the following question: Have you taken any pain relievers (analgesics) during the last 14 days (yes/no)?

The women were also asked: Do you use pain relievers (analgesics) regularly during menstruation (yes/no)?

Responders who answered "yes" to the question on analgesic drug use were defined as users. The others were defined as non-users, because when the responders answered the list of questions on drug use in the questionnaire, some reported only "yes" on drugs they used and left out all the "no"-answers. Many responders thus only bothered to answer the drug questions which concerned them.

Based on previous studies [3, 4, 6, 25–27] and a discussion of the variables from the Tromsø Study, several factors that could be predictors of drug use were selected. The questions on depression and sleeplessness problems have been used in earlier population studies of mental distress [27, 28]. They are modified Norwegian translations of questions from the General Health Questionnaire (GHQ), a known screening instrument for nonpsychotic mental illness in general populations [29]. The independent variables were divided into five blocks:

Self-reported symptoms of physical distress.
Self-reported symptoms of mental distress.
Lifestyle variables.
Sociodemographic variables.
Physiological variables.

The list of variables included initially in the analysis is given in the Appendix.

To single out the important factors, multiple regression analyses were performed, and those variables that were significant in one of the sexes were used in this analysis. Logistic regression analysis was performed to determine the impact of the single variables on analgesic drug use in men and women.

The statistical analysis were performed by the SPSSx statistical package [30]. Age adjustments of the proportions of analgesic drug users were performed by direct method with the Norwegian population (1987) as the standard population.

RESULTS

Use of analgesics in the population

Drug use in the population is dominated by the use of analgesics. Of all responders reporting use of drugs during the preceding 14 days, 54% reported use of analgesics (data not shown). Table 1 shows the proportions of analgesic drug users according to age and sex. About one fifth (3984 subjects) of the study population (19,137 subjects) reported use of analgesics in the preceding 14 days. On average, 28% of the women and 13% of the men ($p < 0.0001$) were users of analgesics. The frequency of analgesic drug use was significantly lower in the two youngest age-groups compared with the rest of the study population in both sexes, but after 20 years of age the proportion of analgesic drug users did not change significantly (no age trend).

Table 1. Proportion of analgesic drug users in the preceding 14 days according to age and sex

Age (yr)	Population		Proportion (%) of users	
	F	M	F	M
12–14	175	167	9.7	7.2
15–19	355	335	23.4	6.3
20–24	1153	1010	28.5	11.7
25–29	1435	1196	29.3	13.3
30–34	1690	1445	29.9	14.5
35–39	1558	1578	29.0	13.4
40–44	1393	1363	28.3	13.6
45–49	975	1014	28.4	12.9
50–54	824	841	28.0	12.2
55–56	306	324	20.9	11.4
12–56	9864	9273	28.1	12.8
Age adjusted 12–56			28.0	12.9
Test				
p(trend)			0.61	0.54
p(gender)			<0.0001	

Table 2. Proportion of menstruating women using analgesic drugs during menstruation according to age

Age (yr)	Number of menstruating women	% drugs users
12–14	173	8.1
15–19	354	25.1
20–24	1151	21.7
25–29	1428	15.8
30–34	1680	14.3
35–39	1540	13.5
40–44	1296	10.3
45–49	729	8.4
50–54	223	11.2
55–56	14	—
12–56	8588	14.5
Age adjusted 12–56		14.0

Analgesic drug use and menstruation

The highest proportion of regular use of analgesics during menstruation was in the age-group 15–24 years, where a quarter of the women used analgesics (Table 2). After 25 years of age the use decreased with age ($p < 0.001$). Figure 1 shows that drug use due to menstruation discomfort contributed only partly to the gender difference in analgesic drug use.

Associations with analgesic drug use

Table 3 shows the relation between significant variables and use of analgesics in either men or women. The univariate associations showed that the proportion of analgesic drug users increased with increasing symptoms of headache, neckache, backache and infections. Subjects who reported sleeplessness and depression had a significantly higher drug use than the others. Subjects with low physical activity, high coffee consumption and daily smoking had a high analgesic drug use. Drug use was lowest among the unmarried (men only) and highest among the formerly married (both sexes). When comparing the proportions of drug users of different education levels, no significant difference was found.

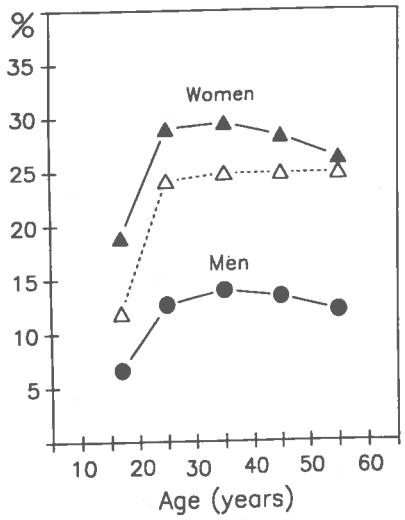

Fig. 1. Users of analgesics (%) for the preceding 14 days by age and sex, comparing women not using analgesics regularly during menstruation (△——△) with all women (▲——▲) and men (●——●).

Physical distress. Table 4 shows the results from the logistic regression analysis tabulating the odds ratio (OR) between the extreme groups. Compared with the other variable blocks, the physical distress variables (suffering from headache, neckache, backache and infections) were by far the most significant predictors of drug use. Among the physical distress variables suffering from headache (OR = 14.2(women) OR = 24.4(men)) and having infections (OR = 2.0(women) OR = 2.4 (men)) were the only variables in the analysis with OR > 2. The other physical distress variables (backache, neckache) had about the same proportion of drug users in the extreme groups with OR between 1.5 and 2.0.

The odds ratio of being a drug user reporting high frequency of headache was only slightly reduced from 33.2 to 26.3 (95% confidence interval (95%CI) 22.6, 30.7), when adjusted for age and gender. Age had no impact on analgesic drug use, while being a woman gave an odds ratio of 2.0 (95%CI 1.9, 2.2) compared with men (data not shown).

Mental distress

Depression was the most significant predictor in women (OR = 1.7), and sleeplessness was a weak but significant predictor of analgesic drug use in men (OR = 1.3). Depression showed no significant gender difference, since the 95%CI overlap. However, excluding premenstrual depression from the analysis, the odds ratio for depression in women increased (OR sleeplessness unchanged). The point estimate was not overlapped by the 95%CI in men (data not shown). The effect from mental distress was then only spread over two variables, depression and sleeplessness, in both women and men. One should therefore be careful with putting all the emphasis on single variables of

Table 3. Age-adjusted proportions of analgesic drug users during the preceding 14 days according to variables from the Tromsø study, 1986–7

	Female			Male		
	% drug users	(*n*)	*p*-Value trend	% drug users	(*n*)	*p*-Value trend
Headache (times)						
Seldom/never	13.5	(4807)	<0.0001	6.7	(6565)	<0.0001
Several a month	37.9	(3607)		25.3	(1923)	
Several a week	56.2	(1045)		47.2	(437)	
Daily	67.0	(216)		42.3	(95)	
Infections (times)/last 6 months						
0	20.0	(2739)	<0.0001	7.9	(2839)	<0.0001
1–2	28.8	(5915)		13.5	(5436)	
3+	43.4	(1210)		22.8	(998)	
Backache						
No	24.3	(7450)	<0.0001	10.6	(7151)	<0.0001
Yes	42.1	(2085)		21.2	(1874)	
Neckache (times)						
Seldom/never	18.4	(4547)	<0.0001	8.3	(5823)	<0.0001
Several a month	31.2	(2750)		18.8	(1852)	
Several a week	40.9	(1170)		23.0	(663)	
Daily	49.0	(1152)		26.0	(668)	
Depression						
Seldom/never	23.5	(5760)	<0.0001	11.3	(6087)	<0.0001
Sometimes	35.3	(2894)		17.4	(1541)	
Often	43.2	(493)		23.7	(202)	
All the time	42.2	(137)		21.3	(70)	
Sleeplessness						
No	24.2	(5701)	<0.0001	10.8	(6502)	<0.0001
Yes	34.0	(3924)		17.8	(2553)	
Premenstrual depression						
Unimportant	23.6	(4098)	<0.0001			
Marked	30.8	(3870)				
Troublesome	42.1	(887)				
Physical activity						
Seldom/never	29.8	(4407)	0.003	15.0	(3233)	<0.0001
Weekly	28.0	(3287)		12.8	(3006)	
Many times/week	24.9	(1538)		10.4	(2271)	
Daily	27.2	(405)		10.2	(612)	
Cups of coffee/day						
<1	23.5	(1483)	<0.0001	9.2	(1255)	0.001
1–4	27.1	(4024)		12.5	(2940)	
5–8	29.1	(3452)		14.1	(3639)	
9+	36.9	(900)		13.1	(1438)	
Daily smoking						
No	25.5	(5487)	<0.0001	11.6	(5147)	0.0001
Yes	31.4	(4377)		14.2	(4125)	
Marital status						
Married	27.6	(5535)	0.006	13.5	(4833)	0.008
Unmarried	27.6	(3228)		11.4	(3720)	
Formerly married	32.5	(1007)		15.9	(647)	
Levels of education						
1–9	27.1	(3497)	0.76	12.6	(3072)	0.62
10–12	29.8	(3374)		12.5	(3061)	
13+	27.4	(2993)		13.3	(3140)	

depression and sleeplessness, but also observe the general trend and the order of magnitude of the mental distress block compared with the others. The mental distress block of variables tended to have more influence on drug use in women compared with men.

Lifestyle factors. Low physical activity was associated with higher analgesic drug use in men, but this association was found only in the univariate analysis in women (Table 3). High coffee consumption was associated with higher analgesic drug use in both sexes.

Table 4. Sex-specific logistic regression analysis of analgesic drug use. The odds ratio for being an analgesic drug user is described for different health status, lifestyle and sociodemographic indicators mutually adjusted

	Female		Male	
Variables	Odds ratio*	95%CI†	Odds ratio	95%CI
Physical distress				
Headache (1–4)	14.22	(11.27, 17.95)	24.40	(17.72, 33.60)
Infections (1–3)	2.04	(1.71, 2.44)	2.39	(1.87, 3.05)
Backache (0, 1)	1.50	(1.32, 1.71)	1.66	(1.40, 1.98)
Neckache (1–4)	1.47	(1.23, 1.76)	1.57	(1.22, 2.01)
Mental distress				
Depression (1–4)	1.65	(1.29, 2.11)	1.17	(0.80, 1.71)
Sleeplessness (0, 1)	1.10	(0.98, 1.23)	1.26	(1.07, 1.48)
Premenstrual depression (1–3)	1.36	(1.16, 1.61)	—	
Lifestyle variables				
Coffee (1–4)	1.44	(1.18, 1.76)	1.32	(1.01, 1.71)
Physical activity (1–4)	0.94	(0.77, 1.14)	0.64	(0.50, 0.82)
Sociodemographic variables				
Levels of education (1–3)	1.18	(1.02, 1.36)	1.37	(1.14, 1.66)
Age (12–14 vs 55–56 yrs)	1.15	(0.82, 1.60)	0.69	(0.45, 1.06)
Unmarried (vs married)	1.09	(0.95, 1.25)	0.80	(0.66, 0.96)
Number of subjects	7974		7431	

*Odds ratio between extreme groups of the variables.
†95% confidence interval.

Sociodemographic factors. When adjusted for health problems, use of analgesics increased with increasing education level, especially among men. Unmarried men had a lower drug use than married men, but marital status had no influence on drug use in women. Age had no influence on drug use when controlled for other factors.

DISCUSSION

The major finding of this study was the strong association between analgesic drug use and headache, and a lesser one with infections, backache and neck/shoulder pain. Self-reported sufferings from depression (women) and sleeplessness (men), coffee consumption and levels of education were significant predictors of analgesic drug use, but of marginal importance compared with self-reported symptoms of headache, infections, backache and neckache. The study showed the importance of adjusting for different types of physical distress, when studying the associations between analgesic drug use and symptoms of mental distress, lifestyle and sociodemographic factors.

Drug use in the population the preceding 14 days was dominated by use of analgesic drugs. Twice as many women reported analgesic drug use compared with men. There was no trend associated with age above 20 years of age. The higher use among women compared with men was found consistently in nearly all subgroups of the different variables studied, which suggests an overall effect of gender. The gender difference was still large after exclusion of women reporting regular use of analgesics during menstruation. The gender difference in analgesic drug use could not solely be explained by women's use of analgesics due to menstrual discomfort. However, the extent of drug use due to menstruation discomfort may be underestimated, since only *regular* users of analgesics during menstruation were excluded from the analyses.

The age and gender trend observed in the study was partly confirmed by another population study [28]. The use increased with age in men, while no significant age trend was observed in women. These results are not consistent with prescription based studies [1, 9, 11], which probably is due to the inclusion of non-prescribed drugs. Non-prescribed drug use is more common among young people [7], and this explains the different age trend in the Tromsø Study compared with prescription studies. When studying the use of analgesics it is essential to include both groups, since several analgesics also are available without prescription and are easily obtained from other people.

Subjects suffering frequently from headache had the highest proportion of analgesic drug use, confirming other studies showing heavy

analgesic drug use among subjects reporting a high frequency of headache [4, 25, 31, 32]. The proportion of users was far higher than in subjects who had worse problems with the other types of physical distress. The odds ratio of being a drug user when reporting a high frequency of headache was highest among men, since more women used analgesics for problems other than headache. The same was observed regarding the other types of physical distress.

Women suffering from depression showed a tendency towards higher analgesic drug use than others. Analgesics were used by people reporting depression, maybe to treat the depression. The same tendency was seen regarding drug use and sleeplessness in men. High use of analgesics among subjects reporting depression has been reported earlier [3, 13, 33]. Nerve problems, sleeplessness and depression have also been reported as stated reasons for analgesic use [4, 25].

Very few of the subjects reporting symptoms of mental distress had used nerve pills or sleeping pills during the last 14 days. The translated GHQ questions used in this health survey setting focusing on physical diseases are not validated, but there are strong and consistent associations between analgesic drug use and the different types of mental distress variables. They also correlate well with increasing headache, neckache and backache problems.

The influence of sociodemographic and lifestyle factors on analgesic drug use were significant, but were of marginal importance compared with the influence of different types of physical distress. Education level had no influence on drug use in the univariate analysis. A Norwegian study showed that use of analgesics was associated with low social class, income, and education [5], but the study was not adjusted for health problems. Another study could not demonstrate any relationship between analgesic use and social class [4]. When adjustments for different types of physical distress were made in our study, use of analgesics was found to be higher among subjects with a high education level. This finding indicates an independent effect of education level on drug use, and the physical distress variables appear to be significant confounders in the association between education and analgesic drug use. This underlines the importance of adjustments for health problems when studying drug use and sociodemographic factors.

Marital status had no influence on analgesic drug use in women, but unmarried men showed a tendency towards lower drug use than married men. In the univariate analyses, those formerly married had a higher proportion of drug users compared with others. However, after adjustments for other factors this had no independent influence on analgesic drug use. This lack of influence from marital status has been shown earlier [4].

Analgesic use may be regarded as a habit. It would perhaps therefore seem reasonable to expect associations to be found with use of other stimulants like tobacco, coffee and alcohol. Studies do not confirm this relationship [3, 4], except in reports from hospital renal units [20, 21]. High coffee consumption is associated with analgesic drug use. Several studies have shown that subjects with recurrent headaches report frequent use of drugs and high coffee or caffein consumption [26, 31, 32]. Caffein may produce relief during headache (some pain relievers even contain caffein). Chronic caffein consumption may cause withdrawal headache [31], and heavy coffee drinking may therefore lead to analgesic drug use. However, this study showed that drug use increased with increasing coffee consumption (same odds ratio) in every stratum-specific analysis of the headache variable.

The present study shows higher drug use among smokers and subjects with high coffee consumption, but there was no significant association between drug use and frequency of alcohol intake. The lack of a significant relationship between smoking and drug use in the multivariate analysis was due to intercorrelation with coffee consumption. Smoking was a weak predictor when coffee consumption was excluded. This underlines the importance of being careful with putting all emphasis on the single variables. In general one should take care when putting emphasis on the odds ratios for the single variables alone, but observe the general trend and the order of magnitude of the variable block compared with the others.

One may expect that people with a high level of physical activity would have a tendency to use analgesics (for pain in joints and muscles), but in this study low physical activity was associated with analgesic drug use (men only). A possible explanation is that a high level of pain suffering reduces physical activity. Women showed the same pattern in the univariate analysis, but the association disappeared after adjustment for other factors.

Recall problems may lead to misclassification, but agreement between information from questionnaires and other sources (like prescriptions or medical records) varies with the type of drug studied [34–36]. Recall of regularly used drugs decreased with increasing age and increasing number of prescribed drugs per subject, tended to improve with increasing duration of use and varied with type of drug. Recall has been shown to be improved when analyzed with regard to therapeutic main groups rather than on chemical entity level, and no gender difference was found [36]. The recall problem was probably small in this study, because the population was young and healthy, with few multi-drug users.

In a similar health survey, comparative analyses of attenders and non-attenders were performed [28]. Non-attenders demonstrated higher mortality and morbidity compared with the attenders, who were more "healthy" than the total population. The non-attenders to the screening may therefore have had a higher drug consumption than the attenders. On the other hand, this mostly applied to the elderly subjects and is probably of minor importance in the Tromsø Study, since it covers the young and middle-aged population and shows the highest proportion of non-attenders in the youngest and healthiest part of the population.

The subjects were considered to be non-users of analgesics if they had not answered the question on analgesic drug use, but answered "yes" to use of one or more of the other drugs. This may lead to an overestimation of non-users and an underestimation of the effect from variables where a high proportion of subjects had not answered the question. When excluding subjects with missing information on analgesic drug use, the proportions of analgesic drug users increased in all variables. However, this had no significant influence on the odds ratios.

In cross-sectional surveys, subjects with chronic conditions are more likely to be registered as drug users. However, since daily use of analgesics in the population is rare [28], this will not affect the conclusions. A general limitation in the design is the inability to correctly establish the temporality between the dependent and independent variables. One may argue, for example, that use of analgesics may lead to more headaches. However, few subjects have a chronic analgesic use high enough to develop a rebound effect, and the possibility of this two-way-effect occuring to any significant extent is therefore unlikely.

This cross sectional study has revealed that analgesic drug use is very common, and subgroups in the population have a very high proportion of analgesic drug users. Headache is the most common predictor of analgesic drug use, far more common than the other types of physical distress like neckache, backache and infections. The results indicate that level of education and lifestyle have an impact on analgesic drug use, and the association between use of analgesics and depression in women calls for further inquiry. Adjusting for health problems when studying predictors is crucial, and a population study provides a meaningful way of connecting drug use with a broad variety of health, lifestyle and sociodemographic factors.

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APPENDIX

Physical Distress

—Number of infections last 6 months
—Problems with backache of more than 4 weeks duration last year (no/yes)
—Neck/shoulder pain (graded 1–4: seldom or never, once or more a month, once or more a week, daily)
—Headache (graded 1–4: seldom or never, once or more a month, once or more a week, daily)

Mental Distress

—During the last two weeks, have you been feeling unhappy and depressed (graded 1–4: never or seldom, sometimes, often, all the time)
—Are you bothered by sleeplessness? (no/yes)
—Feeling of loneliness (very often, sometimes, never or almost never)
—Are you bothered by premenstrual depression (slight, marked, troublesome)

Lifestyle Variables

—Frequency of physical activity of at least 20 min duration that makes you sweat or get out of breath (graded 1–4: seldom or never, weekly, several times a week, daily)
—Daily consumption of coffee (graded 1–4: <1 cup, 1–4 cups, 5–8 cups, 9+ cups)
—Daily smoking (no/yes)
—Frequency of alcohol intake (seldom, approximately once a week, more often)

Sociodemographic Variables

—Age (in 5-year age-groups)
—Years of education (graded 1–3: <9, 10–12, 13+ years)
—Marital status (unmarried, formerly married (separated/divorced/widow(er)), married
—Full-time housewife (no/yes)
—On unemployment allowance (no/yes)
—Type of work (graded 1–4: sedentary, a lot of walking, a lot of walking and lifting, heavy manual labor)
—Employment last year (full-time, part-time, unpaid)

Physiological Variables

—Relative body weight, height, blood pressure, serum cholesterol

PAPER IV

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Use of codeine analgesics in a general population

A Norwegian study of moderately strong analgesics

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Abstract. The prescribing of controlled analgesics (codeine, buprenorphine and pentazocine preparations) was studied, using prescriptions from the three pharmacies in the municipality of Tromsø, Norway. All prescriptions dispensed during one year were analysed. The study sample comprised 3083 women (58%) and 2223 men (42%) between 10 and 99 years of age.

About 8% of the population had obtained one or more prescriptions of controlled analgesics. Combined codeine preparations were by far the most frequently prescribed subgroups, and the average amount purchased during 1 year was 30 defined daily doses (DDD).

The sporadic users were in the majority. A few users had purchased high amounts of controlled analgesics. The prevalence of use, the mean number of defined daily doses of analgesics, and the proportion of 'weekly' drug users was higher in women than men. The prevalence increased significantly with age, from 0.7 to 22.3% in women and from 0.5 to 14.1% in men. The mean number of DDD during one year also increased with age, from 12.6 to 50.6 DDD in women, and from 6.6 to 40.6 DDD in men.

The users of buprenorphine and pentazocine differed in several aspects from the codeine users. The highest use of combined codeine preparations was seen in elderly people especially in women. Use of lower codeine doses or intermittent treatment with other drugs e.g. plain paracetamol in adequate doses, may be appropriate alternatives reducing the risk of adverse drug reactions such as nausea and constipation.

Monitoring of prescribing and use of controlled analgesics according to certain criteria may uncover possible misuse.

Key words: Codeine, Drug-prescription; combination analgesics, pharmacoepidemiology, sex-factor, aged

In Norway, analgesic drugs are divided into three categories: narcotic (strong) analgesics (eg. morphine, pethidine); controlled (moderately strong) analgesics; and non-restricted (minor) analgesics available without a prescription (eg. acetylsalicylic acid and paracetamol). In 1990 Norwegian pharmacies purchased 1.2, 11.6 and 24.9 defined daily doses (DDD)/inhabitants/day (see definition later) of narcotic analgesics, controlled analgesics and non-restricted analgesics, respectively [1]. The figures for 1993 were similar.

The use of controlled analgesics in Norway is substantial. About 7% of all prescriptions in general practice are for controlled analgesics. Combined codeine preparations (30 mg codeine or more per single dose) represent more than 90% of these prescriptions. One combined codeine preparation is in fact the most frequently prescribed drug in general practice in Norway [2] and combined codeine preparations are popular drugs among Norwegian drug addicts [3].

Several studies have been carried out in the Nordic countries on analgesic drug prescribing based on sales statistics [4], health surveys [5] and prescriptions [6–9]. However, most studies do not distinguish between different types of analgesics. Little is known about how controlled analgesics are prescribed and used. It is assumed that patterns for the moderately strong analgesics differ from the other analgesics with respect to prescribing, the user, the extent of use and conditions for which they are used.

The aim of this study was to investigate the use of controlled analgesics in a general population. We examined how much, how often, and to which patients these drugs were prescribed and whether there were problems associated with the prescribing or use of controlled analgesics.

Materials and methods

Controlled analgesics

These are moderately strong, centrally acting agents. Special regulations restrict the prescribing and dispensing of controlled analgesics. The patient's name, address and birth date are required, and the prescriptions are retained in the pharmacy for 1 year. The main subgroup is the combined codeine preparation, i.e. 30 mg codeine in combina-

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tion with about 500 mg paracetamol, acetylsalicylic acid or phenazone. These are mostly prescribed in general practice for mild to moderate acute and chronic pain [10]. Others are pentazocine, buprenorphine and plain codeine preparations. A few combination products with only 8–10 mg codeine per dose were excluded from the study. They are not controlled analgesics and are rarely prescribed.

Prescriptions

All prescriptions for controlled analgesics dispensed from 01.03.89–28.02.90 from the three pharmacies in the municipality of Tromsø, Norway, were collected from the pharmacy records. Prescriptions to persons living outside the study area and to the prescribers' private practices were excluded. In all, 5354 persons had 10824 prescriptions dispensed. About 0.5% of prescriptions contained two different analgesic drugs (e.g. both tablets and suppositories).

Persons were identified by name, address and birth date, and drug use was accumulated for each individual. In this part the Central Population Register, which includes all persons registered as resident in Norway, was used. Approval was granted by the Norwegian health authorities and the data inspectorate.

Population

The three pharmacies serve the municipality of Tromsø, with 52000 citizens living mainly in the town, as well as five surrounding, sparsely populated municipalities without a pharmacy. In total, the pharmacies cover approximately 68000 inhabitants [11].

Measurement of drug use

Drug use was measured in defined daily doses (DDD). One DDD is defined as the assumed average dose per 24 h used for the main indication of the preparation [12]. Taking combined codeine preparations as an example, one DDD equals four tablets, each containing 30 mg codeine and, e.g., 500 mg paracetamol. Table 1 shows the drugs included.

Definitions of 'weekly' and 'every day' use

A 'weekly' user was defined as a person who had been prescribed 50 DDD or more, corresponding to taking on average four or more tablets (one DDD), each containing 30 mg codeine, every week during 1 year. A subgroup of these, receiving 365 DDD or more, corresponding to four tablets or more of codeine every day during a year, were defined as 'every day' users. The classification into 'every day' and 'weekly' users does not imply any medical judgement.

Statistical analysis

Statistical analyses, chi-square and *t*-test statistics between groups, were performed using the SAS statistical package [13]. Age adjustments in groups of users were performed by the direct method with the Norwegian population [11] serving as standard population.

Results

Drugs and prescriptions

Table 1 shows that combined codeine preparations were the dominating controlled analgesics, as plain codeine only constituted 0.5% of the prescriptions. Buprenorphine and pentazocine were rarely prescribed.

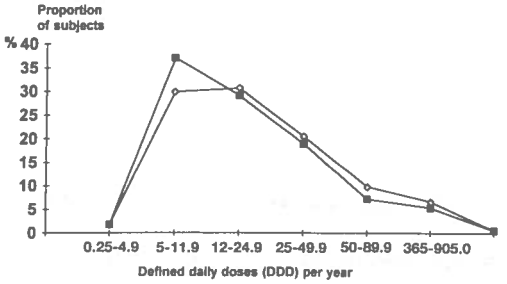

Fig. 1. Distribution of users (%) according to number of defined daily doses (DDD) of controlled analgesics dispensed during one year, comparing women (◇—◇) and men (■—■), Tromsø 1990

Table 1. Controlled analgesic prescriptions according to type of drug, Tromsø 1990

Type of drug	Prescriptions during one year			
	Defined daily doses (DDD)			
	n	*n*	[%]	Mean
Pentazocine preparations	223	1,328	0.8	6.0
Buprenorphine preparations[a]	125	1,055	0.8	8.4
Codeine preparations	10,476	160,124	98.5	15.3
Total	10,824	162,507	100.1	15.0

[a] Classified as a narcotic drug from July 1st, 1989

Women received 61% and men 39% of the prescribed drugs. The mean number of DDD per prescription was 15 and the median 12.5. 50 DDD or more were prescribed on 2% of the prescriptions. No seasonal variation of importance was observed.

The users

The users of controlled analgesics were between 10 and 99 years of age and comprised 3083 (58%) women and 2223 (42%) men. Controlled analgesics were rarely prescribed to children under the age of 15 years (only 11 subjects).

Figure 1 shows the distribution of subjects (%), according to number of DDD of analgesics purchased during 1 year. About 60% of the users had purchased between 5 and 25 DDD, and 15.5% were 'weekly' users (50 or more DDD). Of these, 34 subjects had purchased one DDD or more every day throughout the whole year ('every day' users).

Table 2 shows the proportion of users having one or more prescriptions dispensed, according to age and sex. The proportion of users increased significantly with age, from 0.7 to 22.3% in women and from 0.5 to 14.1% in men. After age adjustment the gender difference decreased but remained significant.

Table 3 shows that 'weekly' users constituted 17.2% of the female users and 13.2% of the male users. The proportion increased significantly with age, from 3 to 35% in women and from 0 to 27% in men. There were more

'weekly' users among women than men. The mean number of DDD purchased in one year [32.1 DDD (women), 28.0 DDD (men)] was highly age-dependent, and increased from 12.6 to 50.6 DDD in women and from 6.6 to 40.6 DDD in men.

Indicators for high drug use

Table 4 shows that 34 subjects had purchased 365 or more DDD of controlled analgesics during the year. Among these no significant gender difference was observed, nor was there any age dependency as observed for 'weekly' users. Of the 'every day' users, 24 out of 34 had prescriptions from one or more of the 10 most frequently prescribing doctors. One third of the 'every day' users had obtained their prescriptions from seven or more prescribers.

The proportions of 'weekly' users increased with increasing number of prescribers, the number of pharmacies used and prescriptions purchased. No significant gender difference was observed. There were, in all, 34 subjects who had obtained prescriptions from seven prescribers or more, with 21 prescribers as the extreme. Sixty-one subjects had obtained 13 or more prescriptions, with 52 prescriptions as the extreme. All these subjects were 'weekly' users (data not shown).

Seven prescribers/year and 13 prescriptions/year (a new prescription every 4 weeks) was chosen as the distinction between high and low numbers of prescribers and prescriptions. Almost 75% of the 34 subjects with seven or more prescribers had purchased 180 DDD or more, corresponding to use of one DDD at least every second day. However, almost 85% of the 61 subjects who had purchased 13 prescriptions or more had used 180 or more DDD. Of these 61 subjects, 40% had used seven prescribers or more (data not shown).

Table 2. Proportion of users of controlled analgesics during one year according to age and sex, Tromsø 1990

Age (years)	Female		Male	
	At risk	Proportion of users [%]	At risk	Proportion of users [% [
0–19	9,266	0.7	9,862	0.5
20–39	11,274	9.0	11,923	6.7
40–59	6,955	13.8	7,702	9.9
60–79	4,892	16.8	4,264	12.4
80 +	1,035	22.3	580	14.1
Total	33,422	9.2	34,331	6.5
Age adjusted[a] 0–80 +	33,422	8.9	34,331	6.8
Test *P*(age)	< .0001		< .0001	
P(gender)	< .0001			

[a] Direct method with Norwegian population of 1989 as the standard population

Buprenorphine and pentazocine

In contrast to codeine, more men than women were users of buprenorphine and pentazocine. They had purchased a higher mean number of DDD during the year [difference 46.5 DDD (95% confidence interval 21.7–71.43)], about 40% were 'weekly' users, and a significantly higher proportion compared with the codeine users had used seven or more prescribers. Purchasing 13 or more prescriptions/year occurred ten times more often than among the codeine users. No significant age difference was observed.

The prescribers

Doctors prescribed 98% of the analgesic doses, and the average amount prescribed was 15.5 DDD/prescription (range 0.25–250, SD = 10.9). Two per cent were prescribed by dentists, with an average of 5.8 DDD/prescription (range 1–33, SD = 3.9). As shown in Table 5, the 10 highest

Table 3. Mean defined daily doses (DDD) of controlled analgesics, and the proportion of 'weekly' users (50 + DDD) during one year according to age and sex, Tromsø 1990

Age (years)	Female			Male		
	Number of users	DDD Mean (SD)	[% [users 50 + DDD	Number of users	DDD Mean (SD)	[% [users 50 + DDD
0–19	62	12.6 (25.1)	3.2	45	6.6 (4.1)	0.0
20–39	1,010	20.1 (41.2)	7.4	802	20.0 (48.5)	6.9
40–59	959	33.1 (69.3)	16.8	764	28.2 (60.2)	13.9
60–79	821	42.0 (72.3)	25.9	530	39.9 (64.7)	20.9
80 +	231	50.6 (65.9)	34.6	82	40.6 (49.8)	26.8
0–80 +	3,083	32.1 (62.3)	17.2	2,223	28.0 (57.0)	13.2
Adjusted[a]		32.1	17.2		29.1	14.2
Test users 50 + DDD *P*(gender)			< .0001			< .0001
P(age)		< .0001				
Test mean DDD 95% CI[b] (gender)		4.1 [0.87–7.33[				
Linearity *P*(age)	< .0001			< .0001		

[a] Male adjusted with female users as the standard population. [b] 95% confidence interval

Table 4. Number of 'every day' users (365 + DDD) of controlled analgesics according to age and sex, Tromsø 1990

	Female		Male	
Age (years)	Number of users	Mean DDD (SD)	Number of users	Mean DDD (SD)
20–39	2	486.9 (26.7)	4	518.7 (152.5)
40–59	9	607.5 (168.5)	5	591.0 (188.9)
60–79	8	568.6 (197.8)	4	442.3 (108.6)
80 +	2	465.0 (49.5)	–	– (–)
Total	21	567.6 (166.2)	13	523.0 (157.3)

Table 5. The 10 most prescribing doctors compared to all doctors and doctors with 10 or more prescriptions, according to different prescription indicators, Tromsø 1990

Doctors	[%] of all DDD	Number of prescriptions	DDD per prescription		
			Mean	Max	[%] largest package
A	6.1	529	18.76	50	54.1
B	5.3	498	17.33	50	41.6
C	4.5	439	16.77	50	44.2
D	3.3	274	19.54	100	51.1
E	2.8	244	18.60	150	45.1
F	2.6	324	12.94	25	28.1
G	2.1	249	13.42	50	23.3
H	1.9	143	21.79	75	72.2
I	1.9	147	20.88	100	56.5
J	1.5	136	18.65	67	39.7
All doctors					
520	100.0	10.237	15.54	250	34.2
Doctors prescribing 10 + prescriptions					
179	90.9	9.400	15.39	250	–

prescribing doctors accounted for one third of DDD prescribed. These 10 also accounted for about 30% of prescriptions with more than 50 DDD. All 10 doctors were general practitioners. The five highest prescribing dentists accounted for about half of the DDD totally prescribed by dentists. The average number of DDD per prescription was the same as for all dentists.

Discussion and conclusions

Validity

Tromsø is the regional capital of northern Norway and a centre for education, health services and business. However, some people are temporarily out of the area due to education, military service etc. Assuming that mobility is highest in the younger age groups, and that older people who dominate the drug use mainly use the pharmacy where they live permanently, this mobility in the population should not greatly affect our estimates. Almost all people living in the study area have considerable travelling distances to pharmacies outside the area, and "leakage of prescriptions" out of the area is assumed to be small.

Prescriptions for controlled analgesics are subject to special regulations as regards record-keeping, and retrieval from computerized pharmacy records is assumed to be complete.

Drugs purchased will not necessarily equal drugs used. The drug may be used only in part or not at all, or it may be used by others (or even sold). This is a general interpretation problem in most prescription studies, which we consider not to have any impact on the observed trends or differences. Self-reported drug use from population studies could provide more complete information, although subgroups with chronic pain tend to under-report their use of analgesics [14–15].

The number of prescription forgeries is assumed to be negligible due to strict control routines. Prescription forgery is predominantly an urban phenomenon [16]. In cities the drug users may alternate between many pharmacies and are less likely to be recognized by pharmacists.

Buprenorphine prescriptions dispensed after July 1st 1990, when the drug was classified as a narcotic, were excluded from the material [17]. The buprenorphine users may therefore have even higher total drug use than observed, but in most cases it is assumed that buprenorphine was substituted with codeine.

The material from Tromsø is considered to be fairly representative for controlled analgesic drug use in the general Norwegian population.

Use of controlled analgesics

The use of controlled analgesics is mainly sporadic, and use on a regular basis is low. About 85% of the users obtained one or two prescriptions, or up to 50 DDD during 1 year. About 0.6% of the users were 'every day' users. Approximately 8% of the population used controlled analgesics during 1 year, and about 1% cent of the population were 'weekly' users. The total level of analgesic use in Norway may be low compared to other countries; e.g., it is only 60% of the level in Sweden. However, the prevalence of use of controlled analgesics use was on the same level as that found in another population study [18].

In international comparisons it is important to compare the same analgesic segments, e.g. strong, moderately strong and minor analgesics, taking into account prescribing restrictions. Prescribing restrictions are one of the strongest factors influencing drug use. The segment 'moderately strong analgesics' may for these and other reasons include different drugs in various countries. As an example, in Sweden the use of codeine preparations is low, while dextropropoxyphene preparations, with effects comparable with codeine, are eight times more frequently sold than in Norway. In Sweden dextropropoxyphene and codeine preparations are both controlled analgesics. In Norway the use of dextropropoxyphene dropped dramatically after it was classified as a narcotic drug, followed by a corresponding increase in the sales of combined codeine products.

The prescriptions contained no information on indications for use. However, according to the Norwegian Prescription Statistics [2] combined codeine preparations are prescribed most frequently (about 75%) for unspecified

pains and disorders of the back and joints, head and neck, including fibrositis and myalgia. Migraine and dysmenorrhoea are rare indications. This could most probably be summarized as "general aches and pains", conditions where effective treatment is difficult to find. The Norwegian Prescription Study [2] showed very small differences between women's and men's diagnoses. This indicates that women and men use controlled analgesics for the same type of disorders, but that use is more frequent among women. The higher drug use in women corresponds well with findings from health surveys that more women suffer from pain, and more women than men on the same level of self-reported health problems use drugs [19, 20].

Problems with prescribing and use

Use of codeine is more prevalent in the elderly, especially among women. This corresponds well with reports of high analgesic drug use and self-reported problems in the elderly [21–26]. However, susceptibility to adverse effects of opioid analgesics increases with age [27], and it is therefore recommended that older people use lower codeine doses. About half of the 'weekly' users were 60 years or older, and in the 80 years of age or older one in three were 'weekly' users.

In general a high proportion of the elderly are using drugs, often multiple drugs, and are potential victims of harmful drug interactions [21–23, 28]. Constipation and dizziness are frequently reported problems among the elderly, symptoms which clearly increase with age [24, 25]. More women than men have problems with constipation [25], women report lower physical activity than men [20], and they use more laxatives than men [2, 5, 28]. Codeine may cause nausea, dizziness or sedation, vomiting and constipation, even in small doses [27], and thus contribute to these problems.

Our results indicate that both age and gender are significant factors when evaluating use of controlled analgesics. Elderly women with 'weekly' drug use will probably gain the greatest benefit from a codeine dose reduction or intermittent treatment with other drugs, e.g., plain paracetamol in adequate doses. In a randomized study of long-term treatment with codeine plus paracetamol versus paracetamol in the elderly, it was concluded that the long-term use of codeine preparations cannot be recommended [29].

Codeine has a similar propensity to produce dependence as other narcotics such as morphine, but is associated with a lower addiction potential [27, 30–32]. Although the incidence of addiction to codeine alone has been low, codeine use among multi-drug substance abusers is frequent [33, 34]. We have little information about the 'every day' users, but they seem to differ from other users. The prevalence of use is not age-dependent as for the 'weekly' users, and one third had prescriptions from more than seven prescribers. Though the classification of use and misuse and the choice of terminology can be discussed [35], we conclude that these individuals would benefit from having their treatment reconsidered.

We looked for indicators which could be used to identify people with a questionable use of controlled analgesics. The number of prescriptions was the best diagnostic factor for high drug use, since 'every day' users do not necessarily use many prescribers.

Persons obtaining prescriptions from several prescribers (drug shopping) may represent a problem, especially in large towns [16, 36–37]. Our study confirms the existence of the phenomenon.

Data from The Norwegian Prescription Study [2] shows that about 45% of all prescriptions for combined codeine preparations were issued following a telephone consultation, either by the doctors (15%) or by the receptionists (30%). In the context of "drug shopping" the practice of telephone consultations, and especially the transferral of authority to receptionists, should be revised.

Users of buprenorphine and pentazocine had a higher drug consumption than codeine users. The pharmacological effects are comparable to codeine, and they have an addictive potential [27, 39–41]. These drugs may be used by patients with more severe, specific and time-limited pain problems than the users of codeine, supporting our observation that the amount of drug per prescription was far lower than for the codeine prescriptions. However, the doctors may also be more alert to the addictive potential of these drugs.

One third of the analgesics purchased in Norway are moderately strong, controlled analgesics, mainly codeine preparations. Patients commonly expect a prescription to follow a doctor's consultation on pain problems. One may speculate as to whether doctors hesitate to recommend to non-prescription analgesics, as this may be considered as a rejection of the patient's problems. Prescribing of analgesics for musculoskeletal problems are mentioned among decisions that frequently make general practitioners uncomfortable, in relation to whether or not to prescribe [42].

Many doctors prescribed controlled analgesics, but the majority of the doses were prescribed by a few doctors. These were predominantly general practitioners, as was also seen in Hordaland county [7]. It is not possible to compare doctors' prescribing patterns without knowledge of patients' diagnoses and the number of patients consulted. Nevertheless, prescribing patterns may still provide useful feedback to doctors, giving the opportunity to compare ones own prescribing with colleagues'.

The prescribing pattern is not alarming. Doctors with a high mean of DDD/prescription or who frequently prescribe the largest package sizes, may have many chronically ill patients or patients living in remote areas. However, we question the rationality of prescribing up to 600 tablets of combined codeine preparations on one prescription.

Conclusions

Use of controlled analgesics is common, but sporadic use is dominant. Drug use increases with age, and women use more drugs than men. Very high and frequent use exists, but is uncommon. Most of the controlled analgesics were

used by elderly people, who are also most susceptible to adverse effects. Codeine dose reduction or intermittent treatment with other drugs (e.g., plain paracetamol) in adequate doses could be considered as alternatives, reducing the risk of adverse drug reactions such as nausea, constipation and dizziness. If a minor analgesic is judged to be a better alternative, this may well be accepted by the patient, if the proposal is conveyed with conviction, and perhaps more easily when written as a prescription.

Misuse of codeine is a very limited, but undoubtedly a serious problem. The health authorities may for particular reasons see the need for looking into the use of controlled analgesics. It is then necessary to collect prescriptions from all pharmacies serving the target population, accumulate prescriptions on an individual level, and identify individuals with a high number of prescriptions. The pharmacies in Norway are now computerized and possess the basic data needed for monitoring doctors' prescribing and patients' use of drugs.

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PAPER V

THE USE OF CONTROLLED ANALGESICS IN A GENERAL POPULATION (15-59 YEARS) - THE INFLUENCE OF AGE, GENDER, MORBIDITY, LIFESTYLE AND SOCIODEMOGRAPHIC FACTORS.

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ABSTRACT

The use of controlled analgesics (codeine, buprenorphine and pentazocine preparations) was studied through drugs dispensed (prescriptions) over a one year period in the municipality of Tromsø, Norway. Drug use was linked to information from the Tromsø Health Study, a cross-sectional survey where the population was invited to a health screening. The study sample comprised 9670 women and 9141 men between 15 and 59 years of age.

About nine per cent of the population had obtained one or more prescriptions. Combined codeine preparations dominated, and the average amount purchased was 25 defined daily doses/year. The use was mainly sporadic, but regular use did occur. Low self-evaluated health, headache suffering and former use of analgesics and psychotropics were the most significant predictors. However, daily smoking and low education level were also significant predictors. Drug use increased significantly with age, but only a minor gender difference was observed. After adjustment for differences in health problems the gender difference became insignificant.

Key words: analgesics, codeine, pharmacoepidemiology, morbidity, demographic factors, non-participation

INTRODUCTION

Analgesic drugs may be divided into three categories: narcotic (strong) analgesics (eg. morphine, pethidine), controlled (moderately strong) analgesics, and non-restricted (minor) analgesics available both with or without a prescription. Several studies have been made in the Nordic countries on analgesic drug prescribing, based on sales statistics [1] and prescriptions [2-4]. However, most of the studies do not distinguish between different types of analgesics. Moderately strong analgesics probably differ from the other analgesics, with respect to prescribing, the user, the extent of use and conditions for which they are used. Our present knowledge of medication habits is mainly based on studies using drug consumption as their starting point. Information from a population study is especially useful in revealing characteristics of the drug user and the distribution of ailments inducing the use of drugs.

Aim of the study. The aim of this study was to investigate how morbidity, self-evaluated health, use of health services, demographic patterns and lifestyle characteristics influence controlled analgesic drug use.

MATERIAL AND METHODS

Controlled analgesics. These are moderately strong, centrally acting agents. Since codeine has a similar propensity to produce dependence as other narcotics, special regulations restrict the prescribing and dispensing of controlled analgesics. The patient's name, address and birth date are required, and the prescriptions are retained in the pharmacy for one year. The segment 'moderately strong analgesics' may include different drugs in various countries. In Norway the main subgroup is combined codeine preparations, i.e. 30 mg codeine in combination with paracetamol, acetylsalicylic acid or phenazone. These are mostly prescribed in general practice for mild to moderate acute and chronic pain [5]. Others are pentazocine, buprenorphine and plain codeine preparations.

Measurement of drug use. Drug use was measured in Defined Daily Doses (**DDD**). One DDD is defined as the assumed average dose per 24 hours, used according to the main indication of the preparation. Taking combined codeine preparations as an example, one DDD equals four tablets, each containing 30 mg codeine and e.g. 500 mg paracetamol [6].

Prescriptions. All prescriptions for controlled analgesics dispensed in a one-year period (01.03.89 - 28.02.90) from the three pharmacies in the municipality of Tromsø, Norway, were collected from pharmacy records. The drug users were identified, and the accumulated drug use was recorded for each individual. In this part the Central Population Register

was used, which includes all persons registered as resident in Norway, and is based on population censuses and yearly data on births, deaths and migrations. Approval was granted by the Norwegian health authorities and the data inspectorate.

The Tromsø Study. In 1987 all men born between 1925-1966 and all women born between 1930-1966, and a 10% sample of the population born between 1967-74, living in the municipality of Tromsø, Norway, were invited to participate in a health survey. The subjects were drawn from the Central Population Register. 21,647 (75%) of the invited population attended the examination. The invited persons completed a self-administered questionnaire covering smoking habits, physical activity in leisure time and status of employment before the screening. Height, weight and blood pressure were measured. A non-fasting blood sample was collected (measuring serum cholesterol and gamma-glutamyltransferase (GGT)). A second questionnaire was handed out to be filled in at home and to be returned by mail. This included more detailed questions about the subjects' use of health services, dietary habits, sociodemographic characteristics, diseases and symptoms, and a set of questions about use of different drugs during the preceding 14 days [7]. The questionnaire was returned by 91.7% of those who attended the screening.

The purchases of controlled analgesics were linked to the Tromsø Health Study population. The number of subjects was corrected for migration in the period 1987-90 (status per 31.12.90).

Based on previous studies [8-13] and a discussion of the variables from the Tromsø study, several factors that could be predictors of analgesic drug use were selected. Drug use is influenced by the morbidity, by attitudes to health and drugs, and by contact with the prescribers. These factors depend on people's sociodemographic characteristics and the health risks they experience.

Pain conditions: Persistent and temporary pain

Attitude to own health: Self-evaluated health

Health risks: Lifestyle variables, Sociodemographic variables

Use of health services: Number of visits to the doctor, number of visits to the physical therapist.

Former drug use: Use of analgesics and/or migraine medication, use of nerve pills and/or sleeping pills, and all other medication. Regular use of medication owing to menstrual discomfort such as pain, oedema and/or depression.

Others: Physiological variables

The list of variables included initially in the analysis is given in appendix 1.

To single out the significant factors, multiple regression analyses were performed, and those variables that were significant in one of the sexes were used in this analysis. Logistic regression analysis was performed to determine the impact of the single variables on analgesic drug use in men and women.

Statistical analysis. All the statistical analyses (ANOVA, linear and logistic regression, chi-square statistics, comparisons of means) were performed by the SPSSx statistical package [14]. Age adjustments of the proportions of analgesic drug users were performed with the direct method with the Norwegian population 01.01.1989 as standard population.

RESULTS

Use of controlled analgesics in the population. Table 1 shows that controlled analgesics were prescribed more to women than men ($p<.0001$). There were 1000 (10.3%) women and 701 (7.7%) men, who obtained one or more prescriptions over the one-year period. The proportion of users increased significantly with age ($p<.0001$), from 2.5 to 14.1% in women and from 0.9 to 10.3% in men.

The amount of controlled analgesics purchased by the users increased significantly with age, from 17.2 to 30.4 DDD in women ($p(trend)=.012$) and from 5.0 to 36.4 DDD in men ($p(trend)=.0005$). The gender difference was not significant ($p=.334$).

The total drug use "intensity" in the population is shown as the number of purchased defined daily doses per 1000 inhabitants per day. The number of defined daily doses of controlled analgesics increased significantly with age ($p<.0001$), and was higher in women than men ($p=.0007$).

Participants and non-participants in the health screening. Table 2 shows the non-participants, i.e. invited subjects who did not attend the screening in The Tromsø Study. Alike the participants the proportion of drug users increased significantly with age ($p(women)=.0002$, $p(men)=.03$), and was significantly higher in women than men ($p=.0002$). There was no significant gender difference observed in the purchased amount of drugs (mean DDD).

The proportion of users and the mean DDD purchased were higher in non-participants than in participants.

Amount of analgesics. Table 3 shows that about 80% of the users had purchased 25 DDD or less during the year (i.e. 100 tablets of combined codeine preparations). Only ten subjects had purchases corresponding to use of one DDD (i.e.four tablets combined codeine preparations) or more every day through the year. About 85% of the users had

purchased one or two prescriptions, while about 5% had purchased seven prescriptions or more.

Type of analgesics. Combined codeine preparations dominated the use of controlled analgesics. Only fourteen subjects were prescribed buprenorphine and/or pentazocine (data not shown).

Controlled analgesic drug use by influential factors. Table 4 shows the relation between significant variables and use of controlled analgesics in either men or women. Many of the variables included initially did not reach the level of statistical significance. Because of missing information, the number of men and women included in the analysis differed within the variables.

The univariate associations showed that the proportion of analgesic drug users increased with increased symptoms of temporary and persistent pain. Low self-evaluated health was strongly associated with drug use; drug use increased with reduced self-evaluated health. Both feeling depressed and sleeplessness were associated with drug use in the univariate analyses.

Daily smoking was associated with analgesic drug use. However, while both high coffee consumption and low physical activity were significantly associated with drug use in the univariate analyses, frequency of alcohol intake had no association with drug use (data not shown).

The proportion of users was highest among those with a low education level. Variables connected with employment status, type of work etc. had no associations with drug use. Marital status had an influence on drug use in the univariate analyses; highest drug use was observed among the formerly married and lowest among the single subjects (data not shown).

Usually drug use increased with age on all levels of the analyzed variable. However, women with poor or very poor self-evaluated health, or daily headache, or low-educated women in the age group 30-39 years had the highest proportion of controlled analgesic drug use (data not shown).

The logistic regression analysis with drug use as the dependent variable is shown in table 5, tabulating the odds ratio (OR) between the extreme groups. Former use of health services and drugs are both included and excluded.

Morbidity and attitudes to own health. The most significant predictors of controlled analgesic drug use were suffering from headache (OR = 2.5(women) OR = 3.5(men)) and low self-evaluated health (OR = 3.1(women), OR = 2.0(men). Headache suffering was more significant in men than women, while low self-evaluated health was more significant in women

than men. Backache, migraine and sleeplessness were significant predictors, but less significant than the other two factors mentioned above (OR < 2.0).

Lifestyle and sociodemography. Daily smoking was the most significant predictor for use of controlled analgesics (OR = 1.4). Other lifestyle variables were not significant. Low education level was a significant predictor in women only (OR = 0.8).

Former use of health services and drug use. Former use of pain medication (OR = 1.5(women) OR = 2.0(men)) and psychotropics (OR = 1.5(women) OR = 1.9(men)) were significant predictors for controlled analgesic drug use, also regular use of medicines for menstruation discomfort. The use of other kinds of drugs (heart medicine, eczema skin ointment etc.) was not a significant predictor. Both frequent visits to the doctor (women only) and to the physical therapist were significant predictors. When former use of health services and drugs were included in the analysis, the odds ratio estimates of all the morbidity variables and low self-evaluated health were reduced. Only low self-evaluated health (women only) and headache showed a significant reduction. The lifestyle and sociodemographic variables were only marginally reduced.

Gender. The odds ratio was 1.5 for being a drug user (women versus men). When adjusted for differences in age, lifestyle, sociodemography, morbidity and attitudes to own health, the difference became insignificant (OR = 1.2). When adjustments for differences in former use of medicines and health services were made (OR = 1.0), there was no gender difference in controlled analgesic drug use.

DISCUSSION

Validity

The prescriptions. Almost all people living in the study area have considerable travel distances to pharmacies outside the area, and "leakage of prescriptions" out of the area is assumed to be small. The prescriptions are subject to special regulations as regards record-keeping, and retrieval from computerized pharmacy records is assumed to be complete. Drugs purchased will not necessarily be the same as consumed drugs. The drug may be used only in part or not at all, or it may be used by others. This is a general interpretation problem in prescription studies, which we consider to have only minor influence on the observed trends or differences.

The Tromsø Health Study population. A higher drug use was observed among non-participants than participants. Almost all migration in Norway is registered by the authorities, since registration is obligatory. However, some subjects may have moved

temporarily without registration. Since the registered migration was higher among non-participants than participants, this indicates that the difference in drug use may be even higher.

The higher drug use among non-participants than participants was mainly due to higher drug use among the non-participating youngest men and the oldest women. Participants may differ from non-participants in many respects. The latter group tends to be men, in the younger age-group, with many social and medical problems [15,16]. Our results are in accordance with a similar health survey, where non-participants demonstrated higher mortality and morbidity compared with participants [17]. Our estimates on drug use should therefore be considered as conservative.

Use of controlled analgesics. The observed age trend differed from use of analgesics in general [18], which was independent of age. However, the trend was in accordance with trends in use of prescription analgesics in the Jämtland study [2,3] and use of minor tranquillizers [19].

The use of controlled analgesics was mainly sporadic. About 85% of the users purchased one or two prescriptions. Regular use of controlled analgesics occurred, but only about 0.5% of the total population had purchased an amount corresponding to a consumption of one tablet of codeine every day through the year (90 or more DDD/year).

The estimates of the extent of regular drug use are probably conservative. In addition to selection bias, false prescriptions may lead to an underestimation of regular use. However, the number of false prescriptions is assumed to be negligible due to the control routines that apply to these prescriptions. The frequency of false prescriptions is probably higher in larger towns, where the drug users have the opportunity to visit many pharmacies and the customers are mostly unknown to the pharmacists. The buprenorphine prescriptions purchased after July 1st 1990, when the drug was classified as a narcotic, were left out from the material. The buprenorphine users may therefore have an even higher total drug use than observed, but in most cases buprenorphine was probably substituted with codeine.

The drug sales statistics show that 11.6 defined daily doses of controlled analgesics per 1000 inhabitants per day were sold from Norwegian pharmacies in 1990 (including drugs sold to health institutions and hospitals). This is roughly interpreted as if 1.2% of the Norwegian population consume one DDD (i.e. four tablets of combined codeine preparations) every day. However, drug use in the young and middle-aged general population is far lower, and only the eldest age

groups had a consumption comparable to the figures from the sales statistics.

Codeine has a similar propensity to produce dependence as other narcotics such as morphine, but is associated with a lower addiction potential [20-23]. Although the incidence of addiction to codeine alone has been low, codeine use among multi-drug substance abusers is prevalent [24]. Our 10 'four tablets every day' users may be at risk of developing dependence. Though the classification of use and misuse and the choice of terminology can be discussed [25], we conclude that these individuals would benefit from having their treatment reconsidered.

The extent of regular drug use in the general population is probably underestimated in our study, since the heaviest drug users are underrepresented in the health survey population.

Predictors for use of controlled analgesics

Health. It is understandable that use of controlled analgesics is related to health. When a person feels ill, he is more likely to visit a doctor, who in most cases writes a prescription for a drug that will relieve the symptoms.

Suffering from headache and backache were more significant in men than women, probably because women use these drugs for more varied symptoms than men (eg. menstrual discomfort). Subjects who suffered frequently from headache had the highest proportion of controlled analgesic drug users, confirming other studies showing heavy analgesic drug use among subjects reporting high frequency of headache [9,11,26-27]. The proportion of users was considerably higher than in subjects who had the most serious problems with other types of pain.

Low self-evaluated health was more strongly related to drug use in women than men, and low self-evaluated health contributed more than morbidity to the prediction of drug use in women. This pattern was also observed for use of minor tranquillizers [19]. This indicates that controlled analgesics may be used as treatment for more or less diffuse pain conditions (feeling ill). Fylkesnes and Førde showed that the determinant of low self-evaluated health was closely related to symptoms and diseases connected with the musculoskeletal system and psychosocial problems, and less related to age and the chronic diseases in both sexes [28]. The authors indicate that self-evaluation of health reflects the individual's perception of own physical performance and efficiency in general.

Education level. Use of controlled analgesics was inversely related to degree of education. The differences in drug use by education were modest in both sexes, but more marked among women then men.

The same pattern was observed for the use of tranquillizers [19]. After adjustment for differences in health problems, education level was significant in women only. This influence from education was contradictory to earlier observations, which showed that the highly-educated use more analgesics in general for their health problems than the low-educated [18]. An explanation may be that the highy-educated use more analgesics than low-educated for their health problems, but they tend to use non-prescribed analgesics or other types of analgesics than the controlled analgesics.

Lifestyle. Problem users of alcohol have often been found to have dependencies on drugs [19]. However, neither in a population-based survey of psychotropic drug use [19], nor in this study we could not find any direct association between drinking and drug use.

The drug users tended to be daily smokers. Low physical exercise and high coffee consumption were strongly correlated with smoking, and this may explain why these variables did not reach the level of significance in the multiple regression. A complex of smoking, headache and controlled analgesic drug use was observed. However, a cross-sectional study does not differentiate between smoking and drug use as coinciding habits, or daily smoking as an inducer of headache and drug use.

Contacts with health-care system. As expected, contact with the health-care system increases the likelihood of drug use. However, frequency of visits to the doctor was an independent predictor in women only. This indicates that a person who feels unwell often visits the doctor and hence receives a medication. Alternatively it indicates that if a person often visits the doctor, she is perceived as a "problem patient" and receives controlled analgesics for those unspecific symptoms which cannot be cured.

Former use of analgesics/migraine preparations and former use of psychotropics contributed equally to the prediction of controlled analgesic drug use. This indicates analgesic use as a persistent habit, and a relationship between use of psychotropics and controlled analgesics.

Women suffering from menstrual discomfort were more likely to use controlled analgesics. When this variable was excluded from the analysis, the odds ratio for use of pain medication only increased marginally.

Being a drug user of other medicines e.g. eczema skin ointment, antihypertensive medication, heart medicine etc.(see appendix 1) did not predict use of controlled analgesics.

Gender. The gender difference was moderate compared with the use of analgesics in general and the use of tranquillizers (both odds ratio women:men 2.0)

[18-19]. There were also marginal differences in which variables predicted drug use in men and women. The gender difference was mainly due to women's higher prevalence of health problems and lower self-evaluated health, though women had slightly higher drug use than men with the same degree of health problems.

CONCLUSION

Use of controlled analgesics was mainly sporadic, but regular use did occur. Low self-evaluated health, headache suffering and former use of analgesics and psychotropics were the most significant predictors. However, daily smoking and low education level were also significant predictors of controlled analgesic drug use. Drug use increased significantly with age. A minor gender difference was observed, but after adjustment for differences in health problems the gender difference became insignificant. Women's higher drug use is mainly due to higher prevalence of health problems. The non-participants in the screening had a significantly higher drug use than the participants and responders, which implies that the strength of the associations may be underestimated.

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TABLE 1. Proportion of analgesic drug users (participants in The Tromsø Study 1986-87), mean number of defined daily doses (DDD[1]) among the users, number of daily doses of analgesics per 1000 inhabitants per day, according to age and sex. Tromsø 1989.

	Proportion of users over a 1 year period				Number of DDD/1000 Tromsø inhabitants/day		USERS ONLY Defined Daily Doses	
Age	WOMEN		MEN		WOMEN	MEN	WOMEN	MEN
group	No	%	No	%	Mean(sd)	Mean(sd)	mean(sd)	mean(sd)
15-19	323	2.5	322	0.9	1.2(13.7)	0.1(1.3)	17.2(28.7)	5.0(00.0)
20-29	1772	7.6	1581	5.8	3.4(23.3)	2.3(18.4)	16.4(26.7)	14.4(24.3)
30-39	3044	9.4	2753	6.7	6.1(46.2)	3.4(22.4)	23.6(50.2)	18.8(26.0)
40-49	2835	11.7	2781	8.9	9.4(66.1)	5.2(34.6)	29.2(65.0)	21.3(37.1)
50-59	1696	14.1	1704	10.3	11.8(72.0)	10.2(85.6)	30.4(64.1)	36.4(91.5)
15-59	9670	10.3	9141	7.7	7.4(54.5)	4.9(44.1)	26.1(56.8)	23.5(53.7)
Age-adjusted		9.3		6.7	6.3	4.1	23.2	19.1
Test for linearity p(age)		<.0001		<.0001	<.0001	<.0001	.012	.0005
Test between groups p(gender)				<.0001	.0007		.334	

DDD[1]= the assumed average dose per 24 hours, used for the main indication of the preparation.

TABLE 2. Comparison of controlled analgesic drug use by participants and non-participants in The Tromsø Study 1986-87. Tromsø 1989.

	N O N - P A R T I C I P A N T S								**PARTICIPANTS**	
			W O M E N			M E N			W	M
	Number		%	Mean DDD		%	Mean DDD		Mean DDD	
Age	Women	Men	users	All	Users	users	All	Users	All	All
15-19	77	64	1.3	0.1	5.0	6.3	0.7	11.1	0.4	0.1
20-29	694	966	9.8	1.3	12.9	7.4	2.3	31.3	1.2	0.8
30-39	591	959	12.0	3.2	27.0	8.0	2.5	31.0	2.2	1.3
40-49	307	601	16.3	9.7	59.6	9.0	3.0	33.8	3.4	1.9
50-59	125	257	14.4	5.8	40.2	11.3	4.2	37.5	4.3	3.7
15-59	1794	2847	11.6	3.6	31.3	8.3	2.7	32.2	2.7	1.8
Age-adjusted			11.3	4.1	29.5	8.3	2.6	30.1	2.3	1.5
Test linearity **p(age)=**			.0002	.0001	.004	.033	.226	.634	<.0001	<.0001
Test between groups **p(gender)=**			.0002	.223	.904				0.0007	
p(participation)										
% users of controlled analgesics						9.6			9.0	p=.2872
mean DDD all						3.0			2.3	p=0.019
mean DDD users only						31.7			25.0	p=0.039

TABLE 3. Number, proportion of users (%) and mean DDD, according to number of daily doses (DDD) of controlled analgesics purchased during one year. Tromsø 1989.

Number of purchased DDD	WOMEN Number	%	mean DDD	MEN Number	%	mean DDD
2.5-5.0	294	3.0	4.8	255	2.8	4.9
5.1-12.0	56	0.6	8.7	44	0.5	9.0
12.1-25.0	470	4.9	15.9	290	3.2	16.2
25.1-90.0	131	1.4	50.2	85	0.9	47.8
90.1-365.0	44	0.5	206.4	22	0.3	223.1
365.1+	5			5		
2.5-365+	1000	10.3	26.1	701	7.7	23.5

TABLE 4. Age-adjusted proportion of controlled analgesic drug users during one year, according to variables from The Tromsø Study 1986-87. Tromsø 1989.

	WOMEN			MEN		
	Number	%drug users	p-value trend	Number	%drug users	p-value trend
Self-evaluated health						
Excellent	2442	5.3	<.0001	2459	4.4	<.0001
Good	4625	8.1		4375	6.2	
Fair	1403	16.1		1235	9.3	
Poor/very poor	234	29.5		188	17.3	
Headache						
Seldom/never	4310	6.2	<.0001	5956	5.1	<.0001
Several a month	3256	10.6		1728	8.1	
" week	946	14.5		385	16.5	
Daily	187	24.7		90	16.7	
Migraine						
No	7513	7.8	<.0001	7934	6.2	<.0001
Yes	1359	15.3		463	12.2	
Backache						
No	6681	7.6	<.0001	6443	5.4	<.0001
Yes	1891	13.5		1722	9.9	
Sleeplessness						
No	5140	7.0	<.0001	5913	5.2	<.0001
Yes	3514	11.9		2283	9.2	
Years of education						
13+	2550	7.1	<.0001	2684	5.2	<.0001
10-12 years	3036	9.3		2805	6.3	
1-9 years	3286	11.3		2908	7.6	
Daily smoking						
No	4896	7.2	<.0001	4671	5.1	<.0001
Yes	3976	11.9		3725	8.5	
Regular users of medication owing to menstrual discomfort						
No	7547	8.0	<.0001			
Yes	1325	15.1				
Users of psychotropic medication						
No	8424	8.4	<.0001	8166	6.2	<.0001
Yes	448	20.3		231	16.5	
Users of pain medication						
No	6279	6.7	<.0001	7301	5.3	<.0001
Yes	2593	14.9		1096	14.5	
Visits to the doctor/times last year						
0	2101	5.3	<.0001	2986	5.0	<.0001
1	2307	6.5		2155	5.2	
2	1771	8.0		1306	6.8	
3+	3685	13.1		1950	9.7	
Physical therapy/times last year						
0	7189	7.6	<.0001	7170	5.8	<.0001
1	344	13.8		299	6.1	
2-9	511	13.4		463	11.2	
10+	828	19.6		465	12.1	

TABLE 5. The odds ratio for being a user of controlled analgesics is described for different indicators mutually adjusted. Tromsø 1989.

Variables	WOMEN Odds ratio[1]	95%CI[2]	MEN Odds ratio	95%CI	WOMEN Odds ratio	95%CI	MEN Odds ratio	95%CI
MORBIDITY AND ATTITUDES TO OWN HEALTH								
Self-evaluated health(1-4)	2.02	[1.44,2.85]	1.53	[1.03,2.28]	3.10	[2.23,4.29]	2.03	[1.38,2.96]
Headache (1-4)	1.71	[1.25,2.34]	2.25	[1.52,3.33]	2.49	[1.85,3.36]	3.49	[2.41,5.04]
Migraine (0,1)	1.41	[1.17,1.70]	1.27	[0.93,1.75]	1.54	[1.29,1.86]	1.43	[1.05,1.94]
Backache (0,1)	1.10	[0.92,1.32]	1.34	[1.08,1.66]	1.30	[1.09,1.55]	1.54	[1.26,1.87]
Sleeplessness (0,1)	1.22	[1.04,1.43]	1.27	[1.05,1.54]	1.34	[1.14,1.56]	1.40	[1.16,1.68]
LIFESTYLE AND SOCIODEMOGRAPHY								
Daily smoking (0,1)	1.33	[1.13,1.55]	1.46	[1.21,1.75]	1.36	[1.17,1.58]	1.47	[1.22,1.76]
Education level (1-3)	0.73	[0.60,0.90]	0.89	[0.71,1.11]	0.79	[0.65,0.96]	0.91	[0.72,1.13]
Age (1-5)	1.91	[1.39,2.63]	2.18	[1.53,3.12]	1.84	[1.35,2.52]	2.23	[1.57,3.17]
FORMER USE OF MEDICINES AND HEALTH SERVICES								
Menstrual discomfort (0,1)	1.58	[1.31,1.90]	-					
Psychotropics (0,1)	1.51	[1.15,1.97]	1.89	[1.30,2.76]				
Pain medication (0,1)	1.45	[1.22,1.72]	2.00	[1.59,2.50]				
Other medicines (0,1)	1.00	[0.84,1.18]	0.93	[0.75,1.16]				
Visits to the doctor (0-3)	1.61	[1.29,2.02]	1.29	[1.00,1.66]				
Physical therapy (0-3)	1.50	[1.21,1.85]	1.44	[1.08,1.92]				
Gender, adjusted for			OR	(95% CI)				
age			1.47	[1.31,1.65]				
also **LIFESTYLE AND SOCIODEMOGRAPHY**			1.46	[1.30,1.63]				
also **MORBIDITY/ATTITUDES TO OWN HEALTH**			1.15	[1.02,1.30]				
also **FORMER USE OF HEALTH SERVICES**			1.08	[0.95,1.21]				
also **FORMER MEDICINE USE**			1.01	[0.90,1.15]				
Number of subjects (15-59 years)	8177		7797		8197		7797	

[1] Odds ratio between extreme groups of the variables [2] 95% confidence interval

Appendix I
Variables from the Tromsø Health Study 1986-87:

PERSISTENT PAIN

Do you have or have you had:
-**Rheumatoid arthritis** (no/yes)
-**Migraine** (no/yes)

TEMPORARY PAIN

-Number of **infections** last six months (graded 1-3: 0, 1-2, 3+)
-Problems with **backache** of more than four weeks duration last year (no/yes)
-**Neck/shoulder pain** (graded 1-4: seldom or never, once or more a month, once or more a week, daily)
-**Headache** (graded 1-4, as neck/shoulder pain)

MENTAL DISTRESS

-**Depressed** last two weeks (graded 1-4: never or seldom, sometimes, often, always)
-**Sleeplessness** (no/yes)
-**Premenstrual depression** (graded 1-3: slight, marked, troublesome)

ATTITUDE TO OWN HEALTH

-**Self-evaluated health** (graded 1-3: excellent, good, fair, poor/very poor)

USE OF HEALTH SERVICES AND DRUGS

-Number of **visits to the doctor** during the preceding year, caused by own health problems (graded 1-4: 0, 1, 2, 3+)
-Number of **visits to the physiotherapist** (graded 1-4: 0, 1, 2-9, 10+)
-Have you taken any of the following medicines during the preceding 14 days?: (no/yes)
  -**Pain medication** (analgesics or migraine medication)
  -**Psychotropics** (sleeping pills or nerve pills)
  -**Other medicines** (fever medication, eczema skin ointment, antihypertensive medication, nitroglycerine, heart medicine, antiepileptic medicine or other)
-Do you regularly use pain relievers during menstruation, or diuretics or other medicines against **menstrual discomfort** as depression, painful breasts, swollen hands and feet? (no/yes)

LIFESTYLE VARIABLES

-Frequency of **physical activity** of at least 20 minutes duration that makes you sweat or get out of breath (graded 1-4: seldom or never, weekly, several times a week, daily)
-Daily consumption of **coffee** (graded 1-4: <1, 1-4, 5-8, 9+ cups)
-Daily **smoking** (no/yes)
-Frequency of **alcohol intake** (graded 1-3: seldom, approximately once a week, more often)

SOCIODEMOGRAPHIC VARIABLES

-**Age** (in 10-year age-groups)
-**Education level** (graded 1-3: <9, 10-12, 13+ years)
-**Marital status** (unmarried, formerly married, married
-Full-time **housewife** (no/yes)
-On **unemployment allowance** (no/yes)
-**Type of work** (graded 1-4: sedentary, a lot of walking, a lot of walking and lifting, heavy manual labor)
-**Employment last year** (full-time, part-time, unpaid)

PHYSIOLOGICAL VARIABLES

-**Relative body weight, blood pressure, serum cholesterol, gamma GT.**

ISM SKRIFTSERIE - FØR UTGITT:

1. Bidrag til belysning av medisinske og sosiale forhold i Finnmark fylke, med særlig vekt på forholdene blant finskættede i Sør-Varanger kommune.
   Av Anders Forsdahl, 1976. (nytt opplag 1990)

2. Sunnhetstilstanden, hygieniske og sosiale forhold i Sør-Varanger kommune 1869-1975 belyst ved medisinal-beretningene.
   Av Anders Forsdahl, 1977.

3. Hjerte-karundersøkelsen i Finnmark - et eksempel på en populasjonsundersøkelse rettet mot cardiovasculære sykdommer. Beskrivelse og analyse av etterundersøkelsesgruppen.
   Av Jan-Ivar Kvamme og Trond Haider, 1979.

4. The Tromsø Heart Study: Population studies of coronary risk factors with special emphasis on high density lipoprotein and the family occurrence of myocardial infarction.
   Av Olav Helge Førde og Dag Steinar Thelle, 1979.

5. Reformer i distriktshelsetjenesten III: Hypertensjon i distriktshelsetjenesten.
   Av Jan-Ivar Kvamme, 1980.

6. Til professor Knut Westlund på hans 60-års dag, 1983.

7.* Blodtrykksovervåkning og blodtrykksmåling.
   Av Jan-Ivar Kvamme, Bernt Nesje og Anders Forsdahl, 1983.

8.* Merkesteiner i norsk medisin reist av allmennpraktikere - og enkelte utdrag av medisinalberetninger av kulturhistorisk verdi.
   Av Anders Forsdahl, 1984.

9.* "Balsfjordsystemet." EDB-basert journal, arkiv og statistikksystem for primærhelsetjenesten.
   Av Toralf Hasvold, 1984.

10. Tvunget psykisk helsevern i Norge. Rettsikkerheten ved slikt helsevern med særlig vurdering av kontrollkommisjonsordningen.
    Av Georg Høyer, 1986.

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    Av Anders Forsdahl, Atle Svendal, Aslak Syse og Dag Thelle, 1989.

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Av Anne Johanne Søgaard, 1989.

14. Helsekontroller i praksis. Erfaringer fra prosjektet helsekontroller i Troms 1983-1985.
Av Harald Siem og Arild Johansen, 1989.

15. Til Anders Forsdahls 60-års dag, 1990.

16. Diagnosis of cancer in general practice. A study of delay problems and warning signals of cancer, with implications for public cancer information and for cancer diagnostic strategies in general practice.
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17. The Tromsø Survey. The family intervention study. Feasibility of using a family approach to intervention on coronary heart disease. The effect of lifestyle intervention of coronary risk factors.
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18. Helhetsforståelse og kommunikasjon. Filosofi for klinikere.
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19.* Factors affecting self-evaluated general health status - and the use of professional health care services.
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20. Serum gamma-glutamyltransferase: Population determinants and diagnostic characteristics in relation to intervention on risk drinkers.
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27. Utdrag av medisinalberetninger fra Sulitjelma 1891-1990. **Av Anders Forsdahl, 1993.**

28. Helse, livsstil og levekår i Finnmark. Resultater fra Hjerte-karundersøkelsen i 1987-88. Finnmark III. **Av Knut Westlund og Anne Johanne Søgaard, 1993.**

De som er merket med * har vi dessverre ikke flere eksemplar av.