

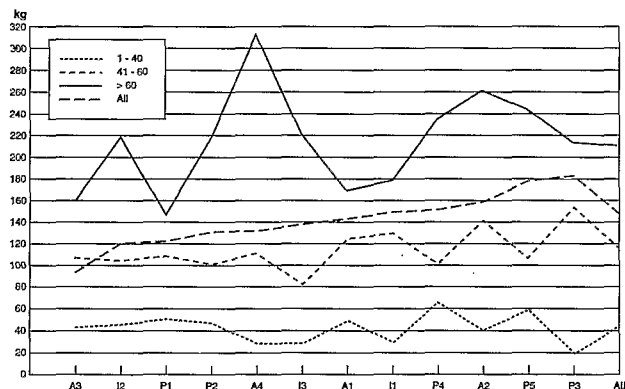
From drug utilization research to pharmaceutical anthropology

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The subject of my lecture "*From Drug Utilization Research To Pharmaceutical Anthropology*" provokes scepticism. Therefore, it seems necessary to start by making some re-

– "large scale, prescription-related studies for the purpose of national and/or international comparisons of drug consumption;"
"patient or physician-related studies concerning the quality

Fig. 1
Prescribed DDDs/Patients according to age



Sample: 1 200 patients of 12 primary health care physicians from the state of Hessen (100 per physician). Period of observation: 3 months in 1989.

1. "A relative big share of prescriptions include those groups of medicaments that are based on uncertain or doubtful therapeutical concepts. Groups that are prescribed particularly often are peripheral vasodilators, expectorants, topical products for joint and muscular pain and drugs of antivaricose therapy. In 1991, a total of 243 million prescriptions of these doubtful drugs were made, which means a share of 31.7% of the total amount of prescriptions of the market for pharmaceutical products. The total costs of these doubtful therapeutical groups amount almost constantly to 6.1 billion DM." (p. 13)

The second statement refers to the economical consequences.

2. "In 1991, essential increases in prescription numbers were caused by regrouping in the prescription-spectrum and were termed "structure-component" in the turnover analysis. The structure-component shows which part of the variations in turnover could have been caused by the utilization of other drugs (interdrug effect) or, in case of identical drugs, by the prescription of larger packagings or more expensive manners of administration and concentrations (intradrug-effect)... The structure-component was about 5.1% in 1991... and corresponds to an increase in the turnover of about 1158 million DM." (p. 15) The interdrug effect is the most important one, which means that doctors and patients have changed the therapy. As other investigations have shown, such changes in drug therapy have occurred more often as previously expected and can only partly be explained by biomedical progress.

3. "The age-group of insurees who are 60 years and older and only make up 21% of the total population consume about 55% of the total costs of medicamentous therapy, which is about 2.6 times as much as the average population-share. On an average, every insuree who is 60 years and older receives a long-term therapy of about three drugs. If the daily dosages of drugs coming from indication groups, such as psychopharmaceutical, hypnotics and sedatives are added, that would be enough to maintain a long-term therapy for one out of five patients of the age-group of the 80 to 84 year-olds." (p. 429)

Two facts which are relevant to this discussion are not mentioned in the drug index.

1. Drugs having an uncertain or doubtful therapeutical value are prescribed for the elderly as they get the largest share of all prescriptions.

Fig.2
Similarities and differences of approach

Body of theoretical knowledge	Drug utilisation Research	Pharmaceutical anthropology
	Bio-medicine/Health-economies	Sociology/Cultural anthropology
Criteria of evaluation	Biomedical standards expectations of health politicians	Evidence/Recognition by the actors
Methods	Epidemiology	Epidemiology/Methods of empirical research in cultural anthropology
	Prescription groups according to similar therapeutic effects or areas structure of expenditure	Patient groups with similar treatment courses/diagnoses related groups
	Prescriptions	Prescriptions linked with the context of individual treatment courses
Data base	Mass data of social insurance or National Health Service documents	

2. Because of the lack of proved experience physicians are not sure especially about the right therapy for older persons. Therefore, they keep on relying on their own limited experience in order to satisfy the needs of their patients, as long as Geriatrics, a new branch of clinical medicine, still is fighting for its academic acceptance even though life expectancy of the elderly is growing. As we found out in our work with a peer review group concerning drug therapy in primary health care, there are big differences in the prescriptions made for patients who are 60 years and older (Fig. 1).

The reported deviations from biomedical standards or from economic expectations provoke many questions and offhand explanations. The easiest one is to accuse physicians and patients of not abiding the standards of their own time.

not explain the behavior of doctors and patients with respect to drug utilization sufficiently. Therefore, other approaches to the way of prescribing and using drugs are needed.

Furthermore, prescriptions serve as a data basis. They are indispensable as they are documents that illustrate real behavior. But they have to be collected and linked differently than drug utilization research does at present.

Prescriptions document a *single moment in the treatment history* of a patient. In order to understand the underlying concept of drug therapy it is necessary to link the prescriptions to other diagnostic and therapeutical measures of the doctor. It is especially requisite to know about the concrete diagnosis on which the prescription is based. The therapeutical drug therapy con-

Fig. 4

Total standardised 1988 diabetes prevalence rate in East

Fig. 5

Utilisation of insurances of the AOK-Dortmund in 1988 share

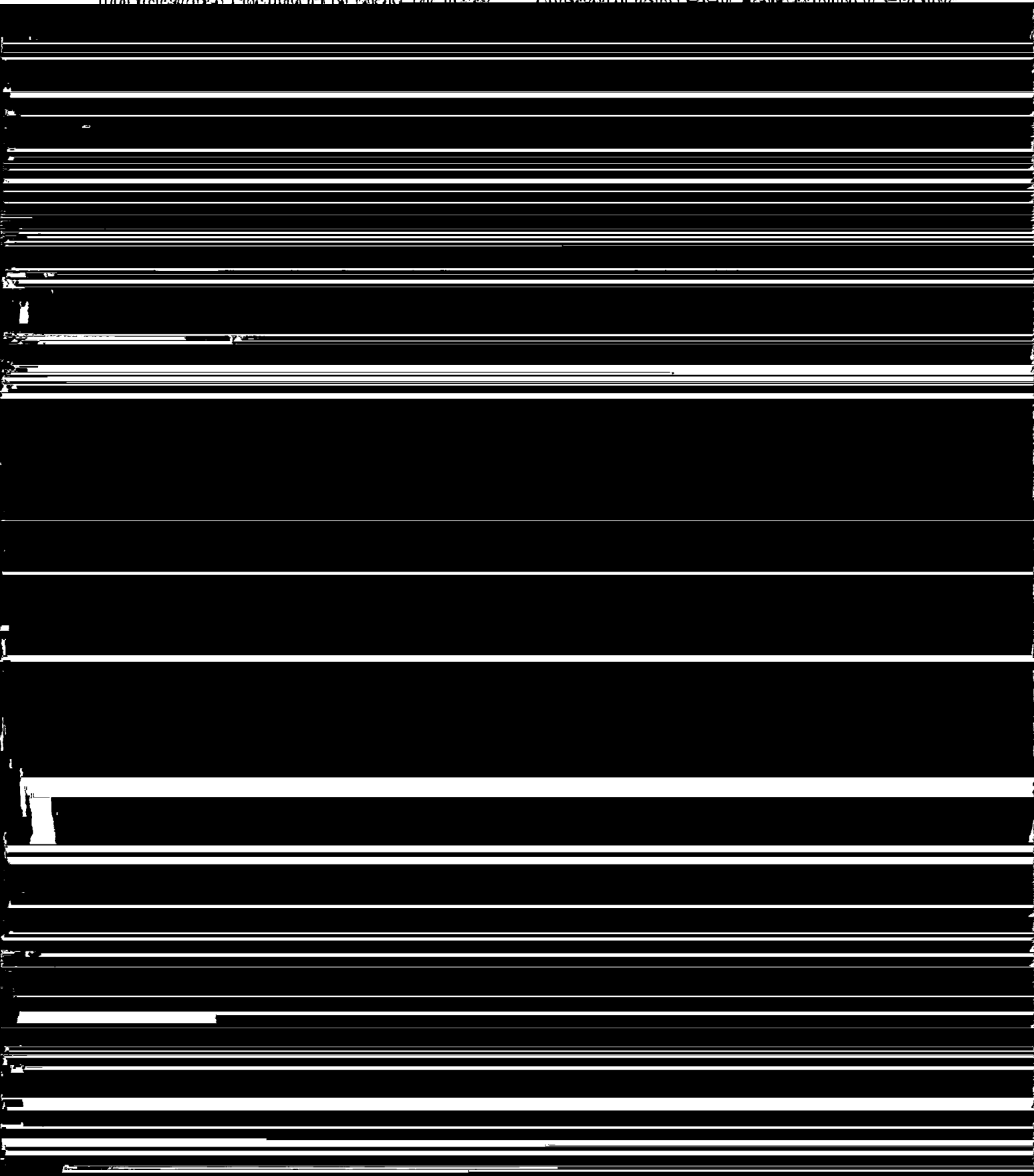


Fig. 7

Dependency under male, female, young and old insurees
I. Dependent on prescribed drugs

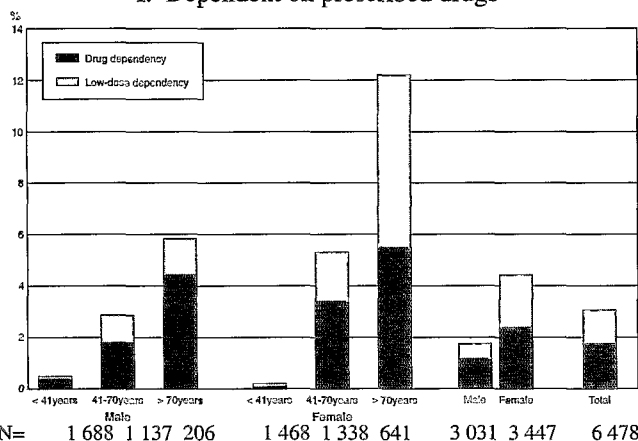
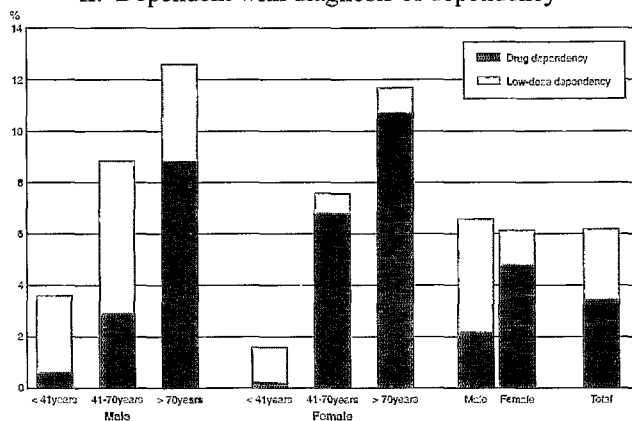


Fig. 9

Dependency under male, female, young and old insurees
II. Dependent with diagnosis of dependency



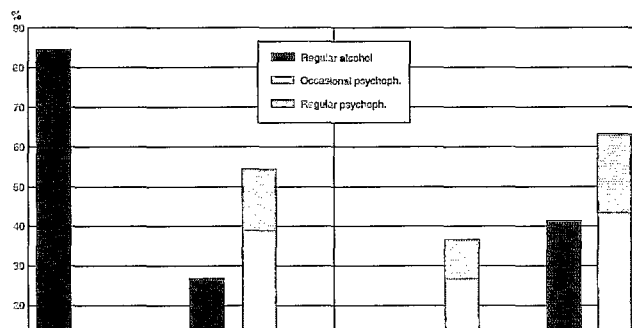
2. The next step is to define the construct "dependency". This definition was formulated in cooperation with a psychiatrist (Prof. Poser, University of Goettingen). We decided to apply three criteria which indicate dependency: duration of drug taking, doses and diagnosis (Fig. 8).

3. Apart from the figures of prevalence (Fig. 9) which are of special interest for health promotion, the results are astonishing in two respects. The greatest share of dependent persons were to be found among the elderly and here among the women.

4. If we do not only concentrate on drug dependency but also include diagnoses indicating dependency on alcohol, we can say that more men are dependent than women. Weighing this result, it has to be indeed considered that doctors write down diagnoses which indicate alcohol dependency on documents

Fig. 10

Psychotropics and regular alcohol-consume in case of high psychical distress in youth (18-29 years) and in seniority (60-74 years). Mellinger, Balter, 1978.



physician's perception that his own modes of prescription differ from biomedical norms may lead to a loss of professional self-esteem. According to Balint, rules of discussion ensure that a tolerant and open atmosphere prevails in which fears and psychological resistance to the discussion about real therapeutic behavior are eliminated and in which the dynamics of the group are used to support the discussion about motives.

The discussion and the comparison of prescription analyses within the peer review group allow the participating physicians to become aware of their prescription behavior and enable them to recognize the social, psychological and economic reasons of their own behavior.

The function of quality circles can be shown by using the example of the prescription of vasodilating drugs.

Vasodilating drugs are on fifth place in terms of drug prescription frequency in the Federal Republic of Germany with a turnover of 1.07 billion (1,070,800 million) DM. Apart from being expensive, vasodilating drugs are in general judged to be ineffective and to have a steal effect and other undesirable side-effects. This group of drugs is unknown in Great Britain and the Scandinavian countries. Vasodilators are mostly prescribed in the geriatric field: While they were given to few people younger than 60 years (7%) the percentage of vasodilator recipients older than 60 years was remarkable (between 60 and 65 years old: 15% and between 75 and 80 years old: 30%). The distribution of age of the recipients is contradicted by biomedical opinion.

Motives underlying the prescription of drugs were freely uttered and discussed. After the physicians had examined their own methods of prescription, an exhaustive discussion about the reasons for the excessive prescribing of vasodilating drugs was held in the pharmacotherapy circle. There was a considerable demand on the part of elderly patients having problems with cerebral circulation and their nursing environment especially for expensive ginkgo preparations which cannot be ignored by physicians.

The discussion in the circle led to a remarkable change in the cultural basis of interactions between doctors and their patients. The participants of the circle agreed upon the following rule. The initial prescription of these drugs can be avoided by writing down the following prescription on a prescription pad.

The evaluation showed a considerable reduction in the prescriptions of these drugs of 20%. The reductions were especially to be found in the case of physicians who had been

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