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Priority Setting in General Practice: Health Priorities of Older Patients Differ from Treatment Priorities of Their Physicians

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Aim To ascertain health priorities of older patients and treatment priorities of their general practitioners (GP) on the basis of a geriatric assessment and to determine the agreement between these priorities.

Methods The study included a sample of 9 general practitioners in Hannover, Germany, and a stratified sample of 35 patients (2-5 patients per practice, 18 female, average age 77.7 years). Patients were given a geriatric assessment using the Standardized Assessment for Elderly Patients in Primary Care (STEP) to gain an overview of their health and everyday problems. On the basis of these results, patients and their physicians independently rated the importance of each problem disclosed by the assessment. Whereas patients assessed the importance for their everyday lives, physicians assessed the importance for patients' medical care and patients' everyday lives.

Results Each patient had a mean \pm standard deviation of 18 ± 9.2 health problems. Thirty five patients disclosed a total of 634 problems; 537 (85%) were rated by patients and physicians. Of these 537 problems, 332 (62%) were rated by patients and 334 (62%) by physicians as important for patients' everyday lives. In addition, 294 (55%) were rated by physicians as important for patients' medical care. Although these proportions of important problems were similar between patients and physicians, there was little overlap in the specific problems that each group considered important. The chance-corrected agreement (Cohen κ) between patients and physicians on the importance of problems for patients' lives was low ($\kappa=0.23$). Likewise, patients and physicians disagreed on the problems that physicians considered important for patients' medical care ($\kappa=0.18$, $P<0.001$ for each).

Conclusion The low agreement on health and treatment priorities between patients and physicians necessitates better communication between the two parties to strengthen mutual understanding.

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The rising proportion of older patients presenting with multiple and interacting morbidities (1) has prompted a search for innovative health care approaches in general practice, yet little has changed. The traditional consultation approach prevails, which usually focuses on a single patient agenda at one time, thereby jeopardizing the ability of the physician to take a holistic view when treating patients with multiple health problems. Recently introduced patient management programs, as well as disease-oriented guidelines, nurture this fragmented approach, with potentially harmful effects for the patient (2,3).

What is needed is a comprehensive and holistic approach (4,5) that allows an overview of all important health problems and aims to arrange and reduce these into a unified treatment scheme. This approach entails two steps: first the accomplishment of a comprehensive health overview and second the selection of important health problems to develop a holistic care plan.

Health overviews can be achieved in different ways, eg, by consulting patient records or more systematically by conducting a comprehensive assessment. Geriatric assessments in primary care were found to have ambiguous benefits for patients (6-9). However, strategies for conducting these assessments often failed to guide professionals on what to do with the health problems that they uncovered. Treatments were usually left to the discretion of health care providers, who may have continued to treat health problems as separate entities. Geriatric assessment in primary care therefore seems incomplete if it does not lead to the second step, the arrangement of a holistic treatment plan.

The present study generates new findings that are necessary for drawing up such a plan. It is based on the idea that only important health problems enter a treatment scheme, instead of all problems. Therefore, it is crucial that physicians and patients determine which health problems to select as health care priorities. The perspectives of both parties will contribute to a shared decision-making process of priority-setting to achieve a mutually agreed treatment plan.

So far, little is known about the health priorities of patients, the treatment priorities of physicians, and the agreement between the two. The WOW health survey (10) assessed hypothetical health priorities of older women in Canada. Another study in South Tyrol (11) assessed health problems that patients rated as important because their treatment had a high likelihood of success. Both studies, however, only touch particular aspects of prior-

ity setting. In the WOW-study, only women were asked to prioritize health problems. These problems were provided beforehand and participants could not fill in their own. In the South Tyrolean trial, patients were asked to consider only treatable conditions as important.

The present study adds to the existing knowledge as it examines health priorities of older patients based on their own real conditions. Moreover, priorities were defined from two realistic perspectives: the patients' view of the importance of a problem for their lives and the physicians' view of the importance of a problem for patients' care. Specifically, the study addressed 3 research questions: 1) Which health problems do older patients have, as identified by a standardized geriatric assessment, and how important are these for their everyday lives?; 2) How important are these problems to physicians when they take them into account for patients' medical care and when they estimate the importance from the perspective of their patients?; and 3) To what extent do these ratings of importance match between patients and physicians?

PARTICIPANTS AND METHODS

Population and recruitment

The study was conducted between September 2008 and January 2009. In the study design, a sample of 8 general practitioners (GP) and 32 patients (4 patients per GP) was defined. The recruitment of physicians took place in 5 pre-specified zip code areas (30169, 30171, 30173, 30952, 30989) of Hannover and the surrounding region in Germany. Whereas 4 GPs were recruited through professional contacts of the authors, the others were respondents to cover letters with information leaflets sent to a random selection of 30 GPs (50% female) with their own practice in these zip code areas. The age of the GP, the size of the practice, and its location were not taken into account for recruitment. The participating physicians signed a written consent and agreed to provide practice characteristics and socio-demographic data. The study protocol was approved by the ethics committee of the Hannover Medical School (No. 5069).

Patients were recruited in the GPs' practices on the basis of a pre-defined scheme determined by age and sex. Nurses were asked to recruit patients who came to the office for whatever reason and who consented to participate. They were advised to consecutively recruit the following 4 patients who presented at the office after 10 AM on working

days during a defined week: one male and one female patient aged 80 years or over, and one male and one female patient aged 70-79 years. If a patient with the desired age and sex could not be recruited on the first defined day, the recruitment was to be repeated on the following day. Inclusion criteria for patients were an age of 70 years or older and at least one contact with the physician in the previous 3 months. Exclusion criteria were long-term care dependency level II or III, known severe dementia, limited contractual capability or incapacity, insufficient language skills, severe hearing loss or deafness, current participation in another clinical trial, and no availability by telephone. Long-term care dependency levels II and III are characterized by a high level of physical, mental, and social vulnerability, which means that everyday life can be maintained only with outside help (1).

Participating patients were informed about the aims of the study and their tasks verbally and by means of an information leaflet; they then signed a written permission and provided socio-demographic data.

Assessment of health and everyday problems

The health and everyday problems of patients were assessed using the Standardized Assessment for Elderly Patients in Primary Care (STEP) (12). STEP is designed to uncover the complex health needs of older patients with multiple problems (12,13). It was revised as a German version in 2008, and has been tested and used in several trials (11,14-16). The German version consists of 76 single questions characterizing 44 health and everyday problems of older patients. For this study, we divided them into the following 10 health domains: functional condition and mobility (eg, problems with activities of daily living), 18 items; social environment and financial setting (eg, problems with housing conditions, no help in case of emergency), 6 items; somatic problems and medical examination (eg, pain, history of heart attack, hypertension), 23 items; mood (eg, depression, mourning), 4 items; lifestyle habits (eg, alcohol abuse, unhealthy nutrition), 5 items; immunization (flu, pneumonia, tetanus, diphtheria), 4 items; medication (eg, problems with number or intake of medication), 5 items; cognition/clock-drawing test (17), 1 item; foot abnormality (eg, pain, deformity), 5 items; and further problems (additional problems volunteered by the patient after the assessment).

A computer-aided program was developed to facilitate data collection using the STEP instrument. A study nurse

completed the computer-aided STEP with each participating patient in the practice setting. The procedure took about 50 minutes. Patients received a list with an overview of the disclosed health and everyday problems.

Assessment and comparison of importance ratings

Patients and physicians independently rated the importance of each disclosed health problem. Whereas patients assessed only the importance for their everyday lives, physicians gave two importance ratings, one on the importance for the patient's medical care and one on the presumed importance for the patient's everyday life. Thus, each identified health problem received 3 importance ratings, 2 from the physician and 1 from the patient. Values were measured on an ordinal scale from 1 to 4: 1 – not at all important, 2 – slightly important, 3 – quite a bit important, and 4 – very important. The patients and their physicians discussed the STEP findings in a consultation.

To relate the importance ratings of patients and physicians, we compared a) the importance ratings of patients and the importance ratings of their physicians concerning their medical care and b) the importance ratings of patients and physicians concerning patients' everyday lives. Ratings with values of 3 or 4 were considered as important and defined either as a health priority for the patient or a health/treatment priority for the physician. Values of 1 or 2 were not considered to be a priority.

Statistical analysis

Socio-demographic data of patients and physicians were analyzed descriptively. Based on the results of normal distribution tests, mean scores and standard deviation were calculated for the number of health problems per patient and for subgroups based on age, sex, and education. *t* test was used to determine the differences between age groups and sex, and variance analysis was used for education subgroups. Additional analyses were made for each single health domain. Since the number of problems in each health domain was not normally distributed, non-parametric statistics were used for calculations of centrality and dispersion (median, interquartile range), comparison of subgroups by age and sex (Mann-Whitney test), as well as education (Kruskal-Wallis test).

Importance ratings for each health problem were dichotomized: values of 1 and 2 were transformed to 1 – not important, and values of 3 and 4 were

transformed to 2 – important. The observed agreement between importance ratings of patients and their physicians, as well as Cohen κ , a statistical measure of chance-corrected inter-rater agreement, were calculated. If raters are in complete agreement after allowing for chance, $\kappa = 1$. If there is no agreement among the raters other than what would be expected by chance, $\kappa \leq 0$. Values between 0 and 1 are interpreted in a range of agreement: 0.0-0.2, slight agreement; 0.21-0.4, fair agreement; 0.41-0.6, moderate agreement; 0.61-0.8, substantial agreement; and 0.81-1.0, nearly perfect agreement (18). Cohen κ was calculated for all problems and separately for each of the 10 health domains. $P < 0.05$ was considered significant. SPSS 17.0 (SPSS Inc., Chicago, IL, USA) was used for data analysis.

RESULTS

Seven practices recruited 4 patients each; one recruited only 2 patients. Therefore, we invited another GP to participate, who recruited 5 patients. In sum, 35 patients from 9 practices participated and completed the STEP assessment. Importance ratings were given by all patients and physicians.

Socio-demographic data on patients are presented in Table 1 and characteristics of GPs and practices in Table 2.

TABLE 1. Socio-demographic data on 35 patients recruited from 9 general practices in Hannover, Germany

Variable	Women (n = 18)	Men (n = 17)	P
Age in years, median (interquartile range)	78.5 (73.0-84.3)	78.0 (72.0-80.5)	0.179 [†]
Educational level, n (%) [*]			0.008 [‡]
low	6 (33)	1 (6)	
middle	12 (67)	10 (59)	
high	0 (0)	6 (35)	

^{*}Levels of education were calculated according to recommendations of the Robert-Koch-Institute (35).

[†]Mann-Whitney-test.

[‡] χ^2 test.

TABLE 2. Socio-demographic data on 9 general practitioners from Hannover

Parameter	
Women, n (%)	4 (44)
Age in years, median (range)	48 (43-60)
Years of working experience, median (range)	20 (16-30)
Patients contacts per year, median (range)	1000 (650-2500)
Single/group practices	4/5

Descriptive analysis

Number of problems. In sum, 634 health problems were identified for 35 patients. Since the number of problems was normally distributed (Kolmogorov-Smirnov test, $P = 0.105$), parametric means were calculated. Each patient experienced a mean of 18.1 ± 9.2 health problems. Patients stated that most of their problems were in the somatic health domain, followed by problems in the "functional condition" and "immunization" domains. Subgroup analysis with t test and variance analyses for all problems showed that women had on average more problems than men (22.5 ± 10.2 vs 13.5 ± 5.1 , $P = 0.002$). Patients with a low educational background reported more problems (23.3 ± 14.1) than patients with intermediate education (18.6 ± 7.1) or high education (10.3 ± 4.2) ($P = 0.033$). There was no significant difference in the number of problems between 16 patients aged 80 years and older (18.6 ± 9.1) and 19 patients aged 70-79 years (17.7 ± 9.6).

Non-parametric analyses per health domain are shown in Table 3. Women had more problems in the domains "functional condition," "social environment," "somatic problems," and "mood." In the "lifestyle-habits" domain, patients with intermediate education had more problems than patients with low or high educational background. In this domain, patients under 80 years had more problems than those 80 years and older.

Importance ratings. There were 537 of 634 problems (85%) that were rated by patients and physicians. Of these 537 health problems, 332 (62%) were considered to be important for patient's everyday life by patients and 334 (62%) by physicians. In addition, all physicians rated 294 of 537 problems (55%) to be important for patients' medical care.

When the health domains were ranked according to the frequency of important problems in each domain, patients considered "mood," followed by "further problems" and "functional condition" to be most important. Physicians most frequently rated problems as important for health care in the "mood" domain, followed by "cognition" and "functional condition." When physicians were asked to assign ratings from the patient's perspective, the domains of "mood," "social environment," and "functional condition" were most important (Table 4).

In order to compare the different perspectives of patients and physicians for problems in the different health domains, we analyzed the percentage of important problems

per health domain separately for physicians and for patients. This means that for all problems in a health domain, patients' importance ratings for their everyday life were compared with physicians' importance ratings for medi-

cal care. Only differences in the relative frequency of important problems of 15% or more were considered. More problems were important to patients than to physicians in the health domains "mood," "further problems," and "func-

TABLE 3. Number of problems per patient overall and by subgroup based on sex, age, and education

Health domain	Number of items in Standardized Assessment for Elderly Patients in Primary Care	Number of problems per patient, median (interquartile range)										
		total	sex*			age*			education†			
			female	male	P	70-79 y	≥80 y	P	low	mid-level	high	P
Somatic problems	23	6.0 (5.0-10.0)	9.0 (5.0-12.5)	5.0 (4.5-7.0)	0.024	6.0 (4.0-8.0)	7.0 (5.0-11.0)	0.175	9.0 (6.0-12.0)	6.0 (5.0-10.3)	5.5 (3.8-6.3)	0.135
Immunization	4	2.0 (1.0-3.0)	2.0 (0.8-3.0)	2.0 (1.0-2.5)	0.865	2.0 (1.0-3.0)	1.0 (1.0-2.0)	0.462	2.0 (2.0-3.0)	2.0 (1.0-3.0)	1.0 (0.0-2.3)	0.399
Functional condition	18	1.0 (0.0-4.0)	2.5 (1.0-5.3)	1.0 (0.0-2.0)	0.013	1.0 (0.0-4.0)	1.5 (1.0-3.6)	0.554	1.0 (1.0-10.0)	2.0 (0.8-4.0)	0.0 (0.0-1.5)	0.072
Mood	4	1.0 (0.0-2.0)	1.5 (0.8-3.0)	0.0 (0.0-1.0)	0.002	1.0 (1.0-2.0)	0.5 (0.0-1.0)	0.293	1.0 (0.0-3.0)	1.0 (0.0-2.0)	0.5 (0.0-1.0)	0.365
Further problems	5	1.0 (1.0-2.0)	1.0 (1.0-2.0)	2.0 (1.0-2.0)	0.383	1.5 (1.0-2.0)	1.0 (1.0-2.0)	0.834	2.0 (1.3-4.3)	1.0 (1.0-2.0)	2.0 (1.0-3.0)	0.113
Foot abnormality	5	1.0 (0.0-2.0)	1.0 (0.0-3.0)	0.0 (0.0-1.0)	0.058	1.0 (0.0-1.0)	1.0 (0.0-2.0)	0.280	1.0 (0.0-2.0)	1.0 (0.0-2.0)	0.5 (0.0-1.3)	0.706
Medication	5	1.0 (0.0-2.0)	1.5 (1.0-2.3)	1.0 (0.0-2.0)	0.155	1.0 (1.0-2.0)	1.0 (0.0-2.0)	0.460	1.0 (1.0-2.0)	1.0 (0.8-2.0)	0.5 (0.0-1.5)	0.405
Lifestyle habits	5	1.0 (0.0-2.0)	1.0 (0.0-2.0)	1.0 (0.0-1.0)	0.119	1.0 (1.0-2.0)	0.0 (0.0-1.8)	0.049	1.0 (0.0-1.0)	1.0 (0.0-2.0)	0.0 (0.0-0.3)	0.039
Social environment	6	1.0 (0.0-1.0)	1.0 (0.0-2.0)	0.0 (0.0-1.0)	0.045	1.0 (0.0-1.0)	1.0 (0.0-1.8)	0.670	1.0 (0.0-2.0)	1.0 (0.0-1.0)	0.0 (0.0-0.3)	0.071
Cognition	1	0.0 (0.0-1.0)	0.0 (0.0-1.0)	0.0 (0.0-0.5)	0.777	0.0 (0.0-0.0)	0.0 (0.0-1.0)	0.149	0.0 (0.0-1.0)	0.0 (0.0-1.0)	0.0 (0.0-0.0)	0.292

*Mann-Whitney-test.

†Kruskal-Wallis-test.

TABLE 4. Ranking of health domains according to importance ratings from patients and physicians

Rank	Patients' ratings important for everyday life		Physicians' ratings						
	health domains	number of problems in that domain*	number of important problems in that domain (%)	important for medical care		important for patients' lives			
				health domains	number of problems in that domain*	number of important problems in that domain (%)	health domains	number of problems in that domain*	number of important problems in that domain (%)
1	mood	30	27 (90)	mood	30	22 (73)	mood	30	27 (90)
2	further problems	23	20 (87)	cognition	9	6 (66)	social environment	25	22 (88)
3	functional condition	80	68 (85)	functional condition	80	48 (60)	functional condition	80	62 (78)
4	social environment	25	17 (68)	medications	36	21 (58)	further problems	23	16 (70)
5	somatic problems	230	148 (64)	social environment	25	14 (56)	foot abnormality	29	20 (69)
6	foot abnormality	29	16 (55)	somatic problems	230	122 (53)	medications	36	24 (67)
7	lifestyle habits	23	10 (43)	lifestyle habits	23	12 (52)	somatic problems	230	135 (59)
8	cognition	9	3 (33)	foot abnormality	29	14 (48)	lifestyle habits	23	13 (57)
9	medication	36	10 (28)	further problems	23	11 (48)	immunization	52	13 (25)
10	immunization	52	13 (25)	immunization	52	24 (46)	cognition	9	2 (22)

*Number of problems: problems rated by physicians and patients.

tional condition." In contrast, more problems were important to physicians than to patients in the domains "cognition," "medication," and "immunization" (Table 5).

There were also differences among health domains in the percentage of problems rated as important by physicians for patients' everyday lives and rated as important by patients. More problems were important to physicians than to patients in the domains "medication," "social environment," "lifestyle habits," and "foot abnormality." Compared with patients, physicians rated a smaller percentage of problems important in the health domain "further problems" (Table 6).

Proportional agreement and Cohen κ

Comparison of patients' importance ratings for their everyday lives and physicians' importance ratings for medical care. A total of 318 of 537 problems (59%) were identically rated by physicians and patients: 34% of problems were important to both groups and 25% were unimportant to both groups. Cohen κ was 0.18 ($P < 0.001$), which means that there is slight agreement between patients and physicians. The following domains showed at least moderate agreement on the importance between the two parties

(Table 5): "social environment," "foot abnormality," and "cognition."

Comparison of patients' importance ratings for their everyday lives and physicians' importance ratings for patients' everyday lives. A total of 334 out of 537 (62%) problems were rated identically by patients and physicians: 40% were important to both groups and 22% were unimportant to both groups. Cohen κ was 0.23 ($P < 0.001$), which indicates a fair agreement between patients and physicians. Fair agreement was also found for "foot abnormality," "lifestyle habits," and "immunization" (Table 6). No moderate agreements were observed.

DISCUSSION

In the present study, aimed at ascertaining the health priorities of older patients and comparing them with physicians' treatment priorities, we found an average of 18 health problems per patient out of 44 problems addressed by the German STEP version. In a comparable trial, Piccoliori et al (11) reported a somewhat lower average – 13 out of 40 possible health problems. We found that women reported significantly more problems than men, as found in other studies (19,20) and that a lower educational level

TABLE 5. Patients' ratings of problems important for their everyday lives and physicians' ratings of problems important for medical care, and concordance of these ratings based on Cohen κ *

Health domain	Number of items in STEP	Total No. of problems that occurred	Average problem count per item in STEP	No. of problems rated both by patients and physicians		No. (%) of problems rated important			Concordant problems or patients and physicians		Discordant problem importance		Cohen κ	P
				by patients	by physicians	by patients for everyday life	by physicians for medical care	total No. (%)	unimportant (No.)	only to patients (No.)	only to physicians for medical care (No.)			
Medication	5	46	9.2	36	10 (28)	21 (58)	17 (47)	6	11	19 (53)	4	15	0.02	0.900
Somatic problems	23	261	11.3	230	148 (64)	122 (53)	123 (53)	73	51	107 (47)	57	50	0.06	0.341
Mood	4	37	9.3	30	27 (90)	22 (73)	20 (67)	18	2	10 (33)	6	4	0.07	0.680
Lifestyle habits	5	32	6.4	23	10 (43)	12 (52)	13 (57)	5	8	10 (43)	3	7	0.14	0.469
Further problems	5	37	7.4	23	20 (87)	11 (48)	13 (57)	10	3	10 (43)	9	1	0.15	0.315
Functional condition	18	87	4.8	80	68 (85)	48 (60)	51 (64)	41	10	29 (36)	22	7	0.18	0.074
Immunization	4	59	14.8	52	13 (25)	24 (46)	32 (62)	8	24	20 (38)	4	16	0.20	0.104
Cognition	1	9	9.0	9	3 (33)	6 (67)	6 (67)	3	3	3 (33)	0	3	0.40	0.134
Foot abnormality	5	37	7.4	29	16 (55)	14 (48)	23 (79)	10	13	6 (21)	2	4	0.58	0.002
Social environment	6	29	4.8	25	17 (68)	14 (56)	20 (80)	12	8	5 (20)	3	2	0.59	0.003
Total	76	634	8.3	537	332 (62)	294 (55)	318 (59)	185	133	219 (41)	110	109	0.18	0.000

*Abbreviations: STEP – Standardized Assessment for Elderly Patients in Primary Care (12)

TABLE 6. Patients’ ratings of problems important for their everyday lives and physicians’ ratings of problems important for patient’s everyday lives, and concordance of these ratings based on Cohen κ *

Health domain	Number of items in STEP	Total No. of problems that occurred	Average problem count per item in STEP	No. problems rated by both patients and physicians	No. (%) problems rated important		Concordant problems for patients and physicians			Discordant problem importance			Cohen κ	P
					by patients for everyday life	by physicians for everyday life	total No. (%)	important (No.)	unimportant (No.)	total, No. (%)	patients only (No.)	physicians only (No.)		
Cognition	1	9	9	9	3 (33)	2 (22)	4 (44)	0	4	5 (56)	3	2	-0.36	0.257
Medication	5	46	9.2	36	10 (28)	24 (67)	12 (33)	5	7	24 (67)	5	19	-0.16	0.188
Mood	4	37	9.3	30	27 (90)	27 (90)	23 (77)	22	1	7 (23)	2	5	0.10	0.543
Social environment	6	29	4.8	25	17 (68)	22 (88)	16 (64)	14	2	9 (36)	1	8	0.15	0.315
Functional condition	18	87	4.8	80	68 (85)	62 (78)	57 (71)	51	6	23 (29)	12	11	0.16	0.155
Somatic problems	23	261	11.3	230	148 (64)	135 (59)	136 (59)	85	51	94 (41)	44	50	0.17	0.012
Further problems	5	37	7.4	23	20 (87)	16 (70)	16 (70)	14	2	7 (30)	5	2	0.18	0.349
Immunization	4	59	14.8	52	13 (25)	13 (25)	37 (71)	5	32	15 (29)	7	8	0.21	0.128
Lifestyle habits	5	32	6.4	23	10 (43)	13 (57)	14 (61)	6	8	9 (39)	2	7	0.25	0.192
Foot abnormality	5	37	7.4	29	16 (55)	20 (69)	19 (66)	11	8	10 (34)	1	9	0.35	0.026
Total	76	634	8.3	537	332 (62)	334 (62)	334 (62)	213	121	203 (38)	82	121	0.23	<0.001

*Abbreviations: STEP – Standardized Assessment for Elderly Patients in Primary Care (12)

was associated with a greater number of health conditions, which was also found in other studies (21,22).

Since treating such a large number of problems simultaneously seems unlikely, it may be necessary to reduce the number of health issues for treatment to a necessary minimum by setting priorities. The most important outcome of our study is the considerable disagreement between priorities set by patients and their physicians.

In theory, priority setting should work, since patients and physicians were able to differentiate between important and unimportant problems: 62% of all problems were important to patients, similar to physicians’ results, depending on whether they adopted their own perspective (55%) or the patient’s (62%). However, these positive results are counterbalanced by the finding that physicians and patients did not attach importance to the same problems. Ratings were concordant for 18% of problems, and this number rose slightly to 23% when physicians were asked to put themselves in the position of the patients. These results suggest that physicians are to a great extent unaware of patients’ priorities.

Physicians found important those problems that are generally considered to be areas of need in the older population,

namely problems with mood, function, and social participation (23-25). These areas were also considered important by our patients. However, physicians rated cognition, immunization, and medication issues as more important than patients did. The difference in ratings for cognition may be due to patients’ unawareness or denial (26), while the latter two areas are typical “action” areas of prevention and treatment and may therefore have been more the focus of physicians than patients. Conversely, physicians underrated the importance of “further” problems, which were individual health issues not covered by the assessment but prompted by the patient.

Different perspectives of patients and their physicians have been demonstrated in several aspects of primary care, including presentation of the main problem (27,28), perception of disease severity (29), perception of suffering (30), as well as faith in the relief or cure of symptoms (31,32). Our study shows that patients and physicians are in disagreement about important problems. Consequently physicians may treat health problems that patients do not consider important, risking their non-adherence. At the same time, patients’ needs may remain unmet because physicians do not assign them a sufficient value. Studies of the patient-physician relationship have not sufficiently focused on disagreement. What needs to be shared is not nec-

essarily the same opinion (33) but rather the information about differences in opinion and choices (34).

Strengths and limitations of the study

Few research articles are available on health priorities of patients and the corresponding treatment priorities of their physicians. To our knowledge, this is the first study that examines individual patients' and physicians' priorities and their agreement in a general practice setting. In this study, health and treatment priorities are based on the existing health conditions. This is preferable to studies of hypothetical priority setting, which may be motivated by fear rather than by experience (10).

A limitation of this study is the small sample size (9 physicians, 35 patients). However, we used the disclosed health problems as the denominator in our analysis, which considerably enlarged the case number, leading to identification of a total of 634 problems, of which 537 (85%) were rated by patients and physicians. Nevertheless, the small sample size meant that it was not feasible to examine priorities for each of the 44 health problems separately and results have to be interpreted with caution.

A further limitation in the interpretation of results is the unknown validity and reliability of the importance ratings. Presently, we do not know whether patients and physicians will attribute the same importance to health problems when re-assessing them, for example, a month later. If health care priorities are not stable, there is no benefit in prioritization. We are also aware that the given response options determine the outcome. A Likert scale with 4 response options and no middle value was chosen because we wanted the participants to make a clear choice. This may have not always represented the real evaluation of the participants. There are other ways of applying importance ratings, eg, ranking the most important problems or using a visual analogue scale. Future studies should assess different response scales and their retest reliability.

Implications for clinical practice

A structured and shared treatment planning process for older patients with multi-morbidity based on individual priorities may lead to a better care with mutual benefit for patients and physicians. This systematic and pro-active procedure of common priority setting does not seem intuitive and has to be learnt; physicians in general practices are not accustomed to such an approach

(13). Shared priority setting requires organizational changes of consultations in general practices. First, this entails performing health overviews for a substantial proportion of older patients. Second, it requires systematic processing of various patients' problems within one consultation. And third, it needs patient-centered communication to reduce treatable problems to an ideal minimum through shared priority setting. Presently, the short time schedule and the single-disease approach in consultations do not lend themselves to a holistic view about patients' diverse problems.

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