

(20.4%), living accommodation (18.5%), social and family relationships (17.3%), and mobility (15.4%) were mentioned most frequently. Other goals mentioned concerned emotions (9.9%), independence and autonomy (3.7%), activities (4.9%), healthcare and welfare services (6.2%), and finances (1.2%). Illustrative examples of these goals are provided in Table 1.

### Goal Specificity

Participants' goals varied in specificity for each domain (Table 1). Interrater agreement on specificity was 79.0%. Of the 162 goals mentioned, 12.3% were global (e.g., staying healthy), 50.6% were intermediate (e.g., not forgetting so much), and 37.0% were specific (e.g., a referral to the department of geriatric medicine to examine cognitive problems).

### DISCUSSION

This study has shown that care-related goals of community-dwelling frail older adults differ between individuals and cover domains that concern well-being just as much as they concern health and functioning. This agrees with previous research, in which participants stated that, except for maintaining health and functioning, maintaining independence and well-being were the most important goals.<sup>8,9</sup>

Participants' goals were classified according to an existing taxonomy for goals.<sup>7</sup> However, some additions to its domains were required, especially on the subject of well-being. Therefore, the domains living accommodation, activities, and health and welfare services were added, because many participants mentioned goals relating explicitly to these subjects.

This study had some limitations. Because studying goals of frail older adults was not the primary aim of the studies used, nurses were not trained in goal-setting, which resulted in less attention being given to eliciting participants' goals and case records sometimes lacking data concerning goals.

In conclusion, this study has demonstrated that care-related goals of frail community-dwelling older adults are diverse and highly individual. This stresses the importance of discussing goals with patients in everyday clinical practice.

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### ACKNOWLEDGMENTS

The authors would like to thank Hanny Hordijk, Marleen Lenkens, and Leny Theunisse for recording the data in the two studies used.

**Conflict of Interest:** The editor in chief has reviewed the conflict of interest checklist provided by the authors and has determined that the authors have no financial or any other kind of personal conflicts with this paper.

This work was supported by a grant from the Dutch National Care for the Elderly Program, coordinated and sponsored by ZonMw (the organization for health research and development), the Netherlands (Grant 60-61900-98-129).

**Author Contributions:** Concept and design: S.H.M. Robben and M. Perry. Analysis and interpretation of the data: S.H.M. Robben and M. Perry. Drafting of the article: S.H.M. Robben. Critical revision of the article: M. Perry; M.G.M. Olde Rikkert, M.M. Heinen, and R.J.F. Melis.

**Sponsor's Role:** None.

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### PATIENT AND PROXY RATING AGREEMENTS ON ACTIVITIES OF DAILY LIVING AND THE INSTRUMENTAL ACTIVITIES OF DAILY LIVING OF ACUTELY HOSPITALIZED OLDER ADULTS

*To the Editor:* At the time of hospital admission, healthcare professionals frequently measure the functional status of older adults using an assessment of the patient's ability to perform (instrumental) activities of daily living ((I)ADLs).<sup>1</sup> This assessment focuses on the patient's recent or premorbid functional status and is often obtained by asking patients to provide a self-report of their (I)ADL functioning.<sup>1</sup> This knowledge of functioning is important for short-term care planning and is also predictive of postdischarge functional status.<sup>2</sup> One of the main problems during interviewing acutely hospitalized older adults is that they may have preexisting or acute cognitive impairments, which is expected to affect the accuracy and validity of the self-reported data.<sup>3-5</sup> Therefore, proxy reports are often used to provide substitute data.<sup>1,6</sup>

The current study of acutely hospitalized older adults aimed to investigate the level of agreement between patient and proxy ratings concerning the (I)ADLs of hospitalized

older patients and to investigate whether cognitive impairment or other factors are associated with any disagreements in these ratings.

## METHODS

This prospective cohort study, the Develop Strategies Enabling Frail Elderly New Complications to Evade Study, was conducted from November 2002 to July 2005 at the Academic Medical Center (AMC), Amsterdam, the Netherlands.<sup>7</sup> All patients aged 65 and older acutely admitted to the internal medicine department and hospitalized for at least 48 hours were included. For the current study, only the patient-proxy pairs with complete data sets for the (I)ADL functioning were included.

All of the patients and proxies were interviewed using the modified Katz index of ADLs.<sup>8</sup> The global cognitive functioning of all of the participants was assessed using the Mini-Mental State Examination (MMSE),<sup>9</sup> and each participant's level of delirium was measured using the Confusion Assessment Method (CAM).<sup>10</sup>

To compare the level of agreement of the patient-proxy perceptions on (I)ADL functioning, each rating of a patient-proxy pair was classified into one of the following three categories: agreement in terms of the patients' ability to perform the task, the patient being rated more dependent by the proxy than by the patient, and the patient being rated more independent by the proxy than by the patient. Patients' cognitive functioning was divided into three groups based on their MMSE scores. To identify factors associated with a higher proxy-rated score on the modified Katz index of ADLs, a logistic regression analysis was conducted.

## RESULTS

Overall, 460 acutely admitted older patients (mean age 78) and their proxies were included in the present study. The patients and proxies exhibited moderate to good levels of agreement on the patients' (I)ADL functioning (70–90%,  $P < .001$ ). The differences in patient-proxy reporting on (I)ADLs were greater ( $P < .001$ ) for the patients with severe cognitive impairment than for the patients with mild to no cognitive impairment (Table 1).

Lower MMSE score (odds ratio (OR) = 0.95, 95% confidence interval (CI) = 0.91–0.99) and the presence of delirium (OR = 2.56, 95% CI = 1.38–4.75) were associated with a greater level of disagreement between patients and proxies ratings of (I)ADLs.

## DISCUSSION

Differences in the level of agreement between patients' and proxies' perceptions of patients' performance were observed for ADLs and IADLs. The findings indicated a lower level of agreement between patients' and proxies' perceptions of patients' performance on IADLs than ADLs. One explanation for a lower level of agreement between patient and proxy perceptions is that proxies can more directly observe ADLs than IADLs, which require a higher level of functioning.<sup>11</sup>

In the present work, the subjective self-reports were not compared with the objective performance ratings of ADLs. Future research is necessary to identify whether subjective or objective performance ratings are more indicative of daily functioning.

**Table 1. Agreement on the Ratings of Activities of Daily Living (ADLs) and Instrumental Activities of Daily Living (IADLs) from Patients and Their Proxies, as Stratified According to Patients' Level of Cognitive Functioning (N = 460)**

%										
ADL Item	MMSE ≤ 15 (16.5%)			MMSE 16-23 (29.1%)			MMSE ≥ 24 (54.3%)			P-Value
	Agreement	Proxy Scored as Dependent	Proxy Scored as Independent	Agreement	Proxy Scored as Dependent	Proxy Scored as Independent	Agreement	Proxy Scored as Dependent	Proxy Scored as Independent	
ADL										
Bathing	63.2	31.6	5.3	74.6	20.9	4.5	88.0	8.0	4.0	< .001
Dressing	67.1	28.9	3.9	76.1	18.7	5.2	88.0	8.8	3.2	< .001
Grooming	76.3	22.4	1.3	82.8	11.9	5.2	94.8	3.6	1.6	< .001
Toileting	67.1	22.4	10.5	75.2	14.3	10.5	91.2	5.2	3.6	< .001
Continence	69.7	26.3	3.9	78.6	11.5	9.9	88.8	6.4	4.8	< .001
Transferring	71.1	19.7	9.2	76.9	14.9	7.5	86.4	10.0	3.6	.01
Walking	77.6	9.2	13.2	80.5	7.5	12.0	85.6	5.2	9.2	.19
Eating	64.5	19.7	15.8	84.8	4.5	10.6	95.2	2.4	2.4	< .001
IADL										
Telephone	69.7	23.7	6.6	87.9	9.8	2.3	96.0	3.6	0.4	< .001
Traveling	77.6	15.8	6.6	73.7	18.0	8.3	76.0	14.8	9.2	.79
Shopping	80.3	11.8	7.9	77.4	12.8	9.8	78.8	11.2	10.0	.88
Preparing meals	77.6	15.8	6.6	77.3	12.1	10.6	74.9	9.7	15.4	.82
Housework	90.8	7.9	1.3	89.5	5.3	5.3	77.6	6.8	15.6	.01
Medications	65.8	26.3	7.9	75.2	13.5	11.3	84.4	7.2	8.4	.01
Managing money	75.0	10.5	14.5	68.4	7.5	24.1	77.6	6.8	15.6	.14

## CONCLUSION

For patients with mild cognitive impairment at the time of the hospital admission, the results indicate that self-report of (I)ADLs is accurate and can be used for assessing (I)ADL functioning. For patients with severe cognitive impairment (MMSE score <15) or prevalent delirium, the nearest proxy may provide valid information about the patient's (I)ADL functioning.

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## ACKNOWLEDGMENTS

**Conflict of Interest:** None of the authors have any competing interests to declare.

**Author Contributions:** All the authors had full access to all of the data in the study and take responsibility for the integrity of the data and the accuracy of the data analysis and drafting and critical revision of the manuscript. BMB and SEdR: study concept and data. BMB and SEdR: acquisition of subjects and data. MP, BMB, and SEdR: analysis and interpretation of data. RdV: statistical expertise. BMB, SEdR, and RdV: critical revision of the manuscript for important intellectual content.

**Sponsor's Role:** No sponsor involved in the study.

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## THE VITAMIN “D-BATE”: WHAT VASCULAR RISK IN GERIATRIC INPATIENTS?

*To the Editor:* Apart from its long-recognized involvement in the regulation of phosphocalcic metabolism, vitamin D may play a role in blood vessel diseases.<sup>1–4</sup> Two schools of thought are opposed: the first proposing that vitamin D protects against atheroma formation,<sup>1,2</sup> the second one suggesting instead that vitamin D increases the risk of blood vessel wall calcification such as medial calcosis.<sup>3,4</sup> In the current context of growing recommendations for vitamin D supplementation, determining whether high or low concentrations of vitamin D are preferable from the vascular viewpoint is of particular importance. Both above-cited complications attributed to vitamin D may be easily explored using the ankle–brachial systolic pressure index (ABI), which is lower in the instance of lower-extremity atherosclerosis (ABI < 0.90) and higher in the instance of medial calcosis (ABI > 1.30).<sup>5,6</sup> The objective of this study was to determine in geriatric inpatients whether low serum 25-hydroxyvitamin D (25OHD) concentrations (<30 ng/mL) were associated with atherosclerosis or medial calcosis.

Between July and December 2009, 216 participants aged 75 and older were included in this cross-sectional study during their hospitalization in the geriatric acute care unit of Angers University Hospital, Angers, France. All included participants received a comprehensive geriatric assessment that consisted of structured health questionnaires and a standardized clinical examination including the measurement of ABI using an 8-MHz Doppler probe (Huntleigh Healthcare Ltd., Cardiff, UK). Participants were examined in the supine position on a bed after relaxing for at least 5 minutes. ABI was calculated as the ratio between the posterior tibial systolic pressure of the dominant leg and the highest systolic brachial blood pressure.<sup>5</sup> The cutoff point for the diagnosis of atherosclerosis was defined as an ABI less than 0.90 and medial calcosis as an ABI greater than 1.30.<sup>5,6</sup> Information about medications and vitamin D supplements was obtained by direct inquiry, from prescriptions, and by calling the family