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Letter to the Editor: How Can the 48/6 Model of Care be Applied in Various Clinical Setting in Korea?

Kwang Joon Kim [iD],[1] Ji Yeon Lee [iD],[2] and Chang Oh Kim [iD] [1]

[1]Division of Geriatrics, Yonsei University College of Medicine, Seoul, Korea
[2]Yonsei University College of Nursing, Seoul, Korea

> ▶ See the article "Applicability of the 48/6 Model of Care as a Health Screening Tool, and its Association with Mobility in Community-Dwelling Older Adults" in volume 35, number 7, e43.

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Address for Correspondence:
Chang Oh Kim, MD, PhD
Division of Geriatrics, Yonsei University College of Medicine, 50-1 Yonsei-ro, Seodaemun-gu, Seoul 03722, Korea.
E-mail: cokim@yuhs.ac

ORCID iDs
Kwang Joon Kim [iD]
https://orcid.org/0000-0002-5554-8255
Ji Yeon Lee [iD]
https://orcid.org/0000-0003-1159-6068
Chang Oh Kim [iD]
https://orcid.org/0000-0002-0773-5443

Korean society ages and the birth rate decreases, the country officially became an aged society at 2017, meaning that the elderly account for more than 14% of the total population. For dozens of years, the population factor has been driving growth in Korean economy, but now it has become the greatest risk for that future of health and welfare. As the amount of medical services provided to patients increases, it is expected that in the current healthcare system, where medical costs increase proportionately, the economic burden associated with medical services for the elderly increases, and thus, sustainability issues will arise.[1] Furthermore, the elderly has various social and medical needs in their daily lives, and meeting these needs is a starting point for improving the quality of life. In addition, if the healthy life expectancy of the elderly increases and reduces the duration of disease occurrence, the medical costs associated with increasing life expectancy may be reduced. Therefore, attempts have been made to contribute to the health care of the elderly by developing an elderly-centered and citizen-centered medical service system based on the 48/6 model of care (48/6), which has already been proven to some extent.[2]

The 48/6 is an integrative care initiative for improving the health outcomes of hospitalized older patients.[3] However, its applicability in community-dwelling older adults as a health screening tool has not been well investigated. In the recent issue of the *Journal of Korean Medical Science*, Uhm et al.[4] reviewed the concept of applicability of the 48/6 as a health screening tool, and its association with mobility in community-dwelling older adults. The authors concluded that the 48/6 is applicable to community-dwelling older adults, who show high prevalence of dysfunction in the six care areas. The authors insisted that the role of the model in screening for the health status of older adults living in the community, and in estimating mobility.

However, considering the characteristics of the 48/6, it is not easy to activate the model in community. It is somewhat regrettable that this article contents are mainly about the clinical application, rather than the real value of 48/6. On this line, there are several issues need to be addressed. First, the tools applied in the study are not the full version of the 48/6, but the 10 questions, which are the short version of the 48/6, so it is appropriate to use other term, such as the Geriatric Screening for Care-10 (GCS-10) published by the authors in 2017[5] rather than the 48/6. Second, the 48/6 (or GCS-10) was originally created for the purpose of early screening of the problem within 48 hours of admission, so it should be considered whether it

is appropriate for the elderly in the community care setting. Third, there is an inconsistency between the purpose of the study and the content of the study. The purpose of the study was to show the 48/6 is effective for the purpose of screening not only for the inpatient elderly but also for the elderly in the community- in other words, applying the 48/6 model to the elderly in the community. As mentioned previously, if the 48/6 is being studied for use in the community as well as in the inpatient elderly, the research should be conducted with the contents confirming the validity/reliability/feasibility of the tool 48/6. For example, one of the three tools presented in the discussion of this study (Flemish version of the Triage Risk Screening Tool, the Vulnerable Elders Survey-13, G-8) and 48/6 tools with inpatient/community continuity. It would be better for the authors to investigate the validity of the tool by researching the same subject. In addition, applicability can be obtained by calculating the time taken when applying GSC-10 instead of 48/6 in the elderly in the community. Fourth, the target population issue should be addressed. In this study, a total of 444 elderly people was surveyed. Of them, 333 were surveyed through a survey on the street and 111 were surveyed at home. It seems that there are the following problems in this regard. That is, in the case of 333 elderly people surveyed on the street, the physical function would be healthier than 111 persons who have been tested at home during the home visit. However, looking at Table 1, only the group differences according to age are shown, and there are no description or results of the differences between the two groups, so supplementary explanation is needed.

Finally, we think that a review related to statistical analysis is necessary. In the contents described in Tables 3-5, each independent variable (48/6 10 items) and dependent variable (life-space) differed significantly according to the age group. In particular, Table 5 corrects age to analyze regression. However, if the age variable in Table 5 is entered as a covariate, it should be shown in the result, but it is not shown in the table. Furthermore, if there is a difference according to the age group, we think whether age should be described as a continuous variable or category and a regression analysis should be described in the results.

Many elderly care professionals are hoping to improve elderly medical services. For this, several tools such as CGA, the 48/6, Flemish version of the Triage Risk Screening Tool, and the Vulnerable Elders Survey-13 are used for the evaluation of the elderly. However, all of these tools have their own limitations. In particular, in the case of 48/6, the biggest limitation is that it is only for inpatients. Therefore, it is very meaningful to attempt to apply the 48/6 to patients at the community level instead of in patients. However, it is difficult to implement 48/6 optimized for inpatients in an outpatient setting or community care setting. In order to apply 48/6 in an outpatient and community, it is necessary to consider several issues as mentioned above. Although the authors have conducted very meaningful research, it is expected that much better research results can be obtained by supplementing these points.

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The Author's Response: Applicability of the 48/6 Model of Care as a Health Screening Tool, and its Association with Mobility in Community-Dwelling Older Adults

Kyeong Eun Uhm [1] and Jongmin Lee [1,2]

[1]Department of Rehabilitation Medicine, Konkuk University School of Medicine, Seoul, Korea
[2]International Healthcare Research Institute, Konkuk University, Seoul, Korea

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Address for Correspondence:
Jongmin Lee, MD, PhD
Department of Rehabilitation Medicine, Konkuk University School of Medicine, 120-1 Neungdong-ro, Gwangjin-gu, Seoul 05030, Korea.
E-mail: leej@kuh.ac.kr

ORCID iDs
Kyeong Eun Uhm
https://orcid.org/0000-0003-2714-1092
Jongmin Lee
https://orcid.org/0000-0001-8718-0099

We would like to express our appreciation for the authors' comments and their interest in our article, "Applicability of the 48/6 Model of Care as a Health Screening Tool, and its Association with Mobility in Community-Dwelling Older Adults". As they mentioned, the growth of the older population leads to an increase in medical costs. Therefore, early detection and intervention for hidden medical problems of community-dwelling older adults could reduce medical costs and promote public health.

The 48/6 Model of Care was originally developed for hospitalized older adults, to prevent functional decline and in-hospital comorbidity through screening and/or assessments of six care areas that address common clinical issues for older adults' health, supported by an individualized care plan.[1] The initial step in applying this model for hospitalized older people is screening. As a first step in adapting the 48/6 Model of Care to the community-dwelling older adults, we attempted to screen for issues in the six care areas.

The authors mentioned the appropriateness of the term "48/6". Our study's screening questionnaire was not identical to the Geriatric Screening for Care-10 (GSC-10) for hospitalized older patients.[2] Unlike the GSC-10, we did not include a delirium question and

used "48/6" instead of "GSC-10". In addition, we focused on "early screening" of common clinical issues rather than "within 48 hours" of the concept of the 48/6 Model of Care. As they recommended, the assessments with other geriatric health screening tools such as the Flemish version of the Triage Risk Screening Tool,[3] Vulnerable Elders Survey-13,[4] and G-8[5] could be reasonable methods to verify the validity of the screening questionnaire used in our study. The study participants were recruited via street surveys and home visiting health care services for vulnerable populations; three quarters, and one quarter, respectively. The survey's purpose was to involve older adults with different functional statuses, including from bedridden to quite active adults. Lastly, age was significantly associated with life-space mobility. We conducted a multivariate regression analysis to examine the independent association between the specific item of 48/6 Model of Care and life-space mobility, entering age as a covariate. After controlling in terms of age, the results showed that polypharmacy, dysphagia, and pain had particularly strong correlations with life-space mobility.

Indeed, the goal of the 48/6 Model of Care is to prevent complications through a stepwise process from screening to care planning. A somewhat different approach would be needed to implement this process precisely in community setting. We demonstrated the role of the 48/6 screening questionnaire as a health screening tool for community-dwelling older adults. Future studies concerning assessments and care plans for identified problems will advance this system.

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