

# Standardizing Generalist Definitions to Improve Evidence in General Medicine: Addressing Diverse Interpretations and Lack of Consistency

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**Purpose:** There has been growing interest in generalists in Japan in recent years. However, due to the diverse use of the term “generalist”, the specific roles of these physicians remain ambiguous. Consequently, the target population for research on generalists is unclear, making it challenging to conduct studies within the generalist practice framework. Therefore, a literature search was conducted to examine how generalists are defined and classified in research worldwide.

**Methods:** We conducted a literature search that focused exclusively on articles written in English and used keywords related to generalists, general medicine (GM), primary care, and family medicine. Based on the results, six physicians working in GM reviewed the findings and discussed the identified issues and their potential solutions.

**Results:** The definition of generalists in studies targeting GM, family medicine, and primary care conducted worldwide, including Japan, varies. Generalists exhibit diverse roles even within university hospitals in Japan. No studies provide a precise categorization or definition of generalists based on specific medical practices or roles, except for hospitalists, who are primarily involved in inpatient management in the United States.

**Conclusion:** The definition of GM was unclear based on the results of the literature search, and the lack of uniformity in backgrounds has rendered the target population unclear. Consequently, in healthcare settings where medical systems vary by country or region, evidence from studies targeting generalists cannot readily apply to actual practice. Clarifying generalists through an explicit definition based on clinical practice will allow for a more precise target population for research on generalists and enable the accumulation of evidence related to well-defined groups of generalists, contributing to the advancement of GM. Therefore, future research is required to develop new indicators to precisely classify and define generalists.

**Keywords:** generalist, general medicine, definition, hospitalist

## Introduction

The aging population and rising healthcare costs in Japan have heightened interest in generalists in recent years. However, the diverse nature of the roles performed by generalists poses a challenge in understanding their functions, not only for the general public but also for healthcare professionals.<sup>1,2</sup> The Ministry of Health, Labour and Welfare defines Japanese generalists as physicians with comprehensive diagnostic skills. Unlike organ-specific specialists, generalists cover a range of patient needs, addressing both diseases and patient backgrounds. They are characterized by their ability to adapt to varying requirements based on the settings.<sup>3,4</sup> In Japan, general medicine (GM) encompasses family medicine (FM),<sup>5</sup> hospital medicine (HM), and primary care (PC). Various academic societies delineate the roles expected of professionals, such as family physicians,<sup>6</sup> hospitalists,<sup>7</sup> and primary care physicians, within their respective

domains,<sup>8</sup> resulting in some overlap.<sup>9</sup> Globally, the term generalist is used synonymously with physicians practicing in non-specialized fields, specifically those in general internal medicine, such as hospitalists, family physicians, and primary care physicians. These professionals may have diverse backgrounds, including completion of specialized training in GM or FM, completion of internal medicine residency programs with a focus on general internal medicine (GIM) or specific subspecialties, or completion of surgical residency programs. The term “generalist” encompasses a highly diverse group. The lack of clear distinctions in the healthcare system between primary care clinics and hospital functions makes it challenging to form a clear image, especially in Japan, compared to that in other countries.<sup>10</sup> Consequently, the target population for research on generalists is unclear, making it difficult to conduct studies within the generalist practice framework. Therefore, considering the unclear definition of generalists, we conducted a literature search to explore how generalists are defined and classified in research. Subsequently, to clarify the research questions to be addressed in the future, experts interpreted and discussed the literature search results. Finally, as part of their expert opinion, they presented a statement.

## Materials and Methods

A literature search of PubMed was conducted using a combination of keywords including “generalist”, “family physician”, “family medicine”, “primary care”, “hospitalist”, “Japan”, “definition”, and “categorize”. The keywords were used in combination or modified based on previous reviews on GM and FM.<sup>11</sup> All included studies were published in English; those published in other languages were excluded from the study.

This study aimed to understand how GM and FM are defined in studies targeting these fields and to find studies that clearly define generalists. One physician performed the literature search, while six physicians working in GM reviewed the findings. Subsequently, discussions were held regarding the identified issues and potential solutions.

## Results

The results of the literature search are presented here. The definition of generalist varied in studies targeting GM, FM, and PC from several countries worldwide, including Japan. Definitions included physicians providing initial patient care,<sup>12–16</sup> those without organ-specific specialization,<sup>17</sup> those who completed specific certifications or training in FM or GM,<sup>11,18–21</sup> and physicians registered or affiliated with specific countries or regions.<sup>22–28</sup> Several studies focused on physicians affiliated with particular databases or organizations.<sup>22–28</sup> A survey conducted in Japan defined generalists as those belonging to the Hospital General Medicine Society and affiliated with university hospitals, handling outpatient care (48.1–53.6%), inpatient care (46.4–51.9%), and emergency care (15.9%).<sup>3</sup> Background diversity was evident even among generalists affiliated with the same society.<sup>3</sup> In the United States, hospitalists are defined as those primarily managing inpatient care.<sup>29–32</sup> However, no other studies provided a precise categorization or definition of generalist based on specific medical practices or roles.

## Discussion

Various studies regarding generalists have been published. However, the definitions of generalists in each study (such as hospitalists, family physicians, and primary care physicians) are diverse, and the lack of uniformity in backgrounds has rendered the target population unclear. The lack of consistency in the generalists included in previous studies has led to an ambiguous target population. Consequently, in healthcare settings where medical systems vary by country or region, evidence from studies targeting generalists cannot readily apply to actual practices. Moreover, studies providing a standardized definition based on specific medical practices, namely clinical practice, have not been conducted for generalists, a term encompassing diverse meanings.

Global research revealed that generalists exhibit diverse subspecialty qualifications and training backgrounds. Even within hospitals of similar size, there are variations in actual clinical practices, leading to an unclear delineation of the target population for research. In Japan, physicians considered generalists hold qualifications in several areas, including FM, HM, and home medical care. Furthermore, as clinical practices vary based on the needs of the local community,<sup>9</sup> the roles expected of generalists differ depending on their work location. Therefore, the GM field in Japan is very diverse, and generalists assume diverse roles based on their workplace.

If classifications and definitions based on clinical practice can be established for homogeneous groups, it would be possible to accumulate evidence with a clear delineation of the target population, potentially contributing to the advancement of GM. One example is the emergence of hospitalists in the United States in 1996.<sup>32</sup> Hospitalists specialize in providing comprehensive medical care for inpatients,<sup>29</sup> and evidence of the benefits of hospitalists, such as cost reduction and improvement in the quality of care, have been reported.<sup>33–35</sup> Physicians working as hospitalists have diverse backgrounds, including those in FM, GM, GIM, and specialized organ-specific internal medicine departments.<sup>36</sup> Hospitalists function as generalists in inpatient care.<sup>29,32</sup> Defining generalists as hospitalists, family physicians, and primary care physicians based on core competencies is crucial. However, there is potential for meaningful research targeting generalists by defining homogeneous groups through their actual roles, such as inpatient care in hospitals, as observed in the case of hospitalists. Such a definition could clarify the target population and facilitate significant studies regarding generalists. Additionally, amidst the global aging trend accompanying advancements in healthcare, evidence from Japan, which has already entered a super-aging society, may become globally valuable.<sup>37</sup> While understanding Japanese generalists may be challenging due to their diverse nature, clarifying the definition of generalists may make Japanese evidence more accessible and applicable internationally.

This study had some limitations. First, the literature search conducted was not systematic. Second, the paper represents expert opinion, necessitating further research to confirm the need for the categorization of GM.

## Conclusion

The definition of GM was unclear from the results of the literature search. A clear definition of generalists based on clinical practice will allow the identification of a precise target population for research on generalists. This clarification will allow for the accumulation of evidence related to well-defined groups of generalists and contribute to the advancement of GM. Therefore, future research is necessary to develop new indicators for the precise classification and definition of generalists.

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## Author Contributions

All authors contributed significantly to the work reported from the concept and design to the execution, data collection, analysis, and interpretation. They participated in drafting, revising, or critically reviewing the article, approved the final version to be published, and agreed on the journal to which the article has been submitted. Furthermore, all the authors are committed to being accountable for all aspects of the work.

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