*International Family Medicine*

# Defining the Concept of Primary Care in South Korea Using a Delphi Method

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Backgrounds and Objectives: *There is no consensus on the definition of primary care in South Korea. This study's objective was to define the concept of primary care using a Delphi method.* Methods: *Three expert panels were formed, consisting of 16 primary care policy researchers, 45 stakeholders, and 16 primary care physicians. Three rounds of voting, using 9-point appropriateness scales, were conducted. The first round involved rating the appropriateness of 20 previously established attributes of primary care. In round 2, panelists received a summary of the first-round results and were asked to once again vote on the 10 undetermined attributes and the provisional definition. The final round involved voting on the appropriateness of the revised definition. The Korean Language Society reviewed the revised definition.* Results: *Four core (first-contact care, comprehensiveness, coordination, and longitudinality) and three ancillary (personalized care, family and community context, and community base) attributes were selected. The Korean definition of primary care was accomplished with all three panel groups arriving at a "very good" level of consensus.* Conclusions: *The Korean definition of primary care will provide a framework for evaluating performance of primary care in South Korea. It will also contribute to resolving confusion about the concept of primary care.*

Evidence of the health-promoting and disease-preventing influence of primary care has been accumulating ever since researchers have been able to distinguish primary care from other aspects of the health services delivery system. The evidence also shows that primary care (in contrast to specialty care) is associated with a more-equitable distribution of health in populations, a finding that holds in both cross-national and within-national studies.[1]

Although the concepts of "primary care" and "primary health care" are often used as synonyms, they represent different aspects of the development and articulation of first-level care.[2] The term primary care, as distinguished from primary health care, is generally reserved for the clinical activity that primarily focuses on individuals. It also connotes conventional primary medical care striving to achieve the goals of primary health care.[3] The US Institute of Medicine (IOM) and the World Health Organization have distinguished between the two terms; primary health care includes such public health measures as sanitation and ensuring clean water for populations. Primary care focuses on the delivery of personal health services.[4] The IOM defined primary care as the provision of integrated, accessible health care services by clinicians who are accountable for addressing a large majority of personal health care needs, developing a sustained partnership with patients, and practicing in the context of family and community.[4]

Primary care is viewed as a strategy for organizing health care and as a philosophy underpinning health care and health.[5] In some health systems, primary care sits at the center of a complex primary health care system that coordinates a wide range of nursing home and home care services. In other systems, however, primary care has little formal connection to any other

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primary health care activity.[6] All this diversity has made it difficult to adopt a universal definition of primary care.[7]

The lack of a universal definition of primary care can affect the development and practice of family medicine and is accentuated by health care crises in many countries. Since the introduction of family practice in 1985 in South Korea (hereafter termed "Korea"), "primary care" and "family medicine" have often been used interchangeably, and many have raised questions about the role and characteristics of family medicine. A 2004 survey of the Korean Medical Association found that family physicians comprised only 7.9% of all clinic-based practitioners, and all medical doctors, regardless of their specialty, can own a private clinic and practice as a first-contact medical doctor. Until recently, the Korean government and the public sector have not played key roles in the development of primary care. The conceptual ambiguity regarding primary care remains painfully evident in Korea.[8]

We thought that a consensual and explicit definition of Korean primary care was needed to enable it to develop within the Korean health care system. The study's objective was to define the concept of primary care in Korea using the Delphi method to gather, coordinate, and organize opinions from experts.

## Methods

Our study was approved by the Institutional Review Board of the Kangnam St. Mary Hospital, the Catholic University of Korea.

### Panel Selection

Panel candidates who were identified by the authors as individuals able to provide perspectives about primary care in Korea were invited to participate in the study via e-mail correspondence. The respondents were categorized into three separate groups—researchers, stakeholders, and physicians—according to predetermined inclusion criteria as follows:

***Researchers.*** Researchers were deemed eligible for participation if they had published one or more primary care research papers in peer-reviewed Korean journals within the previous 5 years. The researchers were initially identified by searching the online Korean Medical Database Web site (http://kmbase.medric.or.kr) using primary health care, primary care, or *juchiui* (a physician who sees patients personally and continues the doctor-patient relationship accountably) as key words. Seven individuals (the authors of this paper) evaluated the value of those papers considering the relevance to this study on a scale of 0–10 points and chose members of the panels by selecting those whose papers had the highest total score.

***Stakeholders.*** Stakeholders were deemed eligible to participate based on their activities and influences related to Korean primary care during the most-recent 3 years. They were recommended by the authors and selected by consensus. The stakeholders included civic organization members, journalists, government officers, National Health Insurance officers, directors of medical societies, health service researchers, college professors with credentials in health policy, and other health professionals (eg, nurse, Oriental doctor, pharmacist, and dentist).

***Physicians.*** Physicians were deemed eligible to participate based on their practice in a primary care setting, their conceptual knowledge of primary care, and recognition by their peers. They were recommended by the authors and selected by consensus. Those who received an award from the Korean Academy of Family Medicine for their exemplary practice and activity were included.

### Delphi Method

We used the Delphi method as originally developed by the RAND Corporation (Santa Monica, California)[9] to solicit the opinions of experts in each of the three panels (Figure 1). We chose this method because it is characterized by anonymity, controlled feedback, and statistical group response.[10] Anonymity derives from the absence of face-to-face interaction. Participants respond independently to questionnaires, and their responses are communicated to other participants without being attributed to specific individuals. This controlled feedback occurs during several questionnaire iterations.[11]

We designed the study questionnaire with a 9-point appropriateness scale to permit a broader range of responses from the study participants. The questionnaire was pretested with six non-panel health professionals and refined by the authors. The study was conducted in three rounds, as described below. Each round, including time for preparation and analysis, took 6 weeks to complete.

The first-round questionnaire listed 20 attributes of primary care that we had identified from a review of the published literature:[1-5,12-14] first contact, accessibility, comprehensiveness, coordination, longitudinality, personalized care, continuity of care, family context, community context, community base, confidentiality, teamwork, evidence-based medicine, holistic care, cultural competence, specific decision-making process, accountability, advocacy role, integration of the IOM definition of primary care, and integration of the European definition of primary care. Two questions pertaining to primary care providers were also included in the questionnaire. The first was "Please describe an appropriate person(s) who will provide primary care

Figure 1

Delphi Process Used to Develop a Consensus
Definition of Primary Care in Korea
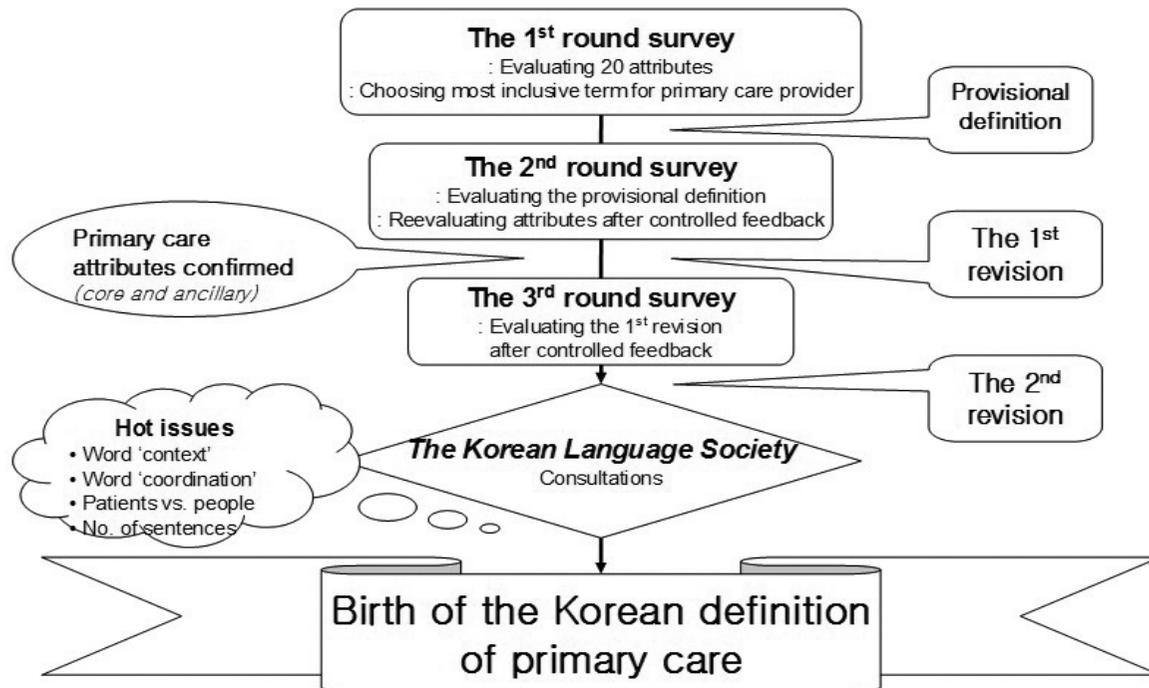


in Korea." The second was "What is the most inclusive term to define 'primary care provider' in Korea?"

In round 2, the distribution scores for each attribute were tabulated and fed back to participants; the median scores were highlighted. The 10 attributes that were deemed inappropriate for the provisional definition of primary care during the first-round survey were reevaluated at the second-round survey. The revised definition reflecting results of the second round was reevaluated and finalized during the third-round survey.

*Consensus Levels*

The authors designed the consensus levels and their criteria, consulting a published study that used the Delphi method[15] and the RAND manual.[16] A "very good" or "perfect" level of consensus among all three expert panels was considered to be an acceptable standard (Table 1).

*Consultations With the Korean Language Society*

After the third-round survey was complete, the authors consulted with members of the Korean Language Society four times by e-mail to determine whether the Korean public could comprehend and use the definition composed by the expert panels.

*Statistical Methods*

The score distributions of the three expert panels were tabulated by frequency analysis. The differences among the attributes and definitions of primary care between each survey round were analyzed by the Wilcoxon signed-rank test. We used computer software, SAS version 8.12 (SAS Institute, Cary, NC), for statistical analyses.

**Results**

Among a total of 134 panel candidates, 77 panelists (57.5%) participated in this study: 16 (72.7%) of the invited researchers, 45 (52.3%) of the stakeholders, and 16 (61.5%) of the primary care physicians. They consisted of 52 MDs (26 family medicine, 14 preventive medicine/health policy and management, and 12 other disciplines), 15 PhDs (five health economics, four public health, four health administration, one health sociology), four RNs, and six other degrees.

*Round 1*

The term selected as being the most inclusive in describing a primary care provider was the Korean term *juchiui* (Table 2). All three expert panels achieved "very good" or "perfect" consensus regarding three of the

Table 1

Consensus Level Definitions for the Delphi Process in This Study

| Level of Consensus | Definition* |
|---|---|
| Perfect | All responses range from 7 to 9. |
| Very good | 80% of responses range from 7 to 9, and 80% of responses are within two integers of the median (eg, median is 8, and 80% of responses range from 6 to 9) |
| Good | 50% of responses range from 7 to 9, and 80% of responses are within two integers of the median. |
| Some | 30% of responses are from 7 to 9, and 80% of responses range from 5 to 9, and 80% of responses are within two integers of the median. |
| *Criteria for a choice of items at each round of survey* | |
| Retained | Items on which all three expert panels showed a "very good" or "perfect" level. |
| Deleted | Items on which all three expert panels showed "some" or "good" level. |
| Reevaluated | Items on which any panel group disagreed with the consensus level. |

\* Definitions refer to a 9-point Likert scale for responses: inappropriate = 1, 2, and 3; equivocal = 4, 5, and 6; appropriate = 7, 8, and 9

Table 2

Results of Voting from Round 1 About Most-inclusive Term for Primary Care Provider

| Panel Group | n (%) | Terms Indicating Medical Doctor | | | Terms for Other Health Care Worker*** | Primary Health Care Team | Nonrespondent |
|---|---|---|---|---|---|---|---|
| | | Juchiui* | Family Physician | Other Terms** | | | |
| Researcher | 16 (100) | 6 (43) | 0 (0) | 4 (29) | 4 (29) | 0 (0) | 2 |
| Stakeholder | 45 (100) | 5 (17) | 6 (20) | 9 (30) | 9 (30) | 1 (3) | 15 |
| Physician | 16 (100) | 10 (63) | 1 (6) | 4 (25) | 1 (6) | 0 (0) | 0 |
| Total | 77 (100) | 21 (35) | 7 (12) | 17 (28) | 14 (23) | 1 (2) | 17 |

\*     A physician who sees patients personally and continues the doctor-patient relationship accountably (15), family/home—*juchiui* (5), *dan-gol-uisa* (an easy term for *juchiui*) (1).
\*\*   Primary care physician (4), primary medical care doctor (4), doctor who owns a private clinic (2), community physician (1), doctor for comprehensive care (1), physician (1), primary care specialist physician (1), primary health physician (1)
\*\*\* Primary care clinician (4), clinician (1), other clinician [community health (1), family health (1), health (1), regional health (1), regular family (1) primary health (1)

attributes—first contact, comprehensiveness, and co-ordination—and deemed them to be the core attributes for their definition of primary care (Table 3A).

Three other attributes—cultural competency, advocacy role, and holistic care—were removed from the definition of primary care in the first round because all three expert panels achieved only "no," "some," or "good" consensus levels. Another four attributes—accessibility, continuity of care, integration of the IOM definition, and integration of the European definition—were also deleted because they overlapped with or were components of other attributes.

*Round 2*

Ten attributes were reevaluated in Round 2. Longitudinality, an attribute that received significantly greater scores among the stakeholder experts in the second round, was added to the definition of primary care

Table 3

Examples of Results of Delphi Voting from Round 1 and 2
About Attributes for the Korean Definition of Primary Care

*A. Comprehensiveness: one of three core attributes determined after rating at the first-round survey*

| Panel Group | n (%) | Round | Inappropriate | | | Uncertain | | | Appropriate | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Researcher | 16 (100) | 1 | | | | | | | 5 (31) | **4 (25)** | 7 (44) |
| Stakeholder* | 45 (100) | 1 | | | | 1 (2) | 6 (14) | 1 (2) | 12 (27) | **7 (16)** | 17 (39) |
| Physician | 16 (100) | 1 | | | | | | | 1 (6) | 2 (13) | **13 (81)** |
| Total (%) | 77 (100) | | | | | 1 (1) | 6 (8) | 1 (1) | 18 (27) | **13 (17)** | 37 (49) |

All three groups of panel showed a "very good" or "perfect" level of consensus.

* One civic organization member responded as the number 10, "unable to answer."

Bold font means the figure that contains a median.

*B. Longitudinality: the core attribute determined after rating again at the second-round survey*

| Panel Group | n (%) | Round | Inappropriate | | | Uncertain | | | Appropriate | | | P Value* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| Researcher | 15 (100) | 1 | | | | | 2 (13) | 0 (0) | 6 (40) | 1 (7) | 6 (40) | .1719 |
| | | 2 | | | | | 1 (7) | 0 (0) | 4 (27) | 1 (7) | **9 (60)** | |
| Stakeholder | 41 (100) | 1 | | | 3 (7) | 1 (2) | 9 (22) | 4 (10) | **10 (24)** | 5 (12) | 9 (22) | .0069 |
| | | 2 | | | 1 (2) | 1 (2) | 3 (7) | 2 (5) | **18 (44)** | 7 (17) | 9 (22) | |
| Physician | 16 (100) | 1 | | | | | | 1 (6) | 6 (38) | 1 (6) | **8 (50)** | .6250 |
| | | 2 | | | | | | | 6 (38) | 1 (7) | **9 (56)** | |

* The Wilcoxon signed-rank test; the last versus the second-round survey

One researcher and four stakeholders were dropped out at the second-round survey.

Bold font means the figure that contains a median.

care after consensus at the "very good" level was reached within all three expert panels (Table 3B). It was added to the core attributes identified in Round 1 (first contact, comprehensiveness, and coordination). Three attributes—personalized care, family and community context, and community base—were deemed to be ancillary attributes because any two of the expert panels reached consensus at the "very good" level. With regard to the provisional definition, only the stakeholders did not achieve a consensus at the "very good" level.

*Round 3*

There was no statistically significant increase in the ratings of the revised definition of primary care derived from Round 2 among the three expert panels ($P>.05$) when compared with the provisional definition derived from Round 1. It is noteworthy, however, that all three of the expert panels reached consensus at the "very good" level on the revised definition of primary care (Table 4).

*Korean Definition of Primary Care*

One of the greatest challenges was to find Korean terms that are comparable to the English terms "context," "coordination," and "health problem." The Korean Language Society suggested that three concise sentences are more appropriate for the public to comprehend the concept of primary care than one long sentence. The definition of primary care we composed follows:

"Primary care is the delivery of those health care services that are first encountered by people. It is a discipline in which physicians, who see patients personally in the context of family and community, continue a doctor-patient relationship over time, coordinate health care resources appropriately, and resolve common health care needs of people. To perform the function of primary care effectively, multidisciplinary cooperation and community participation are required."

## Discussion

If "primary" is defined in the narrowest terms—first in time or order—primary care may be narrowly conceptualized as the entry point in the health care delivery system with primary care providers performing only a triage function to pass patients on to a higher level of care. If, on the other hand, "primary" is defined in broader terms—chief, principal, or main—primary care may be conceptualized as being central and fundamental to health care.[4] In Korea, where specialists are overproduced and the private hospital sector predominates,[8,18] misconceptions about primary care abound. For this reason, we tried to formulate a definition of primary care that not only reflects the reality of the Korean health care system but that also is oriented toward future trends in the field.

The term "primary care" has also been defined in various ways, often using one or more of the following: care provided by certain clinicians, set of activities, level of care or setting, set of attributes, and strategy for organizing health care delivery.[4] No single category

incorporates all these dimensions. In Korea, the term "primary care" has typically been described only by the setting.[19] In this context, we believe that the definition derived from our study could be a milestone in the history of primary care in Korea.

Primary care is also characterized by the type of physician—general practitioner or family physician—who provides medical care. The problem with this characterization is that the norm for primary care becomes that which describes the practices of family physicians. Since those practices may customarily vary from region to region and from country to country, a better specification of the function of primary care is needed.[8]

In Korea, every medical doctor is allowed to practice as a first-contact provider without additional formal training in primary care.[8,18] Although the Korean government promoted reforms that allowed citizens to register with a *juchiui* who would be accountable for their care, those reforms failed in 1996.[20] Given this history, we included questions specifically about primary care providers in the first survey. It was encouraging that *juchiui* was nominated as the preferred term for primary care provider.

Primary care is now widely characterized as being the delivery of first-contact medicine; as assuming ongoing responsibility for patients, regardless of the presence or absence of disease; and as integrating the physical, psychological, and social aspects of health.[21] This description is consistent with the major features of primary care: initial contact, longitudinality, comprehensiveness, and coordination

### Table 4

### Results of Voting of Round 2 and 3 About the Korean Definition of Primary Care

| Panel group | n (%) | Round | Inappropriate | | | Uncertain | | | Appropriate | | | P Value* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| Researcher | 15 (100) | 2 | | | | | | 3 (20) | 0 (0) | **6 (40)** | 6 (40) | .8652 |
| | | 3 | | | 1 (7) | 0 (0) | 0 (0) | 1 (7) | 3 (20) | **5 (33)** | 5 (33) | |
| Stakeholder | 39 (100) | 2 | | 1 (2) | 2 (5) | 1 (2) | 1 (2) | 1 (2) | **15 (37)** | 11 (27) | 9 (22) | .2117 |
| | | 3 | | | 2 (5) | 0 (0) | 3 (7) | 1 (3) | 7 (18) | **13 (33)** | 13 (33) | |
| Physician | 16 (100) | 2 | | | 1 (6) | 0 (0) | 1 (6) | 2 (13) | 3 (19) | 1 (6) | **8 (50)** | .6250 |
| | | 3 | | | | | 1 (6) | 0 (0) | 3 (19) | 4 (25) | **8 (50)** | |

\* The Wilcoxon signed-rank test; the second versus the third-round survey

Among 72 participants of the second round, two stakeholders were dropped out at the third-round survey.

Bold font means the figure that contains a median.

(or integration).[22,23] The definition of primary care derived from our study is functional and has four core attributes that are identical to those major features. However, the Korean definition is distinctive, because it also has three ancillary attributes and gives consideration to the views of the Korean public. It is closer to the European definition in that "multidisciplinary cooperation" and "community participation" are stressed. On the other hand, in that it has a focus on the clinician-patient relationship, it is similar to the US IOM definition.

### Limitations

This study has several limitations. First, because the Delphi method requires participants with varied expertise, we had to rely on the recommendations of other experts to populate our three panels. This process, known as daisy chaining, has the potential to form cliques.[17] For this reason, and to limit our own selection bias, we tried to balance the composition of our panels by bringing together stakeholders with opposing viewpoints.

Second, the tendency for groups to follow the viewpoint of an esteemed colleague[24] may not have been completely assuaged by the panel composition. For example, the scores among the stakeholders rating the appropriateness of longitudinality increased significantly during the second round. It is possible that the inherent educational and consensus-building components of this multistage process contributed to the different ratings.[25]

Third, we cannot be certain that the expertise of the panelists was fully incorporated into their feedback or that the feedback represented the opinions of all the experts. Finally, multistage studies require considerable time, and some participants inevitably drop out during the process.[17] Our study took 5 months to complete, with a dropout rate of 9.1%.

### Conclusions

We developed a consensus definition of primary care in Korea that we believe will bring conceptual clarity to future evaluations of primary care in Korea. To further aid the evaluation process, we plan to create an assessment tool based on this definition.

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