

## Editorial



# The Need to Improve the Quality of Diabetes Care in Korea

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The prevalence of diabetes continues to increase in Korea and has a significant impact on complications and mortality.<sup>1,2</sup> Proper monitoring and management can reduce the incidence of diabetic complications and improve morbidity and mortality.<sup>3,4</sup> Despite evidence-based guidelines for diabetes care, the quality of diabetes care in Korea does not consistently attain the recommended level.<sup>5</sup> According to the Korean Diabetes Association (KDA), only 9.4% of people with diabetes had good control of three targets: glucose, blood pressure, and cholesterol.<sup>5</sup>

In this issue, Cho et al.<sup>6</sup> investigated the geographical variation in the quality of type 2 diabetes care in Korea using the national health insurance and health screening databases. Although they used data for one year, 2014, this is the first study of regional differences in the quality of type 2 diabetes management. This study found failures of all quality indicators in the guidelines and wide variation in the quality of diabetes care among districts and indicators. The eye examination and microalbuminuria test varied mostly by district: ten-fold (0.9%–9.2%) and four-fold (6.3%–28.9%), respectively. There were also large performance gaps between the best and worst districts for the hemoglobin A1c (HbA1c) test (32.4%) and blood pressure control (42.7%). Although the overall quality of care was higher in urban areas than in suburban or rural areas, many suburban or rural areas had similar quality to urban areas due to the large geographic variation in these districts. Far from our expectations, the community-based registration and management program for hypertension and diabetes (CBRMP) did not affect the quality of diabetes care.

Korea ranks first among OECD countries in the number of physician consultation visits (16.0) per person per year in the general population.<sup>7</sup> Furthermore, the number of physician visits for people with diabetes was about three times higher than the number of visits reported for the overall population in Korea.<sup>8</sup> These findings suggest Korea healthcare systems have good access to care under the national health insurance services by reducing the economic barrier. The good news is that the medication possession ratio improved dramatically during the last decade.<sup>9</sup> Although Koreans have good access to health care, why does the quality of diabetes care remain suboptimal in Korea? According to a survey by the KDA, less than 40% have received education for diabetes management at least once, while 60% have never received it.<sup>10</sup> Therefore, we think that the lack of comprehensive diabetes education is the main reason for the wide gap between the guidelines and quality of care. Another possible

reason is that the lack of attention to, and effort regarding, policies related to quality control in diabetes care. After the Diabetes Quality Assessment (DQA) project was implemented by the Health Insurance Review and Assessment Service of Korea in 2011, there has been continuous improvement in the continuity and process of care, including HbA1c and lipid tests.<sup>11</sup> However, the DQA project is currently being conducted only in primary care clinics and does not apply to outpatient clinics of general hospitals. About 30% of people with diabetes in Korea are managed at general or tertiary hospitals. Therefore, the government should extend the DQA project to general or tertiary hospitals, raise the target for process indicators (HbA1c test and lipid panel), and include intermediate outcome indicators (HbA1c, blood pressure, and lipid control). The government policy to monitor the indicators of the quality of diabetes care in practice should improve the overall quality of diabetes management.

We need to think about why the CBRMP has not been helpful in managing diabetes. Recently, the CBRMP Gwangmyeong Center reported that the CBRMP was helpful for managing diabetes and that the cost benefits were high due to the low incidence of death or cardiovascular disease. Therefore, careful review of the results of the analysis in this study is required and more research is needed to determine the effectiveness of the CBRMP. It is necessary to introduce a nation-wide diabetes management project rather than a pilot project for several regions because a national project will help both physicians and patients become more interested in diabetes management. We believe that community efforts for diabetes education and clinic-based diabetes management should be combined to have a synergistic effect.

The Cho et al.'s study<sup>6</sup> indicates that health care policy should match the local situation and needs and be developed accordingly. This study provides useful information so that policy makers can develop appropriate strategies for diabetes care. Further studies such as national diabetes registry or cohorts are required to investigate whether nationwide quality improvement program can finally prevent diabetic complications through improving intermediate outcomes.

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