

Research in Brief



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On the Current Status of Health Care Quality and Disparities: With Reference to the Health Outcomes of the Health Care System¹⁾

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Introduction

Health care access in Korea has improved overall over the years by means of, among other things, continued expansion of the National Health Insurance coverage. However, monitoring of health care quality and disparities is critical to getting improved health care access materialize into improved population health.. Health care quality and access call for added interest, since they are key determinants of improvement in the population's health. To bring about improvement in the quality of health care requires continued monitoring of areas of progress and regress. Of particular importance is monitoring of health care quality and performance in terms especially of health outcomes, which constitute a value that patients and society seek.

Despite the overall improvement in health care in Korea and elsewhere in the world, disparities persist in health care access and quality in many countries due to various social risk factors.

This study was aimed at monitoring health care quality and disparities using health outcome indicators and drawing implications for policy. As to chronic care, this study examined health-related quality of life in patients with chronic conditions, the sufficiency, or lack thereof, of support from the health care system, unplanned hospitalizations due to conditions that are

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1) This brief is an amended extract from Korea Health Care System Performance (2021), authored by Sujin Kim et al.

manageable in an outpatient setting, and medication adherence in hypertensives and diabetics. Trends in unplanned hospitalizations were further examined for children aged 18 and younger with asthma, diabetes, or epilepsy.

The outcome measures examined with respect to acute care concern unnecessary emergency admissions, prevalence of readmission within 30 days of discharge, and health outcomes within one year of the onset of congestive heart failure or ischemic stroke.

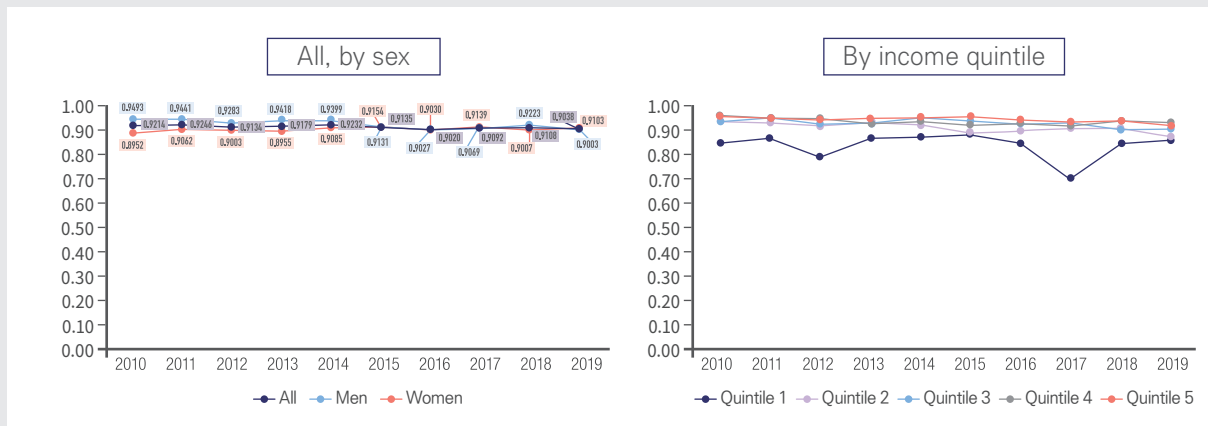
[Table] Health outcome indicators and their sources

	Indicator	Source
Chronic care	Quality of life in persons with chronic conditions	Korea National Health and Nutrition Examination Survey, 2010-2019
	The role of Korea's health care system in disease management	Telephone survey of 1,000 Korean men and women aged 18 and older (September ~ October, 2021)
	Unplanned hospitalizations due to ambulatory care sensitive conditions	National Health Insurance database, 2016-2020
	Unplanned hospitalizations due to asthma, diabetes and epilepsy (for those 18 or younger)	National Health Insurance database, 2016-2020
	Two-year medication adherence in hypertensives and diabetics	National Health Insurance database, 2011-2020
Acute care	Emergency hospitalizations due to acute conditions that do not require hospitalization	National Health Insurance database, 2016-2020
	Emergency readmission within 30 days of discharge	National Health Insurance database, 2016-2020
	Deaths/admissions within one year of emergency hospitalization for congestive heart failure	National Health Insurance database, 2011-2020
	Death/emergency admission within one year of emergency hospitalization for ischemic stroke	National Health Insurance database, 2011-2020

Chronic care quality and disparities

The health-related quality-of-life level as measured by the EQ-5D index did not change much for people with chronic conditions in the past 10 years, remaining low all along for those in the first income quintile.

[Figure 1] Quality of life in people with chronic conditions

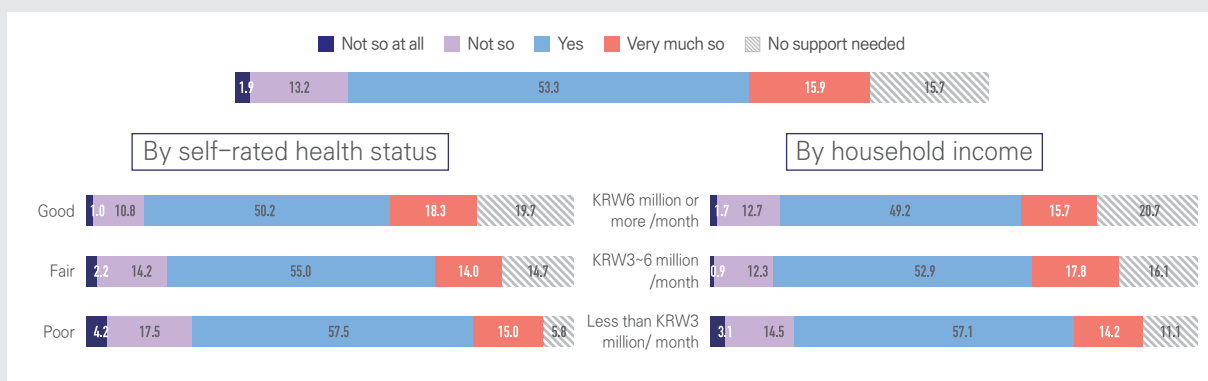


Note: Figures are obtained based on responses to the EQ-5D questions which were asked as part of the Korea National Health and Nutrition Examination Survey (Ministry of Health and Welfare/Korea Disease Control and Prevention Agency). They are standardized for sex and age with reference to for the midyear registered resident population for 2010.

Source: Sujin Kim et al.. Korea Health Care System Performance. Korea Institute for Health and Social Affairs. Reconfiguration of the figures on pp.124~125.

In a public perception survey conducted as part of this study, 69.2 percent of respondents said “yes” and 15.1 percent said “no” when asked whether they regarded Korea’s health care system as providing sufficient support in the management of their or their family member’s illness. The more severe the health condition and the lower the income level, the more likely the respondent was to say “no” to the question. The proportion of those who viewed government support in chronic disease management as unnecessary was higher in groups with higher self-rated health levels and higher income levels.

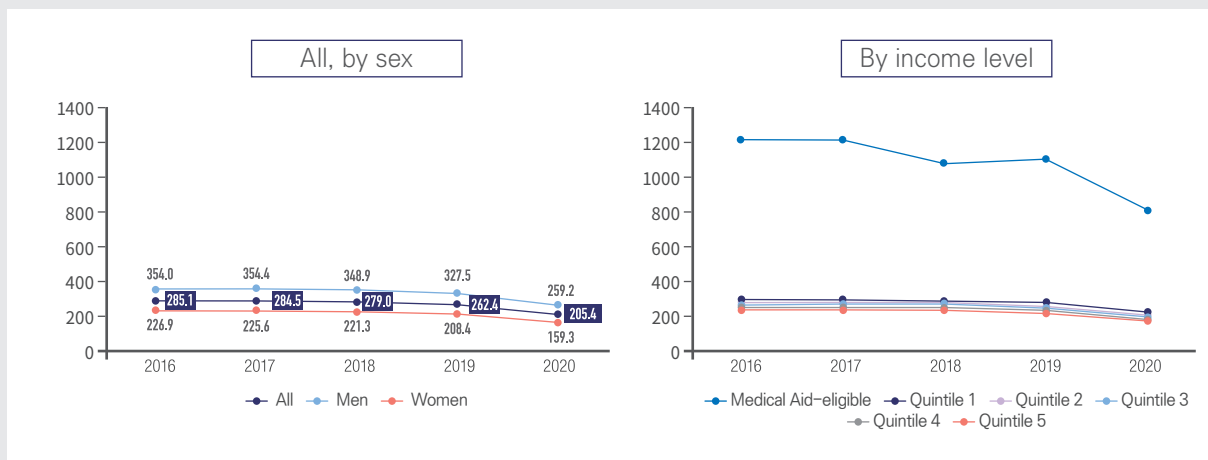
[Figure 2] Does Korea’s health care system perform well in providing support for disease management? (n=1000) (in %)



Source: A Survey of Public Perception about Primary Care. Korea Institute for Health and Social Affairs (2021).

The number of unplanned hospitalizations due to ambulatory care sensitive conditions (ACSCs) followed a downward path, declining by 7.87 percent on annual average to 205.4 cases (out of 100,000 hospitalizations) in 2020 from 285.1 cases in 2016. The rate of unplanned hospitalization due to ACSCs for those eligible for Medical Aid, measured to be higher than for any income quintile group in 2016, remained highest in 2020 even after having declined more rapidly than did the rates for all the other income groups. The numbers of unplanned hospitalizations due to ACSCs, while higher for lower income levels, did not differ greatly between the income quintiles.

[Figure 3] Number of unplanned hospitalizations due to ACSCs (per 100,000 hospital admissions)

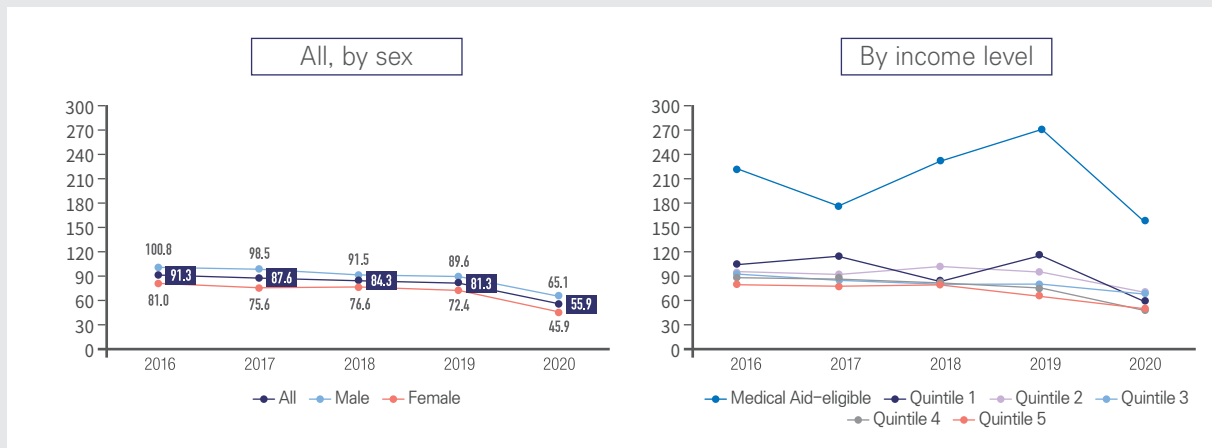


Note: Figures are estimated using the National Health Insurance database of the National Health Insurance Service; they are standardized for sex and age with reference to the 2011 population.

Source: Sujin Kim et al., Korea Health Care System Performance. Korea Institute for Health and Social Affairs, pp.129-130

The number of unplanned hospitalizations due to asthma, diabetes and epilepsy per 100,000 hospitalizations declined by 11.5 percent every year on average from 91.3 in 2016 to 55.9 in 2020. The number was highest for those in receipt of Medical Aid and lowest for those in the fifth income quintile. Of the five income quintiles, the first quintile had the highest number of unplanned hospitalizations due to asthma, diabetes and epilepsy during the period examined (barring the years 2018 and 2020).

[Figure 4] Unplanned hospitalizations due to asthma, diabetes, or epilepsy for children 18 or younger (per 100,000 hospital admissions)

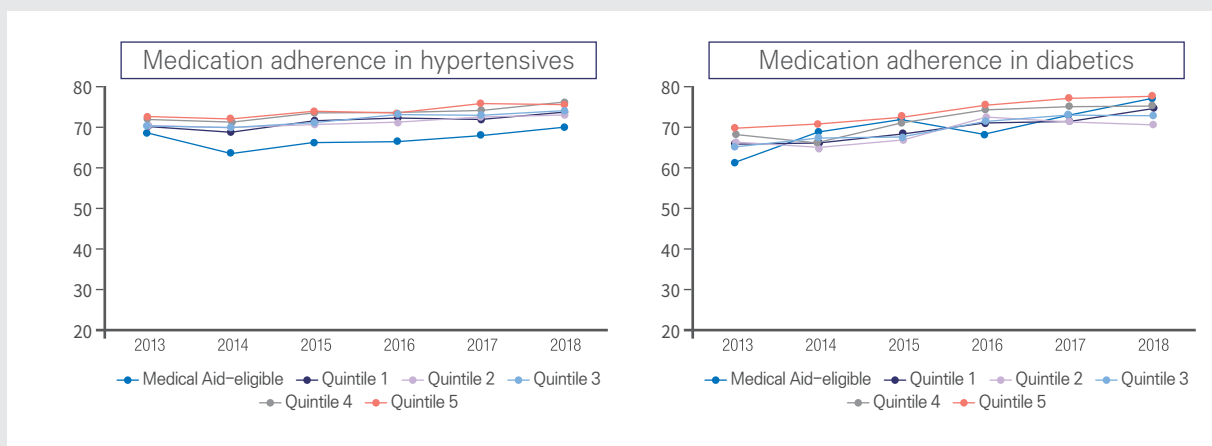


Note: Figures are estimated using the National Health Insurance database of the National Health Insurance Service; they are standardized for sex and age with reference to the 2011 population.

Source: Sujin Kim et al.. Korea Health Care System Performance. Korea Institute for Health and Social Affairs. pp.132~133.

Medication adherence in patients with hypertension and diabetes—both representative of the chronic conditions for which hospitalization can be prevented with appropriate drug regimens and routine care—was examined by income level. Medication adherence in hypertensives was low in those in receipt of Medical Aid benefits. Hypertensives in the fifth income quintile had high levels of medication adherence. For diabetics, Medical Aid beneficiaries had the lowest medication adherence, though showing of late some improvement. Diabetics belonging to the fifth income quintile showed a sound level of medication adherence.

[Figure 5] Two-year medication adherence in hypertensives and diabetics (in %)



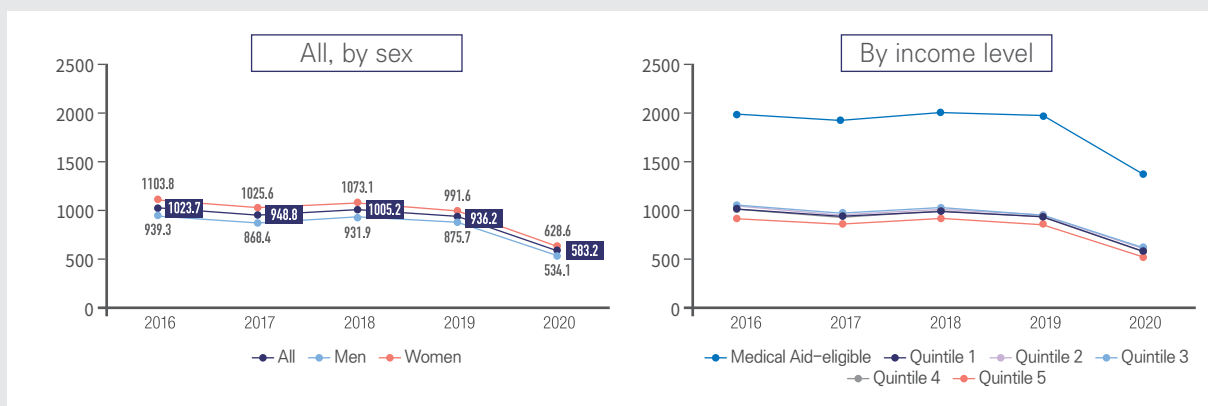
Note: The two-year medication adherence is measured as the proportion of days covered, which here is calculated as the number of days of the prescribed medication taken divided by the number of days in the two-year period following the index diagnosis.

Source: National Health Insurance database. National Health Insurance Service

Service quality and disparities in acute care

The number of emergency hospitalizations (per 100,000 population) due to acute conditions that generally do not require hospitalization declined by a yearly average of 13.12 percent from 1023.7 in 2016 to 583.2 in 2020. The decline was estimated to be 37.71 percent between 2019 and 2020. The number of such hospitalizations, while consistently lowest for those in the fifth income quintile and highest for the group of Medical Aid beneficiaries, declined along similar trajectories for all groups.

[Figure 6] Number of emergency admissions due to acute conditions that do not require hospitalization (per 100,000 population)

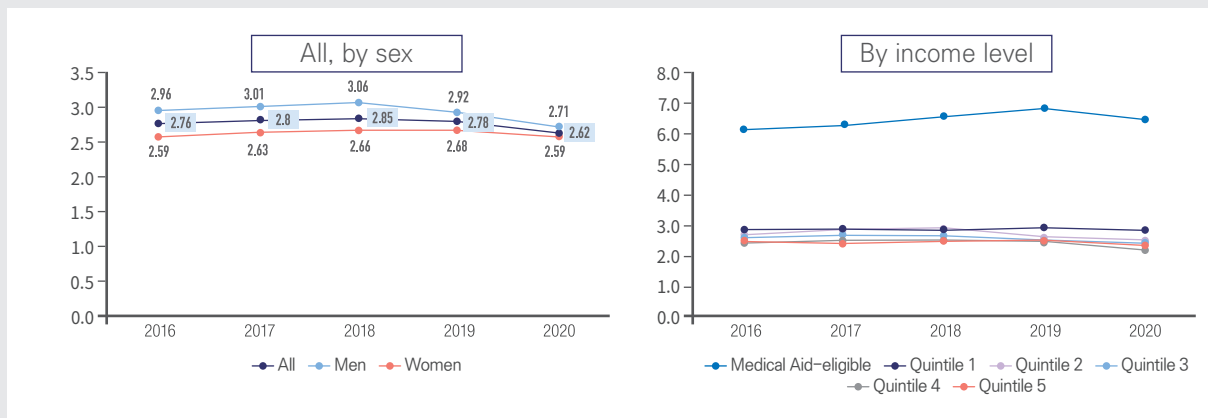


Note: Figures are estimated using the National Health Insurance database of the National Health Insurance Service; they are standardized for sex and age with reference to the 2011 population.

Source: Sujin Kim et al.. Korea Health Care System Performance. Korea Institute for Health and Social Affairs. pp.132~133

The rate of emergency readmissions within 30 days of discharge trended down throughout most of the period between 2016 and 2020, declining by a yearly average of 1.3 percent from 2.8 percent to 2.6 percent. When examined by income level, the rate was highest for those eligible for Medical Aid.

[Figure 7] Emergency readmissions within 30 days of discharge (in %)

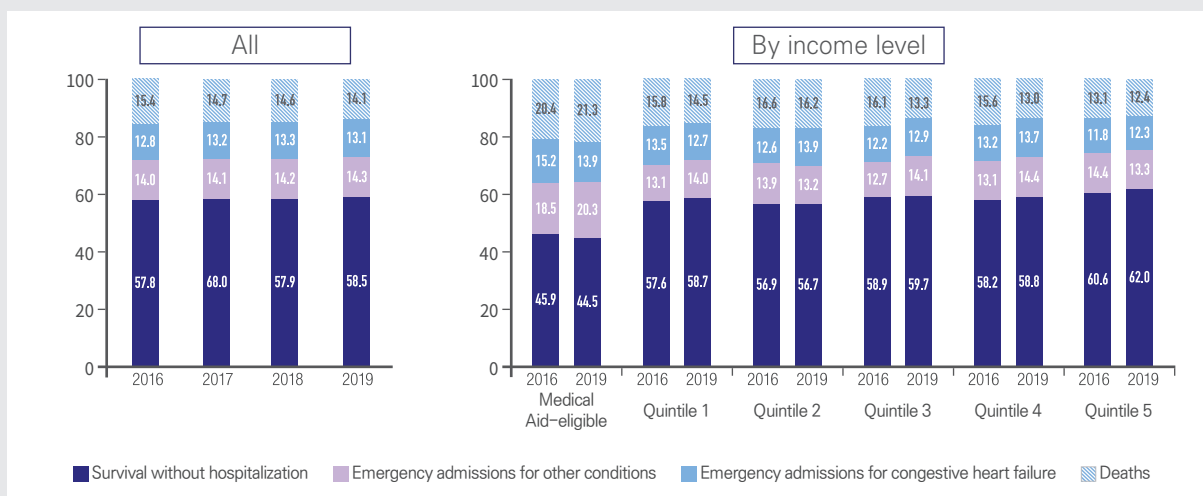


Note: Estimated using the National Health Insurance data from the National Health Insurance Service, the figures do not include admissions due to cancer, pregnancy, or childbirth; they are standardized for sex and age with reference to the 2011 population.

Source: Sujin Kim et al. Korea Health Care System Performance. Korea Institute for Health and Social Affairs. pp.145~146.

The rate of death within one year of emergency admission for congestive heart failure was found to have declined in the years from 2016 to 2019, from 15.4 percent to 14.1 percent. The rate of hospitalization due to congestive heart failure within one year of an index emergency admission was 13.1 percent in 2019. The rate of hospitalization due to other causes within one year of an index emergency hospitalization with congestive heart failure was 14.3 percent in 2019. Both estimates were slightly higher than their 2016 levels. The rate of survival without hospitalization for one year following an index emergency hospitalization for congestive heart failure was 57.8 percent in 2016 and 58.5 percent in 2019; by income level, the rate was highest for those in the fifth quintile and lowest for Medical Aid beneficiaries.

[Figure 8] Deaths or hospitalizations within one year of index emergency admissions for congestive heart failure (in %)

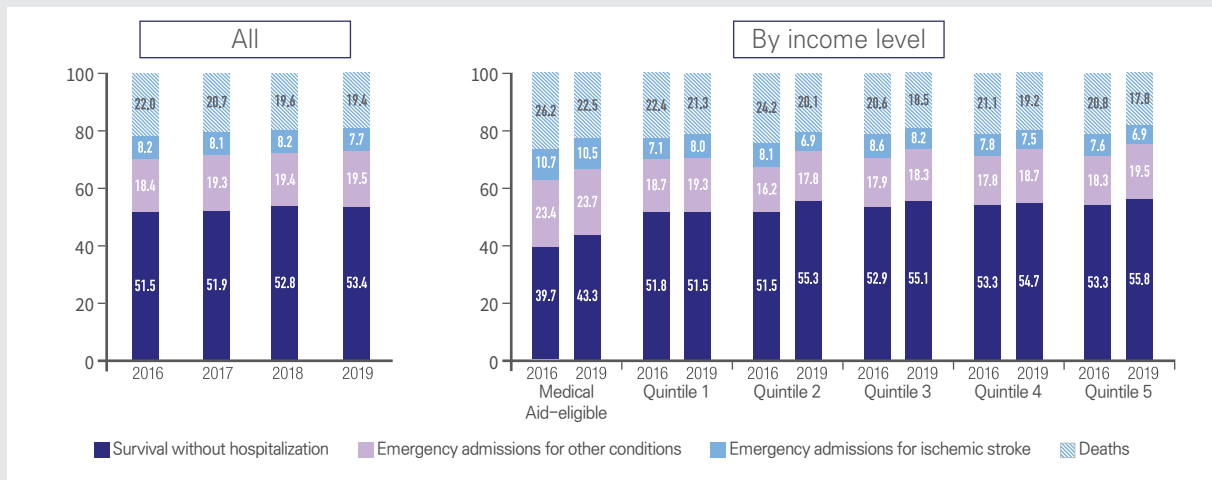


Note: Figures are estimated using the National Health Insurance database of the National Health Insurance Service; they are standardized for sex and age with reference to 2016 estimates.

Source: Sujin Kim et al.. Korea Health Care System Performance. Korea Institute for Health and Social Affairs. Reconfiguration of the figures on p.147 and p.149.

The rate of death within one year of an emergency admission for ischemic stroke declined from 22.0 percent in 2016 to 19.4 percent in 2019. The rate of hospitalization for ischemic stroke within one year of an index emergency admission was 7.7 percent in 2019, down by 0.5 percentage points from 2016. In 2019, the rate of hospitalization for conditions other than ischemic stroke within one year following an index emergency hospitalization with ischemic stroke was 19.5 percent in 2019, a drop by 1.1 percentage points from the 2016 level. By income level, the one-year mortality was highest in people in receipt of Medical Aid. The one-year mortality in patients with congestive heart failure was highest in Medical Aid beneficiaries and lowest in those belonging to the fifth income quintile. The rate of survival without hospitalization for one year following the initial emergency admission for ischemic stroke was highest with people eligible for Medical Aid and lowest with the highest income quintile.

[Figure 9] Deaths or hospitalizations within one year of index emergency admissions for ischemic stroke (in %)



Note: Figures are estimated using the National Health Insurance database of the National Health Insurance Service; they are standardized for sex and age with reference to 2016 estimates.

Source: Sujin Kim et al.. Korea Health Care System Performance. Korea Institute for Health and Social Affairs. Reconfiguration of the figures on p.151 and p.153.



Concluding remarks

The quality of care as measured by health outcomes has improved overall. However, for those eligible for Medical Aid, the quality of care at large remained poor. In general, lower income was associated with lower health care quality. One reason for the high rate of preventable hospitalization observed in those eligible for Medical Aid may be that in many cases routine care for their chronic conditions have not been carried out appropriately. This study examined medication adherence in hypertensives and diabetics. For patients with diabetes there was a significant improvement in medication adherence in recent years. However, medication adherence in hypertensives remained persistently low throughout the years examined. On the same line, a study has pointed out the generally poor health behaviors of Medical Aid beneficiaries in Seoul.²⁾

These findings suggest that the focus of the health care policy on those eligible for Medical Aid should shift away from preventing them from using health services to excess to making sure they are provided with, via improved access to high-quality primary care, support in the self-management of their chronic conditions.

In a survey conducted by the Korea Disease Control and Prevention Agency, a large proportion of low-income people with poor self-rated health reported a need for support from the health system. The

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2) Chang-woo Sohn. "Reality of healthcare utilization and health behaviors of medical aid beneficiaries in Seoul". Seoul Institute.

proportion of those who felt the current level of support from the health system insufficient was likewise high. This suggests that, especially given the high prevalence of both chronic conditions and unhealthy behaviors in low-income groups in Korea, the health system should be extended to such an extent as to cover additional support for people with chronic conditions in their self-management of health and illness.

In patients with congestive heart failure and ischemic stroke, the rate of deaths decreased as survival without hospitalization increased, which, while suggesting that there has been improvement up to a point in the quality of acute and follow-up care, points to a need for effort to bring out further improvement through “integrated management.”

Between the years 2016 and 2019, in patients with ischemic stroke, the rate of hospital admissions for conditions other than ischemic stroke rose and the rate of readmissions for the same condition declined, while in patients with congestive heart failure, both rates increased. The relatively better outcomes of ischemic stroke can be attributed to the relatively greater increase in recent years in stroke treatment units and to the high rehabilitation rate in patients with ischemic stroke.

Hospital admissions for ACSCs have declined overall in recent years. The decline was especially pronounced in 2020, presumably due to the covid-19 pandemic. This could be attributed in part to a decrease in unnecessary hospitalizations, but monitoring needs to be carried out of whether the outcome is as a result of health care needs left unmet. Also, it should be noted that the outcome measures used in this study as a means of examining national-level trends should be construed with caution, given that they are used without risk adjustment.