

Opinion

Scientific evidence or a policy judgment on the new placement of 2,000 at Korean medical schools in 2025

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The 2,000 new placements at Korean medical schools

The topic of “increased number of places at Korean medical schools in 2025 by 2,000 entrants and the resignation of 10,000 residents and interns” has been dealt with in the news of the *BMJ* [1]. In the opinion of the *Journal of Korean Medical Sciences* [2], where the author condemns the government’s authoritarian attitude of treating physicians as felons, including “The government will annul residents’ medical license, prohibit hospitals from accepting residents’ resignations, or pronounce maximum criminal sentence.” He suggested that “the government and the medical community hoping each will take a step back and discuss these policies together to prevent public disaster.” The *Lancet* also announced this topic in the news section: “The Korean government aims to address a projected shortage of 15,000 doctors by 2035 through a new recruitment cap. Junior doctors, however, believe that merely increasing medical school slots won’t effectively tackle physician shortages in underserved medical areas. Instead, they assert that newly qualified physicians will still gravitate toward high-paying fields like cosmetic surgery and dermatology in the greater Seoul region [3].“

It is painful to hear the resignation of interns and residents and the Korean government’s

threatening voice against young physicians (interns and residents) on such beautiful blossom days. Every March and April in the general hospital is a dynamic period when new-coming interns and residents work for patients and learn more practice under the direction of supervisors. They can interact with other health professions, including nurses, pharmacists, dietitians, physical therapists, health information managers, and radiological technologists. Those inter-professional activities became the first step in saving the patients suffering from the pain caused by illness. Also, rapport formation among health professionals, patients, and their families is a new joy and pleasure to work as a physician. March and April were the cruelest months for young physicians without such lively days.

In this opinion, I introduce the young physicians' (interns and residents) voice and the counterpart Korean government's statement to explain the present situation on the threat to young physicians — *“a medical license suspension at least 3 months from March 2024, and related investigations and prosecutions”* by the Korean government. *In addition, I will introduce expert opinions on significant issues and make suggestions from the perspectives of educators and editors by searching journal articles, newspapers, the government's briefings, and personal communication.*

Ethics statement

It is an opinion on the policy judgement; therefore, neither approval by the institutional review board nor the obtainment of informed consent is needed.

Korea Interns and Residents Association Emergency Measures Committee Statement 240220

The official Emergency Measures Committee statement 240220 of the “Korea Interns and Residents Association” was announced on February 20, 2024 [4] (Supplement 1). The Association demanded follows:

- Completely withdraw the essential healthcare policy package and the plan to increase the number

of places at medical schools by 2,000 a year.

- Establish a body to conduct a scientific forecast of doctor supply and demand and discuss increases and decreases.
- Expand the hiring of specialists in training hospitals.
- Verify the concrete measures to mitigate the legal burden on doctors due to unavoidable medical incidents.
- Improve the harsh training environment for residents, who work up to 80 hours per week.
- Withdraw all unfair orders that intimidate residents and formally apologize to them.
- Fully repeal Article 59 of the Medical Service Act, which infringes upon the fundamental rights of citizens, and comply with the Republic of Korea's Constitution and the International Labour Organization's (ILO) prohibition of forced labor.

The present number of admissions to medical school is 3,058 in 40 institutes. According to the law from 2016, the maximum labor hours for interns and residents is 80 hours, except 8 hours for education [5]. After the statement announcement, the residents began to leave their training hospitals one by one as a protest against the government's briefing.

Emergency Briefing on the Physician Workforce Expansion Plan

Why would the gifted young physicians, who represent the hope of Korea, issue such a statement? It can be seen as a reaction to the "Emergency Briefing on the Physician Workforce Expansion Plan" announced by the Ministry of Health and Welfare on February 6, 2024 [6] (Supplement 2). This emergency briefing can be summarized as follows:

Four essential healthcare policy packages will be executed to enable physicians to dedicate themselves to regional and essential healthcare: 1) expanding the healthcare workforce, 2) strengthening regional healthcare, 3) establishing a safety net for medical accidents, and 4) enhancing fairness in the compensation system. We will increase the medical school admissions

quota by 2,000 from 3,058 to 5,058. With an additional 2,000 students admitted annually from 2025,

A more specific proposal is in the Essential Medical Policy Package (Supplement 3).

Continued resignation of the residents and the government's threat of judicial proceedings

Minister of Health and Welfare said on February 27, 2024, "From March, it is inevitable to suspend the license for those who have not returned and proceed with related judicial procedures [7]."

After the announcement of the statement on February 20, 2024, by the Korea Interns and Residents Association, the residents of the training hospitals continued to submit their resignations. After that, on February 28, the number of residents who submitted resignations was 9,997, 80.2% of all residents, and the hospitals did not accept all according to the Korean government's order. The number of residents who left the hospitals was 9,076, 72.8% of all residents [8]. The Korean government issued an order to commence work for 13 residents on March 1, 2024 [9] under Article 59 (2) of the Medical Service Act [10].

Article 59 (Guidance and Order) of the Medical Service Act is as follows [10]:

(2) *The Minister of Health and Welfare, a relevant Mayor/Do Governor, or the head of a relevant Si/Gun/Gu may order medical personnel or founders of medical institutions to resume medical service if there is a reasonable ground to believe that suspension of medical service by the medical personnel without any justifiable ground, or temporary shutdown or closure of medical institutions by a group of the founders causes or is likely to cause significant difficulties in giving medical treatment to patients. <Amended by Act No. 8852, Feb 29, 2008; Act No. 9932, Jan 18, 2010>*

Therefore, under the current circumstances, most residents who do not currently work after submitting their resignations may be subject to criminal punishment. In addition, criminal punishment threatens doctors as a punishment of imprisonment or higher may result in the

cancellation of a medical license. In Korea, the occupations that can be ordered to commence business by law are medical doctors and pharmacists (medicine manufacturers, pharmacy establishers, etc.) and cargo drivers (freight transportation businesses and workers).

On April 1, 2024, there was a Korean presidential statement to the Korean people as follows [11]: Regarding the scale of the increase in medical school admissions, [the government] repeatedly emphasized, "The government has decided to increase medical school admissions by 2,000 students based on clear grounds and sufficient discussion," and stressed, "If the medical community argues that the increase should be reduced from 2,000, instead of collective action, they should properly present a unified proposal with clear scientific grounds to the government." "The average number of physicians of OECD countries is 3.7 per 1,000 population, but it is 2.1 in Korea."

He continued, "If they bring a more reasonable and rational solution, we can discuss it anytime," and said, "If better opinions and rational grounds are presented, government policies can change for the better."

At the same time, he emphasized, "However, we can never accept attempts to force their will through power without proper logic and grounds. They must immediately stop illegal collective actions and bring rational proposals and grounds."

The President said, "I will create a proper medical system through medical reforms," adding, "We will make massive financial investments to make the competitiveness of our country's medical and healthcare industries the best in the world."

Mitigation of threats to young physicians by the Korean government after the meeting between the President and the leader of residents and interns

After the presidential statement, there was a meeting between the President and the President of the Korea Interns and Residents Association on April 4, 2024, in the Presidential office. However, it is still unclear whether the meeting can be a catalyst for solving the present conflict on the increased admission placement of 2,000 medical schools in Korea. There has been

no official announcement on the content of the discussion. After this meeting, the Korean government stopped threatening the residents. However, the refusal to accept medical residents' resignations continued according to the government's order.

After that, the Prime Minister said on April 19, 2024, "Of the 32 universities whose medical school quota has been expanded this year, if desired, we will allow them to recruit new students autonomously only in the 2025 school year within the range of 50 to 100% of the increased number [12]."

Minister of Health and Welfare said on April 22, 2024, that "the Special Committee on Medical Reform will be launched this week for social discussions on medical reform tasks" and "the government will do its best to present each other's opinions on major issues of medical reform, such as the direction of investment in essential medical care, through the committee, and to prepare reasonable alternatives through open discussions." He asked "The Korean Medical Association and the Korea Interns and Residents Association to participate in the special committee on medical reform so that developmental and constructive discussions can take place, not just turn a blind eye in connection with the quota of medical schools [13]."

In late April, there was no further change in the residents' action —resignation from training hospitals. The government also persisted in increasing medical school quotas, although the presidents of some medical schools decreased some quotas. The Korean Medical Association and the Korea Interns and Residents Association still did not participate in the government's suggested special committee.

What are the fundamental issues in the present situation in Korea: new placement of 2,000 at Korean medical schools and medical residents' mass resignation

First, is there an increase of medical school students by 2,000 based on scientific evidence or a policy judgment?

The Korean government continuously said that this increase is ‘based on clear grounds and sufficient discussion’ and that physicians should properly present a unified proposal with clear scientific grounds to the government [11]. Three reports are the basis of the government’s argument [14 – 16].

However, the authors of these three reports, which the government cited as scientific evidence, denied the basis for the government's increase of the 2,000 medical school quota (<https://medicaltimes.com/News/NewsView.html?ID=1157769>). Professor Yun-Chul Hong at Seoul National University stated that his research [14] did not mention a 2,000-student increase. The report included various scenarios, and from the researcher's perspective, the most reasonable scenario was an increase of 500 to 1,000 students. He emphasized that while South Korea will face a physician shortage from 2045 to 2050, there will be an oversupply after that, so medical school quotas should be adjusted accordingly.

Dr. Junghyun Kwon from the Korea Development Institute (KDI) also pointed out that the government's policy is misleading her research [15]. Her proposed scenarios include increasing admissions by 1,000 students annually starting in 2024 for a total of 4,000 additional students, maintaining a 5% annual increase until 2030 to reach 4,500 students, and 7% and 10% annual increases. There was no scenario involving a 2,000-student increase yearly for 5 years to reach 10,000 additional students.

Dr. Youngseok Shin, an Honorary Fellow at the Korea Institute for Health and Social Affairs, also stated that he disagrees with the government's plan to increase medical school admissions by 2,000 students, citing the pace as too fast [16]. Even if the government deems a total increase of 10,000 students necessary, he explained, it would be more appropriate to spread the increase over 10 years instead of 5 years, adjusting the pace considering the medical market situation when the new doctors graduate.

However, the Second Vice Minister of the Ministry of Health and Welfare said, “those three reports are policy suggestion, and when the administration makes policy decisions, of course, those suggestions are considered and referenced. We make policy decisions by taking into account

all the other surrounding conditions and these things, and then the demands of other organizations and these things. So it's up to the government to make policy decisions [17]“.

Considerations for future estimation of the number of physicians

The 18th president of the Korean Society of Epidemiology said that healthy aging, the introduction of artificial intelligence to medicine, and the restriction of outpatient visit should be considered in estimating the future demand for physicians. In the aging population, diseases will not necessarily increase; instead, the number of people experiencing healthy old age is on the rise. With advancements in artificial intelligence that are currently hard to imagine, an era is approaching where AI can perform tasks traditionally reserved for medical professionals [18]. If the work performed by AI programs is recognized for medical billing, healthcare facilities may no longer need to employ as many specialists. Currently, AI interpretations are not acknowledged for billing purposes. However, AI's diagnostic capabilities are expected to surpass those of human specialists in various fields. When that happens, AI-generated diagnostic results could be recognized for billing, and only the more challenging interpretations might require a specialist's attention.

Korea's number of physicians per 1,000 populations is lower than the OECD country average (3.7 per 1,000 populations in 2021), standing at 2.6 per 1,000 population in 2021 (2.1, excluding Oriental medicine doctors). However, the difference in the number of physicians per 1,000 populations between Korea and countries like Japan (2.6), the United States (2.7), and Canada (2.8) in 2021 is not significant (<http://oecd.org/els/healthsystems/health-data.htm>). Despite this, Korea has the highest number of outpatient visits per capita among OECD countries, with an annual average of 15.7 visits compared to the OECD average of 5.9 visits in 2021. The "avoidable mortality rate," an indicator that evaluates the number of patients who died because they did not receive medical treatment on time, is 142.0 per 100,000, which is less than half of the OECD average (293.1) in 2021 [19].

The current supply of healthcare services in Korea is among the highest in OECD countries, and the Korean people enjoy top-level services while incurring low routine medical costs.

However, it is necessary to evaluate whether the high frequency of medical visits constitutes an over-demand for healthcare. It is crucial to assess whether to maintain the low contribution rate to health insurance and unrestricted access to medical facilities or whether controls are necessary.

Dr. Jung said the following about the politics of health care reform in Korea [20]: “First and foremost, policymakers must break free from the vicious cycle of scapegoating and blame avoidance that has plagued them repeatedly. The government must construct a new governance framework to establish a long-term national-physician relationship. This framework space must be created to deliberate a novel healthcare system that guarantees health equity while accounting for demographic and technological shifts. More than increasing personnel will be necessary to achieve a better healthcare system. Increasing the number of physicians is necessary, but it must operate in conjunction with other policy packages. However, suppose the foundation of trust-building between the two parties, an asset for the future, is further eroded in the pursuit of normalizing interest group politics. In that case, new governance will become increasingly elusive.”

Second, is threatening residents with an order of forced labor reasonable in Korea, a democratic society?

The government’s threat was mentioned above [9]. Also, the Second Vice-Minister of Health and Welfare explained more precisely on this issue as follows [21]:

“Submitting medical residents’ resignation letters collectively is not a true expression of intent so that legislation can invalidate this. Didn't I tell you that? So, administratively, there will be a legal dispute over that principle in terms of public law. So, the Medical Service Act becomes public law. In public law, anyway, the request of resignation was not accepted, and even though the request was not accepted, if residents do not appear at the hospital and do not provide medical treatment, it violates the order to start work. And that is punishable under the Medical Service Act. Residents can get up to 3 years in prison at the maximum. If they do not comply with the order to start work, there will be a disposition from the Minister of Health and Welfare. At the same time, the Korean

government will file a legal complaint and accusation. Then, the judicial process will begin. An investigation will take place, and based on the results of the investigation, an indictment will be made; the indictment will lead to a trial, and if a prison sentence or heavier is confirmed as a result of the trial, or rather, even if only the first trial verdict comes out, I told you that the government will take administrative measures. Once the verdict is out, the next step can include revoking the residents' medical licenses.”

Although the execution of these judicial processes was halted after the meeting between the Korean President and a medical resident leader, it may be a request for forced labor. The Korean government can execute the judicial process at any time. Still, the hospitals could not accept the residents' resignations according to the government's order. Therefore, the residents can not work in other places. They have no income for two months.

A lawyer's opinion is being presented that the order to start work, which the Korean government is threatening resident doctors with, has the possibility of being unconstitutional [22] as follows:

“The reason for voicing concerns about the order medical residents to start work under Article 59 of the Medical Service Act is that the order appears to have been established as an excessively powerful means or method beyond what is necessary to achieve a specific administrative purpose. In reality, as demonstrated by the measures to accuse resident, it could potentially be used by the government as a convenient legal tool to control medical professionals and the medical community at will. It is deeply worrisome how far the government may attempt to control the medical field. Doctors are not military physicians who can be punished for insubordination or violation of orders if they do not obey legitimate orders from their superiors, are they?”

The young physician must be liberated from despair, fear, and depression.

The crux of this matter concerning the government's threats toward resident physicians is: who nurtures the doctors? The rationale that thoroughly privately trained physicians can be treated akin to military doctors under Article 59 of the *Medical Service Act* is incomprehensible to the

young doctor. Those of us from the post-generation (birth from 1955-1963), like myself, worked selflessly and without complaint, following the demands of our senior physicians in pursuit of national revival, disregarding any hardship. When I interned at the Seoul National Hospital from May 1985 to February 1986, I remember working more than 140 hours a week. When the so-called “resident law, ”limiting the on-duty hours to 88 hours per week, including 8 hours for educational purposes, was passed in 2015, I was delighted and anticipated that 80 hours-limitation would be the first step toward better patient safety and health of residents [23].

However, the post-war generation has already accomplished the national revival of Korea. The young physicians of today belong to a new generation with distinct values from the post-war generation; they possess a strong sense of self and are not the type to engage in forced labor simply because they are instructed to do so. Failure to adapt to such change will impede understanding, communication, and problem-solving with the younger generation. It should be evident that threatening these young physicians, who will bear responsibility for our future, with measures like license suspensions and denial of resignations, will not resolve the issue. As of April 2024, the government's advertisements vilifying resident physicians in public spaces can also be viewed as a form of such pressure tactic (Supplement 4). I remember the French artist, Bernard Buffet (1928-1999)’s message when he was criticized by the public: “La haine dont je suis entouré est, pour moi, plus merveilleux cadeau que l'on m'ait fait.”

These various measures are akin to driving our future healthcare system toward self-destruction, and thus, attempts to resolve the issue through further threats must cease. When an individual undertakes work, there must be a purpose, the ability to ascribe value to that purpose, and commensurate compensation. Moreover, tasks not chosen by oneself no longer hold meaning for this generation. We must remember that these young physicians, nurtured by our nation's people and society, are the rising stars responsible for safeguarding our health in the future.

Clinical faculty members are also under burnout due to long working hours and frequent duty at night.

My junior doctors in the university hospitals complain of helplessness, anger, and depression under the present status of residents' resignations. They are the most excellent physicians and surgeons in the world. However, they have already experienced burnout. The most significant stressor or burnout source was “excessive regulation by the government or university [24].” The present situation may make them quit university hospitals due to a fear of death from being overworked. They need psychological support beside of provision of assistant personnel.

Role of the Korea Institute of Medical Education and Evaluation

In March 2024, the Korea Institute of Medical Education and Evaluation (KIMEE) released the newly revised accreditation criteria, 'ASK 2026 (Accreditation Standards of KIMEE 2026, <https://kimee.or.kr/board/data/>),' which is an update from ASK2019 [25]. If there are substantive changes, including increase of admission quota, a mandatory evaluation of the substantive change plan must be undertaken according to the KIMEE's accreditation process [26]. If not accredited, graduates might also lose their eligibility for the Korean medical licensing examination. According to the Medical and Higher Education Act [27], only graduates from KIMEE-accredited institutions are eligible to take the medical licensing exam.

Director of KIMEE stated

(<https://www.docdocdoc.co.kr/news/articleView.html?idxno=3016783>): "As the head of the accreditation agency, I cannot casually discuss the results of upcoming evaluations. However, it is crucial to recognize that nurturing a single expert requires more time and dedication than expected. Moreover, society must acknowledge that such investment is necessary for professionals to perform their roles effectively. Medical education should not be merely about passing exams; it should ensure quality and provide a proper educational environment. KIMEE is committed to enhancing the quality of medical education and contributing to public health in accordance with these goals."

We have to pay attention to whether the accreditation system established by the KIMEE for the quality management of medical education can effectively respond to the abrupt increase in medical school enrollments by 2,000 annually.

Editor's perspective on this policy judgement

From an editor's perspective, the regrettable aspect is that three reports cited by the government as evidence have yet to be published in scholarly journals. Typically, scientists submit their research findings as reports and then proceed to have them published in peer-reviewed scholarly journals. While the three studies mentioned above are commendable, had they been published in academic journals like other research reports, their scientific credibility would have been further bolstered. Moving forward, if such policy-related research were to be submitted and published in international peer-reviewed journals, it would facilitate a broader understanding among researchers and readers worldwide, ultimately benefiting future policy discussions.

What shall I do now?

Since I am not a specialist in health policy but a retired basic scientist and teacher, I can do nothing before the present turmoil. I guess the Korean government and the medical residents do not want to withdraw their arguments quickly since they have no confidence in each other. The present residents' resignations will probably continue for a long time. In this status, the two most vulnerable groups are patients who need care in the university hospitals and the clinical faculty members in the hospital. Patients may worry about delayed care. They should seek another general hospital where residents have not worked as soon as possible if their waiting time for surgery or therapy is prolonged.

Also, my great worry is the burn-out and exhaustion of clinical faculty members who should care for patients on night duty instead of residents. I know very well how much they dedicated to patient care without considering their physical status, day and night, since I also had worked as clinician for four years as a public health physician and an intern. Therefore, reducing their workload should be a primary concern for hospital managers. Introducing physician assistants is another option for this purpose, although it is not a final solution. If those faculty members continue to experience depression and hopelessness, the collapse in the provision of high-quality health care can be met. The first and foremost merit for me to live in Korea is the fantastic, top-tier

medical care level provided by Korean physicians, healthcare personnel, and medical institutes. I do not want to imagine such a tragic collapse.

At present, the situation is dire and demands immediate attention. I conclude this opinion by citing a recommendation from my senior doctor, a specialist in health policy [28]: "A country's healthcare policy must first establish a comprehensive dialogue on healthcare, and then assess the supply and demand for healthcare human resources based on clearly defined objectives and specific detailed plans. This process also necessitates the involvement and consensus of the professionals and hierarchical organizations tasked with healthcare provision. Healthcare policy is a complex and challenging issue that demands extensive collaboration. The time is now for the Korean government to formulate a cohesive short- and long-term plan, incorporating expert input, to guarantee the delivery of sustainable, top-tier healthcare services."

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Authors' contributions

All work was done by Sun Huh.

Conflict of interest

Sun Huh has been the editor of the *Emba Medical Journal* since September 2003. However, he was not involved in the peer review process or decision-making. Sun Huh is also a member of the Korean Association of Medicine (KMA); therefore, his ideas and opinions may be biased to those of KMA and clinical faculty member, although he was a basic scientist and had already retired from his university. He may be unable to stand in a neutral position on the health policy issue. Otherwise, no potential conflict of interest relevant to this article was reported.

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Supplementary materials

Supplement 1. The official Emergency Management Committee statement 240220 of the “Korea Interns and Residents Association” announced on February 20, 2024

Supplement 2. "Emergency Briefing on the Physician Workforce Expansion Plan" announced by the Ministry of Health and Welfare on February 6, 2024

Supplement 3. Essential Medical Policy Package announced by the Ministry of Health and Welfare on February 6, 2024.

Supplement 4. Video file, publicizing the Korean government’s medical policy in the public places in Korea.

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