



Report of the State Comptroller of Israel | July 2024

Ministry of Health

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# **Regulation of Clinical Training for Doctors Between the Healthcare System and Academia – Follow-up Audit**





## Regulation of Clinical Training for Doctors Between the Healthcare System and Academia – Follow-up Audit

### Background

In 2020, the ratio of doctors in Israel was 3.3 per 1,000 people, slightly below the OECD average of 3.7 per 1,000 people<sup>1</sup>. Over the years, there has been an increase in the granting of new licenses for doctors by the Ministry of Health, from 919 licenses in 2012 to 2,429 licenses in 2023. In 2023, 1,211 of the licenses were granted to Israelis who graduated from universities abroad (50%), 749 to graduates of universities in Israel (31%), and 469 to immigrants who completed their studies abroad (19%).

To become a medical specialist, both education and training are required. This involves at least 9–11 years, divided as follows: 4 or 6 years of medical studies, with half focusing on pre-clinical education at the university and half on clinical studies, primarily in hospitals, across four main departments: Obstetrics and Gynecology, Pediatrics, Surgery, and Internal Medicine; one year of internship (residency) in hospitals, after which a medical license can be obtained<sup>2</sup>; some doctors continue with an additional 4–7 years of specialization, after which they can earn the title of 'medical specialist'; to gain a sub-specialty, a further 2–4 years of training are required.

Two main bodies are involved in regulating the training of doctors in Israel: the first is the Council for Higher Education (CHE), which serves as the regulatory body for Israel's higher education system, supervising universities and approving degrees, and operates under the Minister of Education. Within the CHE operates the Planning and Budgeting Committee (PBC), responsible for organizing and funding medical education under its authority as the regulator of the higher education system. The second body is the Ministry of Health, the regulator of the healthcare system. This includes responsibility for hospitals, clinics, and other medical institutions. The Ministry owns, operates, and funds government hospitals and supervises the health maintenance organizations (HMOs) under the National Health Insurance Law, 1994. As part of its responsibility, the Ministry of Health is in charge of planning the workforce for the

- 1 According to the OECD Report on Medical Education and Training in Israel – The Organisation for Economic Cooperation and Development, which includes 38 developed countries.
- 2 In November 2023, the Council for Higher Education (CHE) decided to adopt the recommendation to confer the Doctor of Medicine (MD) degree upon completion of academic requirements, at the end of academic studies, and not to include the internship year as part of the academic requirements for the degree; this report pertains to the period before November 2023.



entire healthcare system, guiding all hospitals, and licensing all health professions, including doctors, nurses, physiotherapists, and psychologists.

This report is a follow-up report on the rectification of deficiencies raised in a previous report by the State Comptroller from 2018, titled "Regulating the Clinical Training of Doctors between the Healthcare System and Academia" (the previous audit). In 2022, following the publication of the previous report, two committees submitted their findings: the Committee for Long-Term Planning of Medical Personnel in Israel, established by the Ministry of Health, which has already begun implementing its recommendations; and the Committee for Reviewing the Structure of Medical Studies and Mapping Clinical Fields<sup>3</sup> in Medical Education, established by the Council for Higher Education (CHE) in collaboration with the Ministry of Health. Both committees recommended that by 2025, the number of students beginning medical studies in Israel should increase to 1,200, compared to 800 students who began in the 2020–2021 academic year. In May 2023 (during the follow-up audit), the Ministry of Health established another committee to address the shortage of medical personnel in the healthcare system, under which three subcommittees were appointed.

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<sup>3</sup> Clinical training conducted in inpatient departments, during which students learn "at the patient's bedside," as well as in health maintenance organizations (in the community).



Key Figures

**only 31%**

the rate of those who received a medical license in 2023 who studied at universities in Israel (749 graduates) out of a total of 2,429 licenses issued that year. The remainder: 50% are Israelis who graduated from universities abroad, and 19% are new immigrants who studied abroad

**3.3  
doctors  
per 1,000  
people**

the ratio in Israel in 2020, compared to the OECD average of 3.7 doctors per 1,000 people that year

**2,000  
students**

the Ministry of Health's target for the number of first year medical students in Israel for 2030

**about 1,100  
students**

began their medical studies in Israel in the 2023–2024 academic year (October 2023 – September 2024)

**16% and  
4%**

the growth rate in the number of interns (Cadets) from 2017 to 2023 was 16%, compared to only about a 4% increase in the number of hospital beds serving as their training infrastructure

**40**

the number of weeks required annually for the clinical training of students in each of the four main departments to meet the target of 2,000 medical students by 2030, in contrast to the mere 12–38 weeks of training provided in these departments in 2022

**only 24  
students  
per 1,000  
hospital  
beds**

were trained in Israel in 2020, compared to the OECD average of 38 students per 1,000 hospital beds in the same year

**1,025**

the number of medical licenses issued in Israel in 2022 to Israelis who graduated from foreign universities, including 634 (about 62%) who studied at institutions designated under the 'Yatziv Reform', whereby from 2026, students at these institutions will no longer be eligible to take the licensing exam in Israel and, therefore, will not be able to practice medicine in Israel



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## Audit Actions



**The Previous Audit** – from March to September 2017, the State Comptroller audited the regulation of medical training between healthcare bodies and academia, including the student load in clinical fields; agreements between hospitals and universities; the licensing exam for graduates from abroad; the internship year; the lack of planning for residency positions; the quality of medical education; and the absence supervision over the number of doctors employed in the healthcare system.

**Follow-up Audit** – from February to August 2023, the State Comptroller conducted a follow-up audit on the rectification of deficiencies raised in the previous audit, including additional findings from the follow-up audit. The audit was conducted at the Ministry of Health, the CHE-PBC, the Ministry of Finance, medical schools at the universities – the Hebrew University of Jerusalem, the Technion in Haifa, Tel Aviv University, Ben-Gurion University of the Negev, Bar-Ilan University (Faculty of Medicine in Safed), and Ariel University in Samaria; at general hospitals – 11 government medical centers<sup>4</sup>, seven medical centers of Clalit Health Services (Clalit)<sup>5</sup>, two public medical centers: Hadassah Medical Center and Assuta Medical Center in Ashdod; and at the four health maintenance organizations – Clalit, Maccabi Healthcare Services (Maccabi), Meuhedet Health Services (Meuhedet), and Leumit Health Services (Leumit).

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## Key Findings



**Shortage of Doctors in Certain Specialties** – according to data from the Civil Service Commission and the Ministry of Health, there is a shortage of doctors in the following disciplines: geriatrics, pediatric neurology, anesthesiology, intensive care, general surgery, pediatric surgery, internal medicine, oncology, emergency medicine (intensive care), pathology, radiology, rehabilitation, neurology, forensic medicine, and psychiatry.

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- 4 The Chaim Sheba Medical Center – Tel Hashomer (Sheba), the Tel Aviv Sourasky Medical Center (Ichilov), the Edith Wolfson Medical Center in Holon (Wolfson), the Hillel Yaffe Medical Center in Hadera (Hillel Yaffe), Rambam Health Care Campus in Haifa (Rambam), the Bnei Zion Medical Center in Haifa (Bnei Zion), the Galilee Medical Center in Nahariya, the Ziv Medical Center in Safed (Ziv), Baruch Padeh Medical Center in Tiberias (Poriya), the Barzilai University Medical Center in Ashkelon (Barzilai), and the Shamir Medical Center in Be'er Ya'akov (Shamir).
- 5 The Rabin Medical Center – Beilinson and Hasharon Hospitals (together referred to as Beilinson), Kaplan Medical Center (Kaplan), Soroka Medical Center (Soroka), HaEmek Medical Center (HaEmek), Carmel Medical Center (Carmel), Meir Medical Center (Meir), and Schneider Children's Medical Center (Schneider). Yoseftal Medical Center does not train medical students.



For example, in 2022, the Committee for Examining Neurology in Hospitals and the Community recommended increasing the number of neurologists by about 300 specialists to meet the population's needs at that time. In psychiatry, the shortage was estimated at about 280 doctors in 2019 (in both hospitals and the community). The need for psychiatrists in the public sector is particularly noteworthy given the war that began on October 7<sup>th</sup>, 2023 (Swords of Iron), which has had an impact on the mental health and resilience of the general public in Israel. According to a forecast by the Ministry of Health on the physician ratio in the coming years (which did not account for an increase in medical students), by 2035, the shortage of doctors is expected to worsen, with the doctor-to-population ratio dropping to 3.02 doctors per 1,000 people, lower than the 2020 ratio of 3.3 doctors per 1,000 people.

**Impact of the Yatziv Reform<sup>6</sup> on the Need to Plan the Number of Doctors** – in 2022, 1,025 medical licenses were issued in Israel to foreign graduates; 634 of them (about 62%) were issued to Israelis who studied medicine at universities that, under the Yatziv Reform, were designated as institutions whose students, starting medical studies there from 2019 onward, would not be eligible to take the medical licensing exam in Israel and therefore would not be permitted to practice medicine in Israel. The Yatziv Reform is designed to ensure that only graduates of foreign universities recognized by the Medical Professions Licensing Division as meeting professional standards set by local experts can take the licensing exam in Israel. However, doctors who studied abroad at disqualified universities have primarily integrated into peripheral areas: according to data from the Ministry of Health on doctors who received licenses in 2022, 51% of doctors in the Negev and 63% of doctors in the Galilee, 34% of all doctors who received licenses that year in Israel. This indicates that the Yatziv Reform will primarily impact the number of doctors in peripheral areas (in the north and south).

**Medical Workforce Planning** – the previous audit found that the Ministry of Health lacked a multi-year plan to determine future needs in each medical discipline and the number of positions it intends to add in each discipline and hospital. The follow-up audit found that this deficiency was only partially addressed. While the Ministry of Health has a model to forecast the expected doctor-to-population ratio per 1,000 people and has formulated a specific plan to increase the number of medical students in Israel, unlike advanced countries such as the United States, the United Kingdom, Canada, France, Australia, and Belgium, it lacks a professional mechanism for strategic planning of the medical workforce, such that would allow it to develop a multi-year plan aligned with population needs. Furthermore, the Ministry failed to conduct an accurate situational assessment, particularly in mapping data on the number of medical specialists in each discipline and the shortages therein, nor did the Ministry conduct an assessment of future demand for doctors by specialty and geographic distribution. Additionally, the audit found

<sup>6</sup> In 2018, the Ministry of Health established a list of foreign universities that do not meet the required standards for medical studies. It was decided that students who began their studies at these universities starting 2019 would not be permitted to take the medical licensing exam in Israel and, therefore, would not be able to practice medicine in the country.



that the Ministry of Health lacks comprehensive data on thousands of doctors residing abroad (estimated by the Ministry at approximately 3,700 in 2022), including the duration of their stay, information on doctors who relocated and are expected to return, and their anticipated return dates, nor does the Ministry have an organized system or plan to encourage their return.

### **Use of the National Resource of Clinical Fields in Hospitals in Israel**

- **Training of Students in Clinical Fields in Israel** – medical students in Israel conduct a significant portion of their clinical studies in clinical fields, which involves study groups at the patient's bedside under the guidance of hospital physicians. A hospital operating clinical fields must be certified by the university with which it has an agreement. The quality of clinical training depends on several factors, some of which are quantitative, such as the number of beds suitable for training in hospital departments, the number of students in bedside study groups, and the number of teaching weeks in hospital departments. The audit found that, according to OECD data, in 2020 Israel trained only 24 students per 1,000 hospital beds, below the OECD average of 38 students per 1,000 beds, with Denmark reaching 80 students per 1,000 beds.
- **Responsibility for Managing the Inventory of Clinical Fields in Israel** – the previous audit raised that, although the Ministry of Health and the Council for Higher Education (CHE) share joint responsibility, each within its domain, for regulating and supervising the clinical training framework, clinical instruction within the clinical fields remains unregulated. The Ministry of Health, which is also expected to act as a guiding body, has not established guidelines for operating clinical fields, and the CHE has not addressed this either. The follow-up audit found that this deficiency **was not rectified**. Although the Ministry of Health and the CHE are in charge of the medical education program, they have failed to define the responsibilities of each body concerning the planning, management, and operation of the clinical fields integrated into the curriculum.
- **Current Status of the Number of Clinical Fields** – the previous audit found that instruction in hospitals within clinical fields was unregulated, and the CHE-PBC and the Ministry of Health did not have a complete situation report of the number and distribution of existing clinical fields across all hospitals. The follow-up audit found that this deficiency **was partially rectified**. In 2022, the Ministry of Health and the CHE conducted a comprehensive mapping of clinical fields in only the four main hospital departments in which clinical training is conducted (Obstetrics and Gynecology, Pediatrics, Surgery, and Internal Medicine). As for the other departments, where students also receive clinical training (about 25 departments), the Ministry of Health and the CHE failed to map.





- **Israeli Students Studying Abroad and Undergoing Clinical Training in Hospitals in Israel** – it was found that the Ministry of Health and the CHE have failed to jointly regulate the clinical training of Israeli students from abroad who undergo training in clinical fields in Israel. Consequently, they are unaware of the extent of this training and lack information on the students participating in it. The audit raised that in the 2021–2022 academic year (October 2021 – September 2022), 900 Israeli students studying medicine at foreign universities received clinical training in Israel (for at least one week of training), and in the 2022–2023 academic year (October 2022 – September 2023), this number increased to about 1,050<sup>7</sup>. In contrast, about 2,100 Israeli students studying in Israel were trained in clinical fields each year (noting that Israeli students undergoing clinical training in Israel receive training lasting dozens of weeks). A situation has arisen in which the Ministry of Health and the CHE lack clarity regarding the utilization of clinical fields in hospitals; hence, the current situation report they have of this resource does not accurately reflect the reality. This deficiency compromises the information base required by the Ministry and the CHE for long-term planning of the number of medical students, ensuring optimal use of existing clinical fields and including the potential to increase student numbers.
- **Operation of Clinical Fields – Student Load in Clinical Training: Determining the Operational Format of Clinical Fields in Terms of Study Group Size by the CHE and Ministry of Health** – the previous audit raised that the CHE and the Ministry of Health, in collaboration with medical faculties and hospitals, failed to establish a mandatory operational format for clinical fields regarding study group size. The follow-up audit found that this deficiency **was not rectified**. The CHE and the Ministry of Health, in collaboration with medical faculties and hospitals, have still not determined the mandatory operational format for clinical fields in terms of study group size – specifying the minimum, optimal, and maximum number of students per group.
- **Operation of Clinical Fields – Teaching Weeks Per Year in Clinical Departments** – the previous audit found that the Ministry of Health and the Council for Higher Education (CHE) failed to set a maximum number of weeks for efficient teaching in a department. The follow-up audit found that this deficiency **was rectified only to a small extent**. Although the Ministry of Health calculated the minimum number of weeks required for clinical field learning (36 teaching weeks per year in each of the four main departments where clinical training takes place, out of 52 weeks per year, for the training of 1,200 students, and 40 teaching weeks per year in each of these departments for the training of 2,000 students – the Ministry of Health's target for 2030), the Ministry and the CHE failed to establish a

<sup>7</sup> The audit did not examine the number of training weeks completed by each student, but only the number of students in each hospital. Hadassah Medical Center does not provide such training, and Barzilai had no such students in the 2022–2023 academic year.



plan for regulating it in anticipation of the increase in student numbers, particularly regarding the various types of departments and their characteristics. In practice, in 2022, internal medicine departments in hospitals taught an average of 12–34 weeks; pediatrics departments 23–38 weeks; surgical departments 15–31 weeks; and obstetrics/gynecology departments 14–24 weeks.

- **Use of Clinical Fields in the Afternoon Hours** – as part of its plan to increase the number of medical students in Israel, the Ministry of Health identified the need to operate clinical fields in hospitals during the afternoon hours. It was found that, except for Sheba Medical Center, which reported that since 2020 it has been teaching dozens of medical students in the afternoon, all other hospitals (19) indicated that they do not do so and cited several reasons: lack of compensation or inadequate compensation for training during these hours; a shortage of resources, including medical staff and suitable training programs; preference for training in the morning, and the assertion that the current morning schedule sufficiently meets needs.
- **Regulation of Agreements Between Hospitals and Universities for the Operation of Clinical Fields** – the previous audit found that the CHE-PBC and the Ministry of Health failed to establish any rules regarding engagement contracts (affiliation) between medical faculties and hospitals, nor do they require these agreements to be submitted for their approval or even brought to their knowledge. The previous audit also highlighted cases where exclusive agreements were signed, granting exclusivity to one party. Some of these arrangements are exclusive and unilateral, explicitly linking specific hospitals to particular faculties and precluding hospitals from establishing agreements with other faculties. This restricts the flexibility of the party granting exclusivity, impedes free competition, and could compromise the efficient use of already limited resources. The follow-up audit found that this deficiency **was not rectified**. It was noted that the CHE-PBC and the Ministry of Health have not set a standard agreement framework for all parties to regulate cooperation between medical faculties and hospitals for the operation of clinical fields, to include a model for a compensation method between them, as well as supervision mechanisms for the agreed arrangements. It was also found that, in the absence of a binding agreement regulating cooperation between universities and hospitals regarding the operation of clinical fields in hospitals, no binding rules have been established to prevent the granting of exclusivity to any of the parties in such agreements. For example, as of 2023, Ariel University's Faculty of Medicine has only one direct agreement with a mid-sized public hospital – Laniado in Netanya – thereby limiting the number of clinical fields the hospital can offer and reducing the number of students it can train compared to other hospitals. In May 2019, Ariel University reached an agreement with Tel Aviv University, under which Tel Aviv University would allow Ariel University to use clinical fields in its affiliated hospitals.



The agreement also stipulated that Ariel University could not directly approach hospitals affiliated with Tel Aviv University to inquire about available clinical fields for its students. These circumstances create uncertainty, making it difficult for Ariel University to plan the number of medical students it can train, including potential increases, effectively leaving it dependent on its cooperation with Tel Aviv University.

- **Incentivizing Departments and Physicians Who Train Medical Students in Hospitals** – the follow-up audit raised (this topic was not discussed in the previous audit) that the Ministry of Health and the CHE, in collaboration with hospitals, have not developed an incentive model for departments that operate clinical fields. Consequently, no financial mechanism exists to incentivize the departments and teaching physicians who undertake this complex task over many weeks. Such a mechanism is especially vital to meet the Ministry of Health's target of 2,000 students by 2030, which would require at least 40 weeks of clinical training in the four main departments, compared to the 12 to 38 weeks currently provided.


#### **Israeli Graduates of Foreign Medical Faculties Absorbed in Israel**


- **Funding for Medical Studies Abroad vs. Meeting Admission Requirements in Israel** – due to the limited quota of places for medical studies in Israel, candidates who were not accepted are compelled to study at foreign universities, where the Ministry of Health has no involvement in shaping the curriculum or academic standards. While tuition for a year of medical studies in Israel is about NIS 11,000 for an undergraduate degree and NIS 15,000 for a graduate degree in the 2022–2023 academic year, tuition for these studies abroad is much higher and can reach tens of thousands of shekels per year. Due to the significant financial expenses involved, the high cost of medical studies abroad can be a barrier for Israelis who were not accepted to study in Israel. This means that candidates whose entrance exam scores for medical studies in Israel were not high enough to qualify for the limited places available domestically may forgo studies abroad due to the financial burden, while others with lower scores but greater financial means can study abroad and, after completing their studies and meeting the prerequisites, find a place in Israel's healthcare system. Furthermore, the healthcare system does not bar them from undergoing clinical training in Israeli hospitals, provided they finance the training themselves or through the foreign university at which they are enrolled.
- **Preparation Courses for the Licensing Exam for Israeli Medical Graduates Who Studied at Foreign Institutions** – the previous audit raised that the Ministry of Health had not set criteria or requirements for recognizing the preparation course, nor had it established guidelines for supervising how these courses operate. The follow-up audit found that this deficiency **was only partially rectified**. It was found that the Ministry of Health had replaced the providers operating the preparation courses, and at the time of the follow-up audit, four



different medical centers were conducting the courses. Regarding supervision by the Licensing Division over the preparation courses, the follow-up audit found that at the end of 2022, representatives from the division visited the study centers of preparation courses held in two of the four hospitals offering these courses. However, the results of these visits were not documented in writing, and there are no records detailing the conclusions reached or the Ministry of Health's directives regarding actions that the study centers should take.

- **Amendment of the Physicians Regulations (Licensing Examination)<sup>8</sup>** – the previous audit found that the number of graduates from institutions in Armenia and Moldova taking the licensing exam had steadily increased over the three years preceding the audit, with only a small percentage passing the exam. In response to the previous report, the Ministry of Health indicated that, following the audit, the licensing exams were reassessed, with the intention of including clinical components in the exam content to better reflect candidates' clinical knowledge and skills. The follow-up audit found that this deficiency **was not rectified**. About five years after the previous audit was published, the Ministry of Health has not completed the amendments to the regulations to adjust the exam format. As a result, it may be that foreign graduates who lack adequate qualifications are managing to pass the theoretical exam, with some candidates taking the exam repeatedly without limit until they pass, raising concerns about their competency.

 **Internship Year** – the previous audit found that the Ministry of Health had not taken any concrete steps, in terms of infrastructure and personnel (hospital beds and medical staff required to train them), to address the significant increase in the number of interns. This may lead to the internship year being rendered ineffective. The follow-up audit found that this deficiency **was not rectified**. In 2017–2023, the number of interns increased from 1,547 to 1,793 (about 16%). In contrast, the number of hospital beds in those years grew from 15,798 to 16,408 beds – an increase of only about 4%. It follows that about five years after the publication of the previous audit, the trend of disproportionate growth in the number of interns relative to the increase in the number of beds remains unchanged. It was also found that the Ministry has failed to set the desired ratio between the number of interns and the number of beds.

 **Consolidation and Transparency of Information on the Medical Residency System in Israel** – the previous audit found that the Ministry of Health lacks consolidated information on residency placements. It has neither data on the number of filled and vacant positions nor the timeline for when occupied positions will become available. Additionally, it was found that hospitals do not publish the number of residency positions available for applicants, making the residency assignment and acceptance

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8 Physicians Regulations (Licensing Examination), 1988



process non-transparent to candidates. The follow-up audit found that this deficiency **was rectified only to a small extent**. It was found that the updated Physicians Regulations, issued by the Ministry of Health at the end of 2022, stipulate that a doctor applying for residency, whose request has been approved by the Scientific Council of the Israel Medical Association (IMA)<sup>9</sup>, must submit an online residency report to the Ministry of Health within two months of the Council's approval, along with certain data. These regulations are expected to enable the Ministry to consolidate information on the number of residents starting from January 2023. However, as of the end of the audit (August 2023), the Ministry of Health still lacks cohesive information on the number of residency positions in each department and hospital, as well as their occupancy rates.

#### **Training Students in the Community – Adding Clinical Fields in the Community During Medical Studies**

– the previous audit recommended that the Forum of Deans, in collaboration with the Ministry of Health, make community medicine more accessible during academic training. The follow-up audit found that this deficiency **was rectified only to a small extent**. It was found that since the previous report, the HMOs (Health Maintenance Organisations) have begun to expand student training in clinical fields within the community. In contrast to the prevailing approach among health organizations abroad, such as the World Federation for Medical Education, the General Medical Council in the UK, and health authorities in Australia, by which, the community (in addition to hospitals) plays a central role in the training of medical students, in Israel, not all students undergo clinical training in the community.

#### **Training of Community-Based Doctors Toward Specialist Certification – Division of the Residency Period Between Hospitals and the Community**

– despite the current and expected trend of a shortage of community-based physicians, the Ministry of Health has not addressed the optimal format for community residency training or the ability to meet evolving needs, and only a minority of medical residents undergo training in community settings. It was only at the conclusion of the previous audit (in 2018) that the Ministry began to address this issue. The follow-up audit found that this deficiency **was only partially rectified**. Since the previous audit, the number of pediatric residents who completed any community residency period was 27 residents in 2018 across the four HMOs, and 98 residents in 2023, according to the HMOs' data. The number of family medicine residents who completed a community residency period increased from 596 residents in 2018 across the four HMOs to 961 residents in 2023. It was also found that the Ministry of Health failed to define the required number of specialists in community medicine needed to expand services provided to the public.

#### **Improving the Quality of Medical Education in Israel with the Potential to Increase the Number of Students**

– the previous audit found that issues decided

<sup>9</sup> The Scientific Council is an advisory body that provides recommendations to the Ministry of Health on the accreditation of institutions for medical specialization and is also in charge of the specialization and professional development of all doctors in Israel.



upon by the CHE committee (for example, developing additional training tools such as simulators) were not discussed in any forum, and these issues were not advanced because the Health Professions Forum<sup>10</sup> had not been reestablished. The follow-up audit found that this deficiency **was only partially rectified**. It was found that all six medical schools began integrating innovative teaching methods in line with the CHE committee's recommendations. However, some curricula have not been updated to incorporate advanced technology-based learning methods, multi-component simulations, and exposure to innovative clinical diagnostic tools even before the clinical phase of studies. It was further noted that the CHE has not completed the necessary internal procedures to improve the quality of medical teaching and education in Israel, nor has it finalized the procedures with the medical schools.



**Actions of the Ministry of Health Since the Previous Report** – the follow-up audit found that since the previous report, the Ministry of Health has placed the issue of medical workforce planning on its agenda and developed a model to forecast the expected number of doctors per 1,000 people. Additionally, the Ministry formulated a plan to increase the number of medical students in Israel and appointed a dedicated committee to address the shortage of medical personnel in the healthcare system. The number of first-year medical students increased from 800 in the 2020–2021 academic year (October 2020 – September 2021) to about 1,100 in the 2023–2024 academic year (October 2023 – September 2024).

**Formulating a Multi-Year Plan to Increase the Number of Medical Students in Israel** – the previous audit found that, since 2011, when the need to increase the number of medical students (in Israel) was identified, based on a structured plan and an assessment of clinical teaching load in hospitals and resulting needs, the Ministry of Health had done nothing up to the conclusion of the previous audit. The follow-up audit found that the deficiency **was considerably rectified**. In January 2023, representatives of the Ministry of Health presented to the Ministry's administration a plan they developed to increase the number of first-year medical students in Israel from 800 in the 2020-2021 academic year (October 2020 – September 2021) to 1,200 in 2024 and to 2,000 in 2030, detailing the actions required to meet these targets. However, it was found that although an important action plan such as the multi-year plan to increase the number of medical students in Israel requires structured planning, it lacked essential components that would ensure its success. As stipulated in the government planning guide, in addition to defining the program's objective, it is also necessary to set targets and metrics for performance evaluation. Yet, the Ministry of Health's plan does not

<sup>10</sup> A consultation forum for academic health professions, including representatives from the CHE (Council for Higher Education), the PBC (Planning and Budgeting Committee), and the Ministry of Health.



specify performance targets or metrics for each medical school and hospital. Furthermore, deficiencies regarding the plan's implementation are detailed above.

**Operation of Clinical Fields – Student Load in Clinical Training** – the previous audit found, through an examination of student load in clinical fields, that there was overcrowding in clinical training fields. In such cases, faculties and departments have sometimes increased the number of students in clinical field study groups to a level that prevents effective and efficient learning. The previous audit identified many hospital departments in which there were more than eight students in clinical fields, sometimes even 12 students or more. The follow-up audit found that the deficiency **was considerably rectified**. In most of departments in all hospitals, there are no more than ten students.

**Reducing the Number of Foreign Students Enrolled in Medical Programs in Israel** – in the previous audit, it was found that the Council for Higher Education (CHE) and the Planning and Budgeting Committee (PBC) failed to enforce their decision to gradually reduce the number of foreign students studying in medical faculties in Israel. Consequently, although five years had passed since the PBC adopted the recommendations of the Andorn Committee<sup>11</sup>, they were not implemented. For example, in the 2015–2016 academic year, about 170 foreign students were enrolled per cohort, instead of the 130 allocated by the decision. In the follow-up audit, it was found that this deficiency **was fully rectified**. Starting from the 2023–2024 academic year, enrollment in programs for foreign students was discontinued, thereby opening an additional 130 spots for Israeli medical students.

**Reliance on Israeli Medical Graduates Who Studied Abroad** – in the previous audit, it was found that the high proportion of Israeli doctors who studied abroad and received licenses to work in Israel highlights the country's heavy reliance on overseas medical graduates. Moreover, Israel has no influence over the components of their training programs or their alignment with the healthcare system's requirements and needs. In the follow-up audit, it was found that this deficiency **was fully rectified**. The Yatziv Reform, which came into effect in 2019, is intended to ensure that only graduates of foreign universities recognized by the Medical Professions Licensing Division as meeting the professional standards for medical education established by experts in Israel will be eligible to take the licensing exam in Israel. The revocation of recognition for certain institutions is indeed expected to prevent individuals who were not trained according to these standards from integrating into the Israeli healthcare system. This means that starting in 2026, the number of foreign-trained doctors returning to Israel is expected to decline.

11 A committee appointed by the Council for Higher Education (CHE) to address the regulation of clinical training for medicine in Israel for foreign students studying in the country, chaired by Ms. Yael Andorn, a member of the Planning and Budgeting Committee (PBC) at the time.





**Bonus Mechanism for the Medical Licensing Exam** – the previous audit raised that a preparatory exam grade awarded to those who successfully completed the preparatory course for the licensing exam granted candidates a generous bonus of 10 additional points to their score. This generous bonus enabled course graduates to meet the licensing requirements, raising serious concerns about the professional competence of these doctors. The follow-up audit found that the deficiency **was considerably rectified**. Since the previous audit, several changes have been made to the bonus mechanism for the licensing exam. For example, a passing score of 62 is now required on the preparatory exam to qualify for the bonus. Additionally, the bonus is calculated as 8% of the preparatory exam score rather than being a fixed number of points, as was previously the case. However, it is recommended that the Ministry of Health, based on defined metrics, periodically examine whether the changes made to the bonus mechanism for the preparatory exam scores indeed ensure an improvement in the competence of foreign medical school graduates who obtain licenses to practice medicine in Israel.

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## Key Recommendations



It is recommended that the Ministry of Health evaluate the number of doctors required in each medical field, both in the short and long term, and estimate the anticipated shortages accordingly. This assessment should consider several variables, including movements of medical personnel in the system – entry of new doctors and departure of others, including retirements and emigration abroad; demographic trends – population growth and composition, population aging, and immigration patterns; expected trends in morbidity and the public's health status; the expected reduction in the number of doctors due to the Yatziv Reform, particularly its impact on peripheral regions; the shortening of shifts for medical residents; the rate of reliance on specialist medicine overall and based on the characteristics of the population utilizing it, to determine the optimal ratio of doctors to population size; technological developments; and other circumstances that may influence the demand for medical specialists. It is further recommended that this evaluation include data on the active physician workforce in the country, as some licensed medical practitioners are not active in their profession. In line with advanced countries worldwide, it is recommended that the Ministry, in collaboration with the Israel Medical Association (IMA), consider adopting a professional mechanism for the strategic planning of its medical workforce and implement it starting at the stage of training medical students.



It is recommended that the Ministry of Health, in collaboration with the Council for Higher Education (CHE), form the multi-year plan to increase the number of medical students in Israel, define clear objectives and performance metrics for the plan's implementation and the assessment of its achievements, particularly for each medical school and hospital; it is





further recommended that a phased schedule, supported by a budget, be established for its execution.



It is recommended that the Ministry of Health and the Council for Higher Education (CHE) map clinical fields across all departments, regardless of the duration of clinical training in those fields, including for Israeli students studying abroad who undergo clinical training in Israel. This mapping is necessary given the anticipated increase in the number of students and the corresponding need to expand the use of clinical fields. Such mapping will enable informed planning of medical education and efficient clinical training, as well as regulation and supervision of the use of clinical fields to optimize the utilization of existing resources. Furthermore, it is recommended that the Ministry of Health and CHE reach agreements regarding each party's responsibilities regarding all aspects of clinical fields and define their respective areas of responsibility. If they fail to reach agreements within a short period, it is recommended that the Minister of Health and the Minister of Education, in his capacity as Chairman of the CHE, establish a committee of experts to resolve the matter.



It is recommended that the Ministry of Health, the Council for Higher Education (CHE), medical schools, and hospitals define the operational framework for clinical fields in terms of study group size, the minimum, optimal, and maximum number of students per group, based on the characteristics of clinical fields in various departments, thereby maximizing the utilization of existing clinical fields. It is also recommended that the Ministry of Health and CHE, in collaboration with medical schools and hospital directors, establish the standard range (minimum and maximum) for the number of teaching weeks per year in the various clinical departments according to their characteristics, evaluate the resources required for this purpose, and formalize this in an appropriate procedure. It is further recommended to set phased targets to meet the Ministry of Health's plan to reach 40 teaching weeks per year by 2030. Additionally, it is recommended that the Ministry of Health examine the barriers to training medical students in clinical fields during afternoon hours in hospitals and remove them. This will enable teaching during these hours and thus increase the number of medical students. Specifically, it is recommended that the Ministry consider the creation of effective incentive mechanisms for hospitals, departments, and teaching physicians, and define the required scope of medical staff to support this effort.



It is recommended that the Ministry of Health and the CHE-PBC set an expedited timeline for completing the work of the committee they decided to establish in April 2023. This committee is tasked with examining the national management of clinical fields and immediately determining the minimum and maximum price of clinical fields, thereby formulating a fixed, comprehensive, and written framework agreement to regulate relations between medical faculties and hospitals, including the financial arrangements between hospitals and universities. It is further recommended to define the funding sources for this agreement and establish mechanisms for the Ministry of Health and the CHE to supervise compliance by universities and hospitals with the agreed-upon rules. It is also recommended to involve the Deans' Forum of Medical Schools and the hospitals in this process. Additionally, it is recommended that the subcommittee for developing mechanisms to expand and nationally regulate clinical fields within the Ministry of Health determine the



appropriate framework for the optimal and efficient utilization of clinical fields in all hospitals, including the granting of academic appointments. This should take into account the need to allow hospitals to provide clinical training to medical faculties they are not affiliated with. This will also enable planning for the increase in the number of medical students beginning their studies at each faculty. It is recommended that the Ministry of Health, in collaboration with hospitals and the CHE-PBC, develop a model for compensating teaching departments and teaching physicians. Thus, creating incentives to ensure the highest quality clinical education and enable long-term planning that will guarantee an increase in the number of medical students.



It is recommended that the Ministry of Health and the Council for Higher Education (CHE) evaluate the advantages and disadvantages of the quota set for the number of medical students in Israel.



The Ministry of Health and the Council for Higher Education should weigh the cost of medical education funded by the state budget vis-a-vis the goal of ensuring that doctors in Israel possess the highest qualifications, regardless of their economic background, and that they are trained according to the standards required in Israel. It is also recommended to consider that most students who study medicine abroad return after completing their studies to work in Israel's healthcare system, despite not being admitted to medical studies in the country. Some of them even received training in clinical fields in Israeli hospitals, despite this being a resource that limits the number of medical students who can be trained in Israel.



It is recommended that the Ministry of Health, the Deans' Forum, and hospitals determine the number of interns each hospital can train based on the size of its staff, the number of beds in mandatory and elective departments, and the number of patients, to ensure that neither the routine operations of the departments nor the quality of the interns' training is compromised. It is further recommended that the Ministry of Health review the recommendations of the Committee for the Examination of Medical Internships, published in June 2023<sup>12</sup>, and decide on their implementation.



It is recommended that the Ministry of Health, as the regulator, maintain updated and comprehensive data regarding physicians' specializations and residency placements. This should include the required fields of specialization, where residency positions become available, the fields with waiting lists for residency, the number of available positions, and the timing of their availability. It is further recommended that, after collecting these data, the Ministry improve transparency on this matter, particularly for medical students, and provide them with regular updates and enable them to plan their future. Additionally, it is recommended to define the Ministry of Health's responsibility, in collaboration with the

12 The recommendations of the Committee for the Examination of Medical Internships, chaired by Prof. Zion Hagay, President of the Israel Medical Association (IMA), and Prof. Ehud Grossman, former Dean of the Faculty of Medicine at Tel Aviv University, June 2023.



Israel Medical Association (IMA), for consolidating this information and planning for the various medical specialties.



It is recommended that the Council for Higher Education (CHE), the Ministry of Health, medical schools, the Deans' Forum, and the HMOs finalize the curriculum for the clinical training of students in the community and integrate it into the overall clinical training program. It is also recommended to formulate agreements between medical schools and HMOs to encourage such training, including a mechanism for appropriate financial compensation for the HMOs. Furthermore, it is recommended that the Ministry of Health assess the number of specialists required in community medicine. The Ministries of Health and Finance should also examine what incentives may be given to encourage community specialists to train medical residents. Additionally, it is recommended that the Ministry of Health, in collaboration with the Scientific Council of the Israel Medical Association (IMA) and management of the health funds, develop a structured plan for advancing specialization in community medicine in the required fields. This plan should define the optimal and necessary number of weeks for specialization in community clinics, particularly in pediatrics.



It is recommended that the Council for Higher Education (CHE), in collaboration with the Deans' Forum and medical schools, continue improving the structure of medical education and the necessary infrastructure to align with advancements in the field of medicine, the development of technology and innovation within it, and the anticipated increase in the number of students. In particular, they should examine and enhance the use of innovative teaching methods, such as simulators and artificial intelligence, and assess the funding sources required to implement these tools. Such improvements could help advance Israel toward the Ministry of Health's goal of enrolling 2,000 first-year medical students annually by 2030.



## Factors Influencing the Need to Increase the Number of Doctors in Israel

The shortage of  
specialist doctors in  
specific fields



Non-recognition of  
medical studies in  
certain foreign  
schools



Population growth –  
Increased life  
expectancy



Population growth –  
Higher fertility rate



Retirement of  
doctors



Emigration of  
doctors abroad



Doctors leaving  
the profession



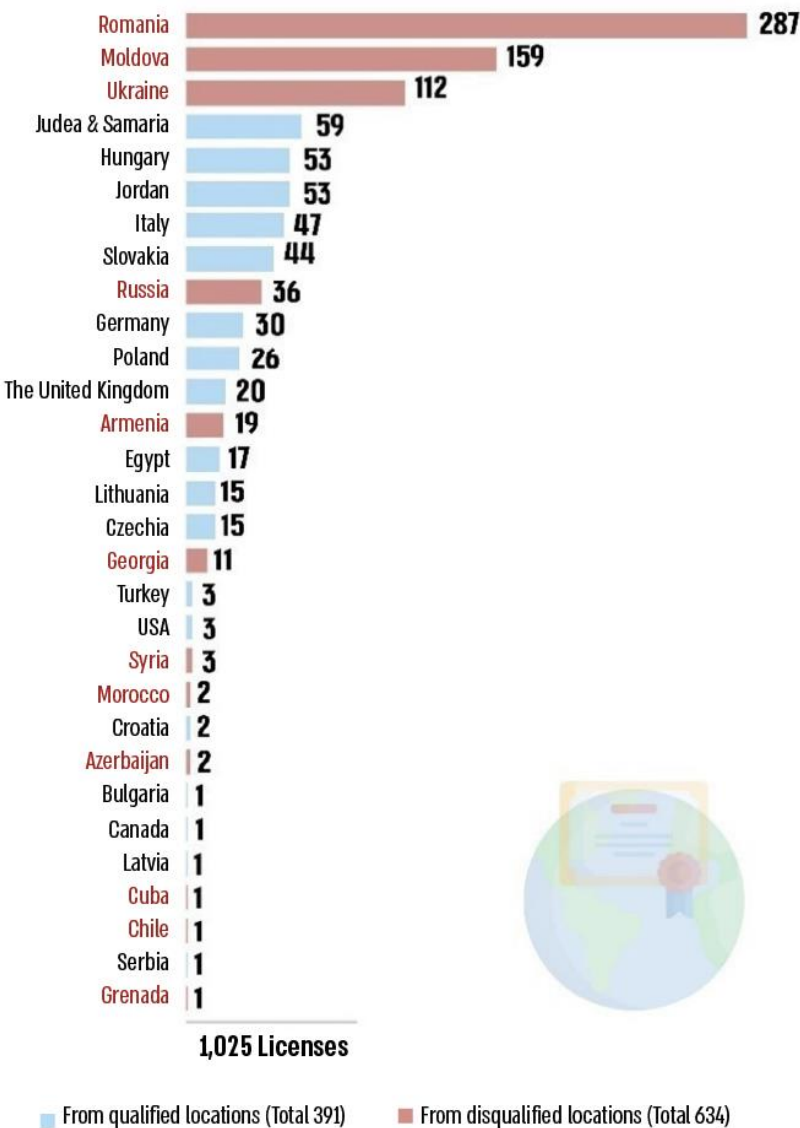
Reduction in  
residents' on-call  
hours





The chart below presents the number of licenses granted to graduates of foreign medical universities in 2022 (students who began their studies before 2019). Medical schools in countries marked in red were disqualified under the Yatziv Reform, while medical schools in countries marked in blue are recognized by the Ministry of Health.

**The Number of Licenses to Practice Medicine in Israel Granted to Graduates**



According to Ministry of Health data, processed by the State Comptroller's Office.



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## Summary

The physician-to-population ratio in Israel in 2020 was 3.3 doctors per 1,000 people, slightly below the OECD average of 3.7 doctors per 1,000 people. According to data from the Civil Service Commission, the Ministry of Health, and professional committees, there is a noticeable shortage of specialist doctors in various fields, including geriatrics, psychiatry, anesthesiology, and intensive care.

The shortage of doctors in certain specialties creates intense competition for every physician, with stronger medical centers enticing doctors at the expense of weaker and peripheral centers. This has led to longer wait times, the closure of services in peripheral areas, and a surge in the costs of private healthcare. For example, this is already evident in the field of mental health. However, given the existing and projected shortages of doctors in Israel, this situation is likely to worsen and spread to additional medical specialties.

Since the previous State Comptroller's audit in 2018, the Ministry of Health has prioritized increasing the number of physicians in Israel. It has taken various actions to achieve this goal and has addressed some of the deficiencies raised in the previous audit. However, the follow-up audit raised significant shortcomings in the regulation of clinical training for physicians, particularly in developing a mechanism for strategic medical workforce planning, formulating a long-term plan to increase the number of physicians in Israel, determining the number of specialists needed in each medical specialty, and assessing the projected shortages in each field in the coming years. Additional issues were identified in the efficient national allocation of clinical fields in hospitals and the community (considered a national resource), regulation of the internship year, and enhancement of the quality of medical education through the use of innovative teaching methods.


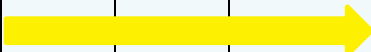
The need to increase the number of physicians in Israel, both overall and in specific disciplines, as well as to ensure their distribution across different regions of the country, requires the Ministry of Health and the Council for Higher Education (CHE) to formulate a long-term strategic plan for the medical workforce. This plan should include setting clear objectives and creating a work plan to achieve them while removing existing barriers to operating clinical fields in the community and allocating budgets accordingly. It is recommended that the Minister of Health and the Minister of Education, in his capacity as Chairman of the CHE, monitor the rectification of the deficiencies raised in this report, to ensure an increase in the number of physicians and regulate their training. These steps will enable the provision of optimal medical services to all residents of Israel.



The Retification Extent of the Key Deficiencies Noted in the Previous Audit



The Audit Chapter	The Audited Body	The Deficiency Noted in the Previous Audit	The Extent of Deficiencies Rectification Noted in the Follow-up Audit			
			Not Rectified	Slightly Rectified	Significantly Rectified	Fully Rectified
Planning of medical manpower	Ministry of Health	The Ministry of Health lacks a multi-year plan to determine future needs in each medical dicipline or the number of positions it intends to add in each specialty and hospital.				
Formulating a multi-year plan to increase the number of medical students in Israel	Ministry of Health	Since 2011, when the need to increase the number of medical students in Israel was identified through a structured plan based on assessing clinical teaching loads in hospitals and the resulting needs, up until the completion of the previous report, the Ministry of Health has taken no action.				



The Audit Chapter	The Audited Body	The Deficiency Noted in the Previous Audit	The Extent of Deficiencies Rectification Noted in the Follow-up Audit			
			Not Rectified	Slightly Rectified	Significantly Rectified	Fully Rectified
Utilizing the national resource of "clinical fields" in hospitals in Israel - responsibility for managing the inventory of clinical fields in Israel	Ministry of Health and CHE	Although the Ministry of Health and the CHE share joint responsibility, each within its respective domain, for regulating and supervising the clinical training framework, it was found that clinical teaching within the clinical fields remains entirely unregulated.				
Current status regarding the number of clinical fields	Ministry of Health and CHE	Clinical teaching in hospitals within clinical fields remains unregulated, and the CHE-PBC and the Ministry of Health lack a comprehensive picture of the number of existing clinical fields and their distribution across hospitals.				





The Audit Chapter	The Audited Body	The Deficiency Noted in the Previous Audit	The Extent of Deficiencies Rectification Noted in the Follow-up Audit			
			Not Rectified	Slightly Rectified	Significantly Rectified	Fully Rectified
Operation of clinical fields – student load in clinical training	Ministry of Health, CHE, medical faculties and hospitals	The CHE and the Ministry of Health, in collaboration with medical faculties and hospitals, have yet to establish a mandatory operational framework for clinical fields, particularly regarding the size of study groups.				
Operation of clinical fields – student load in clinical training	Ministry of Health and hospitals	An examination of student load in clinical fields raises significant pressure on clinical fields. In such cases, faculties and departments have sometimes increased the number of students in clinical field study groups to a level that prevents effective and efficient learning.				



The Audit Chapter	The Audited Body	The Deficiency Noted in the Previous Audit	The Extent of Deficiencies Rectification Noted in the Follow-up Audit			
			Not Rectified	Slightly Rectified	Significantly Rectified	Fully Rectified
Operation of clinical fields – teaching weeks load in clinical departments	Ministry of Health and CHE	The Ministry of Health and the CHE have not determined the maximum number of weeks a department can teach effectively.				
Establishing regulations for agreements between hospitals and universities for the operation of clinical fields	Ministry of Health and CHE	The Planning and Budgeting Committee (PBC) and the Ministry of Health, which are supposed to serve as the regulatory bodies for academic activity in hospitals and supervise their funding, have not established any rules regarding the agreements between medical faculties and hospitals. Furthermore, they do not require these agreements to be submitted for their approval or even for their knowledge.				





The Audit Chapter	The Audited Body	The Deficiency Noted in the Previous Audit	The Extent of Deficiencies Rectification Noted in the Follow-up Audit			
			Not Rectified	Slightly Rectified	Significantly Rectified	Fully Rectified
Reducing the number of foreign students enrolled in medical programs in Israel	CHE-PBC	The PBC has not enforced its decision to gradually reduce the number of foreign students studying at Israeli medical faculties.				
Israeli graduates of foreign medical faculties and absorbed in Israel – reliance on Israeli medical graduates from abroad	Ministry of Health and CHE	The high proportion of Israeli doctors who studied abroad and received licenses to practice in Israel indicates that the country relies heavily on medical graduates who did not study locally. However, Israel has no authority over the various components of their training programs or their compliance with the Israeli healthcare system, its requirements, and its needs.				




The Audit Chapter	The Audited Body	The Deficiency Noted in the Previous Audit	The Extent of Deficiencies Rectification Noted in the Follow-up Audit			
			Not Rectified	Slightly Rectified	Significantly Rectified	Fully Rectified
Preparatory courses for the licensing exam for Israeli medical graduates from foreign institutions	Ministry of Health	The Ministry of Health has established neither rules nor requirements for recognizing preparatory courses, nor has it issued guidelines for monitoring how these courses operate.				
The bonus mechanism for examinees in the medical licensing exam	Ministry of Health	The generous bonus, granted only to graduates of the preparatory courses, enabled them to meet the requirements for obtaining a medical license, raising serious concerns about the professional competence of these physicians.				



The Audit Chapter	The Audited Body	The Deficiency Noted in the Previous Audit	The Extent of Deficiencies Rectification Noted in the Follow-up Audit			
			Not Rectified	Slightly Rectified	Significantly Rectified	Fully Rectified
The internship year	Ministry of Health	The Ministry of Health has not addressed the significant increase in the number of interns, in terms of infrastructure and personnel (hospital beds and medical staff required to train them).				
Consolidation and transparency of information on the medical residency system in Israel	Ministry of Health and hospitals	The Ministry of Health lacks consolidated information on residency positions. It has neither data on the number of filled and vacant positions nor the timeline for when occupied positions will become available. Additionally, it was found that hospitals do not publish the number of residency positions available for applicants, making the residency assignment and acceptance process non-transparent to candidates.				



The Audit Chapter	The Audited Body	The Deficiency Noted in the Previous Audit	The Extent of Deficiencies Rectification Noted in the Follow-up Audit			
			Not Rectified	Slightly Rectified	Significantly Rectified	Fully Rectified
Training students in the community – adding clinical fields in the community during medical studies	Ministry of Health and CHE	The Deans' Forum, in collaboration with the Ministry of Health, should make community medicine more accessible already during academic training.				
Training doctors in the community for a specialist degree – dividing the residency period between hospitals and the community	Ministry of Health	Despite the current and expected trend of a growing shortage of medical personnel in community medicine, the Ministry of Health has addressed neither the desired framework for residency training in the community nor the ability to meet emerging needs, and only a minority of residents undergo training in the community.	