**International Quality Assurance Review Committee Report**
**to the Council on Higher Education**
**March 2022**



## Preamble

The Council for Higher Education (CHE) in Israel put in place arrangements for the evaluation of study programs in the field of Medicine in Israel in 2021. To undertake this evaluation, the Vice Chair of the CHE appointed an International Quality Assurance Review Committee (IQARC; 'the evaluation committee'), under the auspices of the CHE's Committee for the Evaluation of Medical Education in Israel, consisting of:

- Prof. Mark Tykocinski (Chair)
- Prof. Haim Bitterman
- Prof. Adina Kalet
- Prof. Orit Karnieli-Miller
- Prof. Cees van der Vleuten

Ms. Pe'er Baris-Barnea served as the Coordinator of the IQARC evaluation committee on behalf of the CHE.

The five higher education institutions (HEIs) participating in the evaluation process were:

- Technion Faculty of Medicine
- Azrieli Faculty of Medicine at Bar Ilan University
- Sackler Faculty of Medicine at Tel Aviv University
- Ben Gurion University Faculty of Health Sciences
- Hebrew University Faculty of Medicine

These HEIs were reviewed in two phases. The first review phase took place from 7 to 14 June 2021, and it dealt with the Technion Faculty of Medicine and the Azrieli Faculty of

Medicine at Bar Ilan University. The second review phase took place from 2 to 11 November 2021, and it dealt with the Sackler Faculty of Medicine at Tel Aviv University, the Ben Gurion University Faculty of Health Sciences, and the Hebrew University Faculty of Medicine.

The evaluation process was conducted in accordance with the CHE's *Standards for Medical Education (2021)*. Within this framework the evaluation committee was required to:

- Examine the self-evaluation reports, including data collection instruments (DCIs) therein, submitted by the medical schools
- Conduct on-site visits (physical and/or virtual) at those institutions participating in the evaluation process
- Submit to the CHE an individual report on each of the medical schools participating in the evaluation, which draws conclusions vis-à-vis each of 11 CHE standards, setting forth the evaluation committee's key findings, and detailing specific commendations and recommendations
- Submit to the CHE a general report regarding the evaluated field of study within the Israeli system of higher education, including recommendations for changes to the standards for medical education

The present IQARC report addresses the latter requirement. It draws upon, distills, and synthesizes key findings, commendations, and recommendations from the five medical school reports that have been completed, and incorporates a broader view that relates to Israeli medical education writ large.

The IQARC evaluation committee examined only the evidence provided by each participating institution. This material was further elaborated and explained in discussions with senior management, lecturers, students, and alumni during the course of the site visit to each of the institutions.

The IQARC's deliberations over the course of its two sets of site visits in June and November of 2021 encompassed first-order assessment of each medical school's performance vis-à-vis CHE's 11 standards of accreditation, and additionally, second-order consideration of areas of improvement that would elevate each medical school beyond threshold levels of performance to excellence in the areas covered by the standards. This broader perspective encompassed consideration of:

- Self-stated institutional purpose and aspirations, through clearly articulated mission, vision, values, and strategic objectives, in line with CHE's directive to focus the evaluation around '*fitness for purpose'*
- Institutional strengths and assets that might be leveraged and could offer points of distinction within Israel's medical academy landscape

- National physician workforce, healthcare system, and population health imperatives
- Operating and budgetary constraints of the medical schools as they navigate a complex interplay of national, university, and clinical affiliate entities
- Transformational medical education models and didactics on the international scene, viewed through the lens of advances in medical education science
- Rapidly transforming healthcare systems and technologies that will frame the future practice of current physician trainees, whose careers will extend well into the mid-21st century
- Evolving spectrum of physician roles projected for the coming decades, reframed by machine intelligence, robotics, and expanding scope of practice of other healthcare providers
- Looming age of digital medicine, with its implications for the full continuum of medical training and practice
- Diligence in addressing recommendations of the prior review, and so demonstrating commitment to a culture of continuous self-improvement

Common themes emerged in the course of the IQARC's medical school reviews, in terms of both strengths and opportunities. The present report captures some of these commonalities, with a focus on the transformational steps that should be embraced at the institutional level; and on key steps at the national level that are requisite for medical education transformation across Israel's medical school landscape.

## The Israel Advantage

As Israel strives to strengthen medical education across its medical academy, and in parallel, to expand its physician workforce, the nation benefits from a number of core advantages:

1. An exceptional stream of talented medical students, who are highly selected through a demanding gauntlet of admission filters and interviews, and who tend to be more mature compared with peers in other countries, many having spent several years in military service

2. World-class academic medical centers, which place a premium on international clinical fellowship training, invest in exceptional clinical simulation resources and programs, and foster leading-edge clinical innovation through research and development

3. A robust health care system with a National Health Insurance law that ensures universal coverage for citizens and permanent residents; fifth place in the most recent *Bloomberg Health Care Efficiency Index*; high-level primary care services provided by four state-

mandated health service organizations; a sophisticated public health effort, run by the Ministry of Health; a strong system of emergency care delivery; strong capabilities in the areas of clinical technology assessment and prioritization; solid systems for tracking clinical data digitally

4. Preeminent research institutions, driving high-impact scientific discovery and spanning a spectrum of research fields, with interdisciplinary emphasis

5. An advanced *HiTech* ecosystem, showcasing the *start-up nation* mentality and reflecting a hard-wired ken for problem-solving and a drive to translate discovery into practical solutions

6. A culture of human caring and humanism, benefitting from a highly diverse population that is a consequence of a worldwide ingathering of immigrants from across the globe over decades

7. A spirit of global outreach, exemplified by on-the-ground humanitarian efforts for natural and man-made disasters worldwide

These constitute foundational national assets that can be leveraged to elevate physician training across the medical education continuum in the years to come. Indeed, these advantages beckon Israel to aspire to be an exemplar on the international scene in the realm of medical education, paving the way towards '*physicians of the 21st century*' who are at the cutting-edge of humanistic team care; digitally powered medicine; and biomedical discovery.

## Challenges To Medical Education Transformation in Israel

As Israel strives for medical education excellence, its medical schools, and the national entities charged with regulating and financing them, must face up to various challenges, many at the system level:

1. Medical school deans in Israel experience limited degrees of freedom, as they navigate multi-tiered decision-making and approval processes within their universities and amongst their clinical affiliates. Too often, deans perceive financial considerations (funds flow intricacies and associated misalignments) and bureaucratic logistics as impeding their ability to drive educational innovation.

2. Within individual medical schools, organizational structures are often not optimized and tend to reflect historical quirks that accreted over the course of multiple dean tenures. Committees within medical schools often overlap in roles and sometimes do not align well with vice dean accountabilities and decision-making. There is no consistency across medical schools in vice dean roles and committee structures and responsibilities, such that '*if you've seen one, you've seen one*'. Hence, there is a clear need for a more systematic approach to medical education governance and curricular decision-making and management at the institutional level, which could be influenced, perhaps even proscribed, by the CHE for cross-institutional consistency.

3. Relatively frequent dean turnover results in a loss of continuity in pursuing strategic goals and sustained follow-up on recommendations of external review committees. An empowered faculty, which is a fundamental feature of higher education in Israel, has the downside of risking loss of continuity as deans and their leadership teams transition and are forced to navigate faculty demands and entrenched faculty biases.

4. Mission, vision, values, and strategy need crisper definition by medical school leaders, and once developed and codified in formal strategic plans, should be disseminated and reinforced more deliberately as common groundwork for faculty, students, and staff. A clear and consistent articulation of mission, vision, and value statements are essential if a medical school is to mobilize its stakeholders towards its defined objectives, and they are most compelling when appropriately tailored to the medical school, speak to its distinctive core strengths and value propositions, and avoid a generic feel. More specifically, a *mission* statement should concisely set forth the medical school's primary purpose. A *vision* statement should convey what the medical school aspires to be and what it intends to look like several years down road (typically 5-10 year timeframes). A *values* statement should succinctly express the core principles that frame all that the medical school does. Top-level initiatives and programs, along with 'big ideas', follow naturally from an institution's mission/vision/values. These also inform defined strategic goals; a discrete set of action plans and milestones associated with each of these goals; and concrete metrics and timelines to track progress in meeting milestones.

5. Israel's academy places a premium on its research prowess, and prioritizing the research mission permeates university policies, decision-making and investments. As it plays out on the ground, education is too often relegated, *de facto*, to second-tier status. In Israel's medical schools, a *research-trumps-education* gestalt often translates into under-resourcing and under-valuation of the educational mission; under-development of education science expertise within the faculties, with an oft-expressed sentiment that

bench science expertise is a necessary and sufficient qualification for teaching medical students; insufficient buy-back of clinician educational effort; and a lack of opportunities for academic career progression for dedicated educators.

6. To be successful, the incrementalism that characterizes much of Israeli medical school curricular reform efforts these days should give way to a quantum leap forward approach, recognizing that even if current *evolution* gives way to more of a *revolution*, the latter still allows for pre-planning over an initial multi-year runway, and even once implementation begins, the phase-in for first-year students, along with the teach-out for upper-year students, translates into gradual, sequential curriculum development over six years. Sustaining this transformational journey over time will require internal champions at each medical school who are empowered to take the long view.

7. The assumption that a small group-intensive curriculum is unaffordable should be challenged, given that the contact hour-demanding, lecture-intensive curricula now prevalent are themselves costly. Various other curricular changes could be accomplished within the current financial envelope by smartly shuffling resources and prioritizing programming. That said, the newer educational formats do, no doubt, incur added operating and capital costs (e.g., small group rooms and simulation facilities) and will call for incremental investment. Financing for new curricular architectures must be stable, sustained, and hard-wired.

8. Ensuring equivalency of training across clinical affiliates and addressing variability in the quality of specialty training in different settings is a challenge for all of Israel's medical schools, especially for those reliant on geographically dispersed, smaller hospitals and clinics in the country's northern and southern peripheries. This highlights the need to augment faculty development with *teach-the-teacher* programming and to confer academic appointments to core teaching faculty at all clinical sites. Regular and dynamic communication lines among medical school deans staff, department chairs, and the clinical affiliates is essential, as are consistent, student-centered approaches for assigning students to clinical rotations at affiliates.

9. Three of Israel's medical schools (Technion Faculty of Medicine; Sackler Faculty of Medicine at Tel Aviv University; Ben Gurion University Faculty of Health Sciences) run parallel 4-year programs for international students. Curiously, there tends to be more openness to curricular transformation in these programs as compared to their respective core 6-year counterparts. There is a clear opportunity for best practice learnings between these two tracks at each medical school. The broader question

revolves around purpose. Running these parallel programs as financial engines to cross-subsidize the rest of the corresponding medical school is hardly appropriate and is a bad optic. These international students represent future global ambassadors for Israel and should be embraced as such. Hence, instead of being siloed, these international students should be more deeply integrated, educationally and experientially, with their Israeli medical student counterparts, notwithstanding the language barriers. From the standpoint of CHE accreditation and IQARC reviews, there needs to be far greater clarity as to whether they are being reviewed as 'tracks' within a single medical school versus separate medical schools that happen to be co-located. Of note, two of the institutions frame their international components as separate medical schools (*Technion American Medical School; Ben Gurion University Medical School of International Health*), whereas the third refers to it as a program (*The American Medical Program at the Sackler Faculty of Medicine*). The terminology is clearly in need of systematization, recognizing that all share in common a reliance, for Israeli and international student programs, on a single medical school dean and significant overlap of faculty and teaching spaces.

10. Training of medical students is intermingled with training of other health professionals, to varying extents. This adds complexity, particularly as the medical curriculum shifts to more case-based learning and fewer lectures. By example, decoupling of dental from medical education would be called for where the two programs differ in the optimal types and content of small group formats each requires.

11. There is a pressing need for endowed scholarships to offset medical student financial burden. This is particularly pressing in the case of Israeli medical students who, having commonly served in the IDF before matriculating, tend to be older and may have family obligations that require them to juggle jobs alongside their intense educational demands. A culture of local philanthropy that is geared to non-capital and non-research uses of funds, specifically endowments for student scholarships, should be cultivated and would bring welcome relief to overburdened students and unleash their embrace of a richer set of learning opportunities.

12. Israel's medical schools recognize the need to diversify their student bodies across socio-economic, ethnic, religious, and other dimensions. Yet, progress on the ground is variable and falls short of reasonable goals. The challenge is not simple, with multiple root causes, and the solutions will have to be correspondingly targeted and nuanced.

13. Each of Israel's medical schools features distinct strengths, and by virtue of geographic location, home university priorities, and historical underpinnings, have unique

dimensions to their respective missions. Viewed from a national perspective, this heterogeneity is a positive, as it affords prospective medical students with choices. From this vantage point, there is no reason to homogenize the schools; quite the contrary, there is a distinct advantage in allowing, or even encouraging them, to chart their own paths. That said, CHE has a role to play in enforcing some level of cooperation among them. Given that all have an imperative to implement profound curricular transformation, there is much to be gained from best practice sharing and common learning from global leaders in medical education. Towards this end, CHE could host medical education workshops and foster a community of education science experts from the various medical schools. CHE might also encourage and incentivize cross-medical school co-curricular and extra-curricular programming that brings together students from more than one school for community outreach and other projects.

14. There is a unique opportunity to be more purposeful and creative in leveraging Israel's start-up ecosystem and the nation's preeminent strengths in areas such as digital health, computational biology, and biomedical engineering for programming and training pathways, and in doing so, bridge medical school borders. Other opportunities for leverage may be found in tapping into elite research institutions in Israel that do not host their own medical schools, for example, the Weizmann Institute of Science. This could tie into dual degree pathways and research immersion opportunities for medical students. The physicians of the future will likely operate in more diverse spheres of activity, and transdisciplinary training will give Israeli medical student trainees an edge.

15. A lack of national and institutional databases for tracking educational outcomes impairs meaningful, contextual data-informed policy making.

**Recommendations | Overview**

In recent years, there has been a growing openness in Israel to a new mandate for medical education transformation. Several national level committees and workgroups have been constituted to address the nation's pressing healthcare disparities and workforce exigencies. The CHE itself has pressed forward with a concrete plan of action, including formulation of medical school accreditation standards; implementation of a structured approach to monitoring medical school performance vis-à-vis these standards; pursuit of World Federation of Medical Education (WFME) validation of the Israel CHE accreditation process; and openness to critical ideas that would further strengthen CHE's approaches to medical school oversight and promote of transformational change in the nation's medical schools. CHE's commitment to the IQARC evaluation process is itself proof positive.

There are other positive signs. An impressive set of small group teaching/simulation-focused capital projects are underway at the five medical schools evaluated by the IQARC in the current cycle that will address small group learning and simulation demands. Beyond this capital commitment to the educational mission, there are an array of medical school initiatives and projects that speak to a desire to elevate and innovate in the medical education space. Each of the five medical schools reviewed by the IQARC features its own unique constellation of forward-thinking initiatives/projects. By example:

- An embrace of the emerging era of digital medicine is evident in various dual training pathways and co-curricular enrichment offerings that look to cultivate physicians with domain knowledge in computer sciences and data analytics, showcased by the ground-breaking SAGOL program at the **Hebrew University Faculty of Medicine**
- Bridging of medicine to engineering, biophysics, and computer sciences is also reflected in a major push towards increasing the numbers of dual degree students at the **Technion Faculty of Medicine**
- Infusion of clinical teaching in the preclinical years, exemplified by integration of radiology into anatomy teaching, significant participation of clinicians in preclinical education, and senior-to-junior medical student peer mentorship at the **Sackler Faculty of Medicine at Tel Aviv University**—with the world-class *Israel Center for Medical Simulation* at its Sheba Medical Center affiliate now poised to extend its pioneering simulation programming to medical student clinical skills training
- A more deliberate approach to sensitizing and immersing students in the care of under-represented minorities and the economically underprivileged points to a commitment to mint physicians who will pay attention to health disparities and serve in underserved communities, as exemplified by the **Azrieli Faculty of Medicine at Bar Ilan University**
- Training towards a globally informed and responsible physician is reflected in hard-wired global health experiences for students in **Ben Gurion University Faculty of Health Science's** 4-year international program

These and a variety of other medical school initiatives and programs speak to a shifting attitude and a growing openness to fundamental change in Israel's medical academy, and in some instances, aspiring to pioneer at the frontier.

That said, barriers persist. There is significant resistance to curricular reform among medical school faculties, with a self-satisfied, insular *'it's working fine'* attitude. The need for more contemporary curricula that could catapult Israel's outstanding student talent to a next level and mint truly preeminent physicians prepared for a very different future is not seen as an imperative by many. Often their proof point for the status quo is excellence among Israel's specialists and biomedical scientists. Obviously, this attitude sidesteps the question of what the

physician workforce writ large might look like if trained within a more forward-thinking paradigm.

Furthermore, recommendations contained within prior international evaluation committee reports have not been taken seriously by all. On this round, medical schools too frequently drafted their self-studies and DCIs as last-minute sprints, often led by emeritus faculty and/or new faces who were not necessarily well-versed on the most current situation on the ground. Generally lacking was the key perspective that medical school accreditation processes are meant to be never-ending cycles of continuous quality improvement. Also absent was a real understanding of the rigor that is expected for medical school self-studies, and the broad faculty engagement over time that is required. Admittedly, this standards-based accreditation process is new to the Israel medical school scene, and the evaluation process itself was taking place in the setting of a disruptive pandemic, but even so, a more thoughtful and thorough approach to self-study reflection and documentation should have been possible. Of note, two of the medical schools were exceptions. The Hebrew University Faculty of Medicine stood out as an exemplar of how a medical school might embrace the recommendations of a prior IQARC review and embark on a deliberate, multi-year plan to address them, and even go beyond. In its first formal CHE accreditation review, the Azrieli Faculty of Medicine at Bar Ilan University was also notable in its conscientious, relatively rigorous preparations for the review process.

The 29 IQARC recommendations set forth below are in two parts. First, recommendations are offered that are directed at the medical schools themselves. These general recommendations pertain to most, if not all, of Israel's medical schools, and essentially represent a distillation of what was presented separately in individual medical school reports. These recommendations relate to:

- Mission, vision, values, and strategies
- Institutional governance
- Internal quality assurance
- Contemporary preclinical and clinical curriculum design
- Faculty development
- Student wellbeing, financial security, academic progression, and career mentorship
- Diversity

Second, recommendations are advanced that are directed to the CHE itself, as well as other national regulatory and advisory entities that impact medical education in Israel. The logic here is that a mandate for medical education transformation must come from the top; bold aspirations for Israel's medical academy must be articulated by national thought leaders; and a set of key policy decisions and directives, along with funding priorities that comport with them, are essential to motivate and empower Israel's medical schools to reach beyond minimum

accreditation standard thresholds and strive for distinctive educational excellence. Collectively, these recommendations point to:

- A national competency framework
- Steps for empowering medical school deans and guidance for their optimizing medical education governance
- A more coordinated approach at the national level to streamline governance and workstreams around medical education policy and funding priorities, as well as cultivating medical education literacy nationwide
- A national approach for building a community of highly expert medical educators and fostering a culture that values their professional careers and identities
- A national database for tracking medical school graduates and their career paths
- A call to action around interdisciplinary professional education, that takes a comprehensive view of the spectrum of healthcare providers and the roles that physicians will play in healthcare teams of the future
- CHE-catalyzed programs and initiatives for promoting student-centered collaborative interactions and fostering synergies among the nation's medical schools in areas such as community outreach and leverage of Israel's start-up ecosystem
- A plan for regular, ongoing monitoring of progress at each of the medical schools in addressing IQARC recommendations and complying with CHE requirements

The IQARC's specific recommendations are as follows:

**Recommendations | Medical Schools**

1. Codify and disseminate mission, vision, values, and strategic goals that emphasize distinction, and ensure that there is a structured internal process in place at each medical school for monitoring progress over time in embracing external review panel recommendations, achieving internal strategic goals, and ensuring continuity in progress across dean transitions towards realizing strategies set forth. Action plans, informed by strategic goals and buoyed by defined milestones, metrics and timelines, should be in place at each medical school

2. Implement new approaches to faculty career progression that value educators, for example, by working with parent universities to allow promotion to full professor and award of tenure for educators; creating new or modifying existing faculty tracks to accommodate leading educators, where necessary; tailoring mentoring for education-focused faculty; securing financial support for select faculty to go abroad and observe, first-hand, best practices in medical education and to train in education science; and

compensating more fairly for educational effort of both preclinical and clinical faculty

3. Cultivate a new generation of faculty well-versed and deeply engaged in education science and its application to physician training, and leverage these medical education experts to elevate the teaching capabilities of their fellow faculty and to promote increased medical education literacy and the use of a common vocabulary when it comes to terms such as '*educational competency*'

4. Implement mandatory faculty development programming, with a focus on small group teaching and particular attention to clinical faculty at various clinical affiliate sites, to ensure equivalency and high-quality training throughout

5. Streamline medical education governance within each medical school, with a preferred option being consolidation of the various medical education elements (curricular development, content, quality assurance, and assessment) under a unifying Department of Medical Education or its equivalent

6. Embark on a journey of fundamental curricular reform, recognizing that contemporary curricula encompass a comprehensive set of content and didactic elements that are difficult to implement piecemeal. Such contemporary curricula feature:
   - Small group learning
   - Self-directed learning
   - Competency framework-driven with horizontal and vertical integration of basic and clinical science across all years of training
   - Technology-powered, including advanced, multi-component simulation and pre-clinical exposure to clinical diagnostic tools
   - Blend of in-person and remote didactics to accomplish best practice instructional design and outcomes (i.e., *HyFlex*)
   - Integration of basic science and clinical care learning across the full educational continuum
   - Block instead of semester systems
   - Clinical training at both hospital and community sites
   - Population health and health services educational threads, including cultural diversity
   - Interprofessional education experiences, recognizing the centrality of the healthcare team in modern medical practice
   - Leading-edge educational assessment (both formative and summative; workplace assessment; quality-assured; longitudinal tracking of academic performance indicators

across rotations; non-cognitive skills; learning dossiers), in the spirit of assessment *for* learning, as opposed to assessment *of* learning

- A comprehensive, longitudinal mentoring program—extended into the clinical training years—which includes individualized coaching, early identification of academic struggle, and career counseling
- Structured training for transitions to clerkships and to residencies
- Scholarly inquiry, with meaningful research experiences
- Programming geared towards cultivating higher-order human qualities, including off-campus, community-service experiences (i.e., *extra-curriculum*)
- Enrichment with cross-cutting knowledge domains geared to cultivating reflective/ relational /computational/human-centered design and entrepreneurial thinking (i.e., *co-curriculum*)

7. Chart a path for curricular reform that seeks to adopt a competency-based medical education (CBME) framework and encompasses the following action items:
   - Map curricula, both content and assessment, onto a competency framework
   - Choose a specific pedagogy for instruction that favors small group learning, maximizes time for self-directed study, and reduces scheduled contact hours
   - Align medical education assessment with the chosen pedagogy
   - Scaffold self-directed learning with a longitudinal mentoring system, and prepare mentors to cultivate self-reflection
   - Monitor the performance of learners longitudinally, going beyond grades
   - Use a structured mentoring program to monitor longitudinal competency development
   - Use narrative data from documented feedback dialogues in the clinical years to inform complex skills development related to the competency framework, as opposed to checklists
   - Implement a system for tracking and sharing academic performance across clinical rotations, including electronic learning dossiers
   - Introduce authentic work-based assessment and OSCEs to replace oral examinations and ensure consistency of implementation across all clinical sites; examples of work-based assessment instruments include Mini-CEX, field notes, case-based discussions, peer observation, video assessment and multisource feedback; train the assessors on how to give feedback
   - Increase protected time for learners to engage in research and community service
   - Provide students with research knowledge skills (e.g., study and measurement design, academic writing)

- Infuse early exposure to clinical healthcare, and train basic clinical skills in preclinical years, aligned with respective curricular content
- Revisit basic science elements in the clinical years, in the context of clinico-pathologic correlations
- Emphasize communication skills, with longitudinal threading
- Ensure that health care disparities and cultural competence curricular content comprehensively addresses the most common local and regional societal needs in an epidemiologically state-of-the-art fashion

8. Cultivate alternative clinical learning approaches that create options for students, such as the longitudinal integrated curriculum (LIC) for the clinical years

9. Develop programs that specifically address the wellbeing of learners, with special attention to those students who are juggling studies with jobs, and direct philanthropic support over time to the creation of endowed student scholarships

10. Establish a structured Office for Student Affairs at each medical school, headed by a vice dean-level leader, to better orchestrate various services and activities linked to student affairs, student life, student health, and student career guidance; and to conduct well-written, annual required student satisfaction surveys, which monitor adequacy of support services and educational programs and provide consistent outcome data to assess impact of changes and innovations

11. Innovate creative educational pathways that promote cross-disciplinary learning and bridging of distinct knowledge domains, for example, medicine + humanities; medicine + computer science/data analytics; medicine + engineering; medicine + health policy; medicine + entrepreneurism

12. Explore programmatic innovation that leverages Israel's remarkable start-up ecosystem and spirit of entrepreneurship

13. Reassess attitudes towards international/American programs, looking beyond the financial proposition, viewing these students as future ambassadors and advocates for Israel's medical education system, as well as Israel at-large, and better engaging these international students educationally and experientially in their respective medical schools

14. Establish a formal committee at each medical school that deals with conflict-of-interest and conflict-of-commitment matters, to achieve more highly structured, external and internal conflict-of-interest oversight; develop well-defined conflict-of-commitment policies; and attend in a deliberate way to conflicts tied to foreign influence

15. Create a standing committee or workgroup within each medical school that coordinates accreditation matters and hardwires into the organization a culture of continuous improvement; ensures that DCI self-studies are prepared with one to two year lead times; aligns internal and external quality assurance; and promotes continuity in the pursuit of strategic imperatives and addressing of IQARC and CHE external review recommendations across dean transitions

**Recommendations | CHE and Other National Entities**

16. Streamline the governance structure over medical education policy at the national level; rationalize and coordinate the various medical education- and physician workforce-focused committees and their workstreams; and incorporate into top-level planning a holistic view of the full continuum of medical education and training, spanning undergraduate medical education (UME), graduate medical education (GME), and continuing medical education (CME)

17. Develop an overarching governmental viewpoint on the mission of Israel's medical education enterprise vis-à-vis societal needs, and articulate with clarity a vision and aspiration for the nation's physician workforce, for example, how far above minimal accreditation standards Israel's medical schools should reach; the shape and character of Israel's physician workforce for the mid- 21st century; the interplay of Israel- versus foreign-trained physicians in the nation's healthcare landscape; the desired balance in training towards specialty versus community medicine; and the degree of openness to entirely new physician training pathways, for example, dual international MD's

18. Develop a national database for tracking medical education outcomes, which incorporates data derived from templated medical school-specific databases—including demographics of medical school graduates; a catalogue of specialty choices and sites of practice; and measures and metrics that speak to quality and distinction of Israel's medical school graduates as their careers unfold—a database that can serve as a critical resource for decision-making at the national and regional levels

19. Use the national accreditation process, and standards therein, to shape the medical education ecosystem of the country and catalyze innovation across all of Israel's medical schools, including the leveraging of the research excellence in other universities, colleges, institutes and centers in Israel without associated medical schools, as well as the technological prowess of Israel's robust start-up ecosystem

20. Choose a national competency framework for the entire country, both for undergraduate and postgraduate training

21. Explore ways that CHE might empower medical school deans within their respective university, clinical affiliate, and national ministry and committee matrices, to pave the way for substantive medical education transformation

22. Promote collaborative interactions among Israel's medical schools in the areas of co-curricular and extra-curricular enrichment, for example, in leveraging existing programming in various medical schools that is geared towards cultivating humanism and social responsibility in medical students, and sensitizing them to societal problems through community outreach projects

23. Develop a systematic approach, along with guidelines, for Israel's medical schools to address growing pressures on clinical training spot availability, particularly pressing in some of the specialties. This is especially concerning given that there are already high student-to-clinical unit ratios in some of the schools, which will only be exacerbated in the face of governmental pressures to grow student numbers in the coming years and a recent push to increase the number of trainees in each ward—a comprehensive assessment of the current situation, with detailed specialty-level clinical rotation capacity mapping, will set the stage for appropriate action

24. Develop a nationwide internship curriculum which mandates standards for preparedness for and transition to residency and practice, along with their assessment

25. Work closely with medical schools to develop paths for diversifying admitted student demographics—encompassing minority groups, immigrants, and those from underprivileged backgrounds—with particular attention to region- and subgroup-specific issues unique to each medical school; Encourage innovative admission policies, including alternative ways of assessing non-cognitive skills in the admission process that go beyond personality assessments *per se*, e.g., written Situational Judgment Tests (SJT)

and Multiple Mini Interview (MMI).

26. Mandate a formal medical school handbook for each institution that translates university bylaws into well-defined medical school policies that govern faculty, student and staff affairs, and the senior management structure and operations

27. Fine tune CHE's accreditation standards [currently modelled after those of the United States Liaison Committee for Medical Education (LCME)], especially where standards appear to overlap, e.g., *Academic and Educational Environment (Standard 3) v. Skills, Learning Outcomes, and Curriculum Development (Standard 6) v. Curriculum (Standard 7) v. Curriculum Management and Evaluation (Standard 8)*

28. Add to the accreditation review process a mandate for subsequent monitoring of how individual schools are addressing the IQARC and CHE recommendations and progressing in the pursuit of their respective, documented strategic objectives—as a way of impressing on all medical school stakeholders the importance of compliance with international standards of accreditation and the need to foster a culture of continuous improvement in medical education

29. Consider modifications to the IQARC review process and self-study/DCI preparation, such as:
    - Implement an annual standardized medical student survey, orchestrated by the CHE, along the lines of the AAMC GQ Questionnaire and require high response rates.
    - Provide each medical school with a model DCI self-study, written to streamline the reader's experience, and provide guidelines to more clearly convey elements for each standard and best practices
    - Require a standard approach to appendices that makes them easy to find, readily downloadable, and translated into English
    - Recommend that DCI self-studies should be written by active faculty, not emeritus faculty or external consultants
    - Provide pre-training for reviewers by CHE
    - Reconfigure the schema for site visits so as to: 1) allow for some 1-on-1 time with the dean (perhaps the evening before); 2) ensure a writing day immediately following each site visit; and 3) standardize tour components (library; learning space architecture; simulation facilities)

## Concluding Remarks

The IQARC recognizes that the recommendations set forth above are substantial and challenging, especially given the complexity of the organizational frameworks in which the medical schools operate and the matrix of their stakeholders. Yet, the evaluation committee believes, with conviction, that the transformational change called for is indeed attainable.

At the heart of the IQARC's recommendations is fundamental curricular reform. This cannot be readily implemented through an incremental strategy of change that is evolutionary in nature. However, one need not think in terms of outright *revolution*, since pre-planning and implementation phases are to be stretched over years, with plenty of time to lay the groundwork (e.g., map content to competencies; teach-the-teachers) in the course of a phased roll-out. The perceived barrier of finances tends to be overplayed for contemporary curricula, and the inherent costs of traditional, contact hour-intensive curricula tend to be underestimated. The curricular transformation that is already in place in some of the medical schools provides a promising substrate on which to build. Further, investigating the many good examples of curricular innovation abroad will help frame and accelerate the planning process.

While it is essential that medical school leaders and faculties embrace transformational change at the local level, they cannot succeed without strong partnership of those who control the financial and operational levers, institutionally and nationally. Israel's thought leaders, from ministries to national oversight and planning committees, must step forward in a coordinated way to articulate a bold vision for Israel's medical academy. Given Israel's enormous advantages, with world-class healthcare and higher education ecosystems, there is no reason Israel's leaders cannot aspire for the country to be a true pioneer in medical education of the mid-21$^{st}$ century, and even leapfrog those who have already introduced contemporary medical curricula. To achieve this end, the journey must be intentional and centrally coordinated, both within and across medical schools. Israel's brain-trust is certainly up to the task. All that is needed is the will.