JIMS
JOURNAL OF ISRAELI MEDICAL STUDENTS
by MInset

Medicine

SPECIAL EDITION

JIMS
JOURNAL OF ISRAELI MEDICAL STUDENTS

VOL 13 · PROUD MEDICINE 2026

PRINT ISSN: 3080-0331
ONLINE ISSN: 3080-034X

Special Edition PROUD MEDICINE

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"Once a person enters the system - through a mental health professional, endocrinologist, or family doctor - real progress can begin"

Interview with Dr. Revital Arbel

Itamar Elkayam

The Hebrew University-Hadassah School of Medicine, Jerusalem, Israel

Could you please tell me a little bit about yourself, your professional path, and how you came to specialize in gender-affirming care?

I graduated from medical school at Hadassah, Hebrew University in Jerusalem. Very early in my studies, I knew I wanted to become a gynecologist, and soon after beginning my residency, I chose to specialize in urogynecology. At the same time, I became involved in several fields that felt naturally connected to one another.

Very early in my career, I began taking care of transgender patients, initially not focused on genital surgery. It was about the same time that I opened a gynecology clinic with a particular focus on HIV/AIDS. At the time, this was quite new. I worked closely with the AIDS Center at Hadassah and with the infectious diseases department. What may have seemed like separate fields then now feels like an integrated part of comprehensive care.

Over time, my practice expanded into areas that had previously received very limited attention. Women in same-sex relationships began coming to the clinic, often because they felt more comfortable doing so. Later, transgender men also started coming to me. In many cases, they had difficulty finding gynecologic care elsewhere, so I began treating them, often starting with something as basic, and as important, as a PAP test. That was a major issue: if this population is not treated properly, it is not screened. The same was true for HIV-positive women, who were also not receiving PAP tests. What guided my work was identifying populations who were not receiving answers to important medical problems that required follow-up.

There were also absurd practical barriers. Sometimes I needed to order a PAP test for a transgender man, but in the hospital system I could not enter it under a registered male identity. In some cases, we nearly had to change the gender in the system just to order the test and then change it back. Experiences like that helped shape the broader push to make medicine accessible to everyone.

Over time, I began prescribing hormones as well. In 2014, I was asked by the Ministry of Health to join the committee on transgender surgery. My role there combined the surgical side, my knowledge of gender dysphoria, care for people living with HIV, and gender-affirming surgery. At the same time, there was also a great deal of activism, because so much of this field was still not established.

It began with PAP smears and with bringing people together to show the extent of unmet need, including high rates of abnormal PAP smears and breast cancer screening pathology. My work in the Ministry of Health focused on ensuring that essential services for transgender people were included in the system, including comprehensive, supportive, and restorative care. One of the most meaningful achievements was helping secure inclusion of gynecologic services for transgender men within the Ministry of Health's covered services.

I have been working in gynecology for about 30 years, and even before that, as a student, I was involved in activities related to access, advocacy, and change. One of the most rewarding things has been watching these fields grow out of what was once a small and marginal effort. Areas that were once handled by a single person are now established specialties. Breast cancer care, surgical treatment,

fertility work for cancer patients and transgender people — these are all now recognized areas of medicine. In Israel, there is now a society for this work and a growing body of research. It has been exciting to be part of that development from the beginning.

I still work actively. I perform surgeries, including gender-affirming procedures, and I provide postoperative follow-up at Tel HaShomer. I also lead the urogynecology unit at Shaarei Tzedek. Since 2014, I have gone to Tel HaShomer once a week for surgeries and follow-up care. For me, this is the realization of a long-held dream: to be a urogynecologist while also working in these related fields. The fact that Shaarei Tzedek supported that arrangement says something important — when you find what truly interests you, you create space for your own growth.

I also believe mentorship matters enormously. Some people are fortunate to have a mentor who supports and shapes them, but others build themselves by seeking opportunities, volunteering, and learning independently. They create their own professional identity. I have been studying for many years, and now I have students who look up to me and follow my work with great interest. I tell them that the student years are invaluable. They are a time to learn, travel, and volunteer. I still volunteer today. I have done reconstructive surgery in the context of human rights work, and I have traveled to Africa to repair fistulas. Medicine opens a vast world in which you can contribute, learn, and grow.

One of the things I value most is how each field informs the others. What I learn from women after childbirth helps me care for transgender women, and also transgender men undergoing surgery — and vice versa. Medicine is deeply interconnected. I once treated a Hasidic girl who had undergone childhood surgery because she had been born without a vagina. The person who helped me explain and support her treatment was Nina Halevy, a transgender woman who worked with me in the clinic. That was both moving and striking to me: each field can help another, and each person can help another.

"Medicine is a multifaceted profession. Standardized protocols are essential, of course, but the understanding that fields are interconnected can enrich the work itself and improve care for patients"

Medicine is a multifaceted profession. Standardized protocols are essential, of course, but the understanding that fields are interconnected can enrich the work itself and improve care for patients. Working with community members is part of that. It brings something valuable into the clinic.

This model is much more established abroad. In transgender healthcare, WPATH is an organization in which patients and providers work together. I experienced something similar in 2000 at a major AIDS conference, where patients and clinicians sat together in workshops. I learned a great deal from that experience, including things I had never considered. No matter how much you want to help, you do not always know what the community actually needs.

What I want to say, above all, is simple: follow your dream. You will live with your profession all your life, so it has to be something you truly love. When it comes from passion, people respect the field, because they see your commitment, faith, and determination. That is how new fields are built.

What does your day look like in terms of the process that patients go through — not only medically but also emotionally and systematically?

In Israel, there is a committee for gender reassignment, but it is specifically a committee for surgeries. People do not necessarily need to go through it, because there are also gender-change committees, and many people do not undergo all surgical procedures. Often, someone who feels their assigned gender does not fit them understands this at a very young age.

A lot depends on the family and social environment. In many cases, people need a long time before they can access emotional or psychological support. That process is also shaped by background — whether someone comes from a Muslim, Hasidic, religious-national, or secular environment. In all of these settings, support from family, relationships, and society is essential. The later the process begins, and the harder it is for the family, the greater the psychological burden tends to be.

Once a person enters the system — through a mental health professional, endocrinologist, or family doctor — real progress can begin. Depending on age, parental permission may be needed. Hormonal treatment may start with blockers, followed later by

hormones appropriate to the patient's needs. It is a gradual process. Some surgeries are performed before age 18, but genital surgery is never performed before that age.

Since the establishment of the National Council in 2014, the eligible age for surgery has been lowered from 21 to 18. The period of committee supervision has also been shortened from two years to one. The process is still difficult and can create anxiety, but the committee's goal is to make it as accessible and humane as possible.

Ultimately, surgery requires certainty and preparation. Before surgery, we meet with patients to explain all of the available options. The decision belongs to the patient, and our role is to help plan the timing and type of surgery. Informed consent has become a central and highly structured part of the process.

The regret rate is very low — about one percent — but we still need to be careful. Not everyone takes hormones, and not everyone undergoes surgery. Our obligation is to do no harm and to help patients in the way that is best for them.

This is a complex medical process, and knowledge is always evolving. The field is developing rapidly, and informed consent and patient incorporation into the process are essential. This approach is increasingly accepted in other conditions as well, including endometriosis, vulval vestibulitis, and sexual assault care.

This is also a form of medicine that integrates social, cultural, emotional, and physical dimensions. When surgery is significant and recovery is long, it is important to ensure that the patient can manage the process over time. That requires a team: mental health professionals, surgeons, nurses, physiotherapists, and occupational therapists. It is not a one-person effort.

I often work in multidisciplinary teams, both in children's clinics and at Tel HaShomer, where we have built a highly professional system. Community representation is also part of it, both on the committee and within the service itself. I think this should be the model everywhere in medicine. When I began medical school in 1985, these structures did not exist. Today, things are very different.

"Most hospitals now have some kind of clinic or service for LGBTQ+ patients and transgender individuals, and that makes care easier"

Amazing. I wanted to ask another question about stigma and lack of understanding. Do you encounter these in the medical field or in the system, and how do they affect patients? As we said, this issue is still growing, but there are still people who have to overcome certain stigmas.

Yes, that is true. Stigma still exists in society. Even in television, which has improved, the message can still be confusing. At the same time, public conversation and personal stories from women who have spoken openly about their experiences have helped significantly. Part of my own role is to educate medical professionals.

Very early on, when I began working in transgender medicine, I started lecturing medical students, residents, and physicians from different specialties. Sometimes, speaking from a position of authority — as a unit head, a surgeon, and someone from a fairly conservative professional background — gives the topic more weight. It can help move the field forward.

On the other hand, I still hear deeply misguided remarks from professionals. Just recently, during a lecture, a surgeon asked why surgery would be needed for what he called a psychiatric problem. Comments like that are extremely damaging.

At the same time, many professionals are willing to change once they understand the issue. Hospital staff are being trained, and associations and organizations are reaching out to provide education in the community. So there is progress, but much still needs to be done.

Patients are still misgendered, staff continue to use the wrong names and pronouns even after correction, and people sometimes ask intrusive questions that have nothing to do with the medical issue. Often, the problem is simply lack of knowledge. Years ago, I completed a project on medical professionals' attitudes toward transgender medicine, and it became clear that the more knowledge people had, the greater their acceptance. The less they knew, the less accepting they were. That is true in medicine generally.

So one of the most important tasks is to increase professional knowledge and help people understand that these patients need care. There are also practical problems around hospitalization. If a transgender man needs to be admitted for gynecologic care, where should he go? Which

"People have very different capacities, and the experience is strongly shaped by their environment"

ward is appropriate? These questions are still not fully resolved.

Gradually, though, things are improving. Most hospitals now have some kind of clinic or service for LGBTQ+ patients and transgender individuals, and that makes care easier. But there are still very real challenges. For example, in a delivery room, how should staff care for a transgender man giving birth? What do they know, and how prepared are they?

I can say this as someone who works with patients who often face barriers in the regular medical system: even I sometimes experience the same discrimination. Still, the field is improving. Surgically speaking, this is a very complex and advanced area, and there is professional respect for that.

The difficulty is that people still do not fully understand what we do or why we do it. That affects both patients and the clinicians who care for them. This is why the response has to be collaborative. Knowledge needs to grow in the general public and throughout the medical system — among nurses, physicians, and emergency staff — because the issue arises everywhere.

"Transgender medicine" is not really a separate specialty. It is a collection of disciplines, with people specializing in the transgender aspects of their own fields. Once you put that in context — a person is standing in front of you and needs help, respect, consideration, and professional care — it becomes much clearer.

The more we simplify the issue, the easier it becomes to understand.

So you are essentially saying that as knowledge increases, and the public — both the public and medical staff — is exposed to more information on these topics, you believe that the antagonism will decrease.

Yes. Things are improving. This is genuinely interesting medicine, not just in a general sense but in a meaningful one.

I see that even in places where you might not expect it, such as the department I work in at Shaarei Tzedek, where transgender patients are accepted. The staff there includes people from all segments of society. When you mobilize people to care for a particular population, the people who work in medicine, nursing, physiotherapy, and the other health professions are there because they want to help.

That ability to mobilize people is part of the work of building teams and advancing the field. First of all, one has to be positive. That does not mean ignoring the bad things — bad things must be addressed — but the overall approach has to be constructive and what we call affective neutrality. That is our profession. There is no reason to treat one illness differently from another. We see this with other conditions too, including invisible illnesses.

Generally speaking, people struggle more with anything they associate with something psychological or psychiatric. The more knowledge you spread, the more you make it part of ordinary understanding, the easier it becomes for people to work with it. They begin to see the human being in front of them.

If you know nothing about the person standing before you, there is little chance you will be able to give them what they need from you as a health professional.

In your opinion, what is important to know about the process of gender-affirming surgery, beyond the surgical aspect itself?

The surgery is the end point. There are different types of surgery — chest surgery, facial feminization, tracheal shave, and lower surgery — as well as other procedures that are less common. But first and foremost, this is a process. It is something a person goes through with themselves, with family and friends, and with society. Hormone therapy may come before or after, but surgery is not the beginning of the story.

The surgery is highly significant in terms of both complications and recovery, but it is only one part of a much larger process. Not everyone undergoes surgery. By the time someone reaches this stage, after hormones and preparation, they are usually in a state of genuine desire for change, including genital change.

Recovery also means adjusting to oneself again. Society does not always react as we might hope, and that is not always the central issue. The surgery can be life-changing, even life-saving, but it cannot solve everything. We still live with ourselves and with society, and that is an important part of the process.

Of course, the medical side requires a great deal of care. Recovery is long, and follow-up is always necessary. So I see this as a much

broader journey than surgery alone. It requires preparation before and after, and we also work closely with the community to develop guidance and support materials around genital surgery within the broader process of gender affirmation.

Are there certain emphases or sensitivities that are particularly important when accompanying and treating patients in this process?

Yes. One needs a very high capacity for containment. In every medical field, you need to hold your patients, but here that is especially true.

People often come with complicated social backgrounds. Some have psychiatric comorbidities. Some are survivors of prostitution. Some are in unstable or unusual living situations, and some may not even have a home to return to after surgery. A physician needs to understand all of that.

All of this enters the room with the patient. You are not only making a medical assessment; you are also reassuring the patient and helping them make an informed decision. It is essential to understand who is standing before you, how they arrived there, and how you can guide them in a way that is constructive and empowering.

You also have to be very sensitive to the patient's exact needs. You cannot assume anything. It is impossible to assume which parts of surgery the patient wants. Sometimes we receive partial requests — for example, some people want surgery without vaginal deepening. These are the nuances of the field. But the key is to understand what the patient actually wants.

First, do they truly want it? And if so, is it really their own wish, or are they under pressure? A clear example is Iran, where people undergo gender reassignment surgery as a response to homosexuality. That is an extreme case.

"The more people who engage in this work, expand these circles, and make it feel normal, the easier it will become"

Even here, we need to understand why the person wants surgery, what their expectations are, which procedures they want, and what they hope to gain. We need to ask and listen. That is always essential. We should not assume anything is self-evident. We must ask, hear the person, and remain open.

We also need to understand the environment the person lives in. One experience that stayed with me was a patient who came for follow-up about a month after surgery wearing the same pyjamas and house slippers as at the previous visit. It made me realize how limited some people's functioning can be, and how much that has to be taken into account.

We sometimes see this after childbirth too. People have very different capacities, and the experience is strongly shaped by their environment. What gives me the greatest joy is seeing patients arrive with a partner — female or male — or with a parent, someone who can support them. But not everyone has that, and that too must be recognized with compassion.

To what extent do you believe the medical training system in Israel prepares students for work with LGBTQ+ populations?

Very little.

There are efforts to strengthen LGBTQ+ medicine in medical school, but it is still not where it needs to be. There are study days and some exposure, but I think medical students should have a dedicated course on LGBTQ+ medicine and be exposed to all of its specific aspects.

They also need to hear personal stories and learn about the different professions involved. This needs to be much more substantial in the curriculum.

This is not a marginal population. It is a significant part of the population, and it still does not receive enough representation. I came into this work through my own specialty, like almost everyone in LGBTQ+ medicine. People arrive from their own professional direction.

Today there is more specialization, with doctors identifying specifically as LGBTQ+ physicians, but ultimately people come from all areas of medicine. Everyone needs exposure to this. It is not enough to say that people should learn gynecology, which is also important. Here we are talking about a range of professions that every doctor will encounter. That has to be taught.

It is part of training, and later we have to supplement that training. I give lectures for family doctors and other physicians, but it is much harder when people have never learned about it at all.

If there was one thing you would want to change in the healthcare system for LGBTQ+ patients, what would you change?

I would focus on acceptance of diversity across the entire healthcare system.

There is always debate over whether to say LGBTQ+ medicine or gender diversity. For me, the priority is diversity itself: people from different backgrounds, different opinions, different religions, different colors. If that were more deeply embedded and consistently enforced, there would also be much greater openness and understanding in LGBTQ+ care.

There has to be a clear line that the healthcare system cannot tolerate lack of acceptance, judgment, or discrimination toward any population.

LGBTQ+ care is complex, partly because of religious views and partly because of everything happening in our country, which keeps making the issue more complicated. The situation is much better than it used to be, but conservatism still plays a major role.

That may vary geographically. There are often differences between the periphery and the center, but conservatism remains. In general, I think we are a relatively conservative country. There are also large gaps between medicine in the periphery and medicine in the center, with many economic and cultural layers involved. If medicine in the periphery becomes more patient-inclusive, that will naturally make care easier for LGBTQ+ patients too.But there is still a real problem in the way different populations are ranked and treated, and LGBTQ+ people are affected by it. This includes inappropriate remarks, intrusive questions, and behavior that reflects lack of knowledge. If people knew more, they would ask fewer questions. It is not simply curiosity; often they just do not know how to approach the issue or the patient.

Where I work, the secretaries know how to relate to patients, and the nurses are learning. It is a process that needs to keep expanding. This is not something that comes only from above — not only from the Ministry of Health, hospital management, university leadership, or the medical school. It also has to come from within the field.

The more people who engage in this work, expand these circles, and make it feel normal, the easier it will become.

I am optimistic by nature, and I tend to focus on what is going well. Of course, I cannot force anyone to accept someone else. But I can make the field feel more familiar, make the people feel more familiar, and awaken the compassion that is already there, because otherwise they would not have entered this profession. I believe that works better. Personal stories are also essential. That matters not only on television, but in practice as well.

I give lectures in the operating room, in the emergency room, and to anesthesiologists. I do see change, and I have no doubt that change is happening.

Is there anything else you would like to add?

Only this: choose a dream and follow it. For me, gynecology has been something that made me happy from a young age. I am also part of the LGBTQ+ community, so this issue is especially important to me. And yes, I hope that one day there will be the safe place patients can come to, and that means a great deal to me.

Capsule

Synthetic super-enhancers enable precision viral immunotherapy

Leveraging recent insights into the function of enhancers, **Koeber** and co-authors developed synthetic super-enhancers (SSEs) by assembling functionally validated enhancer fragments into multipart arrays. Focusing on the core SOX2-driven and SOX9-driven transcriptional regulatory network in glioblastoma stem cells (GSCs), they engineered SSEs with robust activity and high selectivity. Single-cell profiling, biochemical analyses and genome-binding data indicated that SSEs integrate neurodevelopmental and signaling-state transcription factors to trigger the formation of large multimeric complexes of transcription factors. Moreover, GSC-selective expression of a combination of cytotoxic (HSV-TK and ganciclovir) and immunomodulatory (IL-12) payloads, delivered using adeno-associated virus vectors, as a single treatment led to curative outcomes in a mouse model of aggressive glioblastoma. Notably, IL-12 induced an immunological memory that prevented tumor recurrence. The activity and selectivity of the adeno-associated virus and SSE were validated using primary human glioblastoma tissue and normal cortex samples.

Nature 2026; 653: 232
Eitan Israeli