



U.S.-ISRAEL **COLLABORATION** IN HEALTH INNOVATION

A public policy roadmap to advance greater collaboration in health technology and innovation between the U.S. and Israel



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The U.S.-Israel Business Initiative (USIBI) at the U.S. Chamber of Commerce is the premier national business advocacy organization dedicated to strengthening the trade, investment, and innovation relationship between the U.S. and Israel.



U.S. CHAMBER OF COMMERCE

The U.S. Chamber of Commerce is the world's largest business organization and the leading voice for American business, representing the interests of more than 3 million businesses of all sizes, sectors, and regions.

INTRODUCTION

Much like the U.S., Israel is a leading hub for health-related technology. Throughout the COVID-19 pandemic, Israeli companies, public hospitals, and academic institutions, with the support of the Israeli government, have activated new technology and developed creative therapies to fight the virus. While the global pandemic has highlighted the potential for many of these technologies, the need to build stronger U.S.-Israel ties in health care transcends this crisis.

The U.S. Chamber of Commerce's U.S.-Israel Business Initiative, in cooperation with leading global companies, investors, scientists, academics, and medical experts, established a working group to serve as a platform for a dialogue on emerging health innovations in Israel such as digital health, artificial intelligence, bio-convergence, 5G-connected medical devices, and cybersecurity of critical health infrastructure.

This working group has also begun advancing a new policy framework seeking to unlock the potential of more robust bilateral collaboration between the U.S. and Israel.

The group recommends a number of policy proposals to bolster international collaboration.

THE POTENTIAL FOR U.S.-ISRAEL COOPERATION IN HEALTH CARE

DIGITAL HEALTH

Israel has a robust ecosystem of digital health companies that develop new digital tools, including mobile health treatment and diagnostic platforms, telehealth, and AI-powered applications, that improve access to health care, reduce inefficiencies in the system, and boost the quality and precision of care.

Israel has a health care system with four Health Maintenance Organizations (HMOs) that represent 98% of the population. For the past two decades, these HMOs have used the same electronic medical records platform, with access to patient records available to each point of care as needed. As a result, Israel has one of the largest databases on patients, conditions, and treatments anywhere in the world. The Israeli government has approved a \$300 million digital health initiative to make the nation's large pool of anonymized data available to researchers, entrepreneurs, and medical institutions, as well as pilot programs for startups to join forces with international companies. Israeli hospitals have also established innovation centers and share medical data collected over nearly three decades with strategic partners in research institutions, startups, and leading global technology companies.

Examples of U.S.-Israel Partnerships. The Israel Innovation Authority and the Israel-U.S. Binational Industrial Research and Development Foundation (BIRD) have partnered with several U.S.-based health systems to finance Israeli medical technology companies to develop, test, and market new products in the U.S. These health systems include Thomas Jefferson Hospital, Hartford HealthCare, and the Mayo Clinic.

ISRAELI PHARMACEUTICAL RESEARCH AND DEVELOPMENT (R&D)

In 2018, Israel's life sciences sector attracted \$1.5 billion in investment. Half of the civilian research at Israel's universities and research centers focuses on the life sciences. However, more and more, technologies driving biomedical breakthroughs come from beyond the life sciences sector. New vaccine discovery and delivery, early detection and treatment of disease, and the application of nanotechnology for biomedicine are emerging from the multidisciplinary approach of bio-convergence whereby chemists, physicists, computer scientists, engineers, and mathematicians collaborate.

COVID-19 Bio-convergence Application. The Israeli pharmaceutical sector, in particular, is investing heavily in this multidisciplinary domain for new diagnostics, treatments, immunizations, and therapies.

MEDICAL DEVICES

Israel is home to about 1,000 medical device companies and is a leading country in terms of both patents per capita and in absolute number of patents. That's why many multinational companies have R&D activity in Israel, including Abbott, Philips Healthcare, Johnson & Johnson, Medtronic, General Electric, and Siemens. With a huge influx of internet-connected devices coming to market, coupled with faster 5G technologies, this sector will continue to experience dramatic growth.

COVID-19 applications. Wearable devices for tracking vitals and new innovative ventilator systems have been deployed in Israel.

CYBERSECURITY INNOVATION TO PROTECT HEALTH INFRASTRUCTURE AND SUPPLY CHAINS

Cybersecurity attacks compound the strain on medical facilities and health care companies by disabling relevant systems. Israel is one of the world's leading developers of cybersecurity solutions. With more than 10% of the global investment in cyber going into Israeli companies, Israel has been a key partner for U.S. industry in securing data, critical infrastructure, and supply chains. In the wake of COVID-19, there will be a growing need to secure complex medical, food, and manufacturing supply chains and protect medical facilities, which Israel can help fill.

POLICY RECOMMENDATIONS TO STRENGTHEN U.S.-ISRAEL COOPERATION IN HEALTH INNOVATION

1. **Advance Funding for U.S.-Israel Health Research & Development.** Modeled after the recent creation of the U.S.-Israel Energy Center of Excellence, both governments could look to design a similar public-private R&D center that will support public-private projects to develop and deploy new technologies with commercial application in the health sector.
2. **Expand the Memorandum of Understanding (MOU) Between the U.S. Department of Health and Human Services (HHS) and Israel's Ministry of Health (MOH).** HHS and MOH first signed an MOU in 1985 providing for the exchange of information and scientific research and renewed it in 2016. This updated MOU establishes the framework for coordination on a broad range of public health issues that could be expanded to include pandemic preparedness and response efforts; joint activities to address common priorities; and deeper cooperation between government and private sector scientists, technologists, and medical experts. This MOU offers the framework for a more robust U.S.-Israel health dialogue between entities such as the National Institutes of Health, the Centers for Medicare & Medicaid Services, the Centers for Disease Controls and Prevention, the Biomedical Advanced Research and Development Authority, the U.S. National Academy of Medicine, and parallel partners in Israel.
3. **Enhance Intellectual Property Protections for Biologics in Israel.** Advocate for Israel to recognize regulatory data protection (RDP) for biologics to encourage investment and innovation in R&D in life sciences in Israel.
4. **Strengthen U.S.-Israeli Cooperation in Artificial Intelligence (AI), Especially in the Health Sector.** Commit the U.S. and Israeli governments to a regular dialogue with the private sector to promote cooperation on artificial intelligence and machine-learning technologies by committing to good regulatory practices, including those that are risk based and outcome focused.
5. **Advance a U.S.-Israel Digital Trade Agreement.** The U.S. and Israel are among the most digitally advanced countries in the world. However, the groundbreaking U.S.-Israel Free Trade Agreement signed 35 years ago preceded the internet and e-commerce. A new digital trade chapter to the U.S.-Israel FTA would drive greater cooperation in a range of sectors, most significantly the health sector. A new agreement would promote government-to-government collaboration on cybersecurity issues, foster open access to government-generated public data, and strike down tax and customs duties on digital products flowing both ways.
6. **Further U.S.-Israeli Cyber Cooperation to Protect Critical Health Infrastructure, Supply Chains, and Medical Facilities.** This includes aligning U.S.-Israeli standard-setting and regulatory frameworks, upgrading cyber R&D cooperation, and exploring joint programs on security certification and labeling for technology products. The governments could leverage the existing U.S.-Israel Cyber Working Group established in 2017 by the White House and prime minister's office.
7. **Streamline Regulatory and Registration Processes in Markets.** Market access and entry issues exist for both Israeli companies looking to enter the U.S. market and U.S. firms seeking approvals in Israel. The governments could develop processes on both sides to expedite registration of new products, including a "green channel" in Israel for new products based on certain U.S. compliance standards, and support the establishment of a regional U.S. Food and Drug Administration (FDA) presence in Israel so that Israeli products can reach American patients more quickly.
8. **Support the Establishment of Health Attaché Positions in Embassies.** HHS posts and supports health attachés in almost every region of the world and leads global health diplomacy in their respective countries. These officials touch on the intersection of health and any number of sectors, including trade, security, and the environment, and act as a resource for representatives of HHS and other U.S. agencies in the region. HHS should post a health attaché at the U.S. Embassy in Israel. Similarly, Israel's Ministry of Health should post an attaché at Israel's Embassy in Washington, D.C., to demonstrate the significance of this sector and ensure continuity in government efforts.



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