

BRANCHES



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CROSS-NATIONAL LEARNING:

THE ONGOING ISRAEL QUALITY PARTNERSHIP

The Jewish Healthcare Foundation's (JHF) relationship with the diverse clinical, policy, administrative, and research leaders of the Israeli health care system has yielded outcomes that are testament to the value of international exchange. In nine bi-directional visits between 2009 and 2013, Israeli and American professionals shared best practices and collaborated around the challenge of providing patient-centered, high quality and efficient care against the backdrop of rising rates of chronic disease and resource constraints in both countries.

Israeli healthcare leaders demonstrated the impact on population health of a strong emphasis on primary care, supported by some of the most advanced outpatient electronic health record systems in the world. In turn, we at JHF challenged Israel to adopt Lean methods to improve quality and reduce costs in its overburdened hospital system.

What we learned influenced our thinking in 2009 as we weighed-in on the U.S. healthcare reform debates, leveraged learnings from site visits to two secondary care centers in Haifa into a multi-million dollar grant in 2012 from the Center for Medicare & Medicaid Innovation to develop Primary Care Resource Centers in six regional hospitals, and seeded an ongoing quality improvement partnership with Israel's largest HMO.

In this publication, we champion the fruits of international collaboration by offering another installment in our ongoing Israel quality partnership.

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Championing the Value of Cross-National Learning

Karen Wolk Feinstein, PhD, JHF President and CEO, reflects on the value of cross-national learning, citing numerous areas in which JHF and its operating arm, the Pittsburgh Regional Health Initiative, have adopted and successfully applied such learning to complex U.S. healthcare problems.

Israeli Health Care Reaches a Crossroads

Healthcare expert and author, Michael L. Millenson, as part of a JHF delegation attending the 5th International Jerusalem Conference on Health Policy in June 2013, shares his observation of the Israel healthcare system.

The Clalit-PRHI Quality Improvement Partnership

Ran Balicer, MD, PhD, MPH (director of the Clalit Research Institute), and Yifat Lavi, MSc (Clalit quality improvement coach), describe the JHF-Clalit quality improvement partnership and highlight some of its preliminary outcomes.

What Happens Next

Karen Feinstein speaks to the future of this ongoing partnership.



CHAMPIONING THE VALUE OF CROSS-NATIONAL LEARNING

By Karen Wolk Feinstein, PhD, President & CEO, Jewish Healthcare Foundation and Pittsburgh Regional Health Initiative

Since 2009, we at the Jewish Healthcare Foundation (JHF) have been engaged in a multi-dimensional partnership with our clinical, administrative, research, and policy counterparts in Israel. Our experience, described in greater detail in this publication, builds on almost two decades of demonstrating the value of weaving together high-value health improvements from around the world.

From its earliest days more than 15 years ago, JHF's supporting organization, the Pittsburgh Regional Health Initiative (PRHI), adapted for health care the LEAN-based industrial process improvement method known in Japan as the Toyota Production System. Perfecting Patient CareSM (PPC) became PRHI's flagship quality improvement methodology. In the hands of the more than 3,000 frontline staff that PRHI trained, PPC has improved workplaces, reduced morbidity, and saved countless lives across the U.S. and internationally.



The Japanese Roots of PPC

Following World War II, W. Edwards Deming went to Japan to teach industry leaders how to improve design, product quality, testing, and sales through the application of statistics, or statistical quality control. He detailed the ways in which workplace chaos, uncertainty, random behaviors, work-arounds, confusion, disorder, and secrecy lead to errors, high turnover, and lower profits. The Japanese Toyota automobile company embraced Deming's philosophy. Applying Deming's methods, now called the Toyota Production System, launched Toyota as one of the most successful companies in history.



The Roots of PRHI Infection Control Techniques

From the Netherlands and Scandinavia, PRHI adapted Deming's principles to hospital infection control that ultimately led to an 85% reduction in MRSA in the Pittsburgh VA hospital – with methods that ultimately were adopted at 176 VA facilities across the U.S. Much of this work has been documented in *Moving Beyond Repair: Perfecting Health Care*.

In 2001, a MRSA outbreak in Holland led to the successful development of an infection “Search-and-Destroy” policy which involved:

- intensive screening of all patients and healthcare workers;
- isolation and treatment of all carriers; and
- national guidelines for laboratory MRSA detection to identify all healthcare-acquired cases.

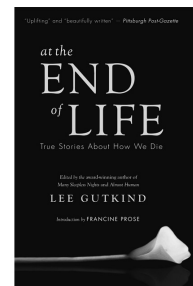
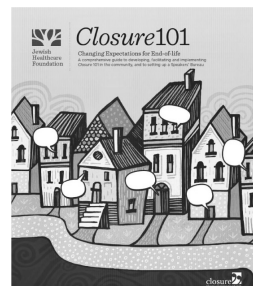
Antibiotic-resistant pathogens have historically been very well controlled in Scandinavian countries. The region's success is attributed to:

- strict compliance with infection control routines such as hand hygiene and sterilization;
- widespread availability of single-patient rooms to prevent infection spread; and
- discriminate use of antibiotics to prevent bacterial antibiotic resistance.



The UK Roots of Closure

Similarly, our extensive work to improve care at end-of-life builds on the launching of the modern hospice movement in the United Kingdom. For example, JHF developed the *Closure* program, which includes information in the form of lessons created by experts on end-of-life issues and care planning, and a six-module, 18-hour series that sparks discussions on end-of-life issues and care.





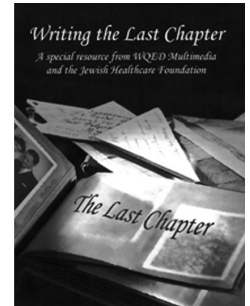
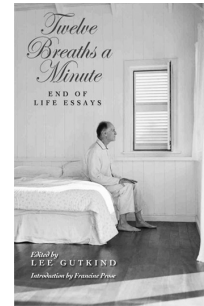
In 1967, Dame Cicely Saunders of the UK founded St. Christopher's Hospice, launching the modern hospice movement. It was the first research and teaching hospice linked with clinical care. And importantly, it defined palliative care to include the easing of total pain, encompassing its physical, psychological, social, and spiritual dimensions.

The Israel Roots of PCRCs

And from Israel itself, we transplanted the concept of secondary care centers to the Pittsburgh region. With the support of a \$10.4 million award from the Center for Medicare & Medicaid Innovation, we built Primary Care Resource Centers (PCRCs) in six community hospitals. The PCRCs are hospital-based care hubs that allow outpatients from physicians' offices to receive highly coordinated and advanced care from a single location.

In 2009, a JHF delegation visited the Lin and Zvulun Medical Centers, part of the Clalit HMO's Haifa services. We encountered facilities providing advanced specialty care (with more than 5,000 specialty visits daily), with eight outpatient operating rooms, and providing advanced multi-disciplinary patient support programs in such areas as pelvic floor dysfunction, liver disease, and pulmonary hypertension. Situated between the hospital and primary care providers, the centers addressed the multiple needs of complex patients in lower cost, outpatient settings.

In summary, what do we gain from cross-national learning? We gain perspective on what is possible. We adopt incentives that enable us to break through barriers to best care. Seeing what's possible gives us the impetus to change and, importantly, contributes insights into shared problems¹. In that spirit, this publication records author Michael Millenson's observations on current issues in the Israeli healthcare system and chronicles a first, multi-site PRHI quality improvement partnership with Israel's largest HMO, the Clalit Health System.



The PRHI delegation visited a number of hospitals on our 2009 trip to Israel, including Lin Medical Center, a secondary care center owned by Clalit in Haifa.



ISRAEL'S HEALTH CARE REACHES A CROSSROADS

By Michael L. Millenson, president of Health Quality Advisors LLC

The State of Israel can sometimes seem just another outpost of American culture, its cities sprinkled with sushi bars and cappuccino joints, its cinemas showcasing Hollywood films and even its famously frenetic cab drivers forced to endure American-inspired, "How am I driving?" stickers affixed to their bumpers.

But look closely at the Israeli health care system and you suddenly find yourself in the Bizarro World of the Superman comics, where everything is the opposite of what you expect. Unlike in America, this is a world where, until recently, medical schools were pleading for students to become specialists, since the good salaries have gone to primary care doctors. It's a world where allegations that extra private insurance buys you faster treatment than government-provided coverage prompt public outrage. And it's a world where average citizens are so satisfied with their health plan – 92 percent, according to the latest figures – that hardly anyone switches.

That this copacetic consensus springs from one of the most contentious citizenries of any nation on Earth may be the most disorienting feeling of all. "Ninety-two percent – and Israelis are happy with nothing!" exclaims Dr. Ran Balicer, director of the Clalit Research Institute, an arm of the largest and oldest of the four Israeli health plans. "It's very peculiar."

Yet that pleasing poll belies some serious problems, particularly with the treatment of serious illness. In keeping with the Bizarro World theme, they have their roots in exactly the opposite of what afflicts the American system. In America, the “health care crisis” is shorthand for the ill effects of a system that resembles an overheated engine with a bad oil leak. While the engine is providing plenty of horsepower, it’s burning through billions of dollars unnecessarily in the process. America. A third of the U.S. health care budget is wasted spending, according to the Institute of Medicine. In 2009 that was a stunning \$765 billion, or nearly six percent of gross domestic product (GDP).

The Israeli system, on the other hand, is a lean machine that reflects local ingenuity. Think of it as an engine with an air-fuel ratio designed to maximize power while minimizing fuel consumption. Israel spends a total of 7.7 percent of GDP on health care while providing insurance coverage for all and a top-notch primary care system. Immunizations, life expectancy, infant mortality, and similar health measures consistently show Israel outperforming America and ranking among the best in the developed world.

TOP-NOTCH PRIMARY CARE

“Israel spends a total of 7.7 percent of GDP on health care while providing insurance coverage for all and a top-notch primary care system. Immunizations, life expectancy, infant mortality and similar health measures consistently show Israel outperforming America and ranking among the best in the developed world.”

—Michael Millenson

“The Israeli health care system today stands at a crossroads, grappling with issues of money and medicine and of equity and efficiency that cut to the core of the state’s relationship with its citizens.”

—Michael Millenson

Israel’s problem, however, is that the “fuel” of government spending doesn’t seem to be quite keeping up with the engine’s demands. More and more often, the engine sputters and chokes, raising pointed questions about the difference between efficient, underpowered, or just plain “out-of-gas.”

In just the last few months, reports from the World Health Organization (WHO) and the Europe-based Organization for Economic Cooperation and Development (OECD) singled out Israel’s inpatient care infrastructure for tough criticism, echoing long-standing complaints about aging and crowded hospitals, too few nurses and shortages of some equipment.

The concerns of the experts seem to be shared by a distressingly high percentage of ordinary Israelis. In a national survey by the Myers-JDC-Brookdale Instituteⁱⁱ, faith in the four health plans was counterbalanced by fear of what might happen in case of serious illness. Just half of respondents “were confident or very confident that they would receive the best and most effective treatment,” the Jerusalem-based institute reported, and “only 40 percent reported that they were confident they would be able to afford the treatment needed.” In these two measures, Israel scored lower than 11 other industrialized nations included in a 2010 survey by the U.S.-based Commonwealth Fund.ⁱⁱⁱ

Whether the system is in “shambles,” as *The Times of Israel* put it^{iv}, is arguable; that the “engine” is misfiring more frequently is not. The Israeli health care system today stands at a crossroads, grappling with issues of money and medicine and of equity and efficiency that cut to the core of the state’s relationship with its citizens.

Bruce Rosen, director of the Brookdale Institute’s Smokler Center for Health Policy Research, puts the situation simply. Providers and plans in Israel “have a sense of mission and values,” he says, “but they’re feeling resource-starved.”



PRHI research consultant Susan Elster, PhD, and Karen Feinstein with Bruce Rosen, director of the Smokler Center for Health Policy Research at the Myers-JDC-Brookdale Institute in Jerusalem.

Defining a New Direction

Two decades ago, the U.S. and Israeli health care systems could have converged. That they did not revealed truths about both.

A concept called managed competition was mesmerizing health policy mavens with its mixed public-private approach. In 1993, President Bill Clinton proposed restructuring U.S. health care along managed competition lines, providing coverage for all Americans through health plans that would offer a certain minimum benefits package and vie for customers based on cost and care quality. The fractured U.S. health insurance industry, facing consolidation, fought back, saying the proposal would take away “choice” from middle-class Americans. Although about 13 percent of Americans had no health insurance at all, the plan died without even coming to a vote.

As America eschewed equity, Israel embraced it. The Israeli Knesset passed its own version of managed competition, the National Health Insurance Law, which took effect Jan. 1, 1995. (A Patient’s Rights Act the next year added various privacy and other protections.) The law defined a new direction for Israeli health care. All citizens were required to join a health plan (in Hebrew, a *kupat cholim*, or “sick fund”), and the plans were forbidden to

Concern about the quality of hospital care seems “to be shared by a distressingly high percentage of ordinary Israelis.” A national survey found that half of Israelis were concerned about their care if they faced a serious illness.

—Michael Millenson

reject members because of a pre-existing medical condition. A basic “health care basket,” updated regularly, provided coverage for hospitalization, physician care, certain drugs, and other services.

However, as in the United States, managed competition’s backers had more than maximizing access as their goal. If the U.S. insurance market had too many players offering too many products of too little value, Israel had the opposite problem: concentration. Clalit controlled more than 80 percent of the market, in part because it accepted all applicants as long as they joined the parent Labor Federation. But the plan spent just 75 percent of the sick fund dues it collected on medical care, with the rest going for other purposes. The other three plans, meanwhile, kept costs down by “cherry picking” members.

A Tel Aviv management consultant remembers trying to join the Maccabi health plan in the 1980s. Then and now, it was the second-largest plan and had an “upscale” reputation. He was turned down because of past health issues. A while later he married a woman who was a Maccabi member and also worked for the plan. But when he applied again, he once again was rejected. Only with the passage of the National Health Insurance Law did the consultant finally get his Maccabi membership card.

The law replaced individual plan rates with a sickness fund tax and supplemented that funding with general tax revenues. Each of the four plans was now paid a set amount per member, with adjustments for age, gender, and geography. Soon, health plan outposts began springing up in East Jerusalem and other previously underserved areas. Today, 53 percent of Israelis belong to Clalit, and 25 percent are members of Maccabi. Meuhedet, historically strong in Jerusalem, has a 12 percent share and Leumit, strong in the West Bank, has 10 percent.

The health plans are not-for-profit, but the money flow involves a “complicated

mix of reimbursement arrangements,” in Brookdale’s tactful phrase. The Ministry of Health operates about half the beds in the country’s acute-care hospitals, and another third are operated by Clalit. The remaining beds are accounted for by a mix of for-profit and nonprofit organizations, such as Jerusalem’s Hadassah hospital. Hospitals get most of their money via the health plans in the form of government-set reimbursement rates, but there’s also money from additional health insurance consumers buy (“private medicine”), from donations, and even from a small medical tourism industry.

Since the government owns, pays, and regulates hospitals, there are regular charges by critics of conflict of interest and occasional lawsuits. Doctors have their own union to negotiate salaries with the government, and that union periodically goes out on strike.^v

Complex payment schemes notwithstanding, primary care in the community has been consistently top notch. Wait times to see a doctor are short, and 24-hour access to phone help or basic services is taken for granted. Primary care records are computerized, with good access by patients. For years, plans have routinely tracked a long list of measures of primary care quality, particularly for patients with chronic conditions, and held doctors accountable for achieving them. Israel, concluded the OECD, has a record of “delivering and sustaining high-quality primary health care.”

Yet if Israelis are happy with their health plans, it’s not just because of high marks on a scorecard. The plans vary from each other in ways that give Israelis the ability to pick a plan that “fits,” be it ideologically, geographically, or by offering care in private physician offices rather than

clinics. Over the years, the local plan branch has become a trusted resource where friends, neighbors, and relatives all turn. Since health insurance is not linked to age, income, or employment, membership becomes a tradition. “In general, [members] stay from the minute they’re born to the minute they die,” says Clalit’s Balicer.^{vi}

For some new immigrants, figuring out the “fit” can be frustrating. A woman in her late 20s who was accustomed to her doctors in suburban Chicago ranted about a Jerusalem clinic that “was like Afghanistan,” filled with Israelis pushing as if at a bus stop to get into the doctor’s office; that is, until she wielded a friend’s baby stroller to block them off. In contrast, a retired couple from New York living just a few miles away from the Chicagoan quietly looked for coverage that ensured access to a clinic known for its American-style care.

As with other aspects of Israeli life, veteran residents shrug off health plan bureaucracy as a challenge rather than a barrier. A diabetic scientist living near Haifa recounted how he got his health plan to cover a wearable insulin pump that enabled him to better adjust his blood sugar levels. A knowledgeable friend had confided to him that the plan granted coverage exceptions in cases of documented acute need. The scientist waited until late one night and then called the paramedics, explaining when they arrived that his blood sugar was seriously out of sync. The same scenario repeated itself a week or two later. The plan paid for the pump.

Dr. Anthony Luder, a British-born pediatrician who’s practiced in Israel for decades, contrasts the Israeli and British systems. In both, the government sets spending limits and controls resources. But in Britain, patients are patient, waiting months for a surgery or specialist appointment; Israeli patients are not. “We have better outcomes,” Luder explains, “because Israelis make sure they get what they need.”

“Israel’s impressive life expectancy gains and lower premature mortality from chronic conditions reflect the contribution of its primary care system.”

—OECD 2012:65

The Safety Valve

In American terms, this would make Israelis what academics call “activated patients.” However, the “power of pushiness” comes closer to describing a national sense of individual empowerment, whatever the rules might say. In health care, this functions as an informal pressure relief valve against any feelings of care being rationed. Equally critical is the prevalence of supplemental insurance that covers certain medical services and medications not in the basic “health basket,” while also providing the ability to choose one’s specialist. Eighty-three percent of Israelis now buy supplemental coverage from health plans, according to the Brookdale survey, and each plan trumpets its supplemental options.

The Clalit Mushlam Zahav (Supplement Gold) Plan, for example, touts full or discounted coverage for “over 80 medical incidents relevant to all age groups.” These include “30 different eventualities that may affect pregnant women,” dental check-ups (dental care is not part of the health basket), consultations with specialists, medical scans, orthopedic and other medical accessories, “delivery of blood and urine specimens from your home or work,” and “therapeutic” swimming and horseback riding for children. There’s also coverage of surgery abroad under certain circumstances. A “platinum” supplement builds on the gold with greater discounts and some additional services, including a promise that cancer patients will receive “guidance and direction by a supportive personal multidisciplinary team” of physicians, nurses, and social workers.

The pervasive use of supplemental insurance exacts a price, however. To start with, a Ministry of Health survey showed that 60 percent of low-income individuals receiving disability or old-age payments now pay for extra insurance, though their need for it is questionable. More broadly, about 40 percent of national health care expenditures now come from Israeli households either directly in the form of out-of-pocket copayments, which have been rising, or in premiums for supplemental insurance and “commercial” insurance (which is sold by for-profit companies and covers extras like long-term care). By comparison, the OECD average is about 29 percent. Moreover,

premiums for voluntary health insurance have been expanding at a double-digit rate, according to a 2011 *Health Affairs* article by Jack Zwanziger and Shuli Brammli-Greenberg.^{vii}

One might ask why Clalit, which owns hospitals and employs doctors, offers a supplemental plan to cover “private surgical procedures in Israel carried out by the best of private surgeons, at private hospitals”? The answers carry us back to that “complicated” money flow.

Israeli primary care physicians earn a comfortable living from their government salaries. Most hospital-based specialists are not as fortunate. They earn a modest government base salary, but many work a schedule allowing them to make extra income by seeing private-pay patients or by working for a health plan part of the day. Supplemental and “commercial” insurance, together known as “private medicine,” help supplement their salaries.

It is here that issues of equity start to get sticky. Put together the public fears of not getting needed care and the stampede towards supplemental insurance, and it starts to look as if Israelis think the public system is on the bottom of a two-tier standard of care. Moreover, insurance enabling you to hire Doctor A over Doctor B is very different from an equity perspective than buying your way to the front of the treatment line. In a country where near-universal Army service constantly reinforces ideals of social solidarity in matters of life and death, pushing ahead of your neighbor, who may be sicker but not richer, crosses a line.

A study concluding that this was exactly what was happening in Jerusalem generated a banner headline in early June. “You didn’t pay for private medicine? Now you wait,” declared *The Marker*, a business supplement to Ha’aretz.

An accompanying graphic, “Money lets you cut into the line” showed waiting times for specialists at two prestigious, private hospitals. At Hadassah Medical Center, patients with insurance on the “private track” waited an average 4.7 days to see a specialist, while those whose care was publicly financed waited more than 10 times longer – 63.6 days. At Shaare Zedek Medical Center, the public track patients

waited an average 34.4 days compared to just 7.2 days for those on the private track. Often, when a family doctor from a health plan called the specialist on behalf of the patient, the call was not returned. “

“Is this the health care system we imagined when the National Health Insurance Law was enacted?” the newspaper asked.

When the study the newspaper article was based upon was presented later that day at the 5th Jerusalem International Conference on Health Policy, strong emotions quickly came to the fore. Researcher Tom Axelrod’s conclusion that “accessibility of public services may be damaged when private services take over” prompted a Ministry of Health physician to protest that the government had a policy against this. A skeptical retort from the moderator precipitated an energetic discussion that veered from the official English of the meeting into excited Hebrew and back again to English. One health plan executive fumed privately that the article must have been inspired by political motives.

Yet the accumulated evidence points to a pattern. Israel’s Taub Center on Health Policy, looking at long-term economic data, put it starkly in a 2012 report^{viii}: “Even with regard to the basic basket of services, two parallel systems are developing – a system for the poor and a system for the rich.”

Or as a question posed at the Jerusalem health policy conference by Dr. Josep Figueras, head of the WHO’s European Centre on Health Policy, framed the concern: “Is austerity a means for covert privatization?”

The Katyusha in the Lobby

Nowhere do issues of equity and efficiency come together as visibly in Israel as in the areas known as “the periphery” (in Hebrew, “peripheria”). Though it may seem an odd appellation in a nation the size of New Jersey, “periphery” refers not just to physical distance from the country’s center in a country where two-lane roads long dominated. It is also a social and political designation for the



Katyusha in the lobby of the Western Galilee Medical Center

northernmost and southernmost parts of the country that are less densely populated, less prosperous, and home to more Israeli Arab villages and to “development towns” heavy with descendants of Sephardic immigrants.

It was fitting that those of us on a recent study mission to Israel sponsored by the Jewish Healthcare Foundation (JHF) went north. When JHF launched what became the Pittsburgh Regional Health Initiative (PRHI) in 1997, its mission of improving health care delivery was labeled “both a social and a business imperative.” Well before other community coalitions, PRHI preached “zero defects” in medical care as an economic benefit as well as a clinical and moral imperative.

By the 1990s, Pittsburgh’s days as an industrial center were long gone; in that sense, it, too, was on the “periphery.” But Pittsburgh’s stature as a medical hub that could be a center of the new American service economy was growing. PRHI offered a way to “create maximum value for the patient and for society.” The health care needs of Israel’s northern communities similarly intertwine the clinical, moral, and economic, with health care facilities that are a large or the largest civilian employer.

JHF’s first official visit to Israel came in 2009. This latest visit included the Lin

Medical Center in Haifa, a secondary care center owned by Clalit; the government-owned Western Galilee Medical Center, in Nahariya; the government-owned Ziv Medical Center and neighboring Bar Ilan University Medical School, in Safed; and the Nazareth Hospital, owned by a private trust based in Scotland.

At each stop the basic story was similar: a shortage of resources accompanied by a dogged determination by the facility’s staff to provide the best possible care for an ethnically, economically, and religiously diverse patient mix. These include Druze, Circassian, and Palestinian Arab Muslims, as well as a variety of Jews ranging from residents of secular kibbutzim to insular ultra-Orthodox.

Over time, the effort expended by clinicians in helping these patients “get what they need,” in Luder’s phrase, edges into weariness. For example, the only radiotherapy for an Arab woman with cancer may be a several-hour trip away, but the woman is forbidden to travel without a male escort. Yet if her husband takes time off his job to escort her, he may lose it.

“Sometimes I have the feeling we’re an orphan area, a ‘no man’s land,’” a doctor at one facility said. No one around the table disagreed.

When there is war or threat of war, though, the government pays attention, particularly to Ziv, close to the Golan Heights, and Western Galilee, just six miles from the border in Lebanon. That’s close enough to the front lines for both hospitals to have treated a steady trickle of Syrians wounded in that civil war. Both facilities also have commendations from the Israel Defense Forces on their walls. One of the first things a visitor to Western Galilee sees is a small glass case in the lobby holding the remnants of a Katyusha rocket.

During Israel’s war with Hezbollah in the summer of 2006, hospital officials counted more than 800 missiles fired their way from Lebanon. Almost all landed short, long or wide; late one night, one did not. The Katyusha slammed into Western Galilee’s ophthalmology department and burrowed down several floors. Staff and patients huddled in bunkers; the damage was to property.

Today, visitors see a new, low-set emergency room with reinforced roof and walls, no windows, and the ability to be sealed tight against any biological hazard lurking in the outside air. In addition to the ER, the underground part of the main facility houses 540 “protected” hospital beds, along with supplies for doctors, staff, and their families.

It is a reminder that Israel’s civilian hospitals are also its military ones. It is also a reminder that other OECD nations do not have to spend money fortifying healthcare facilities against bombs and biological warfare (and it’s not just in Nahariya).

Although the percentage of Israeli GDP devoted to health care has remained remarkably stable since 1995, Israeli life has not. During that period, Israel was involved in a drawn-out intifada, separate month-long conflicts in Lebanon and Gaza and a briefer Gaza incursion. The “guns versus butter” debate in this small country is intense and ongoing, and it involves education, housing, and other social services just as much as health care.

Meanwhile, since 1995 Israel has also absorbed more than 630,000 immigrants in a population that’s grown to 7.8 million, become a technology powerhouse as “start-up nation,” endured the bursting of the technology stock bubble and a global recession, and nonetheless watched personal incomes rise substantially. With that prosperity has come rising expectations for health care services.

And yet: while the tale of hospital perseverance under the rocket’s red glare and bombs bursting in air tugs on heartstrings and loosens checkbooks – outside donors remain essential to Israeli hospital budgets – quiet neglect by Israel’s own government may pose the greater danger to health. For example, until recently, Western Galilee Hospital, serving a population of 600,000, shared one MRI with two other hospitals; a second recently arrived. After a long doctors’ strike in 2011, the government agreed to pay extra to physicians who locate in the periphery, but Western Galilee doesn’t have the budget to hire more doctors.

Nor is there room for more patients. Western Galilee runs at an average 102

percent occupancy rate. With beds on regular floors often full, the intensive care unit runs at 180 percent capacity. While periphery hospitals may be worse off, they are hardly alone in their distress. The nation's average hospital occupancy rate of 98 percent is the worst in the developed world, and in winter months, it can reach 170 percent. The impact on patients is still unclear.

Overall, Israel has 1.91 hospital beds per 1,000 residents, according to an OECD report, compared with an OECD average of 3.4 beds per thousand. There are just 4.8 nurses per 1,000 residents, compared with the OECD average of 8.8 nurses per thousand, and the number of doctors retiring far exceeds those coming into the system.

"The translation into the reality of our lives is the high occupancy of hospital corridors" filled with patients, wrote Dr. Zéev Feldman of the Israel physicians union in an op-ed in Ha'aretz.

As for those scarce MRIs, the data show that Israel has just 2.5 MRI scanners per million residents compared with an OECD average of 18.7 scanners. Within the OECD, Israel ranks next to last, just above Mexico. However, Israel has recently beaten out Mexico for the dubious honor of having the highest poverty rate in the OECD. In 1995, the year the National Health Insurance Law was passed, the poverty rate was 14 percent. In 2013, it is nearly 21 percent. Meanwhile, 12 percent of the population, and 20 percent of those in the lowest fifth of the income bracket, told Brookdale they did not get a needed treatment or medication because of cost at least once in the past year.

Noted the WHO's Figueras: "Saving money is not the same as efficiency." One path, he continued, leads to rationing; the other to value-based coverage.

And so it is that after two decades, the American and Israeli health care systems begin to converge once again.

Bending the Curve

Dr. Avi Porath, director of the health division at the Maccabi plan, a former internal medicine physician at Soroka Hospital in Be'er Sheva, and a pioneer

in Israeli quality measurement and management, is talking about the better future he sees ahead.

"Rationing is where the health care system suffers," Porath tells the Jerusalem health policy conference, before laying out an alternative: true managed competition. By this, Porath does not mean dueling discounts on child care coupons. Instead, he ticks off a list of actions the Maccabi health plan is already routinely taking or piloting: new partnerships between health plans and hospitals; innovation in primary care services, including an integrated medical record common to both primary care and hospitals; collaboration between medical and social services to reduce preventable hospital readmissions; and home monitoring to reduce hospital admissions in the first place.

Separately, Clalit's Balicer talks of similar initiatives, including data mining of member information to predict who will become ill and intervene to prevent it. The two plans alone reach nearly eight in ten Israelis. It's anyone's guess how long it will be before eight in ten Americans routinely enjoy this type of care.

In America, the slogan, "bend the cost curve" means, "bend it downwards." When your health care system is an oil-burning, all-consuming machine, how could it mean anything else? However, since the word "less" is a toxic term in American medicine, politicians and academics are quick to explain they want to do so by obtaining the best possible value for each dollar spent. Porath's list of initiatives could easily have been on a U.S. PowerPoint.

A growing chorus of Israelis is also ready to "bend the curve," but the opposite way: upwards. "The tight controls over Israeli health care costs might not be sustainable in the long term," wrote Zwanziger and Brammli-Greenberg in 2011 after considering Israeli's aging population and growing prosperity.^{ix} Israeli economist Dov Chernichovsky added to that argument in an April, 2013 *Health Affairs* piece^x, noting that the state's per-capita contribution to the care of the aging population in recent years has increased just 4.3 percent while private funding rose 43.7 percent.

Chernichovsky was also lead author of the Taub Center report, which found a "significant erosion" in publicly financed health care expenditures relative to GDP growth since 1995. "Decades of achievement in the realm of equity and efficiency are eroding, and public health may ultimately suffer," the report concluded. Added the physician union's Feldman: "There is no escape from raising the national expenditure on health from 7.7 percent GDP to the level accepted in the OECD, which is 9 percent and 10 percent."

The Ministry of Health's latest budget promises more money between now and 2018 to build more hospitals, buy new equipment, and pay for doctors and nurses, and Minister of Health Yael German herself has appointed an advisory committee to recommend ways to help her "strengthen the public health system." Skeptics believe the response is not yet adequate.

What is uncontested is that at a time of tight budgets, putting more fuel into the health care mix in Israel still requires a careful tuning of the engine. As a result, "value" remains the watchword. In the United States, Americans are embracing a greater equity due to the Patient Protection and Affordable Care Act (ACA) while seeking greater efficiency as the uninsured begin entering the system in 2014. Israel, looking to reduce a level of health care inequity it thought it had left behind, is seeking increased efficiency to keep extra expenditures from ballooning. Appropriately, the theme that united American, Israeli, and European researchers at the Jerusalem policy conference was, "Health Policy in Times of Austerity."

Each nation has its unique issues: an Israeli at the conference talked about Bedouin nomads, while a Swedish researcher spoke passionately of the difficulties posed by immigrants from Norway. However, basic challenges are often similar and conducive to swapping solutions. For example, PRHI was awarded a \$10.4 million federal innovation grant for an accountable care network project inspired by care coordination at Clalit secondary care centers. At the same time, PRHI has brought its Lean-based "Perfecting

Patient CareSM quality and safety improvement methodology to several Clalit hospitals and clinics, in keeping with the kind of values-based approach to cost containment in Israel advocated by Figueras. JHF President and Chief Executive Officer Karen Feinstein keynoted a meeting of the Israel Society for Quality in Health Care, and she was a featured speaker at the Jerusalem policy conference.

Financial incentives, noted Feinstein, are universal: they spark interest in quality improvement wherever she goes. Those incentives may soon be even greater in Israel, as Israeli health policy experts explore adopting and adapting American payment mechanisms that focus on accountability for safety, specific quality improvements, and other measures of value. The role of the private and public sectors in Israeli health care are also in flux, with more U.S.-style entrepreneurial health care.

Without mitigating the challenges, Brookdale's Rosen remains optimistic. "Israelis are fundamentally committed to building an efficient and effective healthcare system with good access for every one of our citizens," Rosen said. "In this country, we have repeatedly succeeded in the face of challenges no one thought we could overcome, and I'm hopeful that's what we'll do here, as well."



Karen Feinstein delivered a keynote presentation at the 2011 Israel Society for Quality in Health Care Conference in Tel Aviv.



THE CLALIT-PRHI QUALITY IMPROVEMENT PARTNERSHIP

By Ran Balicer, MD, PhD, MPH (Director, Clalit Research Institute^{xi}) and Yifat Lavi, MSc (Clalit quality improvement coach)

Modern healthcare systems are under constant pressure to improve their effectiveness due to both financial and personnel resource constraints. At the same time, there is more and more evidence about the daily, high incidence rates of adverse events in healthcare settings. Addressing the joint imperatives of improving quality and reducing costs requires innovative thinking and practice. The Israeli health system, for example, ranks high among OECD countries for achieving both high life expectancy and low infant mortality. However, it struggles with the ongoing impact on service delivery – particularly on inpatient care – of low national healthcare expenditures that have contributed to average hospital bed occupancy rates nearing 98%. As in other countries, improving both the efficiency and quality of care in Israel is a clear priority given such budget constraints.

Process improvement methodologies have demonstrated great strides in addressing both quality and efficiency goals. Long used to improve quality, increase safety, and achieve high effectiveness in industries such as automotive production, aviation, and nuclear power, these methods have only recently been adapted to health care. One of the earliest, LEAN-based adaptations was developed by the Pittsburgh Regional Health Initiative (PRHI) and termed PPC (Perfecting Patient CareSM). PPC is a systematic approach to process improvement and system transformation that has been used successfully in many healthcare settings in the U.S. to prevent infections and medical errors, to reduce unnecessary hospital readmissions, to improve patient flow in emergency rooms, and to reduce waiting time in outpatient clinics, among many other applications.

Following the Jewish Healthcare Foundation's first study mission to Israel in March 2009 to learn about the Israeli healthcare system and to share information that could be beneficial both to Israel and the U.S., JHF and CHS began to explore the possibility of launching a unique initiative to test the implementation of PPC in Clalit Health System, Israel's largest HMO.

Following intensive planning and leadership engagement [see PRHI Executive Summary, "PPC Goes International: The Israel Healthcare Quality Partnership" for further details], in 2010 Clalit selected five teams of physicians and nurses, as well as senior Clalit leadership, to receive PPC training – first in Pittsburgh and then later in Israel with the help of a PPC-trained, Israeli quality improvement coach. The teams returned to their

CLALIT HEALTHCARE SERVICES

- Largest HMO in Israel with 53% of citizens
- 14 general and specialty hospitals
- 1,600 primary care clinics
- 7,500 physicians, 11,500 nurses, 1,300 pharmacists
- 370 pharmacies
- Medical Research
- Rehabilitation
- Mental Health Services
- Care for the Elderly
- Dental Care

home facilities, determined to demonstrate the power of PPC methods in five separate quality improvement projects:

- Three hospital teams focused on preventing central line associated blood stream infections (CLABSIs) in chronic dialysis patients. Participating hospitals included Carmel Hospital in Haifa, HaEmek Hospital in Afula, and Meir Hospital in Kfar Saba.
- Two primary care teams focused on increasing rates of post discharge cardiac rehabilitation for acute myocardial infarction patients. Participating regional health districts included the Northern and Jerusalem Districts.

Following are brief descriptions of the projects, focusing on the barriers the teams identified using PPC observation methods, as well as the experimental improvement solutions they piloted and their impact.

Hospital Teams: Preventing CLABSIs in Chronic Dialysis Patients

In keeping with PPC methodology, the three hospital teams began by collecting benchmark data on the use of central line catheters and infection rates. They also began conducting careful observation of frontline work. Below we detail five problem areas – and the experimental solutions implemented to address them – that the teams concluded could contribute to CLABSIs.



Clalit staff reinforce PPC concepts through a Lego exercise.

1. Problem: Reducing the use of central line catheters in dialysis patients

As a result of massive benchmark data collection performed in the three CHS hospital dialysis units, the teams discover that some 50% of dialysis patients were being fitted with central lines – a much higher percentage than is considered best practice. Using the PPC method's A3 planning tool, hospital division management was able to identify a root cause for the high central line rates in dialysis patients and to develop a work plan for all Clalit hospitals aimed at permanently lowering the use of central lines.

Solution & Results

- Clalit developed clinical decision making tools that helped dialysis units determine which patients truly needed central lines.
- The surgery departments developed standard procedures for inserting central lines that highlighted the importance of avoiding central lines when possible.
- All Clalit hospitals – not just the three hosting the improvement teams – are now working according to the same guidelines.
- Results: System-wide, the use of central lines in dialysis patients dropped from 50% to 10%.

2. Problem: Lack of standardized procedures for connecting patients to dialysis

The teams at all three hospitals observed that nurses used different processes to connect and disconnect patients to and from the dialysis machines. In fact, the processes were not just different between the hospitals, but nurses at the same hospital used different methods. In fact, at times even the same nurse would use a different process from patient to patient.

In attempting to understand the root cause of such variation, the teams observed that nurses spent a great deal of time and energy to collect all of the equipment needed to connect patients to dialysis. Often nurses stopped the process in the middle of the procedure in order to

find missing supplies. This problem can result in variations in process, in addition to mistakes, confusion, and long wait times for patients. All increase the risk of infection.

Solution & Results

- A dedicated dialysis kit was designed by representatives from all three hospitals, with the help of industrial engineer Alex Padua and his design team. The design process involved iterative workshops, meetings, and deliberations involving all team members.
- All items needed for connecting and disconnecting patients are placed inside the kit, which is divided into four main sections – representing the four steps in the process. The kit is disposable and part “D” can be taken out of the kit and placed on the dialysis machine – to be used in the disconnecting process. Pilot trials and data collection showed that by using this kit, dialysis connection time was reduced by one third.
- Results: CHS's Purchasing Department is currently working with potential manufacturers in order to build and supply the kits to all CHS hospitals.



A dedicated dialysis kit was designed by representatives from all three hospitals.

3. Problem: Garbage disposal during Dialysis patients connecting process

The team at HaEmek Hospital in Afula observed that nurses had no standard way to dispose of the garbage produced in the process of connecting patients to the dialysis machines. Disposable packaging must be thrown away, but there seemed to be no convenient location for garbage disposal on the units. As a result, nurses spread garbage bags on patients' legs or placed garbage on a small tray which they also used for the sterile kit.

Each nurse had his or her own solution to the problem. In all cases, however, in order to eventually dispose of the garbage, the nurse had to walk to a central garbage can and then return to continue the connection process. This resulted in delays, patient dissatisfaction (based on patient complaints reported by staff and observed by team), the potential risk of injury when hazardous items were placed in temporary collection bags, and a serious problem in keeping the sterile area clean when garbage items were mixed with sterile items.

Solution & Results

- To solve the problem, the teams designed a mobile garbage bin from recycled materials. The garbage bin was attached to the patient's bedside table using a simple metal ring welded to the cart by the hospital's maintenance staff. The nurses can now remove the garbage after the patient has been connected to the dialysis machine. Replacing the plastic bag in the ring makes it ready for next use and is prepared along with all of the other materials needed for connecting the next patient.
- The new garbage disposable method is now a part of the standard patient cart.
- Results:
 - Walking distance for garbage disposal has been reduced by 80%;
 - sterile conditions are maintained during the process of connecting patients to the dialysis machine; and
 - patients' satisfaction improved.



The teams designed a mobile garbage bin from recycled materials.

4. Problem: Improving central line catheter dressing for dialysis patients

The teams understood that another possible vector for infection involved the dressing used for central lines. Dialysis patients with central line catheters have to cover their catheter exit site for protection and the dressing must be replaced three times a week. Each dressing replacement requires cleaning and sterilizing the catheter exit site. The patient has to wait for the dressing to be replaced until s/he can start treatment. The risk of infection is also elevated by the kind of dressing typically used, which increases humidity at the exit site and (unlike other dressings) does not prevent bacterial growth.

The observation team at HaEmek Hospital also concluded that the time staff spend changing dressings (requiring many items for each replacement) may be better spent providing patient care. For example, at each treatment, samples from the exit site are drawn and sent to the lab to test for bacteria for patients at high risk for Bacteremia (the presence of bacteria in the blood which can cause life-threatening sepsis and septic shock).

Solution & Results

- To solve both the problem of the length of time it takes to replace the dressing and the risk of infection, staff identified a new dressing with the following characteristics:
 - Water proof
 - Needs to be replaced only once a week (instead of three times)
 - Easy to place (for RN's)
 - Easy to handle (for patients)
 - Can be placed after patient is already connected to the dialysis machine – eliminating the time patients previously had to wait before starting their treatment
- Results: In simulations using the new dressing, time spent on replacing dressings dropped from 62 ½ hours/month for 35 of the highest risk patients at HaEmek Hospital, to 40 hours/month – a decrease of 36%. This is time that becomes available for value-added patient care.



PRHI and Carmel Medical Center (Haifa) team

5. Problem: Streamlining the time-consuming process for ordering medical supplies

Medical supplies were typically ordered once a week for the Nephrology Department at Carmel Hospital in Haifa. Nurses are involved in the ordering which includes counting items' stock level, typing the order, and coordinating the order with the hospital's Logistics Department. The Logistics Department then performs a "double check" on the RN's order and prepares material. The process also includes unloading the ordered supplies in the Nephrology Department, a process made more time-consuming when items arrive together in a large box, making them difficult to locate in order to place properly in the supply room.

Using PPC methods, staff performed observations of the RNs' and nurse's aides' work in the Nephrology Department, and observed how orders were filled by the Logistics Department at the medical supplies warehouse. They calculated that the time wasted in the ordering and stocking process (non value-added time) was as follows:

- Nurses: 86% of their time spent in the ordering process
- Medical supplies warehouse staff: 40%

Solution & Results

- To streamline the ordering process, the team first implemented a LEAN/PPC tool called 5S (for sort, straighten, shine, standardize, and sustain) in the Nephrology Department's supply room such that:
 - shelf order is maintained at all times;
 - no supplies are placed on the floor;
 - there is room for all items;

- clear labels of item name, picture, quantity, and category are in place;
- risk is reduced to patients and staff while unloading fluids and heavy items.
- In addition, the team determined that the weekly medical supplies order would be better managed by the logistics team and not by RNs.
- As a result of efficiencies in stocking the store room, the elimination of cumbersome and duplicate ordering processes in the Nephrology and Logistics Departments, and the implementation of an ordering process based on average weekly consumption, inventory levels were reduced significantly.
- Results: RN non value added time was reduced from 80% to 0% and the Logistics department's non value added time was reduced from 40% to 20%.

Primary Care Teams: Improving Cardiac Rehabilitation Participation

1. Problem: Low Participation in Cardiac Rehabilitation in Clalit's Northern District

Cardiac rehabilitation is considered part of best practice treatment for cardiac patients. Yet, in Clalit's northern district, of the 1,050 patients discharged in 2010 following an acute myocardial infarction (AMI), only 6% (60 patients) participated in cardiac rehabilitation. The low participation means that these patients are at elevated risk for ongoing morbidity, reflected in high utilization of healthcare services (e.g., hospitalizations, clinic visits, and medications). Using PPC techniques, the team identified three central root causes of the problem:

- Lack of cardiac rehabilitation facilities was the main issue. Outside of the Haifa region, Clalit's patients in the entire north were served by a single facility that isn't even centrally located in the region.
- Poor communication between hospital and primary care staff resulted in poor hand-offs following patient discharge.

- There was a lack of awareness among both medical staff and patients about the importance of cardiac rehabilitation for recovery following AMI.

Solution & Results

- To address the lack of facilities (problem #1), the team added rehabilitation services at three Clalit primary care clinics (in Afula, Nazareth, and Tiberias). In addition, the team developed standard attributes of a six-month cardiac rehabilitation program to be implemented by a multidisciplinary team.
- To improve hand-offs (problem #2) and educate patients (problem #3), three RNs were appointed as case managers of the cardiac rehabilitation program in each of the three primary care clinics where cardiac rehabilitation would be offered. The nurse care managers are responsible for contacting patients after they leave the hospital, providing education on risk factors and quality of life, scheduling appointments (including referrals to social worker, dieticians, etc., as needed), and meeting them six-month post-discharge for appointment. Both the nurse care manager and a cardiologist are present at clinic appointments.
- Finally, to improve communication between hospital and primary care staff (problem #2), joint meetings were held several times with local hospitals to establish a tighter partnership around the care of cardiac patients and agree on standard program for educating patients while in the hospital.
- Results: Participation in post-AMI cardiac rehabilitation has increased from 6% to 23%.

2. Problem: Poor Transitions of Care for Cardiac Rehab Patients in Clalit's Jerusalem District

The problems in the Jerusalem District differ from those in the Northern District. There are no Clalit hospitals or cardiac rehabilitation services in Jerusalem; rather, services are subcontracted through one of three hospitals and one of two

rehabilitation centers. Of 481 known Clalit AMI patients in 2010, only 30% participated in post discharge cardiac rehabilitation.

The team performed observations at the hospitals and at the cardiac rehabilitation centers. In addition, they interviewed family doctors and RNs working in Clalit clinics in the Jerusalem area. They identified two initial barriers to care: (1) poor hand-offs between hospital and primary care providers (as was the case in the Northern District) and (2) long waiting times for rehabilitation services. For example, the median waiting time for services at one of Jerusalem's rehab centers was 36 days – far too long after discharge to have the maximum improvement effect on the patient.

Solution & Results:

- To improve patient transitions from hospital to community, an RN case manager was appointed to be the link between patients, Jerusalem hospitals, and community care providers (including family doctors, cardiologists, RNs, labs, and the cardiac rehabilitation programs).
- Results: Although there were policy changes that affected the number of patients eligible for cardiac rehabilitation during the project period, the team estimates that there was roughly a 33% increase in patient participation in cardiac rehabilitation.
- To reduce waiting time for rehabilitation services, the team made it possible for some of the preliminary tests, such as stress tests (which resulted in some portion of the delay), to be performed at Clalit cardiac clinics and not at the rehabilitation center.
- Results: The wait time for rehabilitation at one of the centers declined to seven days.



Eran Roteman, MD; Ran Balicer, MD; and Lilly Perelman, RN



On our 2011 trip, PRHI visited several hospitals, including Emek Medical Center, Lady Davis Carmel Medical Center, and Meir Medical Center.



Clalit team visiting Pittsburgh receives training in Perfecting Patient CareSM

Reflections on the Clalit-PRHI Partnership

The partnership has now been underway in earnest since 2010 – long enough to identify challenges and opportunities in implementing lean methods like PPC cross-nationally. Applying our underlying PPC goal of careful observation and continuous improvement, we've compiled a list, below, of our learnings. Most of our learnings are undoubtedly common to all quality improvements.

- Multidisciplinary teams working together contribute significantly to process improvement.
- Working on successive, small, and focused improvement opportunities results in shorter project cycle time, in addition to team satisfaction as successes accumulate.
- Frontline staff is full of creative ideas; all they need is the time and framework to develop and present them.
- Collaborating with non-healthcare professional teams can contribute significantly to project outcome (i.e. the sterile kit design).
- Hospital leadership must be fully engaged from early stages in order to ensure that the frontline team can focus on the project and pursue quality targets.
- Similarly, project improvement targets that are aligned with organization-wide work plans and objectives work better in the long term.
- Training the PPC project team in the PPC methodology prior to the beginning of a project is a requisite. After the core team receives training, methods must be in place to offer training to all staff involved with the improvement effort.
- Newly trained teams need the support of a PPC coach/mentor in order to ensure that a full understanding of the methodology leads to accomplishing project goals.
- Training physicians and engaging them in projects is highly important; process improvement work should, therefore, not be limited to the nursing staff.
- Teaching employees PPC in their native language enables understanding and rapid implementation of PPC.



WHAT HAPPENS NEXT: NOVEMBER 2013 VISIT TO ISRAEL

By Karen Wolk Feinstein, PhD, President & CEO, Jewish Healthcare Foundation and Pittsburgh Regional Health Initiative

Karen Feinstein and JHF Chief Operating and Chief Program Officer Nancy Zions returned to Israel on November 4 for a week to follow up on the five Clalit demonstrations mentioned above, revisit our partnership with JDC Brookdale and the Clalit Research Institute, and decide what, if any, were the Jewish Healthcare Foundation's next steps in the Israel partnership.

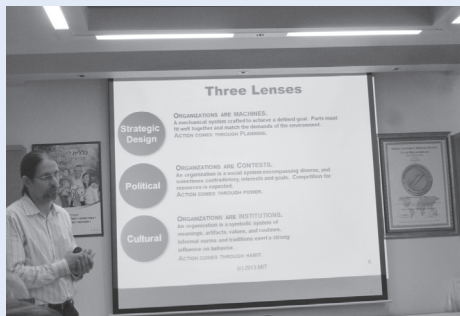
Our areas of mutual and potential focus were *Hospital Acquired (and spread) Infections* (HAIs), meaningful and actionable *Health Research*, and *Community Health Workers*. The three topics represent the priority JHF places on future work in Perfecting Patient CareSM (PPC), reporting as a CMS-designated Qualified Entity (QE), and labor force changes representing health careers' futures.



Karen Feinstein meets with hospital division leadership at Clalit Health Services headquarters.



Meeting with Dr. Ehud Davidson, director of Soroka hospital, and his staff to talk about infection control efforts



At each site, Dr. Retsef Levi speaks to the conditions essential to organizational change.



Dr. Balicer's presentation at the Clalit Research Institute was impressive. The Institute is doing a lot of predictive modeling and focusing on measurement that has immediate clinical implementation and policy implications.

Hospital Infection

JHF wanted to understand the barriers to achieving significant infection reduction goals in its previous three infection control (IC) experiments in Israel and to evaluate whether the current environment was conducive to JHF involvement with additional IC work at this time.

As noted in the recent OECD national health assessment, Israel continues to have high rates of healthcare-associated infections (HAIs). In addition, a particularly lethal superbug has established a presence in Israel. Following my talk in November 2011 at the Israel Society for Quality conference, the Israeli Minister of Health gave an alarming picture of Israel's surgical site infection rate. It was the first time the nation had reported public data on a hospital infection problem.

Progress is being made in Israel. The serious HAI problem is now recognized and beginning to be addressed. National reporting is required (although not yet publicly shared), hospitals are equipped with electronic medical record systems, antibiotic control is encouraged, and preemptive screening and isolation is occurring in some sites.

To help us assess the current climate for change around IC at the front line, we included Dr. Retsef Levi (Standish Professor of Operations Management at the Sloan School of Management, MIT) in a series of hospital visits. At each, Dr. Levi made an hour-long presentation on the conditions essential to organizational change and engaged with us in discussing

whether the time was right for further PPC IC work. We met with talented and committed hospital directors, outstanding IC personnel, and health fund leadership.

Our discussions reinforced our appreciation for Clalit's willingness to be innovative enough to work with us in our previous IC control work, taking concrete steps toward applying serious infection control improvement methodologies like PRHI's PPC at the front line. However, the visit also clearly supported the conclusion that future IC work – if it is to be truly successful – will require the support of leadership at the Ministry of Health. Progress will require mandating hand washing (still disappointingly low), requiring the collection and reporting of infections, enacting financial penalties for HAIs, and creating a culture that looks at infections as opportunities for improvement.

Specifically, our assessment is that progress could accelerate if the following conditions were present:

- HMO and hospital **action plans** that elevate the priority of infection control (IC) and that contain a shared visualization of the components of an aggressive strategy for reduction;
- A plan for creating a **virtual army of embedded IC champions** among existing clinical and administrative staff – with “IC focused” teams on the ground in every unit and within surgical suites who are empowered to close every pathway for infection in the course of their daily work;

- National acceptance of **transparency and public reporting** of institution and unit specific infection rates;
- The everywhere and ever-ready availability of **sterile supplies**, including sterile kits for central line insertion;
- **Rewards and penalties** for compliance and noncompliance, respectively.

Our partnership with Israelis and Israeli institutions has yielded what we hope are mutual professional and personal benefits. Our Clalit partnership, in particular, has demonstrated the impact on population health of first-rate, EHR-driven outpatient care. It also introduced JHF to secondary care center models, which we are currently testing at seven U.S. hospitals. We have also been impressed with the caliber of Israel's health system professionals, many of whom are now both colleagues and friends. In short, the fruits of international collaboration couldn't be sweeter. It is our hope that our evolving partnerships continue to seed ideas that will make both the U.S. and Israeli health systems stronger in the years ahead.

Health Research

The visit to Clalit's Research Institute impressed the team. Dr. Ran Balicer has made this young center an international model of what HMOs can do with their wealth of data. Numerous studies have direct recommendations for policy and behavioral reforms and the Institute has done remarkable work in predictive modeling. It was concluded that Dr. Balicer's team has much to offer the Pittsburgh Regional Health Initiative (and



Our meeting with the Meyers-JDC-Brookdale Institute folks was the beginning of a great exchange about the role of community health workers in health reform.



Karen Feinstein with Carlos Gruzman, MD, Director of Hasharon Hospital, and Retsef Levi

perhaps other Qualified Entities) as we work to develop action plans from the analysis of newly available CMS Medicare data. JHF should arrange for our new Chief Analytics Officer to visit and learn from Dr. Balicer's team. One topic JHF suggested for a future Clalit Research Institute study is an observational analysis of the conditions present at either end of the bell curve (the best and the least successful) of Israeli hospitals in IC to understand better the obstacles and potential for rapid progress. In addition, because the Research Institute has access to longitudinal patient data, its research can also help our upcoming QE performance reports to avoid the pitfalls of reporting on provider performance using measures that are not ultimately tied to patient outcomes.

The Role of the Community Health Worker and Home-Based Caregiver in Health Reform

Dr. Bruce Rosen introduced JHF to three JDC-Israel (Joint Distribution Committee in Israel) leaders: Sigal Shelach (Executive Director, Tevet Employment Initiative), Rina Laol (Knowledge Development & Training, Tevet) and Reeva Ninio (Director of JDC-Tevet Overseas Partnerships). Tevet is the JDC-Israel's employment initiative to create jobs for the disadvantaged and low skilled. Tevet shares an interest in introducing and spreading new career opportunities to advance health supports in the community. We discussed our mutual desire to better understand the career ladders of informal community health workers and semi-professional caregivers around the world, including

different titles for similar jobs, common job responsibilities and requirements, for what and how to pay, training and educational curricula, wages and benefits, accountability and supervision, best practice models, measurable successes and challenges, and anticipated outcomes of care. The outcome of the meeting will likely be an international summit (or possibly two) jointly sponsored by the JDC and JHF to examine these issues. The JHF board approved such a conference in 2012 under a grant entitled "*The Workforce of Tomorrow*."

A Certificate in Patient Safety and Quality

An unexpected outcome of a visit to Bar Ilan University with Professor Racheli Magnezi, head of the Masters in Health Administration program, and Yifat Lavi, former JHF consultant in Israel, was the possibility of creating a certificate in patient safety and quality at Bar Ilan's new medical school in Safed – working with two regional hospitals and using PRHI's Perfecting Patient CareSM (PPC) curriculum and online *Tomorrow's HealthCare*TM. This joint project is in the earliest exploratory stage, but has great mutual enthusiasm. It builds on the visits in June 2013 by the JHF Study Mission to the new medical school and to both the Ziv Medical Center in Safed and the Nazareth Hospital EMMS ("Scottish Hospital") in Nazareth. It offers an opportunity to apply the PPC learning and experience garnered by JHF's Israeli PPC coach for the five previous Clalit demonstrations.

The potential for partnership and mutual learning with the talented health professionals and impressive institutions in Israel continues to build. It was an invigorating whirlwind visit that nicely coincided with the Jewish Federations' General Assembly. At every turn, Karen and Nancy encountered old and new friends and appreciated the friendship and hospitality extended.

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- ^{xi} In addition, Dr. Balicer is the Director, Health Policy Planning Department, Clalit Health Services, and Associate Professor, Epidemiology Department, Faculty of Health Sciences Ben-Gurion University of the Negev.



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