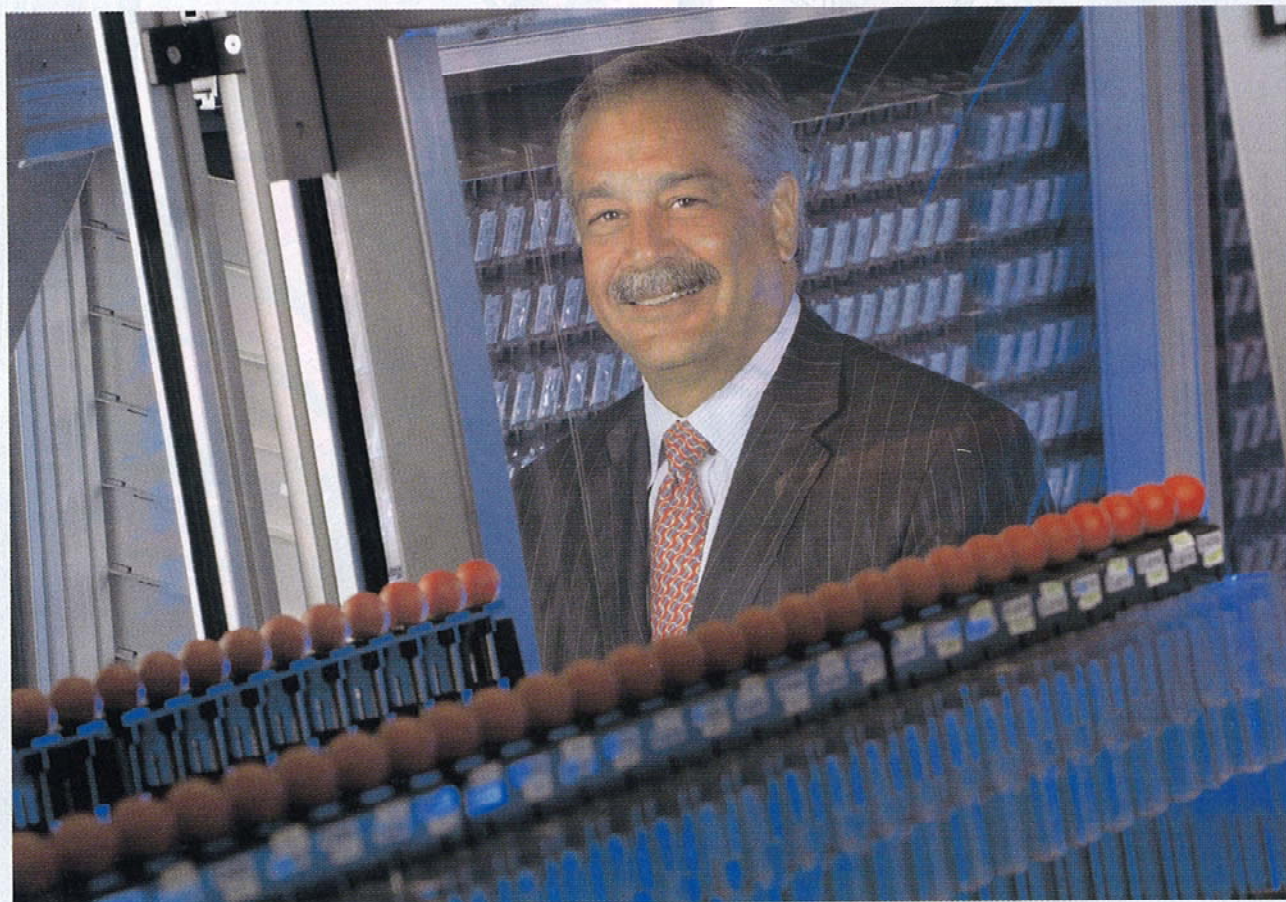# Forbes

DYLAN LAUREN, **DAUGHTER OF RALPH**

Like Father,
Like Daughter

IS ENTREPRENEURIAL SUCCESS INHERITED?
8 FAMILY CONVERSATIONS ... PLUS THE SCIENCE

Drug Lord

Michael Bronfein's robots are streamlining the $14 billion business of providing pills to nursing homes.

BY MAUREEN FARRELL

or Chief Executive Michael Bronfein, walking through the double doors of Remedi Senior-Care's 50,000-square-foot distribution center feels like that scene in the *Wizard of Oz* when the background moves from black-and-white into Technicolor.

Like other so-called institutional pharmacies, Remedi makes money buying medication from drug companies, marking it up and delivering it to nursing homes. For 30 years this involved fleets of people shuttling pills and packing them into batches of "bingo cards," each containing a month's worth of medication, and sending them out. Four times a day nurses make their rounds, popping the pills out of the cards and dispensing them—a tedious process given that some seniors take up to 12 different medications a day, many of which look the same.

Bronfein is changing all that. Half his building (at 9006 Yellow Brick Road, in an industrial park 30 minutes

outside of Baltimore) operates in bingo-card black-and-white. The other half features two 50-foot-long, 20-foot-wide conveyor-style robots that spend 20 hours a day plucking and packaging 62,000 pills dispensed to 5,800 residents of assisted living facilities in Maryland and Delaware.

His automated "Paxit" system—15 years and $30 million in the making—serves up plastic pouches, containing pills individually wrapped in "blisters" and labeled for a particular resident; each pouch is time-stamped and corresponds to one delivery round. Result: fewer hours spent doling out medication, freeing up the nurses to take better care of their patients and reducing the chance of dispensing the wrong pills. And because the pills are shipped in daily doses rather than monthlong batches, nursing homes avoid waste should patients' regimens suddenly change or they die. Bronfein says 17% of the bingo cards he ships the old way get returned and disposed—Medicare eats most of the cost of that inventory.

"There were lots of people who told us it couldn't be done," says Bronfein, 55. "The question was how to take the complex and make it simplistic."

Long in need of a dose of innovation, this $14 billion (sales) industry isn't very inviting to new players. Two big reasons: little pricing power—Medicare picks up most of the tab for the pills, meaning that the federal government essentially sets prices—and a thicket of regulation. By law institutional pharmacies have to staff sites 24 hours a day. The mandates vary by state, too, making it hard to grow. Even the biggest player, Omnicare, has a hard time turning a buck: In 2010 it lost $106 million on $6.1 billion in revenue (down from $6.5 billion in sales in 2006). Meanwhile, the need to dispense medication reliably and efficiently is growing more acute: America's 40 million senior citizens now make up 13% of the country's population and consume two-thirds of pre-

New Path **For Pills**

Industrial pharmacies ship medication to nursing homes in "bingo cards" containing a month's worth of pills that nurses pop out and dispense—a tedious, potentially error-prone process. Remedi SeniorCare's robots serve up prepackaged pouches with daily regimens for each resident.
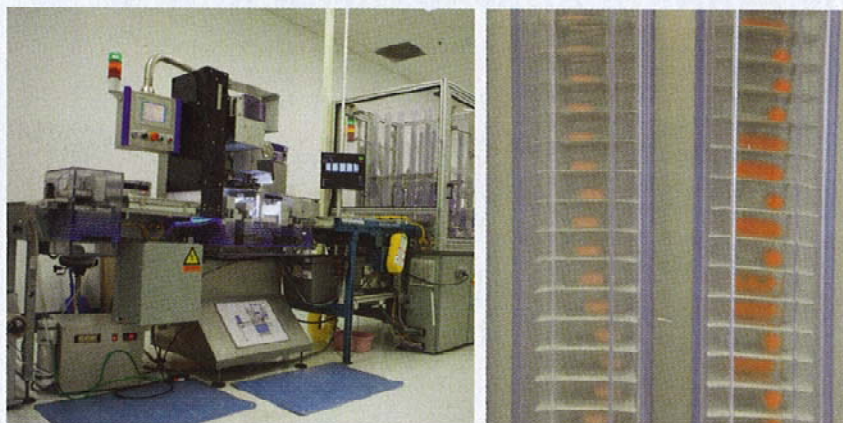
Operators feed loose pills into a Pentapack machine that packages them in individual blisters and loads them into long tubes, each for one of 1,200 different medications.

A 50-foot-long, 20-foot-wide conveyor-style robot plucks the blisters, each with its own bar code, from the tubes and puts them in sealed pouches. It can fill 465 patients' daily regimens—including four dispensing rounds of up to 12 different medications—every hour.

The pouches arrive daily—organized by bed and time-stamped for each dispensing round.

scription drugs. By 2025 seniors will account for 20% of the population.

Bronfein has made admirable strides. Remedi services 265 nursing homes on the East Coast and the Midwest. (There are roughly 17,000 homes in the U.S.) About a quarter of those patients get their medicine via Remedi's new robots. Wesley Malin, chief operating officer of Hillhaven, a 100-bed facility in Adelphi, Md., has been on the Paxit system for the past year. It hasn't allowed him to cut his staff, but Malin affirms that his nurses are distinctly happier: "They spend less time delivering medicine and more time with patients," he says.

Case study in hand, Remedi, now with $140 million in annual revenue, is at a tipping point. Bronfein plans to go totally Technicolor—which means bringing three more multimillion-dollar robots online in Virginia, Ohio and Michigan—by the first quarter of 2012. He wants 16 Paxit operations running around the U.S. by the end of 2014. "I'm an impatient man," he says.

Glinty-eyed and garrulous, Bronfein grew up in Baltimore and studied accounting in college. In 1980, while working as a lender at Signet Bank and with his first baby on the way, Bronfein

Omnicare, in 2005, for $1.8 billion.)

Bronfein is all competitor. When a blizzard hammered Baltimore in 1996, sidelining his rivals, Bronfein (a prolific political fundraiser) convinced the governor to send a National Guard troop to escort NeighborCare trucks along the highway. "No one else thought to do that," he says. At NeighborCare Bronfein spent a few million over several years to design a new pick-and-pack robot, but the project died after he left the company. Robert Smith, NeighborCare's next CEO (and now Remedi's chief operating officer), tried to resuscitate it, but his engineers estimated the robot would cost north of $20 million to build and service only a tenth of the company's 250,000-bed network. "We gave that project up pretty quickly," Smith quips.

Bronfein recruited a handful of old NeighborCare hands and raised a few million dollars in venture capital. In 2005 the company bought a Texas robotics outfit to form the guts of the new system. Several years later the team realized they had to start from scratch. "It became a $1.5 million idea germinator," says Bronfein. The group then approached a dozen engineering firms to kick in proposals. One had

savings comes from eliminating a throng of bingo-card fillers—potentially boosting Remedi's operating margins to 14% from 9%, says Bronfein.

Next a technician loads the pills onto the tray of a Pentapack machine, which packages each one into a blister and stacks them within long, rectangular tubes. Each tube contains one of 1,200 kinds of medication. The tubes are stacked along the sides of the large conveyor-style robot that packages them into separate plastic pouches. Each pouch contains one of four dispensing rounds worth of medication (up to 12 different pills), and all patients get their own daily collection of pouches.

To fill them, spring-loaded rods push high-volume drugs like ibuprofen from their tubes into a small nylon nest moving along the conveyor belt at the bottom of the machine. At the same time a steel arm with a rotary pick head plucks lower-volume pills from their respective tubes. The blisters, each with its own bar code, move to a collating table and are rearranged in a pattern before getting bagged. Along the way the robot snaps high-res photos of the bar codes to verify the selections. (Less than 1% of the orders are rejected, says Bronfein.) A heat press then seals the pouches. Synchronizing all that pushing and picking is stunningly complex, yet the robot can fill daily regimens for 465 patients every hour.

One challenge, Bronfein admits, is teaching customers how to order very precisely. If a nurse doesn't tell Remedi that a patient has changed rooms, for example, the order will be wrong. More daunting, though, is converting nursing-home operators who would prefer to roll out a new system all at once. To do that Bronfein will need a slug of capital to build an army of robots.

"Paxit's done a good job, but I'm in 13 states," says Frank Grosso, vice president of pharmacy services at what is now Genesis HealthCare. "They're in one." Ⓕ

"There were lots of people who told us it couldn't be done," says Bronfein.

bagged a $90,000 bank loan to open a retail pharmacy near Camden Yards. In 1985 he started serving nursing homes. Six years later he left his post as vice president of leveraged finance at Signet to run his new venture full time. By 1996 NeighborCare was doing $100 million in sales and operating in five states. That year Genesis Health Ventures, a nursing home operator, bought the company for $60 million; Bronfein pocketed half and left three years later. (Genesis unloaded NeighborCare to

promise. By fall 2010 Bronfein, who had already burned through $30 million chasing his dream, had a working robot.

The new delivery process begins just like the old method: by phone. Remedi's 30 order takers receive 5,000 prescription requests a day and enter them into the system. Twenty on-staff pharmacists double-check the orders. Under the old large-batch delivery system, Bronfein has to keep 20 days of pills on hand; that drops to 15 with Paxit, improving Remedi's cash flow. But the real