



THE DAILY | BUSINESS

# Angel of the airways

OrganJet matches patients to life-saving flights for transplants

By Julie Cohn

When Steve Jobs traveled across the country for a liver transplant in the summer of 2009, rumors quickly began flying. Had the Apple CEO used money to cut the line? Was it fair — or even legal?

The event quickly cast light on a technique that is both legal and encouraged. It's called multi-listing, but it has been out of reach for average Americans until now.

Organs can survive only a few hours outside a living body. Without a private plane on call, most patients can't place their names on wait lists outside a drivable distance from their homes. Last year, less than 6 percent of Americans multi-listed like Jobs did, while 6,663 patients died on the wait list, according to the United Network for Organ Sharing, the government-contracted nonprofit that manages the nation's organ transplant system.

Enter OrganJet.

The brand new Boston-based startup founded by Sridhar Tayur uses proprietary algorithms and fractional jet ownership to match patients to a fleet of private flights, and, at a moment's notice, shuttle them to an organ in cities as far as a thousand miles away, at a much lower cost than a chartered flight.

"I think Sridhar just thought how might every individual have the access Steve Jobs had just because he was informed and had access to a private jet? Can we democratize Steve Jobs?" said Katharine Wolf, chief executive of OrganJet.

Tayur, a professor of data and operations at Carnegie Mellon University developed

algorithms for scheduling private jets in the 1990s before he started SmartOps, a world leader in enterprise inventory optimization software. In 2010 Sridhar met Baris Ata, an associate professor at Northwestern University who studied rules about the organ transplant system, and the pair quickly realized there was a serious problem with an obvious solution.

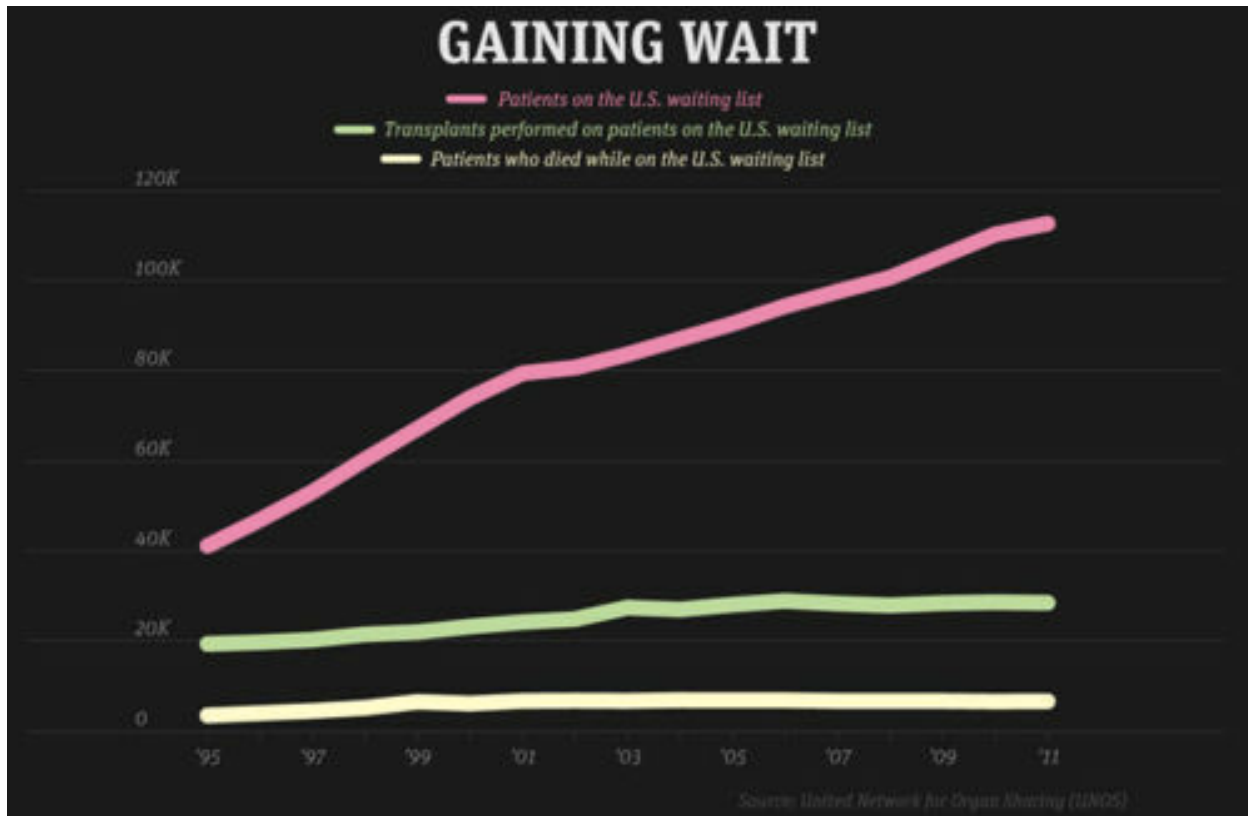
The problem was the inefficiency of current organ allocations. Time spent on organ wait lists varies dramatically based on location, according to figures from the UNOS. A patient waiting for a kidney in the California Bay Area should expect to wait an average of four to six years, whereas the same patient in Jackson, Miss., will wait just under nine months.

The disparities are due to several factors, including differences in supply — which can change based on helmet laws, how many surgeons or transplant centers a region has, and donor rates. But demand is also an issue, with some regions needing more organs because of differences in population and other factors, too, like obesity rates.

The solution is multi-listing, but flying commercially takes too long unless the patient and the organ being harvested are both in towns near major airports.

Chartering a private jet for one-time use is also not practical, since it is virtually impossible to schedule a one-off flight with less than 10 hours notice.

"The only way to access a flight on a minute's notice is to own your own aircraft," said a source at a private aviation company. Fractional owners can get quicker access than those who charter.



A few lucky candidates have been able to take advantage of a fleet of angel flights, private planes whose owners and pilots donate their time and aircraft for medical purposes — but the network is still small, and flight times and locations depend on the generosity and availability of the volunteers who run it.

To the OrganJet team, the answer seemed obvious. “We often get asked how no one has thought of this before, and the answer is, we have no idea,” said Wolf.

The company takes advantage of economies of scale with their large fractional jet ownership stakes, then sublets the planes out to patients at hourly rates. And the company works with small planes in remote cities to get better overall response times, using its own algorithms for the most efficient scheduling.

OrganJet’s hourly costs are lower than the

normal charter price, according to Wolf. More important, it can offer flights that are on call on short notice.

The average flight in a small jet from San Jose, Calif., to Memphis, Tenn., the route likely taken by Steve Jobs, runs on average around \$25,000, according to the private charter travel agency U.S. Sky Link. But OrganJet is already in talks to get its flights covered by private insurance, and possibly Medicare.

In addition to private flights, OrganJet offers advisory services, helping guide patients through the complexities of multi-listing, helping arrange post-surgical care — a challenge when the patient’s doctor is not in the same location as his residence — and using the company’s scheduling algorithms to help explore available commercial options.

Though it has been in operation just over a

year, the group already serves 60 patients. “We are really poised for growth. We are recruiting very quickly. It’s very clear that we’ve identified a very strong need,” said Wolf, who met Tayur at a Harvard social enterprise conference in 2011.

Only 1 percent of end-stage kidney disease patients multi-list, according to Wolf. OrganJet aims to increase that number to 15 percent, helping ease the regional bottlenecks in transplant wait lists, and save the lives of some of the thousands who die waiting each year.

For now the company only assists patients requiring kidney transplants. Kidneys last longer outside the body than other organs and thus lend themselves most easily to multi-listing. And, according to Wolf, kidneys also represent about 80 percent of the market need for organs. But if the company’s growth persists, OrganJet plans expand to other organs, most notably livers.

The company is set up as a for-profit organization but is paired with a nonprofit arm.

“We are a social enterprise seeking to use a business to solve a social issue, and we are not trying to maximize our financial profits,” said Wolf, adding, “We look at many other



**PHOTO: Stephanie Stevens**  
OrganJet CEO Katharine Wolf and founder Sridhar Tayur want to give less-wealthy organ transplant patients a way to jet to hospitals around the nation.

metrics for success, but we are structured as a for-profit company.”

But at the same time the company’s nonprofit subsidiary, Guardian Wings, can accept donated jet time and other capital, and offer free services to individuals who can’t afford OrganJet’s prices.

Terminal illnesses threaten everyone equally, regardless of status and wealth, but often those with less wealth have fewer options in the fight for their lives. “Your likelihood of survival really depended on the location of your accident, on whether you had been educated on multi-listing, and whether you had the money to afford it,” said Wolf. “Our goal is to keep trying to change that.”