

"Donuts, Diabetes and Dialysis" was the title of James Calver's talk as a guest speaker at the LCS/London Sunday Times Health Care conference in London last week. His comments reflected new developments in US health care that address some of the challenges faced both sides of the Atlantic. Too many donuts (and not enough disease prevention) are driving extraordinary current and future costs of care. New inexpensive monitoring tools and regimen adherence help diabetics and new developments in home dialysis lower costs and improve patient care and experience.



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Donuts, Diabetes and Dialysis -- Doing More With Less

This month we've chosen to share some extracts from James' talk in the UK. One theme dominates in the US and UK, everyone is "Doing More with Less" -- improving care and lowering costs. We illustrate with two related debilitating diseases, diabetes and renal failure and, more often than not, the cause, avoidable lifestyle factors.

It is common knowledge that health care costs are increasing at a staggering rate in the US. Today, our health care expenses are nearly \$3 trillion annually, 16% of GDP and projected to grow to 25% of GDP in the years ahead. The average family's care costs \$11,500 and this number has doubled in 5 years.

The increase in costs is driven by supply and demand factors. On the supply side, by 2020 we will have 40,000 fewer physicians. Medical technology costs outpace inflation nearly 5:1 and prescription drug spend on hypertension alone is \$25 billion, a number that has doubled in ten years. On the demand side, 70% of our diseases are chronic and mostly lifestyle induced -- too many donuts. Adding to the expanding waistline of health care expense is an aging population.

Several notable academics have written about the problem and the solution. Professor Clay Christensen from Harvard Business School; the originator of the term 'disruptive technology', writes in his new book. "...by transforming care delivery from

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integrated, centralized delivery points utilizing high cost interventions supported by highly skilled professionals to more disintegrated, de-centralized points leveraging lower cost interventions and supported by lower skilled professionals." This means simply doing more with less in new, non-traditional ways and locations.

One of these new, non-traditional ways is more preventative care -- 72% of chronic disease is preventable. Emergency room costs are some 80-100 times that of a wellness exam. Others include, personalized medicine tailored to the individuals needs and genome. Home care is cheaper and a better patient experience in many cases. New, lower cost treatments like Medco's diabetic therapy management and education service. Levering inexpensive labor and technology can reduce costs dramatically.

Donuts

Social factors play a role too. Our diet has changed in an astonishing way over the last twenty years. A portion of fries has 200 more calories and a burger 400 more calories than twenty years ago. The world's highest calorie burger weighs in at 2,500 calories -- Burger King's Pizza-Burger Whopper. That's more than the entire daily intake for a typical male.

The costs of treating just the new cases of the top three preventable diseases, type II diabetes, coronary disease and stroke is nearly \$500 billion and 70%+ of those cases are avoidable. Said differently, we could save \$337 billion by delaying or preventing these diseases altogether.

The most promising wellness and preventative efforts are in the private sector. Global brand name companies like Johnson and Johnson, Wal-Mart and Safeway are leading the way with their employees. These companies have lowered their health care costs through prevention. Return on investment in disease prevention programs ranges from 3 to 6 times for every dollar invested. There is a lot of variability in these programs but a few themes stand out.

Employee incentives are critical. All the studies show that a "carrot" is needed to motivate employees to change to healthier habits -- we all know we could shed a few pounds, a nudge is usually needed to get us going. Self-reporting your vital signs and body measurements is not effective. Biometric measures from an inexpensive blood test are needed. Some form of behavioral coaching is a must. This ranges from self-education to web and telephone-based coaches. Savings must be tracked and compared to the original investment—you can't improve what you don't measure.

Employee incentives include cash payments for adherence to a wellness program -- up to \$500 is paid by some employers. The actual number, it turns out, is not so important. Air miles type programs are popular with several wellness and prevention suppliers. Employees amass air miles points for compliance with a wellness program and can buy 'goodies' from a catalog with their points. Air miles points are only paid for when cashed in! Some companies and state governments offer lower insurance

professionals."

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premiums to employees participating in disease prevention programs.

Self-reported health data simply doesn't cut it. Inexpensive blood tests monitoring 15 conditions provide a great deal of information to doctors and patients. Employees can deliver effective prevention programs from aggregate employee information.

Behavioral change programs come in all shapes and sizes, ranging from self help web-pamphlets from CMS to a smoking cessation and wellness company called Free and Clear (recently acquired by Alere) that couples behavioral coaching with prescription drugs to help people quit smoking over 12 weeks. It's highly successful and used in 30 of the 50 states as well as many Fortune 500 companies.

Measuring ROI is important. Large-scale studies show an ROI of 3 times over 4 years when measuring reduction in prescriptions, emergency room and specialist visits. When productivity and absentee metrics are added the ROI increase to 6 times for every dollar invested.

Diabetes

Shifting gears from prevention to treatment, we wanted to highlight the diabetic time bomb -- by 2050 the cost of treating diabetes alone will consume the entire US health care budget. The wellness efforts underway should help reduce the number of new diabetics but what can be done to lower treatment costs and improve care for those unfortunate enough to develop the disease.

There are several promising lower costs solutions that improve patient care. The fact is that half of all diabetics do not take their prescribed medications. The personal cost to patients and the monetary cost to the health care system is frightening -- impaired vision, amputations and kidney failure. Every year there are 100,000 new dialysis patients. New self and peer monitoring tools are becoming available, including education and support using the web and other new media.

Medco, the global pharmacy benefit management company, is one business at the forefront of diabetic regimen adherence. Medco's tools and programs including cheaper generic medications, therapy management and counseling to help focus the 50% non-adherent diabetics achieve a better regimen. The results are costs savings and better patient outcomes.

Blood glucose monitoring and logging is a fact of life for all diabetics. Today, J&J's glucose monitors upload, via smart phone, daily personal diabetic information for review by doctors, nurses and other caregivers. Troubling trends can be spotted early and dealt with.

GlucoSentinel is an iPhone app that reminds diabetics to take their medications. If they don't then alerts are sent to a peer support network -- friends, neighbors, and relatives. Dangerous conditions are avoided. Visits to the ER are reduced. And the best part, it's free. Inexpensive A1c tests, the quarterly check-up test,

As former CEOs we assist health care companies with planning and execution.

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are available for the first time in retail shops. And our favorite, the nano-technology contact lens that changes from clear to red when blood sugar levels become dangerous. For the bikers, the same technology is available as a tattoo!

OBS Medical, based just outside Oxford, UK, is 10 years old this year and provides education and support for a variety of chronic disease including diabetes.

Dialysis

An unfortunate side effect of diabetes is renal failure. Every year in the US there are 100,000 new dialysis patients. 1 in 5 of these patients die in the first year of the disease. Most kidney patients must dialyze three times a week for several hours at a dialysis center. Studies show that many centers lack standards and some are unsanitary. The centers are costly to run and staff, and most are uncomfortable for patients.

Dialysis is beginning to move into the home. It's cheaper, generally safer, and a more comfortable environment for the patient. One company, Home Dialysis, shows much promise using micro-technologies to develop an easy to use portable home-based machine. A recent \$50 million cash infusion from Warburg Pincus should allow patients to dialyze at home while asleep.

In summary, new, disruptive services and technologies that lever low cost labor and treatments away from the traditional hospital and GP settings coupled with disease prevention programs show great promise to provide better care at a lower cost.

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