

**Grektek, LLC**

# Re-engineering cardiac care

Saving lives & money through modernization

## *The Current State*

There are approximately 23,000 cardiologists in the United States, each with about 1,200 patients. Imagine for a moment if each cardiologist only had 12 patients. How different would the quality of care be? How much better would the cardiologist understand each of their patients? How many heart attacks and strokes might be avoided because more frequent patient interaction with a complete understanding of their entire health picture would allow the cardiologist to deliver superb, customized attention?

Of course, this idyllic state will not be achieved because the current system demands cardiologists maintain a very large roster of patients. How else could they pay their medical school loans, their rent, and their office manager's salary? Plus, Medicare and insurance companies are very prescriptive about what patient treatment and procedures and medications they will and will not reimburse for. True preventative care – for



example, having an annual dental check-up and x-rays to detect and prevent issues early – does not make economic sense in the context of cardiac health care. It is much harder to predict

which cardiac patient will have a heart event than it is to predict that a dental patient's tooth will eventually have a cavity. In the cynic's view of the 'system', it is cheaper to wait for the small percentage of cardiac patients to have a heart attack than to pay for aggressive monitoring and care for the entire army of cardiac patients out there.

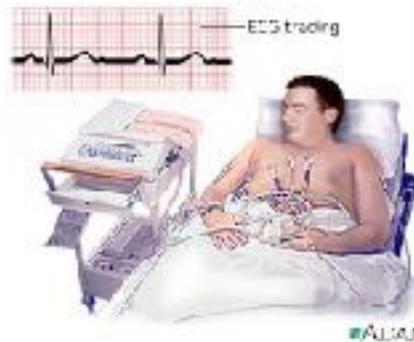
## *The World is Changing...*

Of course, smart people realize the system is flawed and are trying to drive change. The rise of Accountable Care Organizations (ACOs) and US government initiatives to measure patient outcomes and reward / punish practitioners based on these outcomes is meant to address the broken system. Conceptually, everyone is largely in agreement – the doctors, the patients, the insurance companies, large companies, and the government. In a perfect system, what is most important is maintaining healthy patients and preventing illness. It's intuitively obvious that everyone wins in this scenario.

## *The Obstacles to Success in Cardiac Care*

There are several real obstacles to changing the system for cardiologists and their patients:

1. High quality, actionable **patient data** is not readily available to the doctors.
2. The **reimbursement policies** of insurance companies are still antiquated, and pay mostly



for reactive treatment. The concept of paying 100% for an annual dental checkup has proven very effective for dental patients, dentists and insurance companies. It's

just not that simple for cardiologists and their patients. Once-a-year-monitoring is simply too infrequent to catch and prevent heart problems.

3. Cardiologists do not have **adequate capacity** to regularly monitor their patients' health status, to detect potential problems before they occur. No one dies in their cardiologist's office – they die between visits often having experienced a symptom ahead of their heart attack or stroke.
4. **Patients do not behave perfectly** and comply strictly with their doctor's instructions. Even with their life at stake, it's human nature to want to relax instead of exercise, eat steak instead of salad, forget the occasional medication, and so on. Sure, the typical patient is very good for the first few days after seeing the cardiologist. But as time passes and nothing happens, they naturally misbehave.

### What's the solution?

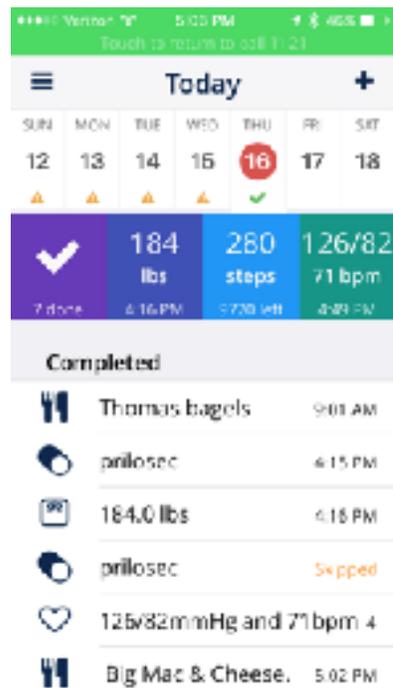
If health care professionals can demonstrate real progress in addressing obstacles 1, 3 and 4, the insurance companies will update their reimbursement practices and address that problem. The top-down push for outcome-based care from the US government via Medicare is also paving the way here. So in developing our solution, we have focused on the obstacles related to inadequate patient data, inadequate cardiologist capacity, and patient behavior.

At everbeat, we envision re-engineering the cardiac care **process**. We believe that equipped with the right information and enough time with their patients, cardiologists will save many, many lives that are lost today because the system is broken. We recognize that there are other solutions providers out there attacking different aspects of cardiac care. We believe our differentiator is a maniacal focus is using technology to create deep patient – cardiologist intimacy, as if the doctor only had 12 people instead of 1,200.

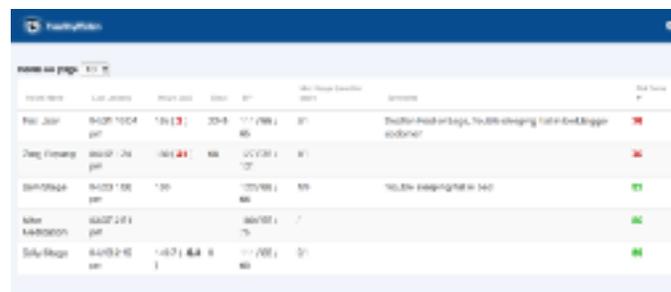
The everbeat platform consists of an application used by the patient to track all their relevant health data – weight, medication compliance, diet, blood pressure, heart rate and ECG, and more. The cardiologist establishes a detailed care plan for the patient (e.g, “take these meds, exercise at least 7,000 steps each day, lose 15 pounds in 3 months, record your heart rate, blood pressure and ECG daily, and call me if you feel symptoms.”)

The care plan is programmed into the everbeat application. The patient has an everbeat wristband that monitors their heart rate and alerts them if something seems amiss, prompting them to record an ECG for review.

The everbeat application reminds the patient to weigh themselves, take their medications, record what they ate, exercise, and document their symptoms. The patient is gently reminded to follow all aspects of their care plan and are graded on their compliance. If they do a great job in adhering to their doctors' instructions, they receive positive feedback from their doctors and their family, and receive other benefits including financial incentives.



If the patient doesn't follow their care plan, or more typically doesn't track their behaviors...the cardiologist sees what each of her patients is doing in an everbeat Dashboard. The Dashboard risk ranks all of the patients in an easy to use format so the cardiologist can quickly see who she needs to focus on.



Upon seeing that a patient is at risk, the cardiologist clicks into that patient's detailed record to see all aspects of their health since the last visit. Integration with the cardiologist's own Electronic Health Record is also possible so the doctor can view the results of previous extensive testing and procedures. A quick review of the patient's symptoms, medication compliance, activity, their vital signs leads her to recommend follow-up actions, including:

- Calling the patient directly to discuss their health issues
- Scheduling the patient to come in for an unscheduled check-up
- Having the office staff contact the patient to gently encourage better recording of health information
- Having the office staff contact the patient and adjust their medications based upon weight gain.
- Having the office staff follow-up with the patient to drill deeper into what's going on with them, to determine if an office visit or primary care physician visit is warranted.

INSERT SCREEN SHOCK MOCK-UP HERE

The cardiologist can review dozens of patients in an hour on the Dashboard, documenting next steps for their office to take and how urgent the follow-up needs to be. The actions specified are immediately noted by the office personnel, who begin these follow-ups right away.

At everbeat, we believe powerful technology can bring intimacy to the cardiologist – patient relationship. Doctors will have continuous access to patient data and behavior that can lead them to intervene and take steps to understand if a problem is developing, if the patient is not taking proper care of themselves, or even to encourage patients who have really taken their care plan compliance seriously.

The patient will have an ability to see how they are doing against a complex set of doctor's instructions through the lens of a simple score. Through gentle reminders and positive feedback from their doctors and their family caregivers, the patient will take better care of themselves leading to better heart health. If they do start to see problems develop, they will know to contact their doctor proactively rather than wait 3 months for the next scheduled visit. Their doctor and their staff will see the same information at the same time and can also proactively contact the patient to evaluate next steps. Today, the patient may wait until they have a stroke, a heart attack or other serious symptoms to seek help. The everbeat platform provides a means to continuously monitor heart health and help the cardiologist see potential issues before a significant event occurs. And that will save lives, improve outcomes for the doctor and their ACO, and reduce total health care expenses. Everyone wins.

The key is accurate information presented to the cardiologist in an easy-to-use, risk-ranked manner. The everbeat Dashboard, designed by cardiologists for cardiologists, can modernize cardiac health care, dramatically streamline office operations, and restore patient intimacy even while the patient roster grows. That's the power of technology.

## *Summary*