MAYA Viz Helps Doctors See the Big Picture

Over the years, doctors have been plagued by the inability and unwillingness to share information, which impedes treatment and diagnostic improvements, and makes the practice of medicine less effective. Although technology has benefited medicine in many important ways, the collaborative research process has been largely overlooked.

Dr. Laura Esserman wants to reverse that trend. She has set out to change the face of healthcare by revolutionizing the way medical treatment is administered. In addition to her positions as surgeon, associate professor of surgery and radiology at University of California at San Francisco, and associate faculty at the Institute for Health Policy Studies, Esserman is the director of the Franc Buck Breast Care Center. Her goal is to make medicine more business-like and efficient vis-à-vis an outcome-based approach, which emphasizes clinical research -- gathering data and finding patterns based on the same treatments. Two important components of Esserman’s overall goal are:

- expediting cancer diagnosis and treatment -- for instance, reducing diagnostic turnaround time from three weeks to one day
- involving patients in their treatment plans -- allowing patients to contribute to the process rather than dictating to them

The ability to see the big picture and view significant events over time is critical to Esserman’s outcome-based approach, and Dr. Esserman approached MAYA Viz to help create a solution.

The first step was to design a visualization of patient records, allowing doctors and clinicians to understand the patient’s history in one glance. MAYA Viz worked with a small group of surgeons from the clinic to develop a usable presentation of patients’ records. The result is a visualization design called ‘Patient at a Glance’ that displays patient events, including diagnoses, treatments, and procedures, along a timeline -- each event is color-coded according to its type. Patient at a Glance enables users to drill down to more specific information about each event, in order to have as much information as needed for an adequate understanding of the situation.

The next step will be to use CoMotion™, MAYA Viz’s collaborative visualization toolkit, to bring the big picture to life. With CoMotion™, Esserman’s database of patient data will morph into visual form, to create image-based patient records that can be understood in seconds. Additionally, visual records will be created that help identify patterns based on treatments given to people in specific demographics. These visual representations make it significantly easier for doctors to share information, turning them into researchers with the ability to ascertain patterns based on outcomes. What’s more, MAYA Viz is in the process of making it even easier for doctors to share information and learn from one another by putting visual representations onto handheld devices.
With MAYA Viz’s help, the collaborative process is markedly improved, resulting in better outcomes for patients, time savings for medical professionals, and in turn, lower costs. At a time when healthcare costs are spiraling out of control and fragmentation in the industry is adversely affecting treatment, MAYA Viz’s visual-based solution is a good start to changing all that.

# # #