Abstract
Efficient management of Health Care information is a pressing, complex issue – because of this, our team designed an SMS Patient Survey server to routinely text a set of health questions from Vivify Health to its patients and publish their responses to their Patient Care Portal for straightforward monitoring, resulting in ease of use and potentially preventing unnecessary trips to the doctor’s office for data collection.

Architecture
We programmed in C# using Visual Studios ASP.NET MVC 4 and published to an Amazon EC2 web server. The server receives a call from Vivify’s servers to send out a Patient Plan every morning and sends the questions to the Twilio service which sends the texts to the patient. Twilio receives the user’s text response and forwards it to our server, where we process the response and save it to Vivify’s Patient Care Portal, where they manage patients through assigned Caregivers.

Impact
Vivify is fundamentally improving the way patient data can be managed through their Android Tablet Monitoring System used by their senior audience requiring more specific attention. We are helping further develop that idea by extending it to a larger audience: cell phone users. Our system will greatly increase patient monitoring via tracking of concrete biometrics and responses in these surveys and potentially allow for fewer trips to the hospital for recurring or chronic health issues.

Results
Text Message Survey:
Results are posted to the Vivify Portal and potential alerts are sent to Caregivers.

Summary
The SMS Patient Care Plan is designed to:
• Send/receive texts to carry out health surveys
• Communicate survey results to Vivify’s database for review

This will result in greater convenience for biometrics and data collection, as well as an easier way to monitor patients. Caregivers are alerted by unusual results, some of which may require further action based on the circumstances.