

**Project/Client Name:**

Contract Anonymity

**Application Name:**

Electronic Clinical Decision Support (eCDS) system

**Industry:**

Healthcare

**Domain:**

Health & Wellness

**Category:**

Web Application

**Technologies Used:**

- **Frontend:** Microsoft .Net Framework (ASP.Net, VB.Net, C#.Net), Flex, ColdFusion, ColdBox and FuseBox Frameworks.
- **Database:** Microsoft SQL Server.
- **Other tools:** DevExpress Reporting tools, Free Charts Tools Chart Director, Secure Black Box SFTP Components etc.

**Project Duration:**

9 Years ( Ongoing)

**Prime Team Size:**

26 People including Onsite and Offshore team

**About Client**

The Customer is a not-for-profit health care organization and a pioneer in the multispecialty group practice of medicine.

They are part of a renowned healthcare unit, a family of not-for-profit hospitals and physician organizations that share resources and expertise to advance health care quality. Serving more than 100 communities in Northern California, customer is a regional leader in cardiac care as well as care of women and children with special focus on advanced patient safety technology.

**About the Application**

In line with their vision of providing advanced patient safety technology and to enhance the health of people, customer wants to develop a user-friendly interface to facilitate the Health Risk and Wellness Assessments online. They were looking for an Electronic Clinical Decision Support system (eCDS) to bridge the gap between clinical knowledge, clinical systems and clinical workflows.

After careful evaluation, they have approached Prime to help them in meeting their needs Prime suggested a streamlined and automated healthcare solution to the customer ,that will improve their clinical performance and allow the medical practitioners and the patients:

- To target improved clinical performance by an automated system for
  - Risk profiling
  - Patient focused care planning and
  - Streamlined workflow
- To provide critical best-practice clinical information to
  - Doctors
  - Healthcare professionals and
  - Patients for decision support at the moment of care that enables the systematic delivery of individual programs of care

The main aim was to have the payers (Patients) and providers (Doctors) to implement disease focused programs on a large scale with efficiencies in reduction of human resource and administrative costs.

**Prime Solution**

Prime developed a more patient-centric health care solution that focused mostly on the problems faced by the patients in finding out the right Health Care Center or a Specialty Doctor and their services with the ease of location during a critical health situation. Doctors can log in and view both the clinical and behavioral information of their patients and provide their recommendations for the problems.

Prime followed an Agile application development methodology throughout the development lifecycle to deliver the following applications:

- A Knowledge management – Rule creation and Content updates
- Knowledge delivery facility – a Powerful decision engine (PREDICT)
- Quality assurance – Knowledge integrity
- Assessment Engine – Health Risk (HRA) and Wellness Assessment with Action Plans

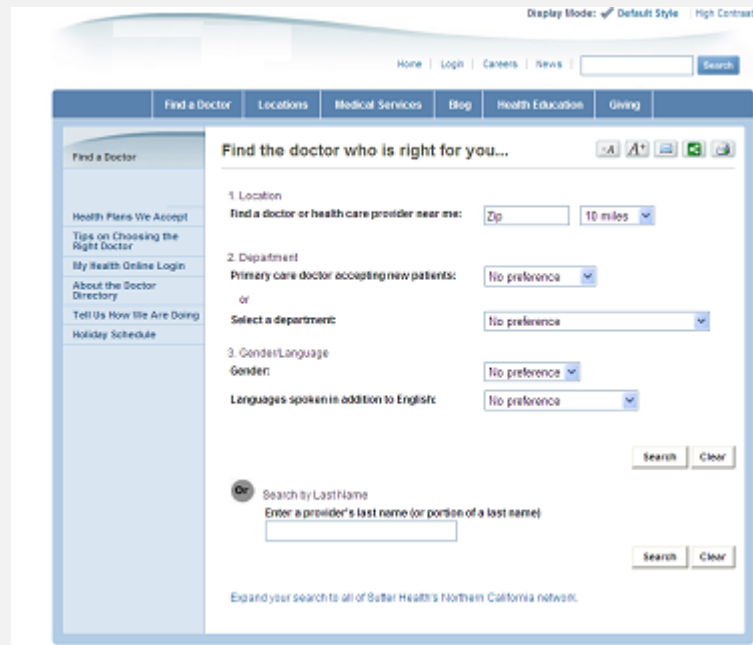
- Search Engines – Search facility for Doctors, Hospitals, locations and their contacts.
- Administration – Security Management and Tracking
- Reporting platform – Financial reports, Aggregated health risk reports, Performance and Recruitment reports
- Integration with social media sites such as; Facebook, Twitter and Blog

Security Management and Tracking facilities were provided at each level for user and group maintenance and with the ability to set role based security permissions and options.

## Application Screenshots

### Find a Doctor Page:

Find a Doctor page of the application allows a user to search for a doctor depending on the parameters like; location, department, gender, language or by last name.



The screenshot shows a web application interface for finding a doctor. At the top, there is a navigation bar with links for Home, Login, Careers, News, and a search box. Below this is a secondary navigation bar with tabs for Find a Doctor, Locations, Medical Services, Blog, Health Education, and Giving. The main content area is titled "Find the doctor who is right for you..." and contains several search filters: 1. Location: "Find a doctor or health care provider near me:" with a Zip code input field and a "10 miles" dropdown. 2. Department: "Primary care doctor accepting new patients:" with a "No preference" dropdown, followed by "or" and "Select a department:" with another "No preference" dropdown. 3. Gender/Language: "Gender:" with a "No preference" dropdown, and "Languages spoken in addition to English:" with a "No preference" dropdown. There are "Search" and "Clear" buttons for each filter section. Below the filters, there is a radio button labeled "Or" next to "Search by LastName" and a text input field for "Enter a provider's last name (or portion of a last name)", with "Search" and "Clear" buttons. At the bottom, there is a link: "Expand your search to all of Sutter Health's Northern California network."

### Health Education Page:

Health Education page allows the users to view the group education classes with respect to various diseases and their location details that helps them to take the classes and also consultation services and instructions and screening facilities



### Provider Screen

Providers can view the Patient clinical data and can track the related information for health recommendations.

Patient (Rule Info)	Clin.Acti. Last BP	14 day Avg BP	Date/Time Last BP Upload	Last Weight (LBS)	30 Day Avg Weight	Date/Time Last Weight Upload	Steps	Inactive ?
<b>High (Count: 1)</b>								
<input type="checkbox"/> Ztest, Alica (7556811)	120 / 81	94 / 56	03/27/12 22:20	204	-	02/23/12 19:04	View	<input type="checkbox"/>
<b>Inactive (Count: 3)</b>								
<input type="checkbox"/> ZzTestpa, MISYSRAD (5398628)	114 / 81	118 / 86	05/19/15 13:09	136	-	11/07/14 12:07	View	<input checked="" type="checkbox"/>
<input type="checkbox"/> ZzTest, carla (150384)	104 / 62	105 / 75	02/21/12 14:42	118	-	02/23/12 08:47	View	<input checked="" type="checkbox"/>
<input type="checkbox"/> zztest, Aetna (4103023)	76 / 46	103 / 67	03/20/12 11:09	234	-	02/23/12 22:24	View	<input checked="" type="checkbox"/>

### Patient Data Updates

Patient updates page allows the users to view the Patient Clinical data, Biometric summary and goal sheet assigned to them at a single view. This facilitates Providers, to get a complete view of the Patient data.

Patient Name : Amy1, ZZTEST  
 Coaching Session :  Attended  Missed  
 Next Visit :  3 Months  6 Months  Other

Date : 06/05/2015 06:32 AM  
 Coach Name : Prime, Developer  
 Date Enrolled : 01/26/2015

**Employee Goal**  
Text will appear on after visit summary

**HRA Review**  
Text will not appear on after visit summary

**Program Goals**  
Text will appear on after visit summary

**Assessment Plan Follow-Up**  
Text will appear on after visit summary

**PCP Comments**  
Text will not appear on after visit summary

**After Visit Summary**  
Text will appear on after visit summary

Steps Per Day   
 Target Weight   
 Minutes of Activity

Biometric Summary		Units	Screening Date
Current Age	(years)	43	06/05/2015
Height	(ft. inches)	5.0	
Weight	(lbs)		
BMI			
Glucose (fasting or random)	(mg/dL)		
HbA1c	(%)		
Total Cholesterol	(mg/dL)		
HDL	(mg/dL)		
TC/HDL			
LDL	(mg/dL)		
Triglycerides	(mg/dL)		
Blood Pressure	(mm Hg)		

PHA Key Answers	Answer	Survey Date
Cigarette Habits	Never smoked	06/04/2015 09:53
Alcoholic Beverages per Week	0.0	
Exercise (150 min per week moderate)	No	
Exercise per week		
Vegetables (servings/day)	1	
Fruit (servings/day)	2	
Eating Out (3X/week)	No	
Sleep (average hrs)	5.0	
Hours of Sleep (per night)		
Self-rated Health	Very good	
Stress (view survey answers if "yes")	No	
Satisfied with Life	Neutral	

Save

The solution facilitates the reach of critical best-practice clinical information to doctors, healthcare professionals and patients to enable effective decision making. The solution helps the payers and providers to implement disease focused programs on a large scale, with a reduced human resource and administrative costs.

### Key Challenges

- Capturing data from various sources ranging from Paper records, CSV files, Lab reports, Images etc. and integrating them regularly to the application
- Automating Patient focused care planning and risk profiling was a challenge as customer supports multi specialty group practice.
- Synchronizing doctors calendars in line with Patient appointments was a challenge
- Security Management and Tracking to facilitate assessment and enable decision making

### Client Benefits

Client had realized the following benefits with Electronic Clinical Decision Support application:

- A better Knowledge management system for content creation and updates
- A Powerful assessment and decision engine
- An Improved security Management and tracking system
- An accurate reporting platform that generates financial, health risk, performance and recruitment reports.
- An advanced search engine for finding, doctors, health centers and their contacts.
- Better visibility and control of performance and recruitment processes
- Theme based dashboards for easy access of Information and better control
- Automated message system with customized information for every patient

## About Prime

Prime Technology Group is a global, technology services company where innovation is at the core of our business engagements. We develop cutting-edge solutions and carefully select the best Information Technology professionals locally and globally to become ambassadors of your business. This approach maximizes our ability to leverage our award-winning team and their competencies. Prime is the conduit which bridges the immediate business solutions today to the technology advances of tomorrow.

Our candid ability and forethought has enabled us to navigate seamlessly, bridging the appropriate technology solutions that outlast today's technology trends. How do we do this; simply we listen. Team leaders identify poignant solutions and fuse the appropriate framework and infrastructure necessary for unlocking your capabilities.

Prime Technology Group is organized into four technical practices;

- Cloud (Google PAAS, Microsoft Azure)
- Mobility (IBM Work Lite)
- Analytics (Big Data, Predictive Analytics)
- Quality Assurance

Prime develops customizable frameworks, driven by our robust R & D, which become the cornerstone of our solution offerings. Our philosophy in flexibility allows us to leverage our award-winning resources and competencies to exceed our clients' expectations while improving their bottom line.

We have successfully helped hundreds of clients in Healthcare, Insurance, Life Sciences, Banking, Financial Services, and E-commerce. Our imprint has drastically impacted client growth; we are Prime Technology Group, where we are "Bringing visions to life."

To know more about our services, please visit [www.primetgi.com](http://www.primetgi.com).

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