

Flexible Mobile Survey Solution Enhances Productivity, Workflow, and Quality for CMS Program

Industry
Healthcare

Client Background

RDA's client, The Lewin Group, is a premier national healthcare and human services consulting firm that earned approximately \$50 million in revenue in 2003. Lewin's strategic and analytical services aim to help clients:

- Improve policy and expand knowledge of healthcare and human services systems
- Enact, run, and evaluate programs to enhance delivery and financing of healthcare and family services
- Deal with shifts in healthcare practice, technology, and regulation
- Optimize performance, quality, coverage, and health outcomes
- Create strategies for institutions, communities, governments, and people to make healthcare and human services systems more effective.

Situation

The Lewin Group was engaged by the Centers for Medicare & Medicaid Services (CMS) to facilitate the development and implementation of a set of standards for the inspection and accreditation of End Stage Renal Disease (ESRD) centers. These centers provide dialysis to patients who have experienced kidney failure.

In 1972, ESRD legislation extended Medicare coverage to almost everyone who requires dialysis to live and established health and safety standards for providers of ESRD services. There are over 4,000 dialysis facilities in the United States, serving over a quarter of a million patients.

The rules and regulations governing the inspection of ESRD facilities are lengthy and complex. Because of this, the rules and regulations are inconsistently interpreted and applied – both among individual states and surveyors. This situation is also due to lack of adequate training and the varied experience of individual surveyors.

In addition, the reporting of deficiencies found in ESRD facilities was often subject to delays, due primarily to reporting methods. In the existing process, the surveyors took notes by hand and then transcribed them into an application to produce the survey reports. This application offered very little assistance to help determine which regulations applied to a given situation.

The Lewin Group and RDA set out to codify the rules and regulations into a practical tool that could be used by ESRD surveyors.

The tool was designed to:

- ensure consistent application of the rules and regulations,
- establish objective criteria for deficiency citations, and
- improve the timeliness of reporting the results.

Solution

To resolve these issues, RDA created the STAR system (Surveyor Technical Assistance for Renal Dialysis), a customized version of its Intelligent Mobile Framework (IMF) tool set. Developed for field data collection projects, the IMF utilizes a common set of analysis and design patterns for survey or inspection intensive data collection systems. IMF consists of a central engine and set of reusable components that allows the rapid implementation of such systems, with built in functionality for data collection, real-time synching of data between multiple users, multiple platform support, a host of available data transmission paths, and built in security, reliability, and robustness.

The Tablet PC was chosen as STAR's hardware platform due to its storage capacity and interactive capabilities. Many of the features of STAR resulted from creative solutions to challenges we faced on the ESRD project, along with the built-in capabilities and features derived from use of the IMF.

1. Separation of Content From Program

STAR needed to be easy to modify and inexpensive to update when ESRD regulations changed. The IMF's design allows content to be created and updated without programmatic changes.

2. Access to Supporting Information

Because surveyors needed access to a large amount of information at their fingertips, STAR was equipped with hyperlinks to relevant documentation, tips that provided definitions when the surveyor placed their pen over highlighted words, and dynamic access to pictures and diagrams.

3. High Performance

STAR needed to be highly responsive. Its decision engine was designed for peak performance, with each content rule or calculation based on the answers to questions within the survey.

4. Easy Integration

Information collected from each survey needed to be uploaded automatically into the CMS ASPEN system. STAR captures results in XML format, making integration with the existing back end system straightforward. The Framework provides flexibility for direct connection, e-mail, or wireless Microsoft Activesync technology transmission.

5. Dynamic Collaboration

STAR needed to support surveyor communication on site. The Tablet PC's built-in "WiFi" capability enables surveyors to create an ad hoc wireless network and exchange findings dynamically. The IMF works out of the box with the WiFi protocol.

6. Ease of Navigation

STAR needed to allow a surveyor to address whatever questions were relevant at that moment in the inspection process. For flexibility, it was equipped with an outline feature that allows rapid navigation from one area to another.

Benefits

The partnership of one of the foremost healthcare research and analysis firms, The Lewin Group, with a world-class technology company, RDA, provided a “best of breed” solution for CMS. The Lewin Group provided the expertise to standardize and codify the rules and regulations, which RDA then took to the next step of developing into a practical tool that could be used by CMS surveyors performing inspections.

The surveyors are provided a light-weight, flexible interface for capturing the requisite data. Survey data may be easily modified by the surveyors in the field. The simple user interface reduces the learning curve, allowing surveyors to rapidly come up to speed on the system.

The solution delivered by RDA improves the productivity of the surveyors by automating manual processes. It also provides improved workflow, allows for collaboration among the surveyors at a site, and allows for more efficient report delivery. Most importantly, the solution ultimately helps to improve the quality of care that ESRD patients receive.

RDA’s use of our Intelligent Mobile Framework reduced the time and cost to deliver this solution, while enabling many built-in features that otherwise would have had to be developed from scratch.