University of California

San Francisco
Cognition

Clinical Study

Background

The University of California, San Francisco is a world-renowned bio-medical research institution and one of the top-ranked schools for National Institutes of Health funding. Within UCSF's School of Medicine, the Division of Adolescent Medicine aims to improve health and well-being of young people by using interdisciplinary approaches to provide exemplary clinical care and advance knowledge through leading-edge research.

As part of a human papillomavirus study to support cervical cancer research, 500 women participated in a clinical trial involving a physical examination and update of profile information once every four months over a period of several years. Each visit produces nearly a dozen forms ranging from questionnaires about diet and demographics to physician reports of test and lab results for each participant. Data manager Lisa Clayton coordinates the data collection process for the entire project which involves an estimated 4.5 million data points, all of which must be accurately and efficiently collected to maintain the institution's commitment to quality bio-medical research.

Challenge

Over time, the piles of paper forms had created a bottle neck between the recording of information and the ability to use it. Data entry for the study had fallen behind and a two-year backlog needed to be processed to get the program back on track quickly without sacrificing data integrity.

A current Scantron customer, UCSF was using an OMR solution that included forms design software and a Scantron 8200 scanner. Their need to design and print forms with multiple pages, while also capturing handprint and a digital image of the forms, led them to consider an imaging solution. Other requirements included the use of barcodes and integration with a Microsoft SQL database.

With the OMR system, UCSF was able to gather bubble marks from forms quickly, but hand written information such as comments or personal health history had to be entered by hand, a process that took countless hours. Some of the participant forms were up to 12 pages long, making them very tedious to complete using mostly bubble answers.

"We had concerns about software hand writing recognition capability, butwhen we saw the ease at which Scantron's capture solution was able to accurately recognize handwritten information on forms, the decision was made," said Lisa Clayton, data manager, UCSF, division of adolescent medicine.

Solution

At every stage of a clinical research study, data collection is critical. Information from forms must be captured, verified and processed accurately and efficiently to protect the university's commitment to high-quality research. With the assistance of a NIH grant, UCSF implemented Scantron's Intelligent Capture Solution including Cognition forms processing software and training, while leveraging their previous investment in an imaging scanner.

"We decided to go with Cognition because of our existing relationship and Scantron's great customer service," said Clayton. "When I checked out the competition, they simply did not compare."

UCSF now has a solution that makes data collection faster and more accurate, while capturing an image of the form and allowing form design flexibility. According to Clayton, "Cognition is working out well, we now have a solution we can keep for another 15 years. Anything that can get through a two-year backlog of data entry in just two months is a lifesaver."

Benefits

- Accurately captures bubblemarks, machine print and hand print from forms.
- The flexibility to design and print multiple-page forms in-house.
- Collects data and a digital image of the form simultaneously.
- Processes data collection backlog quickly.
- Leverages existing hardware investments.
- Saves time and money over manual data entry.
- Designs forms that are easy to complete and process

"I am amazed how quickly Scantron got me up to speed on-Cognition - the process was painless."

Lisa Clayton
Data Manager
UC San Francisco

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