

# End-to-End Revenue Cycle Solution

“The client required a partner with healthcare IT expertise to help them overhaul their revenue cycle and reconciliation process ”

## The Client

The client is a growing, affordable cloud/web-based dental software company that extensively provides dental practice management systems to large established Dental Service Organizations (DSO) and to smaller dental practices. The client provides a complete dental software suite with scheduling, charting, billing, patient portal and reporting required for integration to the top EHRs and in managing a dental practice with the help of user-friendly dashboards and an intuitive interface.

## The Business Challenge

The client was looking for a reliable technology and application development partner to help them develop and enhance their revenue management system/ dental billing module and treasury reconciliation processes to integrate with their existing dental practice management software and a provide a plug-and-play application to potentially use with other applications and platforms.

The specific functions that needed to be achieved by the web application included:

- 1) Improve the capture, integrate and automate features
- 2) Paper EOB conversion to an 835 and creation of Check21 file
- 3) Reconciliation capabilities include all sources of payments and streamlined cash with audit controls
- 4) Workflow improvements to enhance exception processing ensuring human readable ERA
- 5) Advanced analytics with report creation features
- 6) Improve UX/UI; increasing user satisfaction and dashboards to include more on-demand information
- 7) New platform architecture with enhanced remittance repository for multiple, concurrent users

## The Engagement

The client chose the Telliant team for its demonstrable experience in building high performance applications in the healthcare industry and for the continued reliable and trusted partnership.

The engagement included the following:

- Comprehensive experience developing high-quality healthcare IT solutions with attention to detail
- Telliant has the necessary bandwidth of resources to expand the team as needed to satisfy additional requirements of the project and additional projects as needed
- Customer service is a core value, we strive to meet and exceed the needs and expectations of our clients
- Telliant's dedicated team worked closely with the client to deliver the required services.
- After careful analysis of the client's requirements, the team proposed additional upgrades and performance enhancements.
- Design and development of core applications and modules
- Performance analysis, benchmarking and solution identification, project-based with full QA management

## Solution Highlights

The product was designed and developed in a regularly active collaboration between the client's internal team and the Telliant Team.

Final result is an easy-to-use software solution that was integrated with the existing dental practice management software. To improve the quality of care provided by the healthcare organization we enhanced the following admin and medical side features:

- Capture
- Integration
- Automation of Revenue Cycle
- Treasury Reconciliation



## Why upgrade Revenue Cycle Process?

Cloud-based RCM software increases medical provider's ability to aggregate claims filing, invoicing and payment transactions, appointment scheduling as well patient data in one single convenient place

**40%** of Providers fail to collect over **\$31,713** a year from patients (2017 study by InstaMed)

**25%-30%** of all medical practice income is lost due to incorrect coding, under pricing, missed or never submitted charges, and nonexistent or improper follow-up. (2017 Annual study by InstaMed)

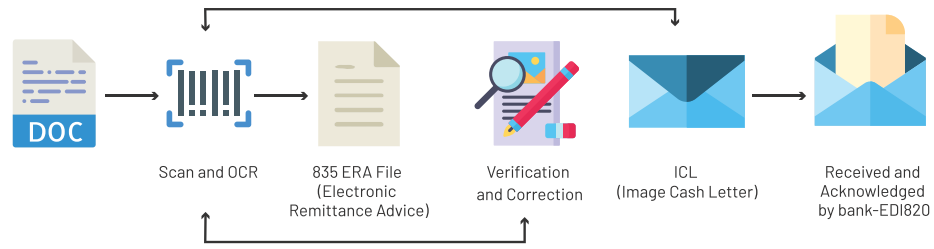
**28%** of Providers do not know how much in-patient collections they write-off each year (Healthcare Payment Study-InstaMed)

**50% +** CFOs want easier report creation and drill-down, better dashboards and visuals. (WallStreet Journal)

**89%+** healthcare payments will be made on phones/-mobile devices by end of 2018.(Beckers ASC Review)

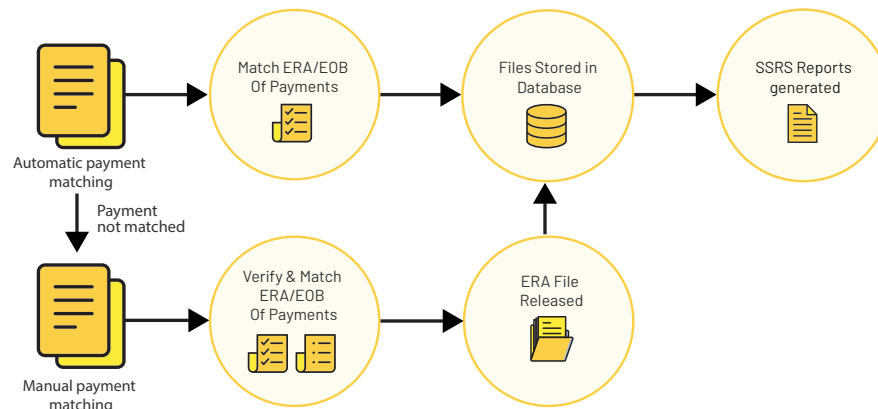
**1. Paper EOB Conversion to 835:** This module allows the user to convert paper EOBs to an electronic remittance Advice (EDI 835) by scanning the paper EOB's. Using the ABBY FlexiCapture engine the revenue cycle application allows the user to scan the paper EOBs with the OCR which separates the checks from the scanned EOB image and stores it for quick access. The new advanced features of the application enables the user to search, data, view and print scanned images from the EOB's. The application stores and matches the 837 files with the extracted EOB data on daily basis for reconciliation.

**2. Creation of Check 21 File (Image Cash Letter (ICL) creation):** The newly created, improved and enhanced application will allow users to create an ICL, to view and search checks. The check image will also be stored/archived in the database for future reference to help manage the Check21 process.



Check 21 and Paper EOB Conversion

**3. Reconciliation capabilities include:** The reconciliation process includes both paper and electronic payments and will reconcile EOBs v/s the checks and 835 ERA v/s the 820 files the application.



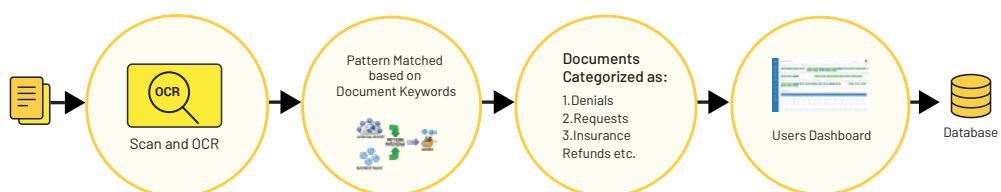
Reconciliation of ERA/EOB With Payments CEFC/CHECK

**4. Human Readable ERA:** The application will Convert 835/ERA to a user friendly/readable format for import into PMS (Practice Management System). The applications would send 835 ERA information in JSON format to Change Health Care human readable ERA API. Human readable ERA API would generate human readable ERA based on JSON data and send response of ERA in human readable format.

**5. Analytics:** With advanced informational charts on a dashboard the analytics module provides an option to filter by date of service, payer, monthly, yearly, quarterly and by state for comparative analysis with the option to drill-down by payer and state. The innovative dashboards allow the users to visualize and analyze different parameters from the 820, ICL and 837 files.

The application provides analysis of payment and AR information from high-level to very detailed including specific carrier/plan and procedure. The user has the capability to export the data used to generate the dashboard charts with as much detail as needed. Advanced reporting for CARC/RARC codes (the procedure codes by payer) can be created and exported in SSRS format or PDF.

**6. Workflow:** The workflow module offers an enhanced scheduling function with predetermined automated features. This module has improved audit control across the entire revenue cycle.



Workflow Flowchart

## Results

The revenue management system/ Dental Billing Module and Treasury Reconciliation process was developed and enhanced to integrate with their existing dental practice management software.

## TECHNOLOGY ENVIRONMENT

Telliant was responsible for identifying and implementing the most appropriate technology for the web application in order to meet the performance, cost and usability objectives set by the Client.

### Major Technologies used:

- > **Presentation Layer**  
Angular 2
- > **Business Logic Layer**  
Web API  
C# (Visual Studio 2015, .Net Framework 4.5)
- > **Database Layer**  
SQL Server 2014
- > **Delivery Method**  
Agile SDLC
- > **Encryption**  
LDAP Authentication

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