

## Deliverable 4: Oasis Health Ventures Systems Proposal

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## **Description**

Our proposed solution is to build an in-house management software that works in tandem with ICANotes. ICANotes will hold client meeting notes and general information of the clients (DOB, SSN, address, phone number, emails, medication lists, etc) for the FSCs and also other employees (therapists, psychiatrists, social workers etc.) reference as needed.

This management software will track client meetings notes and appointment count, reduce tedious administrative tasks, and streamline the billing process. Users will be able to access the management software through the web on their mobile devices, desktop computer or laptops. The development of the software will be outsourced to a software development consulting firm. The software will run on Oasis's current PC's and servers. The data will be stored on a database server in the Oasis Health Ventures building. The organization will experience an increase in efficiency and revenue. The software's ability to track client notes will highlight clients who have not had the minimum 6 FSC visits and alert the Program Manager, at a predetermined date, on which clients still need more visits before the month ends. The software's secondary ability to catch note errors and missing note requirements in the meeting notes the FSCs enter and submit into ICANotes. This will reduce the chance of insurance claim rejections due to inadequate meeting notes, which will increase revenue and reduce time wasted on submitting appeals. Billers no longer have to wait for approval from the program manager to file claims because claims ready to be filed (approved notes) will automatically be sent to the Billers. The Program Manager no longer has to shift through all clients reports for errors, instead errors are automatically highlighted by the new software.

## **Feasibility Analysis**

### Economic feasibility analysis

#### **Cost**

Cost of construction and implementation of the new software (one time): \$150,000- \$180,000

Cost of Part-time IT admin salary (recurring): \$55,000-\$65,000

#### **Benefits**

All clients having a minimum of 6 FSC meetings per month: \$160,000 -\$200,000

Clients continues with Oasis services due to satisfaction (1 year): \$2,000,000 - \$2,500,000

#### **Intangible costs/Estimation Evaluation**

The intangible costs are better quality of services and customer satisfaction. Estimation of costs is relatively certain because we received quotes from software engineers and experienced IT admins.

Cost of all clients having a minimum of 6 FSC meetings per month is relatively accurate because we

calculated the standard monthly estimated profit using predictive analysis and patterns. Variation From predicted analysis and patterns (loss of customers, addition of customers, number of days in month, minimum of 6 meetings not met, etc) could vary the estimated monthly profit cost. Cost of clients continuing with Oasis services due to satisfaction for a year is relatively accurate because we calculated the standard yearly estimated profit using predictive analysis and patterns. Variation from predicted analysis and patterns (loss of customers, addition of customers, minimum of 6 meetings per month not met, etc) could vary the estimated yearly profit cost.

#### Technical feasibility analysis

This solution will require the business to outsource the production of the software. The software engineers given this task will be responsible for technical requirements, design, prototyping, implementation, and testing. An experienced IT admin will be needed to manage the servers and software. The software needs to be compatible with ICANotes's software so that it can access client notes and count the number of notes submitted to ICANotes. A new database server will need to be purchased to house the software. Little to no training is required for most employees except for the Program Manager and FSC team manager, who will be utilizing the management software. The Program Manager and FSC team manager will also be needed in the development process to evaluate prototypes.

#### Organizational feasibility analysis

- i. There are no strong constraints on the schedule but it would be ideal for the software to be completed within 3-6 months.
- ii. The software will be a big cost to the Oasis Health Ventures, some employees might have other thoughts about where money should be spent. There shouldn't be too much change in the power dynamics in the organization, other than less interaction between Billers and Managers due to the automatic notifications of ready to file claims.
- iii. The Program Manager's (and FSC team manager) job will change significantly because they are no longer spending hours going into each client's file, counting the number of client meeting notes per month, and reviewing the validity of notes. Instead, Managers will be notified when client meeting notes have errors and can view a chart displaying client meeting note count per client per month. Billers will have the benefit of receiving a list of approved notes more rapidly than waiting on the Managers' approval of notes. This will enable Billers to file for claims quicker. There is little to no evidence that employees will resist the change the software offers.
- iv. There are legal concerns on making sure the software is HIPAA and 42 CFR Part 2 compliant. Ensuring the software is compliant with both involves implementing technical safeguards, such as encryption, and access control to protected health information and records. A technical legal expert might be needed to make sure the software adheres to these technical legalities.
- v. The solution might not solve the problem if the software isn't able to detect errors and lack of note requirements in claims and report effectively. The cost of implementing the software might become too expensive for the business to handle in a fiscal year.

## **Alternative Solutions**

### Alternative Solution 1: Excel spreadsheet

#### Low end and Low Tech

Instead of using a new software to record and track the number of billable meetings per client per month, Program Manager may consider inputting the billable meetings on Excel. If used correctly, Excel has the capability to track the number of billable meetings per client, per month but will not be able to connect with ICANotes and check for client meeting note requirements in notes. Excel is relatively easy to use and learn and would be a cheaper alternative than adding another feature that would increase the new software costs.

#### Major features and findings:

- Over the course of the business day, the billable (or approved) meetings times will be entered into the Excel spreadsheet instead of into a new software database
- Excel can track billable meetings directly
- The actual client meeting notes will still be stored in ICANotes
- Program Manager must look through Icanotes first for client meeting notes, dis/approve notes, then document number of approved client meeting notes into Excel
- Estimated one-time costs: \$0
- Familiar software to Managers
- Excel spreadsheets needs to updated daily or weekly
- Learning to set up Excel spreadsheets can be achieved through free resources
- Some employees are unhappy about learning a new system (Excel) while still having to use the old system (for querying notes).
- The data on each Excel spreadsheets will likely be stored by month. The Excel spreadsheets per year will likely be stored by files. This may take up large amounts of storage.

### Alternative Solution 2: AWS Simple Notification Service

#### High end and high tech

Instead of using new software to send notifications out to the Program Manager, the Program Manager may consider using AWS Simple Notification Service. With AWS Simple Notification Service, notifications can be sent via SMS text and email as opposed to just the SMS text on the new system. Notifications concerning notes that do not meet the billable requirements can be sent to both the Program Manager's phone and email. The Program Manager could also configure the Notification Service to send notifications to the FSCs phones and emails instead of alerting the FSCs manually through phone calls. This service would be a cheaper alternative than adding another feature that would increase the new software costs.

#### Major features and findings:

- Program Manager must initiate or set-up the notification alerts
- Notifications regarding insufficient 6 minimum meetings can be sent to FSCs immediately or at predetermined times

- Notifications regarding client meetings notes not meeting billing standards can be sent to FSCs quickly
- Estimated one-time set costs: \$650
- Estimated monthly costs: \$300, depend on SMS amount
- Installation is easy and learning to use software is relatively easy
- Troubleshooting is provided with AWS subscription
- Could expand to send announcement notifications or reminders to all FSCs or even clients
- Potential security risks but low

## **Alternatives Matrix**

### Criterion 1: Understandability

Type: Risk

Everyone can learn and adapt to using the software system

A low rating (1): A certain level of technical foundation is needed to understand and use the new software

A high rating (5): Anyone could understand and use this system

### Criterion 2: Degree of Automation

Type: Requirement

Software enables less manual operations. New software includes automatic notifications, automatic tracking of client meeting counts, and client meeting notes requirement scan.

A low rating (1): Manual operation is necessary

A high rating (5): All operations can be automated

### Criterion 3: Cost

Type : Requirement

New software requires one time construction and implementation cost and the cost for an IT administrator for software troubleshooting.

A low rating (1): Cost of new software construction, implementation, and IT administrator is expensive.

A high rating (5): Cost of new software construction, implementation, and IT administrator is inexpensive.

### Criterion 4: Integration Compatibility

Type: Requirement

The new software's ability to integrate seamlessly with ICANotes is crucial for its success. The goal is to ensure that data exchange between the new management software and ICANotes is smooth and both systems work in tandem without causing conflicts or data inconsistencies.

A low rating (1): Challenges with the ICANotes integrating with new software leading to potential disruptions in the overall business processes

A high rating (5): No challenges with the ICANotes integrating with new software; seamless integration

## Solutions Analysis

Evaluation Criteria	Weight	First Solution 1: A new Integrated software	Score (1-5)	Weighted Score	Alternative Solution 1: Excel spreadsheet	Score (1-5)	Weighted Score	Alternative 2: AWS Simple Notification Service	Score (1-5)	Weighted Score	Total Weighted Score
Criterion 1: Understandability	25	Program Manager can learn and understand how to use the new system relatively easily but has some struggles	3	75	Program Manager can easily understand and use Excel	5	125	Program Manager can easily understand and use AWS Simple Notification Service with limited struggles	4	100	300
Criterion 2: Degree of Automation	25	Limited manual operations. New software includes automatic notifications, automatic tracking of client meeting counts, and client meeting notes requirement scan.	5	125	Program Manager must document the number of approved client meeting notes into Excel. Must update spreadsheets daily or weekly.	2	50	Software sends out mass notifications. Program Manager must still initiate or set-up the notification alerts.	3	75	250
Criterion 3: Cost	20	Cost of construction and	5	100	There are free	1	20	Estimated one-time	2	40	160

		implementation of the new software (one time): \$150,000-\$180,000  Cost of Part-time IT admin salary (recurring): \$55,000-\$65,000			resources for installing and learning to use Excel. Free to install.			set cost: \$650  Estimated monthly costs: \$300, depend on SMS amount			
Criterion 4: Integration Compatibility	30	Possible to integrate with ICANotes.	5	150	Not possible to integrate ICANotes to Excel spreadsheets. Program Manager will have to manually count approved meeting notes from ICANotes and input data to Excel. Excel spreadsheet will document and record client meeting count.	2	60	Not possible to integrate ICANotes with AWS Simple Notification Service. Program Manager will have to manually initiate or set-up the notification alerts. AWS Simple Notification Service will send mass notifications to appropriate parties.	3	90	300
Totals:	100			450			255			305	1000

### Conclusion

The solutions analysis suggests that the first and original solution, building a new software from scratch, would be the best solution to address Oasis Health Venture's need for a database upgrade.



