



家和專業輔導中心

CHINESE FAMILY SERVICES OF ONTARIO

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BUSINESS CASE: CLINICAL INFORMATION DATABASE SOLUTION

Background

The agency has identified a gap between its clinical document and reporting needs and the available functionality of its current clinical database. As research, ED has surveyed members of Family Services of Ontario and identified 3 major providers of solutions in the industry: Athena, Coyote, and EMHware. All three providers were invited to demonstrate onsite to management and Information Technology committee of the Board. Athena was weeded out before the demo date because they volunteered the information that they do not have pre-built forms, which is critical for reporting and client service needs.

Purpose

This document serves to provide an objective analysis the current and emerging needs of the clinical information system at Chinese Family Services of Ontario. The information in this document is intended to inform the Board of Directors to facilitate unbiased decision-making over what new clinical database solution to adopt. Return-on-Investments are outlined according to gains process efficiency, time savings, and quality improvement.

Commissioning

This development of this document was commissioned by the Chinese Family Services of Ontario Board of Directors, and is produced by the Executive Director of the organization in September 2016. Input from staff and information from vendors were collected in various formats and taken into consideration during the research process.

Timelines

This plan will be circulated to the Information Technology Committee of the Board, which will then discuss and make recommendations to the board accordingly, during the Board meeting on September 14, 2016.

Implementation

According to the evidence-based, informed decision, implementation will be planned with needs requiring, scoping, functionality design, data tests, staff training, usability tests, data migration evaluation, initial implementation, in-house support training and resource development, and ongoing warranty and vendor relationship management, as aligned with project management principles. Feedback will be collected from users on an ongoing basis and channeled back to the vendor for continuous quality improvement as defined within the contractual terms. \$6500 has been earmarked in the additional ISAP budget for 2016-17.



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Key Benefits

1. Externally hosted solutions are certified for be secure by the funders. Liability of cyber security is minimized.
2. Internal server and power are not reliable. Hosting, backup, and liability are transferred to the vendor.
3. CFSO does not need to stay updated on the funder forms since the system automatically updates it for all its users.
4. Projected Savings (based on maximal benefit, staff time savings based on 60% direct client service productivity ratio):
 - a. ED time savings of 25 hours per year, equivalent to the time to complete 1 community proposal
 - b. Staff team will save 1675 hours per year, equivalent to the time of delivering 1005 client sessions
 - c. \$5000 of maintenance costs per year of existing system will be saved
5. New Functionalities:
 - a. Relationships between client will be possible to prevent abusive situations and to better deliver family counselling
 - b. ISAP will be able to record their group activities to capture date, number of attendees, and length of activity.
 - c. Group sessions will be recorded to capture number of attendees, date of seminar, and length of seminar.
6. Business Opportunities:
 - a. productivity tracking
 - b. service delivery
 - c. evidence-based business planning
 - d. pave way for fee-for-service model
 - e. enable client evaluation of treatment progress and service quality.

Recommendations

1. Adopt an external solution
2. Select EMHware as provider at 0% interest 3-year instalment plan, based on more functionalities, lower costs, and more prompt services
3. Use \$6500 from ISAP budget and the rest from Operating budget or Reserve. Build ongoing costs into operating budget.
4. Timeline:
 - a. October 2016: data collection, scope definition, custom configuration
 - b. November 2016: Data migration & Data testing
 - c. December 2016: Usability testing
 - d. January 2017: User training; Cutover & Go-Live
 - e. February – April 2017: Business-As-Usual & Warranty & Refinement
 - f. April 2017: Q4 data will be reported from the system





SITUATIONAL ANALYSIS

Current State

The current clinical database was developed in-house by an IT contractor in 2007 based on Java scripts. It has been going through minor patch fixes throughout the years, but has not been updated based on funder or regulatory requirements. There have been issues with the existing system for years, affecting data entry, accuracy, security, and reporting requirements.

1. DATA ENTRY

- a. Data entry is currently limited but the fields and menus designed without user consultation. Fields and menu items do not reflect the current reporting needs of the funders, nor the anticipated growth areas of the agency.
- b. Efficiency is also affected due the database's lack of interface with reports for funders. Data entry is therefore duplicated according the current database and those of various funders.

2. ACCURACY

- a. Data integrity is a concern, as shown from a recent copy of the entire database, that data and fields are mismatched for some entries but not all entries.
- b. Client files are sometimes merged within the system, reflecting information from 2 different clients into 1 file.
- c. File access dates are sometimes changed arbitrarily, and the dates reflected at all of the intake, assessment, treatment, and last access stages would become the same, reflecting no accurate date of any of the said services.
- d. Client files that require to be related to others for purposes for family counselling and abuse prevention, is not reflected accordingly, making related case information less accessible for service staff.
- e. Some data have not been collected due to historical practices.
- f. Some data have not been collected due to system limitations. Separate manual collection is required in order to ensure accurate funder reporting and accurate business projection for organizational planning.

3. SECURITY

- a. Data is stored in-house, backed up on a daily basis, and not accessible outside of the in-house server network.
- b. Security assurance is done based on in-house server infrastructure and backup system.

4. REPORTING

- a. Reports cannot be generated according to funder requirements, making reporting to funders a manual process.
- b. Data were not collected according to funder or business requirements, making reported data less meaningful.
- c. Field and data mismatch leads to less accurate and meaningful reports, making reporting a labour intensive process due to the need for manual data cleanup.





New and Emerging Needs

In keeping with the strategic directions of the organization to expand its outreach and services, and increase efficiency and effectiveness of its operational processes, as outlined in its 2016-2019 Strategic Plan, there are a series needs scoped for the new solution apart from requirements from funders and PHIPA and PIPEDA.

1. CUSTOMER SERVICE

- a. Scheduling of clients and reflection of fulfilled appointments vs no-show
- b. Logging of time spent per client per session
- c. Logging of number of groups, length of group session, and number of group participants
- d. Individualized fee schedule per client, under a corporate sliding scale
- e. Fee payment reconciliation and tickler system for fees in arrears
- f. System generated, custom printing of forms and receipts for individual client use
- g. Documentation of relationships among clients for abuse prevention and informed family counselling and parent education
- h. Mechanism for client evaluation of services and self-evaluation of progress

2. PRODUCTIVITY

- a. Documentation of client interactions including phone and email conversations
- b. Logging of client appointment completion rate and time spent
- c. Reporting of individual staff and agency overall productivity by number of sessions and clients, and service hours
- d. Trending of client retention rate
- e. Scheduling of appointments for multiple types of services across all locations
- f. Documentation of other activities, including but not limited to student mentorship, staff meetings, outreach, group activities, documentation work, research, public education, clinical supervision, case audit, and marketing

3. REPORTING

- a. One-click report generation in compliance with ministry reporting standards to eliminate manual work
- b. Report generation according to custom-defined criteria for funder reporting and business planning purposes
- c. Capability to report client evaluation results, and staff case audits and clinical supervision
- d. Capability to log and report on client needs across multiple areas of services





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Clinical Operational Time Use

PROGRAM	TASK	ROLE	FREQUENCY	TIME SPENT IN MINUTES (Current vs Projected)			
				Current	Current Updated	EMHware	Coyote
Counselling	Intake	Staff	Multiple/day	20/staff/client	Unknown	10/staff/client	15/staff/client
- mandatory for all cases; additional info per client groups	Assessment	Staff	Multiple/day	60/staff/client	Unknown	50/staff/client	50/staff/client
	Service Plan	Staff	Multiple/day	20/staff/client	Unknown	15/staff/client	15/staff/client
	Progress Notes	Staff	Multiple/day	15/staff/client	Unknown	15/staff/client	15/staff/client
	Discharge	Staff	Multiple/day	15/staff/client	Unknown	10/staff/client	10/staff/client
PAR	Report to funder	Staff	Quarterly	60 per staff	Unknown	0	0
	Report to funder	ED	Quarterly	60	Unknown	15	15
	Report to John Howard	Staff	Monthly	10/staff	Unknown	0	0
	Report to John Howard	ED	Monthly	30	Unknown	10	10
VAW	Report to funder	Staff	Quarterly	180/staff	Unknown	0	0
	Report to funder	ED	Quarterly	180	Unknown	15	15
	Genogram for abuse prevention	Staff	Multiple/day	Cannot capture	Unknown	5/staff/family	5/staff/family
Gambling	New Case Entry	Staff	Multiple/day	20/staff/client	Unknown	0	20
	Progress Notes	Staff	Multiple/day	10/staff/client	Unknown	0	10
	Report to funder	Staff	Quarterly	60	Unknown	0	60
	Report to funder	ED	Quarterly	90	Unknown	15	90
Youth	Report to funder	Staff	Annual	120	Unknown	0	0
	Report to funder	ED	Annual	240	Unknown	0	0
Parenting	Genogram for parental relations	Staff	Multiple/day	Cannot capture	Unknown	5/staff/family	5/staff/family
ISAP	Activity recording	Staff	Multiple/day	Cannot capture	Unknown	5/activity	5/activity
Groups	Session recording	Staff	Multiple/week	Cannot capture	Unknown	10/group	13/group



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Solution Comparisons

Comparison is drawn between the 2 vendors based on functionalities, needs, costs & references. Existing system immeasurable.

LEGEND	
Included	✓
Available with extra costs or with custom design	✗
Not Available	X

TABLE A: EMH\$	Payment	Support	Total	Notes
October 2016	\$20,666.67	\$0	\$20,666.67	
April 2017	\$20,666.67	\$9,200.00	\$29,866.67	Support Fees Prorated
April 2018	\$20,666.67	\$9,200.00	\$29,866.67	Coincide with Go-Live Anniversary
April 2019	\$0	\$9,200.00	\$9,200.00	

NEEDS \ FUNCTIONALITIES \ COSTS \ REFERENCES	EMHWARE	COYOTE
IT		
Data Integrity	✓ data validation, duplication, merging	✓ Microsoft SQL Database; built in components and functionality to align with PHIPA; users conducted independent PIA/TRA and penetration testing
Custom Menus & Fields	✓	✓ Custom field labels, menus, and custom tabs
Interface with Funder Databases	✓ DATIS, CCIM/IAR, CBI, OCAN, InterRAI-CHA, HL-7 hospitals	✓ CCIM and DATIS (DATIS integration uncertain)
Generation of Funder-Customized Reports	✓ CDS, MIS, OCAN, DATIS, MAG, MCSS, MCYS, MOHLTC	✓ Common funder reports and user created reports using SSRS or 3rd party tools
Client Relationships	✓ see references	✓ see references
External Hosting	✓ 100% cloud based	✗ External hosting services extra
Timely & Multiple Backups	✓	✓
Onsite Training	✓	✓ included in deployment fee
Hotline / Technical Team Support	✓	✓ requires in-house superuser at CFSO as first line of support





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NEEDS \ FUNCTIONALITIES \ COSTS \ REFERENCES	EMHWARE	COYOTE
CUSTOMER SERVICE		
Individualized fee schedule per client, under a corporate sliding scale	✓ included with Fee for Service / Billing Module	✓ can be based on a combination of the client, and the specific service(s) delivered
Fee payment reconciliation and tickler system for fees in arrears	✓ included with Fee for Service / Billing Module (same price)	✓ mechanisms to ensure outstanding balances are paid
System generated, custom printing of forms and receipts for individual client use	✓ included with Fee for Service / Billing Module	✓ CFSO will be define
Documentation of relationships among clients	✓ Client Connections Section	✓ Master Person Index structure: Contacts, Family, Therapeutic, Judicial contact types; can create alerts on clients, which will be automatically displayed when working with the client; time overlap requires manual search
Mechanism for client evaluation of services	✓	✓ to be developed in user defined tabs to generate from the system or through ad-hoc reporting
Mechanism for client self-evaluation of treatment progress	✓ Client Portal	X
Assignment of multiple needs and treatment services for each client	✓ Program History Section	x Client needs to be enrolled into each program separately. x A module for Care / Prevention Plans will be released in future.
Documentation of referrals for individual clients	✓ Referrals/Info-Sharing Section	✓ all inbound&outbound referrals are tracked in Caseworks



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NEEDS \ FUNCTIONALITIES \ COSTS \ REFERENCES	EMHWARE	COYOTE
PRODUCTIVITY		
Scheduling: multiple locations, multiple service lines, all frontline staff	✓ built-in Scheduler	✓ scheduling module for staff, clients, and facilities: ongoing appointments, matching clients with staff with availability; direct & indirect admin functions
Recording of time spent per session	✓ Contacts & Workload Sections	✓ for all direct, indirect & admin functions per service event
Documentation of other client interactions: phone & email conversations	✓ Contacts Section	✓ appointments, phone calls & attempts & all correspondences
Reflection of Fulfilled Appointments & No-Shows	✓ Contacts Section	✓ attended, cancelled, and no-shows; with reflecting fees
Reporting of agency overall productivity by number of sessions and clients, and service hours	✓ Contacts Section	✓ agency-wide & strategic breakdowns of session counts and service hours broken down by a broad spectrum of ways
Trending of client retention rate	✓ Program History Section	✗ Custom report by Coyote or ad hoc report by CFSO
Reporting of individual staff overall productivity by number of sessions and clients, and service hours	✓ Contacts Section	✓ Service Activity & Census Report
Logging of number of groups, length of individual group sessions, and number of group participants per group	✓ Contacts Section	✓ Group management system: client(s) to be registered in one or more groups → tracks their attendance, services provided and documentation
Documentation of other activities: e.g. student mentorship, staff meetings, outreach, group activities, documentation work, research, public education, clinical supervision, case audit, and marketing	✓ Contact & Case Note Sections + Workload	✓ Schedule and Service Event Modules



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NEEDS \ FUNCTIONALITIES \ COSTS \ REFERENCES	EMHWARE	COYOTE
Reporting		
One-click report generation in compliance with ministry reporting standards to eliminate manual work	✓ MOHLTC, MAG, MCSS, MCYS, and DATIS	✓ MOHLTC, MAG, MCSS, and MCYS
Report generation according to custom-defined criteria for funder reporting and business planning purposes	✓	✓ extensive filtration on existing reports for the ad-hoc capability; frequency report for counts on fields within the system; Beyond that CFSSO can create & deploy its own reports within the system.
Capability to report client evaluation results, and staff case audits and clinical supervision	✓	✓ case summary report & service activity report
Capability to log and report on client needs across multiple areas of services	✓ Check-box per need that trigger entry in reports	✗ Client needs to be enrolled in a program per identified need to report
Reporting of individual staff and agency overall productivity by number of sessions and clients, and service hours	✓	✓ Broken down by staff, location; identifying hours, services & other productivity measures
Costs & Contract Duration (See proposals for details)		
Software Licence	\$46000	\$25000 (Caseworks only) +\$17500 for Formworks
Project Fees (one-time)	\$16000	\$63250
Annual Subscription	Included	\$8000
Annual DB Hosting	Included	\$3250
TOTAL FIRST TIME FEES	\$62000 (\$15000 deferred 6 mths)	\$99500 Caseworks only
TOTAL FEES PER SUBSEQUENT YEAR	\$9200	\$11250 Caseworks only
Contract Term	No contract; 0% interests 3-year split payments (see Table A), and 2% 5-year split payments	3-year minimum contractual commitment



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NEEDS \ FUNCTIONALITIES \ COSTS \ REFERENCES	EMHWARE	COYOTE
References		
Guelph-Welling Family Counselling and Support Services		<ul style="list-style-type: none"> - Used Coyote for over a decade. - Been through diff versions of Caseworks - They believe Formworks is a MUST - Support reliable; turnaround not quick - Need multiple superusers in-house
Halton Family Services	<ul style="list-style-type: none"> - Recent adopter of EMH - Did not do custom design or usability test. Challenged during implementation. - Believes solution is the next Ministry standard - Service excellent - Agency did not have plan implementation well. 	
Windsor-Essex Family Services	<ul style="list-style-type: none"> - Recent adopter of EMH from CIMS database. - Believes the future is with EMH. - Good for reporting to multiple funders 	
Sudbury Counselling Centre		Adopted Caseworks a few years ago <ul style="list-style-type: none"> - Expensive - Hard to use - Not ready to change to another provider yet since staff are slow to learn new technology
Based on Existing Clientele	More clinics of mental health and abuse and multi-funded agencies use EMHware	More family service agencies use Coyote

Last Updated September 13, 2016



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