A Program Management Application for the Civil Commitment Unit for Sexual Offenders

Timothy R. Montoya

University of Iowa, Iowa City, Iowa
timothy-montoya@uiowa.edu

Introduction

The Civil Commitment Unit for Sexual Offenders (CCUSO) was started in 1999 after State of Iowa statute 229A was passed, providing for the civil commitment of Sexually Violent Predators (SVPs) after completion of their prison terms. The purpose of CCUSO is to provide psychological and mental health treatment to committed individuals to prepare them for an eventual successful re-integration into society. [4] The therapists at CCUSO conform to state and nationwide standards for psychological testing and treatment. During the program, a wide variety of records are kept with no coordinated data storage and management application from which the therapists can draw statistics or use to communicate with other therapists or security staff. In order to facilitate effective case management and security, a robust database system is needed as an improvement over the current system of record keeping.

The remainder of this proposal will include a detailed program description and background information on the CCUSO program, as well as background information on the current state of electronic and paper records. Additionally, a motivation for process improvement and database development will be presented along with a detailed implementation plan and timeline for project completion.

Motivation

Currently there is a large movement in the Department of Human Services to streamline processes and improve current methods of conducting business. As with any business, this effort is difficult without an "information at your fingertips" type of application. A well designed database for CCUSO will be a large improvement over the current methods of managing patient case files and allow quick responses to upper management requests for information used to make business decisions.

Several problems with the current case file management system have been identified. The current system would benefit from a centralized patient record repository and communications platform in which all pertinent records are kept and from which statistics and reports may be generated. This will assist the therapists in making treatment decisions based on a patient's progress. Additionally it should improve communication between treatment and security staff by using a common interface where information can be retrieved and stored and eliminate the data redundancy issues. Further, it will improve staff efficiency, freeing staff to concentrate on their primary job functions rather than repetitious data entry.

Project Summary

There are two main goals to be accomplished in this project. The first is to improve CCUSO record keeping and communication by developing an integrated database and user application. The developed system will provide staff with a management tool that captures previously unavailable statistics and automates several inefficient processes. The second goal is to develop experience in application development and planning throughout all stages of the project life cycle from initial discovery through implementation, testing, and maintenance.

Background

CCUSO Background

The CCUSO program is currently housed at the Iowa Medical and Classification Center (IMCC) at Oakdale, Iowa across the highway from the University of Iowa's research campus at Oakdale. However, plans are being made to relocate the program to the Mental Health Institute at Cherokee, Iowa. The program currently has a patient population of between 30 and 40 patients who have been civilly committed for an unlimited amount of time in order to complete an approved treatment program before being allowed to re-integrate into society. The civil commitment process, while similar to how someone might be committed to a mental health institute, is unique in that it applies only to a limited population of sexual offenders which meet the following criteria:

- The candidate must be nearing completion of a criminal sentence for a "sexually motivated" offense.
- The candidate must meet the criteria established by statute for a "sexually violent predator," including determination that the individual has a "mental abnormality" or "personality disorder" that makes it "more likely than not" to engage in future acts of a sexually violent nature.
- The candidate must be referred for commitment by a Multidisciplinary Team, the Prosecutor's Review Committee, and be determined by a professional evaluator to be a high-risk for re-offending.
- The candidate must be found to be a "sexually violent predator" by a civil court. [3]

The patient then has an opportunity to complete treatment at his own pace. The basic treatment program consists of a patient's successful grasp of "12 universal treatment goals" which is then measured by progress through five phases during treatment. ([1], pg. 6) Day-to-day behavior is measured by five different behavior levels, which are not necessarily based on a patient's particular phase. For example, a patient may be on phase three which is a relatively

advanced phase, but act out with inappropriate behavior and be dropped to a behavior level of one.

A patient's progress through the phases is calculated by his ability to pass several tests including a polygraph (lie detector), plethysmograph, and Abel screening, which measure sexual arousal and interest respectively. His primary therapist and the security staff review a patient every 90 days. Additionally the program director, Attorney General's office and a civil court judge review each patient annually. The phases are not particularly tied to exact promotion dates as they depend on an individual patient's progress. The one definite rule is that phase two, known as the core phase, has a minimum participation time of one year. ([1], pg.10)

A patient's progress up and down the behavior levels is another matter. The behavior levels are generally based on behavior reports generated by the security staff as patients act inappropriately. These behavior reports are based on infractions of rules outlined in the CCUSO Patient Handbook. [2] Once a patient has been promoted or demoted a level, he is eligible for review again within a specific period of time. ([2], pg.12 – 13)

The patients are able to reach their treatment goals and complete the program by participation in several psycho-educational classes on topics such as relapse prevention, victim empathy, and cognitive skills. They also participate in group therapy and individual treatment sessions that are all recorded and used to evaluate a patient's progress. ([1], pg. 9)

Virtually all of these processes have multiple forms associated with them and a lot of paperwork is generated by hand or by using a simple word processor. Very little of it is generated automatically without human calculations or data entry which has become a time consuming process. A complete list of reports kept by CCUSO that will be addressed by this project can be found in Appendix B.

System Background

When CCUSO was initially set up, there were plans to hire professional programmers to create a database to maintain all aspects of patient records and case management. However, due to circumstances beyond management control, the contract was never completed. A haphazard system of record keeping was put in place as an interim measure and is still in use.

The current state of data collection is an unorganized set of text documents and spreadsheets spread over four shared drives on two different servers. One of the servers is located on a separate subnet of the Department of Human Services (DHS) Enterprise Network. Each patient has their own set of flat files and case notes which are quickly growing to an unmanageable level due to the growing patient population. There is a significant lack of communication and computer literacy among the staff, which leads to the undesirable state of data redundancy and an inordinate number of hours being spent on data entry and retrieval. There are several examples which demonstrate this current state of CCUSO data, a few of which are detailed here.

One of the worst examples of data redundancy is the entry of clinical notes and progress notes for each patient (Appendix A). After each session of group therapy, the primary therapist must enter a note on each participant in the group. This is often the same note. Each patient has his own Microsoft Word file in which progress notes are stored. Therefore, if 15 patients participate in a group, the therapist must open each file individually and copy and paste the note into each file. This becomes an extremely time-consuming process considering that each therapist usually conducts two group sessions per day along with numerous individual sessions. The same situation applies to progress notes which are entered by security staff.

At the end of each month all progress and clinical notes are archived which involves opening each Microsoft Word file, saving the previous month's notes to another folder, and then cleaning out the previous month's notes in preparation for the current month. If the current population is 35, this means that 70 files must be opened, saved to a different network share, and old notes deleted. The newly archived notes are then printed on paper to be filed in each patient's permanent paper record.

Another example that highlights the lack of communication in the current processes is the processing of behavior reports (Appendix A) written by security staff. Once a patient commits an infraction, the security staff involved enters the appropriate information in a Microsoft Word document and manually assigns a case number. The report is then stored on one share on the file server and a supervisor is notified that a report has been written. The manual assignment of case numbers leads to an inconsistent numbering system and file naming conventions. This makes retrieval of specific reports difficult as each file that does not have the proper name must be opened to find the one being searched for when the report is ready to be reviewed.

Once the supervisor has had a chance to review the report, it is saved on a separate network share and the patient has the opportunity to appeal the report to the security director who has seven days to respond to the appeal. Currently, there is no automated system that notifies a supervisor or the appellate authority that a report is ready for processing or review. Information is passed strictly on paper and by word of mouth. This leads to report appeals not being completed on time, which in turn opens the unit to a lawsuit by the patient in question.

Other reports which are currently calculated by hand are quarterly review dates (Appendix A) for each patient, patient's age range grouped in ten year increments, patient daily status sheet, and review dates for patient behavior levels. This is tedious work that consumes

countless staff hours generating reports that could be done much more quickly if they were stored in a central location.

The current data storage and networking system is housed on two separate servers. The main file server is located off campus at the Mental Health Institute in Independence, Iowa. This server stores the majority of documents on three separate network shares named svp_asst$, svp_ark$, and ccusso_pss$. It has a storage capacity of 20 GB and currently holds 12.1 GB of data. Another small file and print server is located onsite at the CCUSO unit and stores an additional 1.5 GB of data in a suprvsr$ share used primarily by the supervisors for administrative purposes such as level review information and patient personal effects inventory.

A variety of personal computers (PCs) are used to access the network with the baseline system containing an Intel 433 MHz Celeron processor with 128 MB of RAM and running either Windows 95 or Windows 98. These computers as well as the onsite server are on their own internal LAN that is subnet of the much larger DHS Enterprise WAN. The current number of users of the CCUSO network is approximately 40 but this is scheduled to expand to a total of 57 full-time employees by the end of 2003.

Project Details

Proposed System Overview

The new CCUSO program management application will be a relational database designed independently of any particular Database Management System (DBMS) to prevent any particular platform specific issues from interfering with the design process. After the initial relational design is complete, the application will be implemented in Microsoft Access and Visual Basic 6.0 for which CCUSO already owns a license. If possible, the final product will be ported to run on Microsoft SQL Server 7.0 on a new server that has been purchased for the CCUSO unit with

a Visual Basic front-end. The new server has 70 GB of storage capacity and will function as the primary data storage unit for CCUSO. It must be noted for clarity of project requirements that there are currently some internal political issues that may preclude full access to the SQL server that cannot be resolved until well into the project's implementation phase. If upon nearing completion of the project it is determined by this author and the information technology administrator at the Cherokee Mental Health Institute that proper final implementation and maintainability on Microsoft SQL Server 7.0 cannot be achieved due to Department of Data Management constraints, the final project implementation will remain in Microsoft Access. In addition, all desktop operating systems should be upgraded to a standard Windows 2000 installation with Microsoft Office 2000 by the time the new application is ready for rollout and testing.

After careful consideration, it has been determined that the management application should meet the following requirements and perform the following functions:

- Be designed with computer illiterate users in mind so that all staff will benefit from the new processes.
- Provide for collection of data and generation of all reports listed in Appendix B. These computer reports will either resemble the current form or be revised as determined by the CCUSO management team.
- Automatically calculate items that can be derived from information currently stored such as 90-day review dates and level review dates.
- Provide some type of automatic notification to users who have the responsibility for reviewing reports or conducting patient reviews.
- Provide statistical data which are determined to be useful by management staff through predetermined queries built in by the programmer.
- Allow for entry of clinical notes and progress notes for more than one patient simultaneously without opening separate files or switching screens.

Following are some provisions for things that the program management application will not do although these ideas were gathered during initial discovery. The application will not:

- Automatically generate staff schedules, although enough information should be stored so as to provide for a follow on addition of this feature after completion of the initial project.
- Aid in classification of patient personality types.
- Generate content or make suggestions for comments used in 90-day reviews.
- Provide any inventory management for unit equipment.
- Support *ad hoc* queries other than those queries already built into the system as agreed upon by management.

The application should have a login screen to determine which users have access to which parts of the system. Major notifications should appear immediately after login based on a user's status and permissions. There should be an intake screen for initial patient information entry as well as a case summary screen for each patient. There should also be a screen that allows for correction of information and a screen that allows entry of clinical and progress notes for more than one patient at a time. There should be a reporting screen that will allow users to generate required reports. There should be several data entry screens for data entry of various reports or reviews that are initiated by staff.

Timeline

This project will be completed in several different phases over the course of the next year from June 2003 to May 2004. Phase one will include the project proposal and discovery, which will include an exploration of CCUSO business rules. This will be accomplished through this author's own extensive knowledge of CCUSO procedure's, personal interviews conducted with both management and line staff, and review of CCUSO internal documentation as noted in the references section of this proposal. During this phase CCUSO management will be encouraged

to look at current business practices and take this opportunity to revise them rather than just try to translate the current paper system directly into a database environment.

Phase two of the project will be the database design. The database will be designed using a relational model. The design will be done independently of any particular software package. Entity-Relationship diagrams and normalization of tables should be completed during this phase. This should provide a strong foundation for development during the third phase. This phase should be complete no later than September 30, 2003.

Phase three of the project will consist of implementation of the DBMS on Microsoft Access as well as coding of the application in Microsoft Visual Basic 6.0. This phase is expected to take most of the fall semester and beginning of the spring semester from October 2003 – February 2004. A close working relationship must be maintained with the CCUSO management staff as well as periodic project update reports to ensure that the project remains on track and continues to work as expected.

Phase four should begin with extensive end-user testing of the application to ensure that all agreed upon specifications have been implemented. Any bugs should be recorded and fixed during this final phase. Additionally during phase four, all staff should be trained on the new system. At least one test system will be set up in order to allow staff to practice entering and retrieving data, generating required reports, and adjust to the idea of using new procedures. Phase 4 should begin no later than January or February 2004 and be near completion by April 2004.

An honors thesis is a central portion of this project and should be worked on continually throughout the project. This will facilitate good documentation of the project development and

ensure timely delivery of the final draft. The final draft of the honors thesis should be delivered and approved no later than May 1, 2004.

Conclusion

Due to the nature of patients in the CCUSO program, rigid rule sets, extensive psychological testing, and complete documentation in all case files is necessary to both protect the state and assist patients in fully completing their treatment program. However, all of this collected information is underutilized and in some cases pointless if it cannot be easily searched or statistical comparisons made between patients. The final result of the program management application should in the end alleviate many of these problems and save numerous man-hours of time spent by psychologists and security staff wading through separate files.

References

[1] Jim Gardner. Program Description. CCUSO internal document. 1999.

[2] Jim Gardner. CCUSO Patient Handbook. CCUSO internal documents. 1999.

[3] CCUSO website. **www.dhs.state.ia.us/CCUSO/CCUSO.asp**

[4] State of Iowa Statutes Section 229A.

http://www.legis.state.ia.us/IACODE/2003/229A/1.html

[5] Jan L. Harrington. Relational Database Design: Clearly Explained. AP Professional, Chestnut Hill, MA, 1998

[6] Peter Rob & Carlos Coronel. Database Systems: Design, Implementation, & Managemnt. 5th Ed. Course Technology, Boston, MA, 2002.

Appendix A – Example Report Documents

It should be noted that due to the confidential and controversial nature of the CCUSO program, all identifying information pertaining to both staff and patients has been deleted, changed or replaced with generic nondescriptive labels.

Date/Time	Clinical Notes
7-7-03 Assertiveness Training	Handed out an Assertiveness Training Quiz and had the men work on the answers. We then read the Group Rules and Expectations and had a good discussion regarding them. Following that, we began to discuss the first two questions. Therapist 4
7-8-03 Personal Victimization	Went over the focus during this quarter in PV. Resentment lists, resentment letters and forgiveness being the primary objectives. Also, established rapport with new caseload, i.e., DG, JB and AH. Therapist 1
7-8-03 Small Group	Xxxx X shared some personal history up until he finished his 3rd tour of duty in Southeast Asia. I identified emotional points of his history, i.e., aunt Xxxxxx, leaving parents in CA, abusive father and friend KIA in Nam. Will pick up. Also discussed uniqueness and purpose of small group. Therapist 1
7-9-03 Relapse Prevention	TG, DT and RG were congratulated on completing Blue Book and moving to Brown Book. I gave them their brown books. Spent the group time going over the new patient handbook. Received feedback and some grumbling. Issues to be addressed are clothing-many patients have only a few pair of underwear. Supervisor 1 said he would try to get some resolution; wage issues. I discussed this with the Program Director. Emphasis was placed on advancing in the phases of the program. Also pointed out new policies when we arrive to Cherokee. Therapist 1
7-9-03 Small Group	Continued discussion of the patient handbook. Therapist 1
7-10-03 Victim Empathy	Discussed process for this group. The major goals being for patients to identify with their victim, demonstrate insight into the feelings of their victims and express meaningful remorse for their offenses. The expectation is that patients will write out victim sheets, amends letters and letters "through the victim's eyes". We will have the patients share victim sheets, discuss the similarities/differences between the specific victim and the offender, while this is going on I will get with another patient to rehearse role-playing the part of the victim. We will then conduct the role-play and get feedback from the perpetrator and the rest of the group. This is a format that is recommended in the Handbook for Sexual Abuser Treatment. We will see how this goes. I went over this with the patients. Especially the fact that this may bring out strong emotions and that is ok, but they will have to find appropriate ways to express their feelings in group, i.e., crying, anger without attacking, respecting others in the group, etc. Therapist 1
7-10-03 Small Group	JB shared his personal story (life history) with the group. This was done to establish rapport and gain some insight about Xxxxx. He did a fine job. He became emotional at several points related to his close relationship with his sexually abused sister, a crush he had on his 5th grade teacher, keeping family secrets and family shame. He finished today at age 14. Group gave him very good feedback. Therpist 1
07-11-03 Disclosure Group	Group was cancelled this a.m. due to conflict of scheduling with H.S. Therpist 2

Figure 1: Clinical Notes. This document contains the same entries multiple times for multiple patients leading to large amounts of redundant data. Typically seven or eight pages like the one above are generated for each patient every month.

CCUSO BEHAVIOR REPORT

Patient**: Xxxx Xxxxx** _____ **Case No.:011007xxx**

Date of Infraction: 10/07/01 Time: 5:19 PM

Location of Infraction: IMCC Dining Hall

Person(s) Involved/Witnesses: Security Staff 1, Security Staff 2, Security Staff 3, Patient Xxxxx Xxxxxx, Patient Xxxxx Xxxxxx, Patient Xxxxx Xxxxxx, Patient Xxxxx Xxxxxx.

Brief Description of Infraction: Patients Xxxxx Xxxxxx Xxxxx Xxxxxx, Xxxxx Xxxxxx, and Xxxxx Xxxxxx sat with each other during lunch on 10/07/01. Patients Xxxxx Xxxxxx and Xxxxx Xxxxxx are on diets. It is the general practice on the CCUSO unit to have patients on diets sit together away from non-diet patients to ensure that the diets are complied with. Patient's Xxxxx and Xxxxx were directed not to sit together by Security Staff 3 at lunch on 10/06/01.

Staff Reporting Infraction: Security Staff 1 _____ Date: 10/07/01

Staff Signature: _____ Date:

INVESTIGATION DISPOSITION

Investigation Deadline: 10/14/01
Investigator: Supervisor 1 _____ Completion Date: 10/07/01
Signature

Summary of Findings:
Xxxx stated that he had heard what Security Staff 3 told him about the seating arrangements, but said that he gets a special diet plate (gets a shake with his meal) We informed him that we wanted him to sit at the tables with the rest of the patients and this would be a warning. He stated he would like to be at the table with Xxxxx to help him eat and carry his tray. He was informed we would review the situation at a later date to determine whether this is working or change the seating. Xxxxx agreed to comply.
Appeal Wanted: Appeal Waived:
Patient Signature:

CC: Program Director
Clinical Director
TPS copy

Figure 2: Behavior Report. This report has the potential to be updated by three sets of people including the author, reviewing supervisor, and security director if appealed. Also noted here is the lack of rule citations typical of report-writing inconsistencies.

Last	First	CCUSO #	DOC #	Admit Date	1st Qtr Review	2nd Qtr Review	3rd Qtr Review	Next Annual Review	Therapist
Xxxxx	Xxxxx	010306	910930	6/9/2003	9/7	12/7	3/6	6/9/2004	Therapist 1
Xxxxx	Xxxxx	010202	0207247	02/01/02	5/2	7/31	10/29	02/01/04	Therapist 1
Xxxxx	Xxxxx	010109	0800935	09/05/01	12/4	3/4	6/2	09/05/03	Therapist 2
Xxxxx	Xxxxx	010204	1012754	04/29/02	7/28	10/27	1/25	04/29/04	Therapist 1
Xxxxx	Xxxxx	020305	1020700	05/23/03	8/21	11/20	2/18	05/23/04	Therapist 3
Xxxxx	Xxxxx	010207	0902006	07/19/02	10/17	1/15	4/15	07/19/03	Therapist 2
Xxxxx	Xxxxx	020205	0803580	05/21/02	8/19	11/18	2/16	05/21/04	Therapist 2
Xxxxx	Xxxxx	039910	0802832	10/25/99	1/23	4/23	7/22	10/25/03	Therapist 2
Xxxxx	Xxxxx	010102	1053124	02/02/01	5/3	8/1	10/30	02/02/04	Therapist 3
Xxxxx	Xxxxx	020211	1012633	11/27/02	2/25	5/26	8/24	11/27/03	Therapist 2
Xxxxx	Xxxxx	010305	1122054	05/02/03	7/31	10/30	1/28	05/02/04	Therapist 3
Xxxxx	Xxxxx	020004	0791198	04/17/00	7/17	10/15	1/13	04/17/04	Therapist 2
Xxxxx	Xxxxx	029910	0400074	10/15/99	1/13	4/13	7/12	10/15/03	Therapist 2
Xxxxx	Xxxxx	019910	0808056	10/14/99	1/12	4/12	7/11	10/14/03	Therapist 1
Xxxxx	Xxxxx	020207	0081040	07/22/02	10/20	1/18	4/18	07/22/03	Therapist 2
Xxxxx	Xxxxx	010001	0103408	01/07/00	4/7	7/6	10/4	01/07/04	Therapist 3
Xxxxx	Xxxxx	010205	0803735	05/10/02	8/8	11/7	2/5	05/10/04	Therapist 1
Xxxxx	Xxxxx	020403	0207218	04/30/03	7/29	10/28	1/26	04/30/04	Therapist 3
Xxxxx	Xxxxx	010208	0207151	08/05/02	11/3	2/1	5/2	08/05/03	Therapist 3
Xxxxx	Xxxxx	010101	0805802	01/18/01	4/18	7/17	10/15	01/18/04	Therapist 1
Xxxxx	Xxxxx	010301	0206152	01/20/03	4/20	7/19	10/17	01/20/04	Therapist 2
Xxxxx	Xxxxx	010002	0021558	02/03/00	5/4	8/1	10/30	02/02/04	Therapist 1
Xxxxx	Xxxxx	020107	0017965	07/13/01	10/11	1/9	4/9	07/13/03	Therapist 3
Xxxxx	Xxxxx	030107	0800984	07/23/01	10/21	1/19	4/19	07/23/03	Therapist 2
Xxxxx	Xxxxx	019904	1028710	04/21/99	7/20	10/19	1/17	04/21/04	Therapist 1
Xxxxx	Xxxxx	010010	1092549	10/05/00	1/4	4/3	7/2	10/05/03	Therapist 2
Xxxxx	Xxxxx	020102	0804809	02/06/01	5/7	8/5	11/3	02/06/04	Therapist 1

Due dates for July 03 reviews:

7/2 Lastname (3rd)
7/6 Lastname (2nd)
7/11 Lastname (3rd)
7/12 Lastname (3rd)
7/16 Lastname (1st)
7/17 Lastname (1st) Lastname (2nd)
7/19 Lastname (2nd)
7/20 Lastname (1st) Lastname (3rd)
7/22 Lastname (3rd)
7/28 Lastname (1st)
7/29 Lastname (1st)
7/31 Lastname (1st)

Annuals In Italics

7/13 Lastname
7/19 Lastname
7/22 Lastname
7/23 Lastname

Figure 3: Quarterly Review List. This list is manually generated and updated in a Microsoft Excel spreadsheet each month.

Appendix B – List of Documents and Reports

Report	Current Format	Number	Frequency Generated	Current Location
Clinical Notes	Microsoft Word	1/Patient	1/Month	svp_asst$
Progress Notes	Microsoft Word	1/Patient	1/Month	ccusso_pss$
Psychoeducational Report	Microsoft Word	1/Patient	1/Quarter	svp_asst$
Behavior Log	Microsoft Excel	1/Patient	As needed	ccusso_pss$
Level Review Dates	Microsoft Excel	1/Unit	Continuously Updated	suprvsr$
Polygraph Log	Microsoft Excel	1/Unit	Weekly	svp_asst$
Disclosure Log	Microsoft Excel	1/Unit	Weekly	svp_asst$
90-Day Review Dates	Microsoft Excel	1/Unit	Monthly	svp_asst$
Behavior Report	Microsoft Word	Individual	As needed	ccusso_pss$ and svp_asst$
90-Day Review	Microsoft Word	1/Patient	1/Quarter	svp_asst$
Patient Status Sheet	Microsoft Word	1/Unit	Daily	ccusso_pss$
PPG Assessment Log	Microsoft Word	1/Unit	Monthly	svp_asst$
Criminal History	Microsoft Word	1/Patient	Once	ccusso_pss$
Patient Personal Effects Inventory	Microsoft Word	1/Patient	As needed	suprvsr$
Archived Clinical and Progress Notes	Microsoft Word	1/Patient	Monthly	svp_ark$