

NAMI Southwestern Pennsylvania
Student Consultant, Patrick Correa
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I. The Consulting Situation

Organization

NAMI Southwestern PA was established in 1983 to address the increasing need for families and consumers to have a stronger voice in the mental health system throughout the Southwestern Pennsylvania area. It serves a ten-county region which includes Allegheny, Armstrong, Beaver, Butler, Fayette, Greene, Indiana, Lawrence, Washington and Westmoreland counties.

Their membership consists of 1,300 families, consumers, and friends of people with severe mental illnesses. Working at the regional level, NAMI Southwestern Pennsylvania provides education programs, support groups and self-help to enable families and consumers to become more effective self advocates. NAMI Southwestern Pennsylvania provides education about severe brain disorders and advocates for adequate health insurance, housing, rehabilitation, and jobs for people with serious mental illnesses. They work with consumers, family members, and professionals enabling them to gain access to vital resources and to become partners in care.

The Consumer Action & Response Team (CART) is a project of NAMI Southwestern PA created in 1998. Its mission is to facilitate “improvement in the quality of life of persons who use behavioral health services by listening, recording, and collaborating with all stakeholders in the behavioral healthcare system.”

NAMI Southwestern PA has leased office space in a small office complex located behind Northland Center in the North Hills at 4721 McKnight Road. This location is close to Ross Park Mall as well as several other shopping centers. CART has leased office space in an office building in downtown Pittsburgh at 938 Penn Avenue. Due to a growing number of staff, CART relocated to a larger office space within the same building in June 2001.

Programs

NAMI Southwestern PA runs a project, the Consumer Action & Response Team (CART) of Allegheny County. Their primary program evaluates the level of care that consumers are receiving at mental health provider sites by sending interviewers to different mental healthcare providers throughout Allegheny County. At a provider site, interviewers collect input anonymously from different consumers, and this input is tabulated and used to create a site report. Copies of this report are distributed to the provider, the Allegheny County Department of Human Services, and Community Care, a managed service organization. These organizations then use this report to improve the quality of service at the provider site. In addition, CART also holds bimonthly accountability meetings with the Department of Human Services and Community Care where provider quality improvement issues are discussed.

CART also runs a program as part of a Community Hospital Integration Projects Program initiative, known as CHIPP. In this program CART interviews consumers who are mentally disabled and discharged from the Mayview State Hospital in 2001. CART's role is to interview this group of consumers in order to assess their degree of satisfaction with their services and general quality of life. This information is fed back to the decision-makers to help them assess the community adjustment of the people discharged from the hospital. These consumers would be interviewed three times a year in their first year after being discharged from Mayview. In the second year, they are interviewed twice and only once in the third year. Ideally, after these seven interviews over a span of three years, consumers would have overcome the difficulties of the transition from being in a hospital back into the society. This initiative has been running for two years, and currently monitors 55 consumers.

Internal & External Communications

CART releases site reports to mental healthcare providers after interviewing their customers. These reports inform mental healthcare providers of consumer opinions of their treatments and allow them to improve the quality of their services. Annual and quarterly reports are also released with aggregated statistics of consumers interviewed. Data displayed includes demographic information and interview findings such as the level of satisfaction with treatment. In addition to these statistics, these reports also detail what providers have implemented as a result of consumer feedback. These quarterly and annual reports are important, as they give a snapshot of how satisfied consumers are with their health care and document the improvements that have resulted from their interviews and site reports.

Staff

- Sandy Hein (the Community Partner) is the Director of Administrative Services at NAMI Southwestern PA. She manages technical resources at CART. She also performs other duties such as management of CART's assets. She works closely with Paul Freund on CART-related issues.
- Paul Freund is the Project Director at CART. He oversees the day-to-day operations at CART, as well as maintains overall responsibility for budget, staffing, program development and implementation, and community involvement.
- Barbara Fellows is the Site Coordinator at CART. She schedules interviews with mental healthcare providers and works with Virginia Mayo to find interviewers that can conduct these interviews. She also is an interviewer during times when other interviewers are not able to conduct an interview.
- Virginia Mayo is Team Supervisor at CART. She manages the interviewers' schedules and assigns them interviews at different customer sites. When other interviewers are not able to conduct interviewed, she may be called upon to conduct an interview herself.
- Barbara Reith is the Administrative Assistant at CART. She handles technical support that does not require Sandy Hein's expertise. During peak interview periods, she acts as an interviewer during times when other interviewers cannot conduct interviews. In addition to these duties, she also is in charge of the CHIPP program.

In addition there are 6 part-time and 3 full-time interviewers at CART. These people are the ones who visit different mental healthcare provider sites and interview consumers about their level of satisfaction with the treatment they are receiving. More interviewers are expected to begin working at CART as the number of interviews that they conduct at different sites increases.

Technology Management

Sandy Hein, the CP, is in charge of maintaining the computers both at CART and at NAMI Southwestern Pennsylvania. Backups are currently performed both at CART and at NAMI Southwestern PA. However, there is no disaster recovery plan or other contingency for whenever a serious network failure or server failure takes place.

A formal training program does not exist for employees, but Barbara Reith and the CP orient new employees with the computer and programs they will need for their work. General technical support is provided by Barbara Reith for minor problems such as problems finding or saving files. Whenever more difficult computer-related problems arise, The CP travels to the CART site to take care of these issues. Although both NAMI Southwestern PA and the CART site have networks, there is no direct connection between the two, and thus remote administration is currently not possible.

Technical Environment

NAMI Southwest Pennsylvania has a computer for each employee. These computers have Microsoft Office installed as well as Novell GroupWise for e-mail. Each of these computers is networked together and is connected to a file server running Novell NetWare and GroupWise. This server also hosts the www.namiswpa.org web site. The server is located in a separate room. NAMI Southwest PA's network is connected to the Internet via cable modem.

Each of CART's staff members, except for the interviewers, has an HP computer running either Windows 2000 or Windows XP. These computers have Microsoft Office and Novell GroupWise e-mail clients installed. In the room where interviewers work, there are five Pentium-II computers. Even though there are more interviewers than computers, this is currently not a problem since most interviewers only work part-time and others may be at a provider conducting interviews while others are busy typing reports. All of these computers are networked together and connected to a HP LaserJet printer.

CART has two servers. The first is a Novell GroupWare file server. The reports are stored on these servers. The second server has Linux installed and has a web server with PHP and MySQL. This server was provided by Carnegie Mellon University as a result of an IS project from a previous semester.

Technology Planning

CART does not have a formal technology plan. However, depending on its budget, one or two new computers are purchased each year. In addition, Allegheny County purchases computers for CART when budgetary constraints allow. When this is done, computers are shuffled around the organization such that full-time staff members with greater needs have a better computer that can help them accomplish their work. Upgrades are also handled similarly.

Information Management

Interview Scheduling/Tracking & Site Reports

CART uses a paper-based system to schedule interviews and allocate interviewers to each one. Barbara Fellows schedules interview times with provider sites about one month in advance. Then, she creates an Excel sheet with interview information such as date, time, location, and service type for a particular week. This sheet is then printed out and given to Virginia Mayo.

Virginia Mayo collects interviewers' schedules of times when they are working weekly. One week before the interview takes place, she matches interviewers with the interview times given to her by Barbara and writes their names onto the sheet. She keeps track of who is assigned to what interview using a whiteboard. In order to avoid confusion as to which week schedules are being created for, different colors of paper are used for each week. After assigning interviewers to interviews by hand, she gives the sheet back to Barbara Fellows. Barbara then types the names of the interviewers in and saves the spreadsheet for future reference. Virginia also manages a signup sheet for interviewers to obtain a vehicle to travel to sites that are further away.

When an interview is completed, interviewers are given one working week to finish a site report. These reports are typed out by interviewers on the computer, printed out, and then proofread by Virginia. Interviewers then make the necessary changes, and after these reports are finished, the reports are given to Paul Freund for release to the provider. A copy of the report is saved on the file server for future use or reference.

Interview Data Collection

During a visit to a provider, CART interviewers write consumers' responses onto paper copies of surveys. When they return to the CART office, the information collected is copied into a Word document, and the site report is also written in Word. Aggregate statistics of responses on multiple choice questions is manually done by Virginia Mayo or Paul Freund using Excel.

Last semester, a Carnegie Mellon IS Project team created a PHP/MySQL solution that would allow all of this data to be entered electronically. Aggregate statistics would then be calculated, automatically saving much time. However, the system had many technical bugs that kept it from being used effectively, and as a result, CART has fallen behind in distributing site reports back to providers. To catch up, CART has had to revert to the old method of creating site reports.

Consulting Project

The CP and the consultant worked together on a database project which was the main priority of the CP, the consultant, and Matt Mlinac, a student consultant working with Project Director Paul Freund at CART. The CP and consultant also agreed on two secondary projects; however, there was not enough time to complete these secondary projects, and as a result they have become recommendations for further work.

Primary Project: Interview Scheduling and Tracking System

Work Task

The CP and consultant worked together to create an Access database that will manage site visits and interviews. At the same time, Matt Mlinac created a component to integrate into the database which tracked interview questions and responses and linked this data to the site visit and interview data, so that a wider variety of analyses could be done.

Approach

- Work with CP to determine what data needs to be stored in the database.
- Flowchart the processes used in interview scheduling to better understand how data should be accessed.
- Determine functional requirements.
- Create database tables and determine relationships.
- Create front-end GUI.
- Test database with staff that will be using the database.
- Train CP to maintain and modify the database.
- Modify and refine database as needed.
- Input existing and new schedules into database.

Expected Outcomes

- CP has a better understanding of Microsoft Access and how to build databases.
- CP will have the ability to modify the database as operational requirements change.
- Microsoft Access database will be created that will be a central location for information on interviews.
- Queries and reports will be created to ease common tasks that would be performed by staff.
- Front-end GUI will be created for ease of use by staff.

Expanded Capacity

Implementing this database would increase the capacity of the organization and allow CART to manage a larger number of interviews and interviewers as it grows. The database would also allow information about scheduled site visits to be easily accessible. Staff would be able to query the database for information such as whether reports for certain site visits have been created, or if

certain interviewers are performing more interviews than others. At a minimum, it would allow the scheduling process to take less time for both Barbara and Virginia.

The database would also provide for a more concrete process for scheduling site visits and interviewers for each site visit. A uniform method would exist for scheduling site visits and interviewers that would still be expandable as the organization grows. In addition, this would allow someone else to easily take over in case one of them could not make it to work on a certain day, or if one of them leaves the organization and someone else must take her place.

The database would lessen confusion among administrative staff members since a centralized location would exist for information about site visits, assigned interviewers, and report status. In addition, individualized schedules could be printed for interviewers so that they could plan their work schedule around interviews or work with Virginia to reschedule site visits. This would also reduce the amount of paper shuffled among administrative staff and interviewers.

The portion of the database that Matt Mlinac is creating would be used to correlate interview responses with site visits and different types of mental health providers. As a result, the Project Director as well as other staff will be able to perform many other types of analyses on the response data very easily. As a result, he will have more insight as to the conditions of several sites and which ones may need to be monitored more closely.

II. Outcomes and Recommendations

Project Outcome: Streamlining the interview process through development of a database to handle site visit scheduling and report tracking.

Solutions

- The CP and consultant worked with other CART employees to determine the requirements of the scheduling system.
- The CP and consultant worked together to diagram the relationships among the different data tables of the database.
- The consultant worked with the CP to create a scheduling and report tracking system database using Microsoft Access.
- The CP and consultant worked with another student consultant in the class who developed an interview data collection system to be integrated into the existing database.
- The CP and the two consultants worked together to integrate the two systems.
- The CP and consultant worked together to create queries and reports that would be useful for CART staff.
- The CP and consultants worked together to create a GUI for the database to make it easier for employees to use.

Outcome Evidence

The infrastructure for the database was completed, and preliminary queries and reports were completed. In addition, the CP and consultant worked together to create the user interface for the database. After information on sites and providers are input into the database, the CP can proceed to train CART employees in the operation of the scheduling, data input, and report tracking system. In addition, the CP can create a transition plan for CART employees to go from the old paper-intensive interviewing process to the more streamlined database-driven process.

Evidence of Expanded Capacity

The old method of tracking interviews, collecting interview data, and site report tracking was very paper-intensive. As a result, only employees directly involved in the administration of the entire interview process know how to manage all of the data. With the new system, the processes for doing all of these tasks are standardized, and all information is centralized into one location that can easily be accessed by employees (with proper access privileges).

As a result, the new system, when fully implemented, will have several advantages over the old method. When scheduling site visits, the appointment information will be present in one centralized database that can be accessed by any employee who requires access to this information. This will be more efficient than the old method, where paper copies of the schedule were printed and passed around between employees, and revisions were handled in a similar manner.

In addition, site report tracking will be done in the database rather than on paper. As a result, employees can look up the status of reports quickly in a centralized location rather than looking for paper sheets that could easily become lost or misplaced.

Another advantage is that the database allows anyone (with proper access) to be able to perform different tasks in the interviewing process. As a result, operations are not affected if an employee cannot come in to work on a certain day, or if an employee decides to leave CART.

The advantages above will help contribute to reducing paperwork as well as lessening confusion during the entire interview process.

Evidence of Sustainability

The CP was very involved throughout the database creation and design process, and along the way, has learned many different features of Microsoft Access. In addition, she has access to a web site (see *Resources*) where she can ask other Access users questions related to database design and receive a prompt reply.

As a result, she will be able to maintain the database and add new queries and reports as needed by CART staff. In addition, she will be able to make changes to the database in case new data or different data has to be stored in the database.

Recommendation

The consultant recommends creating a procedure for transitioning from the old paper-intensive interview process to the more streamlined database-driven interview process. Without such a procedure in place, much confusion will result from employees wondering which data is being kept track of using the old method and which data is being tracked using the new method. A transition plan would include documenting the current methods of scheduling site visits and inputting interview data, and the new way these processes would be accomplished using the database. The next step is developing and documenting the necessary steps that need to take place for moving from the old process to the new process.

This transition plan should include a training program in order to ensure that employees are comfortable with the new system before it is put to use. This transition plan should also include plans to directly import site and provider information that is currently kept in an Excel spreadsheet into the database. If this is not possible, the CP may have to result to manual site and provider data entry so that this information is present in the database before it is put to use. However, another employee familiar with the information can take responsibility for this task.

To help accomplish this task, there are a couple of sites online that have resources for creating technology transition plans. There is an HP vendor website with a PDF article (http://www.mbfoster.com/pdf/Library/Transition_Planning_Senior_Management.pdf) that discusses the steps needed to develop a transition plan to change from one type of server platform to another. Although this is not what CART needs done, a large portion of the article talks about developing a transition plan in general terms, including what types of issues should be addressed, how to analyze current processes, and creating a timeline for the transition.

Resources

Whenever the consultant and CP ran into issues creating the database, the consultant posted a question on UtterAccess (<http://www.utteraccess.com/>), a forum for Microsoft Access users where problems are posted and solved by other members. Membership on this web-based forum is free, and other forum users respond to messages very quickly. The consultant recommends that the CP continue to use this resource as she runs into any database-related issues.

At the beginning of the semester, the CP obtained many books on Microsoft Access for both the consultant and her to use as a reference throughout the consulting project. The consultant recommends that the CP continue to use these books as necessary when making changes to the database.

Recommendations

Recommendation 1: Create and analyze the results of a survey designed to assess CART staff members' technology skills.

The consultant recommends that the CP work with CART administrative staff to create a survey to administer to determine the technical competency of CART employees. This would involve the CP working with the administrative staff at CART to determine minimum technology competency levels for employees and formulating a survey designed to measure their level of technical knowledge.

Source

While investigating the different aspects of CART's operations, the consultant found no official training plan or method for measuring employees' technical competency. Many technical problems that employees run into are problems that can be solved easily given a formal curriculum.

Rationale

Currently, new staff members are trained in their first week on how to log into the system and perform tasks by the CP and other CART administrative staff members. When the new employee runs into a problem, he obtains help from one of the staff members at CART. If the people at CART cannot fix the problem, the CP must drive down to the CART office and diagnose and fix the problem herself.

A staff survey would be the first step in fixing this problem. The survey would measure the technical competency of different CART employees. After administering the survey, the CP as well as other senior staff members will have an inventory of the skills of all of the staff at CART. As a result, they can determine which staff members require more training than others so that they may be brought up to speed and perform their work more efficiently while running into less computer-related issues.

As a result, employees will be more confident when working with the computer and gain useful skills that can benefit them in the future. In addition, this would decrease the amount of time that the CP and Barbara have to spend helping employees with technical issues.

In addition, if employees are comfortable with certain software tools, this can be used in planning for upgrades such that newer versions of tools they are familiar with are acquired instead of completely new software tools that they might not be familiar with. Employees may even later become part of the software selection process as their computer skills improve.

This survey can be an integral part of formulating a technology plan. Matt Mlinac and Paul Freund (part of another Student/CP partnership) are working on other aspects of a technology plan, which includes defining minimum skills required for certain positions at CART. The survey results can be used in conjunction with these skill requirements so that training can be tailored for

each employee. In the long run, programs will be run more efficiently since staff will be more computer-literate, and as a result they will run into less computer-related technical issues for which they require assistance.

Resources

The consultant recommends that the CP read the pamphlet *Technology Literacy Benchmarks for Non-Profit Organizations* by NPower. This document, which was distributed in class and is available at <http://www.npowerseattle.org/tools/benchmarks6.02.pdf>, has a section which discusses technology training and how it relates to planning. In addition, it also discusses the importance of minimum technology competence levels, and why they are necessary within any organization.

In addition, a website at the University of North Texas (<http://www.tcet.unt.edu/START/assess/tools.htm>) contains sample surveys that can be used as a model to formulate a technical competency survey appropriate for use at CART. Although these surveys were designed to measure educators' competency in various technology skills, many of the questions present in these surveys are also relevant to CART staff.

Recommendation 2: Create a disaster recovery plan for use in the event of a computer or network failure.

The consultant recommends that the CP work with CART administrative staff to devise a disaster recovery plan for use in the event of a computer or network failure. The presence of such a plan would ensure continuity of operations at the CART office, and the experience gained from the creation of the plan could be used to devise a similar program at the NAMI Southwestern PA office.

Source

While investigating the different aspects of CART's operations, the consultant found that the failure of an information system previously created by a CMU IS Project group resulted in CART falling almost a month behind in delivering completed site reports to mental healthcare providers. Although data backups are performed on tape by the file server daily in the event of a server failure, there is no plan that exists to ensure business operations continue with minimal or no interruption. In fact, the data backups are not completely effective since the tapes are not taken off-site, thus lessening their usefulness in the event of an office fire or other similar disasters.

Rationale

With a disaster recovery plan present, CART will be better prepared in the event that there are technology problems that prevent them from doing their work. This will ensure that business processes are able to continue, or experience minimal disruption in the event that such a problem occurs.

In addition, creating a disaster recovery plan will cause the CP and consultant to think about “critical points” in the organization’s processes and steps can be taken to ensure that these points are not as prone to failure. Also, a disaster recovery plan would help prioritize which technology resources should be upgraded or maintained more often in order to lessen the chance of a failure.

Resources

Again, the consultant recommends that the CP read the pamphlet *Technology Literacy Benchmarks for Non-Profit Organizations* (<http://www.npowerseattle.org/tools/benchmarks6.02.pdf>) by NPower. This document has a section which discusses the importance of a disaster recovery plan and an overview of what this plan should contain.

In addition, a website created by the University of Toronto Computing and Network Services group (<http://www.utoronto.ca/security/drp.htm>) contains detailed information on creating a disaster recovery plan, including the different components that should be present within the plan as well as different methodologies and other important points to keep in mind while creating the plan.

About the Consultant

Patrick Correa is a senior graduating in May 2003 with a Bachelor’s degree in Electrical and Computer Engineering with a double major in Engineering and Public Policy. He plans to work for a research and engineering firm in Northern Virginia doing systems engineering and technical analysis for government clients.