

Hill House Association Seniors Program

Student Consultant: John Yuen

Community Partner: Tony Bell, Director

I. Background: Description of Organizational Situation

Organization

Founded in 1971, The Hill House Association Seniors Program, one program under the Hill House Association a multi-purpose community-based agency, provides services to senior citizens in Pittsburgh between the downtown area and Oakland. Its goals are to prevent loneliness, isolation, and institutionalization and promote independence, wellness, and security among the elderly. It is located at 2038 Bedford Avenue in the Hill District. Their funding comes primarily from the Allegheny Department of Aging and the United Way of Allegheny County, and they also receive donations for their services. The annual budget of HHA Senior Services is about \$800,000.

Programs

HHA Senior Services offers a wide variety of programs and services for senior citizens. Programs are divided into three categories:

1) Assistance in Problem Solving is counseling and services for the elderly. These range from providing legal help and medical referral to counseling the elderly for any problems they may have. These are usually held at the building, though a case manager may go to a senior's home if necessary.

2) Senior Companionship is providing a place where senior citizens can meet and get to know one another. HHA Senior Services provides a large common room where seniors can gather and talk, various events throughout the week such as Bingo, and a kitchen so that seniors can have meals together. They also provide an adult day care so that seniors who have trouble living on their own do not have to be institutionalized. They also provide some education services for senior citizens. HHA Senior Services provides transportation to seniors through bus passes.

3) In-Home Services is the other main part of HHA Senior Program's services.

a) One of the most important facets of Hill House Seniors Program's services is the home delivery meals system. Through this service, over 100 seniors from downtown Pittsburgh to Polish Hill to Oakland receive a hot meal every day, delivered to their door. Every morning, HHA Senior Services receives some food from a city catering service; it also makes some of its own. During the midmorning, drivers leave and deliver these meals along predetermined routes to the seniors, a process that takes 3-4 hours. In the offices, employees keep track of who received what type of meal, how many they receive per week, and other statistics.

b) They also provide homemaker and chore services, where they go to a senior's home and do some chores to make their life easier.

Problems and Opportunities

At the onset of the consulting project, I observed many problems that could be solved or aided with technology, and opportunities for technology to increase the capacity of HHA Senior Services. Some of these included:

- Database for Home Delivery Meals – the current database and information for the home delivery meals program was being stored in a Microsoft Word document on Ronele’s computer, and billing was done via form letter.
- Statistical Requirements – most of the statistics that HHA Senior Services needed to send to the main Hill House or the Department of Aging were calculated by hand, a time-consuming and ineffective process.
- Teaching and Training – some members of the staff were taking courses in various applications, such as Word, Excel, and PowerPoint, but were not learning as much as they should have from those classes, and were not using those applications to their fullest extent.
- Internet Connectivity – only a few computers at HHA Senior Services were capable of connecting with the internet, and only through AOL via a modem and phone line.
- Hardware Issues – HHA Senior Services had some antiquated machines, such as Intel 386s that weren’t Y2K compliant. They also had some newer machines sitting in storage.
- Breakfast Program – Tony wanted to extend the current Home Delivery Meals program to include breakfasts, but needed to gather statistics on the use of this program to request an addition to the budget.
- Filing Database – all of the information on the seniors was stored upstairs, in a series of large filing cabinets. Whenever a case manager needed information, he or she would have to physically walk to the room and search through the cabinets to find the information.
- Inefficient use of Hardware Accessories – HHA Senior Services had a scanner, digital camera, and a Palm pilot, but these accessories were not being used efficiently

II. Scope of Work and Outcomes

After considering which problems and opportunities needed to be addressed, and taking into account both my community partner’s recommendations and situation, and my own technical skill set, we chose to focus on two major issues: 1) Developing an information system that would support the Home Delivery Meals program, and 2) Increase the knowledge and skill and comfort level for technical tools among staff.

Home Delivery Meals

A word processing document was being used to track information about seniors participating in the Home Delivery Meal program. This document contained all the information about clients, including their addresses, dietary information, and third-party payers. A separate word processing document was used to generate a “routing sheet” that was used by the drivers. This sheet indicated the type of meal and beverage each senior required, their location as well as the order of deliveries. Every day, over 160 seniors received a meal for lunch and dinner.

This method was ineffective in many ways, including:

- Frequent errors were made, because the system was not automated.
- New clients on a route or clients not at home on a particular day were often missed, as changes to the route sheet were frequently ignored.

- To process one routing sheet required almost an hour of work every day.
- Only one staff person, Ronele, knew the system that she had created. The program was completely dependent on her to maintain the client information and to generate the routing sheets for drivers.
- Statistical reports needed to monitor the program as well as to receive continued funding, would take days to generate and there was no way to determine accuracy.

How the consulting partnership addressed the problem:

We analyzed the requirements for the needed information system. It needed the capability to do the following:

- Store the names, addresses, phone numbers, driving directions, dietary information, and billing information of over 160 seniors.
- Generate a daily route sheet with all the information drivers needed to get the right meals to the right seniors in an efficient manner.
- Generate requests for donation – the home delivery meals program is free to seniors, and HHA Senior Services sends out only a request for a donation of \$2.00 per meal.
- Toggle a senior as active/inactive, so only active seniors would be on the route sheet for that day.
- Denote which days of the week someone would be receiving meals.
- Easy to use, so that every staff person could operate it.

What we then proceeded to do was to make a list of our options, match them up with the requirements, and see what choice would be best. We came up with many ideas, and narrowed them down to a few viable solutions. A database in Microsoft Access would be able to store all the information, but generating a route sheet would be a hack, and I would have to do most of the work putting together the database, and it wouldn't be very sustainable after I left, because my community partner does not know Access well. Our other option was to find a piece of commercial software that was written specifically for home meal delivery programs. We searched the internet, and called some companies, and it seemed like the best commercial software we could purchase was made by Stillwater Systems, a company in South Carolina, that sold an extensive meal delivery program for \$1200. This program was build with complicated menus, labels and billing modules, much more than we needed. So, we decided to search for something that fit better and was less expensive.

After researching database options, the partnership determined that a program called “Meals-On-Wheels”, written by a company in Los Angeles called K-Tech. A free version of the program was offered to small non-profit. The free version was limited to only 100 records or people. To get around this limitation, we decided to setup a separate database for each driving route. This required working in multiple copies of the program, one for each route. Each route has about 80 seniors, so each route can fit into one database. Since the program adds at most 5 seniors per year, this solution was cost effective and satisfied the requirements of the system.

Outcomes:

- The Meals-On-Wheels program automatically generates a route sheet with all the information needed by drivers.
- The new system is easier to maintain and can be taught to every staff person.
- The time spent on managing the information is now a matter of minutes rather than hours.

- The amount of time required to generate a routing sheet was reduced from hours to merely a click of a button.
- The process is automated, so it is practically error-proof if information is entered correctly.
- Statistical reports are automatically generated and include the number of meals delivered, and how many meals a person received every month.
- Annual reports now take an hour to compile whereas before would take days.
- Requests for donation can be automatically generated, though the form letter must still be used.
- The program can also be easily copied and moved to another computer if necessary.
- The data can be backed-up to a disk easily.
- Going through this process together encouraged staff to think of good technical solution to their problems, without having to spend a lot of money.

How sustainable is this solution?

- The software will satisfy their information system needs for quite some time. The staff knows now how to copy the program and begin a new database if a new route is needed.
- The number of seniors participating in the home delivery meals program is not expected to grow. If the numbers ever exceed 100, the current two routes can be divided into four routes, which means four different copies of the program. This can also be done if there are enough inactive seniors on a route, so that extra room in the database is needed. There shouldn't be a need to purchase the full program for a while.
- The program is very simple and has a easy-to-use interface. Technical support is available from the K-Tech, at 1-877-66K-TECH. Any staff member who is stuck while using the problem can ask other staff members for help, and if the issue is not resolved, they can call the company for technical support. Eunice has already called the company on more than one occasion and they were very helpful.

Recommendation & Resources:

- The K-Tech website, www.ktechla.com, has information pertaining to new releases of the program, price updates, and other news pertaining to meals-on-wheels.
- The program should also be backed up, as all the home delivery meals information is contained in this program. To back the program up, simply copy the contents of the data folder to a floppy disk.
- Part of the home delivery meal problem is that drivers don't pay attention to changes. K-Tech's software doesn't emphasize changes on its daily route sheet – highlighting new seniors and creating a cover page with the new seniors and inactive seniors will help drivers go to the right houses every day
- Currently the K-Tech program will give you all the information on how many meals the senior had in a month, but this number must be entered into a request for donation form letter. Look into integrating the request for donation letter into the program – ask K-Tech if this is possible.

The success of this program also sets the stage for implementing a breakfast program. This program would be similar to home delivery meals, but the delivery would occur around 7am in the morning, to accommodate seniors that are active in the morning and need a meal, or those who need to take morning medication with food. Tony recommends that we start with a pilot program of about 20-30 seniors that fit the above description, and monitor the program for a few months to see how successful it is. K-Tech's Meals on Wheels program can also be used to better execute the pilot program. A copy of the program can be run specifically for the breakfast route, making the new route easier to manage by keeping a separate database of the people on the breakfast delivery program. It is also easier to gather statistics about the seniors using the Meals on Wheels program.

Training

As the director of the program, Mr. Bell spends a good deal of time building budgets and preparing reports. He used the Excel spreadsheets tool but in a very limited way. He didn't use any of the built in functions, the built-in arithmetic, copy and paste functions, and generally, he didn't have the confidence to do more than text entry into spreadsheets. To calculate values, he would use a calculator instead of Excel's functions. He attended classes on Excel in the past, but after the classes were over, he forgot all that he had learned.

To address this problem, the consulting partnership focused on improving Mr. Bell's knowledge, skill and application of spreadsheet tools.

- Cut, Copy, and Paste. How to transfer values from one cell to another, how to denote a cell as constant with the '\$' operator, and copying functions over a range of cells.
- Arithmetic in Excel. Using the '=' operator to enter a simple arithmetic function in a cell, training him to use Excel instead of a calculator so that when input changes final calculations will be updated automatically.
- Functions in Excel. How to use basic functions such as Sum, Count, and Average. Also showed him the list of functions from the menu, how to search for a function you want, and how to use Excel's built-in function generator.

It is only a matter of time before Tony is proficient in Excel and will be able to save time in creating statistics. Mr. Bell can now create his own financial spreadsheet. This would save him time when he needs financial information – in the past, he would have to request the information from the main Hill House, and wait a few days before being able to pick up bulky printouts from the main site. He should be able to store the budgetary information on his own computer, saving time and allowing for quicker decision-making.

Outcomes:

- Tony can make Excel spreadsheets in less time and with more functionality, by using shortcuts such as cut and paste
- He can save time by maintaining his own spreadsheets, containing financial information for HHA Senior Services, instead of having the main Hill House maintain the financial information, allowing him to make quicker decisions on how to spend money
- He can teach the rest of the staff to use Excel more effectively, making HHA Senior Services more effective as a whole
- He has a new appreciation of how much technology can help him if applied correctly

How is this progress sustainable?

Like any teaching, this is a very sustainable accomplishment. However, as with anything one learns, continued usage and practice is imperative. Tony has notes from the consulting sessions to which he can refer if he forgets something or if he needs help in finding ways to use a certain function. Most importantly, he is now using the MS Excel Help screens to guide him in finding the best approach to an Excel function.

Recommendations & Resources

Tony should continue to use Excel whenever he can, and use the built-in functions and shortcuts whenever possible. Once he gets more comfortable with Excel, he should try the classes again, to learn more about Excel and to build upon what we have gone over. Furthermore, he should share his knowledge with his staff, instructing them on how better to use Excel to create spreadsheets. There are also some web sites that contain useful information and Excel tutorials:

- <http://www.usd.edu/trio/tut/excel/>
- <http://isds.bus.lsu.edu/cvoc/learn/introit/excel/>
- <http://einstein.cs.uri.edu/excel97/excel.html>

III. Additional Recommendations

Faster Internet Connection

Currently, HHA Senior Services is connected to the internet through a modem connection, using AOL as an internet service provider. Only three computers downstairs have this capability, and they only have one phone line with which to connect to AOL. This phone line is dedicated to internet usage, and is not used for incoming and outgoing phone calls. Therefore, only one person may use the internet at once, and at relatively slow speed of 28.8 KPS. My recommendation is that they install DSL connection and network their computers so that all computers have access to the Internet and at faster speeds, then they would have a 24-hour, dedicated connection to the internet that everyone can use.

The benefits of a much faster, dedicated connection are obvious.

- Faster download times. To download a 3 MB file with the 28.8 baud modem takes 25 minutes, which is what we did with K-Tech's Meals on Wheels program. With DSL, the same file can be downloaded in about one minute.
- Faster web searching. Employees need to use the Internet to search for information, and this would also be much faster.
- Easy to add on new computers to the network and to the Internet. There is talk of a small computer lab being installed in the near future for senior citizens to use – with DSL, these computers can be connected to the internet and they can “surf the web” at a much faster rate.
- DSL will also be very important as HHA Senior Services moves into the future – as more and more of their information will be on computers, DSL provides an easy way to access and transfer files.
- If HHA Senior Services decides to have its own web site in the future, having a high-speed connection makes creating a web site much easier.

Most importantly, DSL is not too expensive. Currently, they have AOL service, and a phone line that is used primarily for internet connectivity. AOL is \$20 a month, and a phone line costs also \$20/month. DSL is slightly more expensive, costing anywhere from \$100-\$150/month for a 1.0 Mbps connection, which is the speed I would recommend, excluding installation. Different speeds cost different amounts – you can get a slower speed for cheaper or a faster connection for more money. So, DSL would cost more per month, but offers the benefit of a much faster and dedicated connectivity. In order to find out about DSL, they can go to www.dsl.com, or call 317-867-4375 and fill out a form, which will get them in contact with a local DSL provider.

Setting up a Computer Lab

My community partner has also talked extensively about setting up a computer lab for use by the senior citizens. HHA Seniors Building is a place where senior citizens can come meet other people, have a place to “hang out” for the day, and generally not be lonely. In order to make them more comfortable, they have recently added a big-screen TV and a sofa to the common room. My CP wants to extend this with a small computer lab, 3-5 computers, with internet access, so senior citizens can “surf the web”, check their email, and learn to use a computer.

First, HHA Senior Services will need to acquire the hardware. My CP tells me that they have one computer, a Pentium II, which would be useful in the computer lab. There is also a scanner and a printer available. If this computer is similar to ones that I found in most of the offices, it should be fine. They would have to acquire at least two more computers of the same caliber and set them up, getting the appropriate software and a high-speed internet connection before senior citizens can use them. As they would mainly be used for internet-related activities and small applications, its not as important to get the best hardware as opposed to acquiring a wide range of software and investing in a high-speed internet connection. My recommendation would be something inexpensive yet reliable, maybe Dell or Gateway, which sell Pentium II computers for under \$1000, and the only attachments they would need would be a printer that can be hooked up to all the computers in the lab. For internet connectivity, I would suggest DSL, which I mentioned in the previous recommendation. There is some space on the side of the common room, and acquiring an extra table and a few chairs is easy.

There is a lot of information that can guide my CP in building a computer lab. To obtain computer hardware, there is www.gateway.com and www.dell.com, both of which are sites where you can look up hardware purchases. Both sites should have ample information about obtaining the necessary hardware, and also for accessories and software that come with the computer. In terms of software, I would suggest getting software that seniors would want to use, such as card games and board games, and also point them to some web sites on topics that they would be interested in, such as health care, genealogy, gardening, and computer skills.

Client File Database

Currently, all of HHA Senior Services’s client files are stored in huge filing cabinets in a room upstairs. Any time where a counselor or worker has to look up information on a client, he would have to go to the file room, sign out the file, take it with him, look up the information, return the file, and sign in back in. It would be much easier if this information could be accessed without as much hassle, and much more convenient if this information could be accessed while counselors are on site visits.

My recommendation would be that HHA Senior Services store all the client information into a database. This would be a very time consuming task, as each client folder has very detailed information on medical backgrounds, service and program information, and other general information and client needs. It is hard to determine the type of database that could hold all this – would be it easier to use a general database, such as Access or Oracle, or find a company that can produce a custom database to hold all this information? There are many resources for finding databases that my CP can check. www.oracle.com has information on Oracle databases, which they might want to consider. What I would do is to try and find a custom database that could hold this information – it would probably take an extensive online search, and also contacting a few software companies. Given the complex needs of client folders, it would take awhile before the database is found, and even more time before the information can be put in, so this is definitely a long-term recommendation.

Facilities

Hill House Senior Services is located in a small three-story building in the Hill District. The facilities are geared towards providing services for the elderly. There is a large common room on the first floor; where senior citizens relax, play cards, and talk with one another. The main administrative offices are also located on the first floor. There are four offices, each of different sizes and each equipped with a computer. The main office belongs to the director of senior services, Tony Bell. His office has enough space to hold a small meeting – it has four chairs and two tables – and has a computer that can connect to the internet. The second office is the smallest. It was originally used as storage space and machine graveyard, and now has a Pentium II computer and a scanner, and is used by volunteers, interns, and temporary assistants. It has been recently refurbished – all the old computers have been moved out, and a newer computer has been placed in the room. The third office belongs to Eunice Boyd, the associate director. Her office is similar to Tony’s, but smaller. She also has a computer that can connect to the internet. The fourth office belongs to Ronele, who is the office manager of HHA Senior Services.

In the basement of HHA Senior Services, there is a kitchen where food is received from caterers for the Home-Delivery meals program. Senior citizens are also welcome to use the kitchen anytime they need. HHA Senior Services is open from 8am to 4pm during weekdays. The second floor contains the offices of the case managers, people who interact with seniors on a day-to-day basis, managing over a hundred seniors each. The third have some classrooms and smaller rooms where senior citizens can meet with HHA Senior Services representatives for social, protective, legal, and care services. There is also space for meetings on the third floor. There is parking in back. Each room that I have seen has windows and the whole building is well lit. It is an open environment – seniors can walk in at any time, use the common room, talk with other seniors. The general atmosphere is cheery.

Staff

HHA Seniors Program is a non-profit organization, and workers are paid through government funding and donations. The director of Senior Services is Tony Bell. His responsibility is to manage the senior services component of Hill House and makes the final decision on new programs, staff members, and major purchases. He is generally eager to learn more about using computers, and is in charge of much of the administrative tasks, such as procuring funding and delivering government documents.

Eunice Boyd is the assistant director –secretary. She writes most of the documents and reports, contacts new seniors about HHA Seniors Program’s services, helps Tony with budgetary and administrative matters, and makes the office run smoothly. Most of the other workers help with a certain service, or have a specific responsibility. She has limited knowledge of computer usage.

Ronele Williams, the office manager, is in charge of most of the technology for the seniors program. Her job includes maintaining various databases for the different senior services and providing the daily route sheets for home-delivery meals, an list of the order in which drivers deliver meals to seniors, with addresses and dietary selection. She also helps out with billing and administrative matters.

In addition, there is a secretary who handles incoming calls and visitors, and a volunteer from a local college who helps with administrative tasks such as word processing and accounting. On the second floor, there are the offices of the 7 case managers, workers who are each in charge of over a hundred seniors. There is a case specialist who deals with seniors who have spend considerable time in prison, and also a secretary that manages all the case information, which is stored in a room full of filing cabinets. On the third floor, there are some senior counselors and also some workers from the main HHA Senior Services building, placed in the Senior Services building because the main building is tight on space. In addition, there are drivers who deliver the meals and part-time staff that performs the other in-home services, including household chores for physically bound seniors. In total, there are about 30 full-time employees at HHA Senior Services.

Appendix B: Technical Environment and Management

Technical Environment

Location	Processor	Peripherals	Internet	Software
Tony's office	Pentium II	CD Rom, printer	AOL	Palm pilot
Eunice's office	Pentium II	CD Rom, printer	AOL, Hill CAM	
Ronele's office	Pentium II	CD Rom, printer		Meals-on-wheels
Visitor office	Pentium I	CD Rom		

On the first floor, HHA Senior Services has four modern computers, one located in each of the four offices on the first floor. All four computers are Pentiums. I have only used one of the computers extensively, and it is a PI 200. It looks to be about 3-4 years old. The other computers are probably of the same speed or greater. All four computers run Windows 98, and have Microsoft Office programs on them. The computer in the main office can connect to the internet through AOL on a 28.8KB/sec modem. None of the computers are networked. The computer in Eunice's office can connect to the internet through Hill CAM, Hill House Association's internet service. Two of the computers are connected to printers, both desk jet printers. There is a Pentium II set up in the common room that seniors can come in and use – it has Microsoft Office installed, along with some software such as card games, but no internet connection. It is connected to a deskjet printer. There was an Intel 386 that used to run a Y2K-noncompliant program that would handle home-delivery meals called Meals-On-Wheels, but this computer has been moved into storage. HHA Seniors Program is not anticipating receiving any new hardware soon, but will have some money before the fiscal year ends on June 30 with which to purchase more computers.

Technical Management

At the Senior Services branch of Hill House, there is nobody specifically in charge of technical management. Whenever there is a computer problem, everyone gets together and tries to solve it. Ronele uses the computer the most for her work - she is also in charge of maintaining various databases for the different programs. She keeps information for the meal delivery program, and also most of the billing information, and updates these as necessary. She also generates statistics when HHA Senior Services needs to generate reports for Hill House Association and the Department of Aging. They have very limited means of solving computer problems – within my first two weeks, I helped them fix a crashed computer, which they had no idea how to fix. For all computer problems they cannot solve themselves, they usually call the manufacturer of the product for troubleshooting support.