

Centralized Paperless Energy Assistance: Saving Time, Money and Trees

A Case Study in Implementing an Electronic Filing System

By Randy Cole and Chris Macy

Introduction

Central Missouri Community Action is currently finishing up its fourth year in contracting with the Missouri Department of Social Services Family Support Division to implement the Energy Assistance (EA) component of LIHEAP. Prior to this, Missouri's EA was implemented through local county welfare offices. Although bureaucratic procedures are necessary and important to ensure proper implementation of public policy, CMCA had come to realize that unnecessary bureaucracy had become a barrier to effectively serving the spirit of public policy at our agency.

This case study describes how CMCA made its EA program paperless through digital imaging and restructured the entire process to increase efficiency and overcome traditional bureaucratic barriers. Critical to successful implementation of the paperless system was moving some temporary EA clerks to CMCA's central office.

Why Go Paperless?

CMCA was looking for a way to increase efficiency in its energy assistance program. The decision to go forward with an electronic filing system was done to eliminate unnecessary bureaucracy, minimize the energy program's impact on our county staff, improve record retention and reduce inefficiencies.

Unnecessary Bureaucracy

Excessive amounts of paper, duplication of documentation and multiple computer applications contributed to unnecessary bureaucracy that a centralized paperless system could alleviate. At CMCA, we believe that bureaucracy should be a mechanism that helps achieve democratically determined policy goals and guidelines, rather than being a barrier to these goals.

Under the paper system, the amount of EA applicant paperwork required to achieve program goals and guidelines for LIHEAP in Missouri is significant. An average EA paper file is 7-12 pages, and within these pages, income levels, social security numbers and active utility account information must be verified. While some duplication is still necessary due to funding source requirements, implementing an electronic filing system has resulted in a dramatic decrease in duplicate printing.

Impact on County Offices

After CMCA staff began assisting in the processing of energy assistance applications, it became apparent that the process was impacting staff's ability to perform other duties such as community development activities and developing longer term strategies to reducing poverty.

As part of strategic planning for the past year or so, CMCA has been looking at ways to make real changes in the lives of low-income families and working to end poverty. While LIHEAP is critical for many low-income families' survival and can be an effective short-term solution for those in crisis, discussion is underway about the effectiveness of Missouri's LIHEAP as part of a strategic solution to end poverty. CMCA has been looking at ways to enhance the role of LIHEAP in ending poverty.

Centralizing the EA component has freed up more time for CMCA county staff to perform more comprehensive client assessments and follow-up referrals, and to develop longer term and more effective solutions to ending poverty, including intensive case management, community outreach and fundraising.

Improving Record Retention and Accessibility

Improvement of record retention and accessibility was a major factor in deciding to go forward with an electronic filing system. Instead of manually creating and managing 7,000 paper files consisting of seven to 12 pages per file and utilizing over 20 file cabinets, all 7,000 files are now saved on a server and then retained on a single DVD. Instead of thumbing through thousands of paper files, CMCA staff can now retrieve data in seconds.

Prior to centralization, state monitors would have to wait for county files to be mailed to CMCA's central office to be reviewed. Now, files can be retrieved within seconds.

Prior Year Inefficiencies

CMCA is now in its fourth year in contracting with the Missouri DSS to implement the Energy Assistance component of the LIHEAP. In Fiscal Years 2004-2006, CMCA struggled to handle the high volume of energy assistance applications and their uneven distribution across the eight counties it served. For example, Boone County, as the most populous county we serve, had twice as many applications as any other county, resulting in a cumbersome process of shipping EA applications from Boone County to the other counties to assist in processing. Applications then were shipped back to Boone County after processing. This caused significant increases in administrative costs such as mileage and time and increased errors.

While administrative costs and savings are difficult to quantify, this paper presents more tangible benefits such as labor costs during FY2006 as well as projected costs and savings for FY2007.

Results

Figures 2 and 3 show the dramatic decrease in labor costs due to implementing an electronic filing system, centralizing EA clerks and decreasing them from nine workers to five. (Because EA clerks are seasonal temporary workers; we did not have to lay off any permanent staff.) The more qualitative gains such as improved record retention, file consistency and record accessibility are also valuable and are discussed later.

Figure 2

Labor Costs 2006					
County	Worker	# of Weeks Worked	Hours/Week	Wages/Hour	Total Season Wages
Boone	worker 1	20	40	\$ 9.05	\$ 7,240.00
Boone	worker 2	16	40	\$ 9.05	\$ 5,792.00
Boone	worker 3	9	40	\$ 9.05	\$ 3,258.00
Callaway	worker 4	29	20	\$ 9.18	\$ 5,324.40
Cole	worker 5	29	20	\$ 9.56	\$ 5,544.80
Cooper	worker 6	20	20	\$ 9.05	\$ 3,620.00
Moniteau	worker 7	21	16	\$ 9.05	\$ 3,040.80
Audrain	worker 8	29	20	\$ 10.20	\$ 5,916.00
Howard	worker 9	20	20	\$ 9.05	\$ 3,620.00
Total					\$ 43,356.00

Figure 3

Labor Costs 2007				
Worker	# of Weeks Worked	Hours/Week	Wages/Hour	Total Season Wages
worker 1	27	24	\$ 11.07	\$ 7,173.36
worker 2	7	40	\$ 9.08	\$ 2,542.40
worker 3	27	40	\$ 9.56	\$ 10,324.80
worker 4	13	20	\$ 9.08	\$ 2,360.80
worker 5	27	30	\$ 9.08	\$ 7,354.80
Total				\$ 29,756.16

Figure 4 displays the equipment and office furniture costs involved.

Figure 4

Equipment Costs	
Computers, Server, Fax and Shredder	\$ 3,016.67
Furniture	\$ 1,976.71
Telephone	\$ 343.67
Total	\$ 5,337.05

Subtracting the equipment costs from the labor costs savings between FY2006 and FY2007 gives a total net savings of \$ 8,599.84. These savings should increase each year, allowing more resources to be freed up to serve low-income families.

Process

Applications were submitted, processed and stored in the CMCA’s county offices during the first three years CMCA contracted with Missouri DSS. EA clerks processed applications in separate county offices.

After centralization of EA workers, applications were mailed or faxed to CMCA's central office by clients or our county staff. Currently one Energy Assistance clerk is responsible for scanning all documentation to ensure consistency and accuracy. Once the documents are scanned, they are saved on a server as a PDF. The EA server is located in the Energy Assistance room and is only accessible by Energy Assistance staff.

While applications are saved, each document is tagged with the applicant's name, Social Security number and county. This tag is used to perform searches through PDF Professional 7.0, but this program also searches the meta data within each document. This ensures the ability to locate each document during searches because names and social security numbers are also seen within metadata on each page.

Because about 75 percent of the EA families CMCA serves receive food stamps, eligibility information can be obtained from the state food stamp website. Formerly, food stamp documentation was printed and saved in the client file. The paperless system allows CMCA to save these screens as a PDF onto the EA server. These documents are tagged the same way as the scanned documents with the applicant's name, Social Security number and county, allowing for quick and easy searches.

Data Security & Data Backups, Why Paperless is Safer

Many people are more comfortable with storing files with a paper system; however, we've found that digital documentation is safer and much more secure than paper storage. CMCA backs up all of the EA file data within the server, as well as on an external hard drive at an offsite location and on magnetic tape (Ultrium) in a fireproof container. Under the paper system, data was stored in only one location.

Detailed Explanation of EA Data Record Retention and Backup

Data access is restricted to systems administrators only. Using one of the industry standards, Symantec's Backup Exec 10d, the backup is created automatically at 11:00 PM every evening. The backup routine both compresses and encrypts the data rendering it useless to outside parties. This backup is stored first on a physically attached external 200GB hard drive. The automated backup location is mapped onto the main backup server as the only accessible network drive in the SHOWMEACTION domain. (Note: our website located at www.showmeaction.org is not part of this network.)

As part of the larger backup scheme, the EA nightly backup routine takes less than 10 minutes. However, in order to account for scalability, the agency backup schedule job does not begin until midnight. This leaves ample time for the daily EA job to complete. The agency backup job transfers all agency data to magnetic tape. This job includes financial data, mail stores from the mail server, Head Start, Section 8 and CSBG program data as well as any user folders, miscellaneous databases, etc.

In turn, these tapes are kept in a fireproof container in CMCA's server room for two weeks until they are transferred to a DR (Disaster Recovery) / Redundant server 30 miles offsite in Jefferson City, Missouri. In the event of a major disaster, this data can be made available within a few hours notice.

Also, CMCA operates on a true monthly backup cycle as opposed to the norm of two weeks or 10 tapes. The tapes are numbered x.1, x.2, x.3, x.30, x.31, etc., where x is the variable indicating the month, and each day of any month is accounted for. Every two weeks tapes x.1 thru x.15 are swapped with x.16 thru x.31. Therefore, given an overnight disaster, the only data that would be destroyed would be on the tape in the server which ran the previous night's backup.

With regard to backup location, the local backup (attached external hard drive) is overwritten each evening. It is only the latest version which is run nightly. However, since CMCA runs on a monthly tape backup schedule, even though the current file is less than 24 hours old, any version of the backup from the previous month can be restored from tape. Beginning January 1, 2007, any month-end back up is also available, meaning CMCA can keep monthly versions of the data as long as legally required. The redundant server in Jefferson City currently holds a 3TB capacity and is expandable.

At the end of the program year, we plan to archive 2006-2007 data onto DVD. This archive will also be encrypted. It is a simple matter to change the destination of the backup from an external drive to a DVD-RW drive. We intend to burn three copies of this archive: one for the EA supervisor, one for the archive spindle in our IT department and one to be stored off-site in Jefferson City.

Summary

This case study is an example of how community action agencies can utilize technology to improve services provided to low-income families, while making internal operations more effective. CMCA has successfully implemented a centralized paperless EA system that has improved efficiency, improved record retention and allowed CMCA county staff to focus on more long term approaches to ending poverty.

We hope other agencies in Missouri will follow our example and, toward that end, we'll be showcasing our system at a statewide meeting of EA outreach managers on April 27.

Community Action Agencies and the social services arena must examine methods to improve efficiency and eliminate unnecessary bureaucracy. Utilizing technology, improving services to low-income families and ending poverty is critical to the survival of community action agencies.