

University of Utah Community Clinics— Medical Assistant Teams Enhance Patient-Centered, Physician-Efficient Care

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ABSTRACT

The University of Utah Community Clinics' success in achieving a remarkable financial turnaround empowered the organization to innovate further in order to improve the patient experience. The organization implemented a team-based model of care that increased the ratio of medical assistants (MAs) per provider and expanded MA roles, further enhancing the organization's clinical and financial outcomes, and improving staff, provider, and patient satisfaction.

Introduction

In 1998, the University of Utah purchased a nine-practice multispecialty primary care network. The network, now the 11-clinic University of Utah Community Clinics (UUCC), was projected to quickly turn a profit for the University.

However, it soon became clear that the healthcare market was changing rapidly and the financial model under which the clinics operated was not sustainable. In response, administrators began major restructuring of the clinic system in 2001.¹

The success of this restructuring was followed by a practice redesign intended to produce "patient-centered and physician efficient care". In 2004, starting with the new South Jordan Community Clinic, administrators piloted the "care by design" model. This new model includes a high medical assistant/provider ratio with a group of skilled medical assistants (MAs) cross-trained to fulfill all office functions and accompany the patient throughout the course of the visit. The care by design team-based model has now been implemented system-wide and has gained national recognition. The new model resulted in a change in the role of the medical assistant and in increased promotional and training opportunities for these employees.

Practice Profile

Name: University of Utah Community Clinics

Type: Eleven academic-based primary care clinics

Location: Salt Lake City area, Utah

Staffing:

- 70 primary care providers
- 20 part-time specialists
- 130.2 FTE medical assistants (MAs), including 13 advanced medical practice assistants (MPAs)
- 10.7 registered nurses (RNs)
- 2.2 licensed practical nurses (LPNs)
- 3.3 nutritionists
- 76 outpatient specialists

Number of Patients: 120,000

Annual Patient Visits: 300,000-350,000

Payer Mix:

- 47% commercial insurance
- 28% Medicaid
- 18% Medicare
- 7% other

Background & Inspiration

Located in Salt Lake City, the University of Utah houses Utah's only medical school. The University established a Medical School in 1912 and opened its own facility, the University of Utah Medical Center, in 1965.

University of Utah Health Care now owns and operates 9 hospitals and 80 clinics, of which 11 are community clinics.

The University purchased the community clinics in 1998 with savings from its faculty development accounts. The cost of the clinic system was a large proportion of the entire account balances, but administrators projected a return on investment within a year. At that time, the majority of the revenue from these practices was derived from capitation, and the university expected the growth of capitated payments. Instead, as capitation decreased throughout the market, the system posted considerable losses, necessitating immediate action.ⁱⁱ

Administrators had to choose between selling the clinics at a loss or attempting to restructure them. The organization went through what leaders called "a period of draconian change" from 2000-2001 to stabilize the system financially by closing some practices and laying off staff, implementing an electronic health record system (EHR), revising physician compensation and undertaking other measures. They moved from a capitation to a fee-for-service model in the space of one year.

In 2003, the leadership started to explore new models of care and organization, which included advanced access and visit redesign. The Executive Director brought in a consultant on advanced access, and the group also visited other clinics, including the practice of Dr. Gregg Omura in Grand Junction, Colorado, to learn from what his group was doing to redesign their practice. Administrators also attended Institute for Healthcare Improvement practice improvement meetings on ways of enhancing the patient experience. The organization regained profitability in 2004-2005.

The group made the decision to move to the care-team model not for financial reasons, but because it was "the right thing to do for the

patient". However, addressing the financial situation gave the group the opportunity to examine their overall operations and the freedom to innovate. The new model they developed included enhanced roles for cross-trained medical assistants and the eventual phase-out of many nursing and clerical positions.

"We had a fabulous crisis... We were perceived as a toxic asset for the university. No one wanted to touch us because no one wanted to get burned. We had the opportunity to innovate in a protected environment because we were stigmatized... It is harder [to do so] now because we are doing well."

*-Michael K. Magill, MD,
Executive Medical Director, Community Clinics-*

Transition to Team Based Care

Leadership promised that there would be no layoffs during this second phase of transition. The emphasis was on education and re-training. For example, reception and clerical staff could either choose to work in the organization's new Call Center, where all messaging for the 10 clinics would be handled in a centralized location, or they train as medical assistants so that they could continue to work at the clinic sites. Many nurse and other clinical staff positions were phased out as individuals left through attrition.

The new model called for care teams of five MAs for every two providers. Increasing the number of MAs was intended to improve the patient experience by providing each patient an "ambassador" who could guide patients through the visit, taking on some of the tasks previously allocated to physicians, thereby freeing up physicians to concentrate on patients.

Technological innovations, such as the introduction and customization of the EHR, offsite Call Center, and Vocera communication devices for onsite communications, played a role in facilitating workflow.

Implementing advanced access required that the group standardize and simplify appointment types

and schedules across clinics in order to centralize scheduling, calls and messaging at their Call Center. This entailed a much-needed cultural shift in that providers had to give up having their own individual ways of handling these operations.

When this initiative began, MAs were in high demand in the Salt Lake City area. The organization found that it needed to examine its MA compensation and advancement policies to compete. The UUCC worked with their human resources department to standardize job descriptions and pay scales across the organization and provide advancement opportunities.

By 2006, UUCC decided to include self-management for patients with chronic disease into the model. The “Planned Care” piece incorporated pre-visit planning, working with the clinical pharmacist, medical reconciliation, and goal-setting into the workflow.

Training and Startup

Startup: Because they were about to open a new clinic in South Jordan at the time they were transitioning to team care (2004), the group had the opportunity to beta test the model they were developing. Once they were satisfied with the pilot program, they rolled the initiative out to all of the other clinics. They did lose a few providers and other staff during this time, but leaders noted that they had “done their homework and planned well.” By the end of the first year, they were showing good outcomes and those who had been skeptics were won over to the new model.

“You have to get everyone on board; it is not a matter of asking whether they want to come along, more like “We are going to change; are you coming with us?”

*-Duane Palmer,
Administrative Director, Clinic Operations-*

In order to orient staff to the new model and enhance buy-in, the Community Clinics held a large two-day staff development training where they took half of their entire staff off the floor each day and

had them meet in a centralized place to discuss the change.

Orientation and Ongoing: Planning for the new model entailed an examination of what providers, nurses and clerical staff were doing that could be shifted to MAs. This was accompanied by a careful assessment of existing MA competencies. Administrators and educators then developed a set of competencies for the new model along with related training materials and a competency checklist.

MAs, like all employees, receive an extensive formal orientation offered by the clinical staff education department at the hospital. After the two-week employee orientation, MAs receive additional training at their clinic sites to enable them to use the EHR specific to the clinics and to function in the care team environment.

While the clinics previously offered a centralized formal training program, they have decentralized this to the clinic sites because MAs are now hired as-needed rather than in large groups.

To work as MAs, employees must be able to fill all support staff roles in the clinics, both clinical and clerical. It takes the new MA about five weeks to complete the initial orientation, but six months to become truly competent in his or her role. MA preceptors and other staff conduct onsite training using the clinical competency lists developed by nurse educators involved with the initiative. New MAs also shadow experienced MAs. Physicians provide ongoing informal training to MAs, who acquire medical knowledge by accompanying patients throughout the visit and the exam.

MAs working in the specialties receive additional training in areas such as urology and endoscopy. The UUCC has developed training modules for specialty skill sets and administers annual competency assessments on designated skills and new equipment. Those who prove competency receive a pay differential which applies when they are actively working in the specialty area.

Some MAs may also receive training on selected clinical skills as needed, such as Licensed Practical Radiology Technician (LPRT), IV access, and catheterization.

Upgrade Program: From 2008-2010, the University of Utah Hospitals and Clinics partnered with the local community and technical college (Salt Lake Community College or SLCC) to develop an MA training program open to incumbent UUCC employees. Trainees included department secretaries from the School of Medicine, environmental and linen service workers from the hospital, and some former clerical staff from the clinics. UUCC sponsored two cohorts of approximately 20 students each in this program, paying the tuition of employees willing to enroll and maintain at least a C+ average. The candidates for this program had to have been employed by the UUCC for at least six months prior to submitting an application. Employees had to continue to work throughout their MA program and sign a contract committing to work at least 75% for two years after graduation. Employees who were not able to maintain a C+ average are required to reimburse the University of Utah Hospitals and Clinics for their tuition.ⁱⁱⁱ

MA trainees in this program also received training as Licensed Practical Radiology Technician (LPRT) as part of their program of study. Some of the incumbent MAs working in UUCC clinics were also sent to SLCC to obtain this training to supplement their skills.

Classes were offered at the SLCC campus. After attending the MA program at Salt Lake Community College, trainees completed their externship at University of Utah sites.

There were approximately 30 graduates of this program, which included department secretaries, environmental and linen service workers, and three former clerical staff from the community clinics.

This program was discontinued due to the economic downturn, but may be revived as needed.

Care By Design in Action

The core principals of the new care team model included the following:^{iv v}

1. Patient Experience
2. Right person/right job
3. Standardization
4. Facility Design
5. Exploit Technology
6. Communication

Each principal is described in detail below.

Patient Experience: When the patient arrives at the clinic, the MA greets the patient and accompanies him or her throughout the visit, from pre-visit preparation, exam, and post-visit. The goal is to provide undivided attention to the patient and minimize wait times.

The UUCC also instituted the practice of bringing all care to the patient in the exam room as much as possible rather than moving the patient. Each exam room includes a computer terminal and a printer so that patient records can be accessed immediately and post-visit summaries can be printed in the room.

Patients pre-register through an offsite Call Center. By moving calls out of the individual offices into the Call Center and by having the MA serve as a scribe during the exam, the UUCC was able to minimize interruptions so the physician can concentrate on working with the patient.

Right Person/Right Job: The Call Center, which is located at the Greenwood Clinic, takes and documents calls and messages and forwards them electronically through the EHR to the MAs at the clinics. This system helps maintain a very quiet, calm atmosphere at the clinics.

The removal of registering, scheduling and messaging from the individual clinics to a team of Call Center professionals has freed MAs to concentrate on other tasks.

MAs are cross-trained to perform front and back office functions, including traditional MA tasks such as rooming the patient and taking vitals, as well as other duties such as reception. The MAs who have been trained as LPRTs may conduct some imaging procedures.

The MA greets the patient, verifies that s/he is in the system, takes and documents the payment, rooms the patient and performs a pre-visit assessment using a symptom-specific questionnaire which is entered into the history form in the EHR. The MA uses the EHR to determine what lab work is required. S/he may draw blood for lab work and start the process of ordering labs with final sign-off and confirmation from the physician. The MA may also give injections, perform EKGs or take x-rays, if

authorized by the physician, and perform medication reconciliation for new patients.

The MA remains with the patient throughout the exam. The physician uses the information entered by the MA into the EHR to continue the exam, and the MA stays in the room to scribe for the physician. This frees the physician to concentrate on the patient.

When the physician is done with the exam and leaves, the MA can complete the chart and assist with completing orders for tests, referrals and e-prescribing to the onsite pharmacy. However, all notes and orders are executed by the physician. The MA completes the patient's visit by printing out the post-visit summary from the EHR. When the MA finishes a visit, he or she is free to greet the team's next patient and bring the patient back for the next visit.

Between visits, MAs may also route messages from their EHR in-basket, order approved prescription re-fills, send referrals and inform patients of normal lab results.

The MA is with the patient for 30-35 minutes while the physician is with the patient for 15-20 minutes.^{vi}

Standardization: Work and training is standardized to allow different physicians and MAs to work together. Any MA can work with any patient or physician; MAs are not paired with specific provider. Upon the completion of a patient encounter, MAs are free to greet new patients as they come in.

The UUCC also standardized the supplies and setup of exam rooms across the system so any MA can work in any exam room. They developed a set of electronic protocols and disease specific questionnaires (which they call "X-files") to direct care.

As noted previously, they also standardized and centralized scheduling and messaging protocols at their Call Center and standardized training, protocols, job descriptions and wage steps across their system.

Facility Design: Clinics were redesigned as much as possible to facilitate the new model. One clinic, the Redstone clinic, illustrates this principal well. The clinic is in a shopping mall and co-located with a pharmacy, optometry clinic and specialty clinic, all

of which can be accessed via the front entry. The waiting room is small because they do not intend for the patients to wait there long. There is a kiosk instead of a front desk where staff can greet patients and take co-payments. The Patient Service Coordinator's office is off the lobby, and a window allows the coordinator to keep an eye on the waiting area.

At the Redstone Clinic, there are a series of parallel patient hallways and service hallways. Patient hallways are curved with pleasant lighting and artwork. Meanwhile, the service hallways are all business, housing terminals for MAs and providers and extra supplies. Exam rooms can be entered from the patient side or the service side. This keeps patient entryways calm and unobstructed and allows staff to enter and exit the room with supplies and information without excessively interrupting the visit.

At the back of the clinic, there is a centralized work area with computer terminals for the MAs. There are additional open cubicles for the physicians, although in some of the clinics, physicians and MAs sit together. This allows for easy communication between MAs, and between MAs and providers.

Exploit Technology: The UUCC has set up its Epic-based EHR to facilitate work by developing electronic decision support tools such as standardized templates, order sets per protocol, e-communications with the pharmacy and point of service reminders. It is able to generate in-depth reports and to document quality outcomes and process measures. A web-based patient portal (MyChart) based on the EHR allows patients to follow their health care.

The staff use Vocera communication badges and headsets in order to communicate within the clinic. This eliminates noisy PA systems and calls. The group initially used walkie-talkies for inter-clinic communications, but graduated to the more sophisticated system at some point during implementation.

Communication: The group has worked on developing methods of communication to facilitate this process and maintain a standardized system across sites. Aside from the Call Center and other technology innovations, it has instituted a number of in-person meetings to keep staff in communication and updated. These include daily huddles in which

staff meet to discuss patient needs and scheduling. The organization also holds a number of meetings to keep staff updated within sites and across the organization as a whole. For example, a Community Clinic Council meets monthly for an entire day. In this meeting, managers and directors report on standardized measures such as staffing levels, patient outcomes, financials, new patient ratios and any achievements or challenges.

Resources

Financing: Administrators emphasized that impetus for the care teams was not profitability, but improving patient experience. Profitability was achieved via prior turnaround measures such as cost cutting, creating a billing office, and incentivizing physician performance, which in turn provided the stable fiscal situation in which innovation was possible.

Despite adding more MAs and paying them more, administrators report that the MA-based model is mostly budget-neutral. MAs have taken over roles formerly filled by receptionists, phlebotomists, x-ray technicians, and nurses and some tasks formerly performed by providers. Overall UUCC has increased staffing costs per visit, but decreased staffing costs per RVU (per work relative value unit).^{vii} While their costs increased as a result of the redesign, their revenue increased even more.

One factor in increasing revenue has to do with an unusual integrated business model in which ancillaries such as pharmacies and imaging facilities generate margin for the overall unit.

Upgrade Program: The University of Utah Hospital funded the upgrade program, which is similar to an ongoing program for LPNs. It paid the Salt Lake Community College for the costs of conducting a series of LPRT trainings and the Medical Assistant Partnership Program in 2009.

Challenges

There were a number of challenges to implementing the new model, including initial resistance on the part of MA staff and providers, finding time to conduct ongoing staff training in busy clinic settings, and in getting MAs, providers and patients comfortable with an extra clinician in the exam room.

Physician Providers: During the initial re-design phase, some providers were resistant to the notion of open scheduling or same-day appointments and left the organization.

Perhaps the biggest challenge was getting physicians to accept the presence of the MA in the exam room. Leadership staff found that in primary care redesign, “a site visit is worth a thousand words”. They found a trusted physician champion and MA willing to “star” in a video on how they worked together to provide patient care. The video was very useful in convincing some providers that this model could work for them. The success of the model as implemented at their beta site, the South Jordan Center, also served as a powerful example. Other providers were invited to spend time observing at this site, and many came away impressed.

Medical Assistants: At the South Jordan Clinic, which served as pilot for the current practice model, supervisors were able to hand-pick new with the skills and attitudes to work in this model and train them from scratch. At existing clinics, administrators had to work to transition incumbent staff to a whole new way of doing things.

There was initial resistance from incumbent MAs, who noted that they were already very busy. The new model included a front office component, a check in component, a lab component, and a referral component. While these are skills taught in most medical assisting programs, these functions had previously been handled by clerical staff at UUCC. Until the redesign, MAs had not been called upon to put this training into practice.

Some MAs have also been uncomfortable being in the room during the exam. This may be especially challenging in situations when the MA is male and the patient is female. Sometimes the provider will not relinquish the computer so the MA can serve as a scribe and the MA may not feel that s/he is being used to full potential.

Supervisors report staff selection and ongoing training as solutions to these issues.

Recruitment and Coverage: The care team model “tends to break down” when clinics are short-staffed because it depends on the 5:2 staffing ratio. The UUCC developed a number of strategies to keep the MA ratio consistent. These include standardizing

training, job descriptions and clinic processes so that MAs can cover for one another, developing the MA Upgrade Program to pull in new, qualified recruits as necessary, and developing an MA resource pool. The resource pool is a group of MAs trained in the care team model and the clinic's EHR system that can cover when regular MAs go on extended vacations or family medical leave, or when a position becomes open and the clinic needs to spend several weeks on a recruitment and hiring process.

Reported Patient Responses: While most patients appreciate this model of care, a few do not feel comfortable having someone other than the doctor in the room during the exam. This can be especially true in cases where the MA is male and the patient is female. This situation may also be challenging for the MA. In cases where the patient is not comfortable, the MA may be asked to leave the room, leaving the documentation of the visit to the provider.

"If the MAs have a greater role in caring for the patient, they begin to care more about the patient. If they are just doing the vitals, this does not happen. If the MA is asking history and screening questions, they are more involved and know more about the patient, and that results in better care."

*-David Owen, MD, Medical Director,
South Jordan Health Center--*

Training: There was little challenge involved in developing the competency training material as staff could draw resources and materials developed for the University of Utah Hospitals and Clinics. However, staff found it somewhat challenging to train MAs and check off competencies while simultaneously running the clinics.

Roles: The UUCC is in an ongoing process of re-assessing what works and what needs improvement. The organization faced some initial challenges from the larger institution and outside

organizations over the move from a nurse-based to an MA-based model.

While overall the model works well, administrators noted that as the system grows and patients have become more complex, it may be necessary to move back towards some specialization in roles. This includes the incorporation of greeters or front desk administrators in some clinics, the re-institution of some clinical RN roles, and the introduction of care managers.

For example, the clinics initially did away with the front desk role and had MAs finish work with current patients before returning to the front to greet the next patient and bring him or her back. However, they found that sometimes MAs would get delayed at the lab, and distressed patients complained that there was no one at the front desk. Some clinics then moved to rotating MAs through front desk duties one full day every ten days. Finally, as they grew, some decided they might need to revert to a dedicated greeter to handle check-in, processing co-payments, and notifying the MAs that the patient had arrived.

While most of the existing RNs left when the organization adopted the Care by Design model, the group has now found it useful to incorporate a full-time clinical RN position back into each clinic and it is looking at incorporating care managers to work with patients with complex chronic diseases.

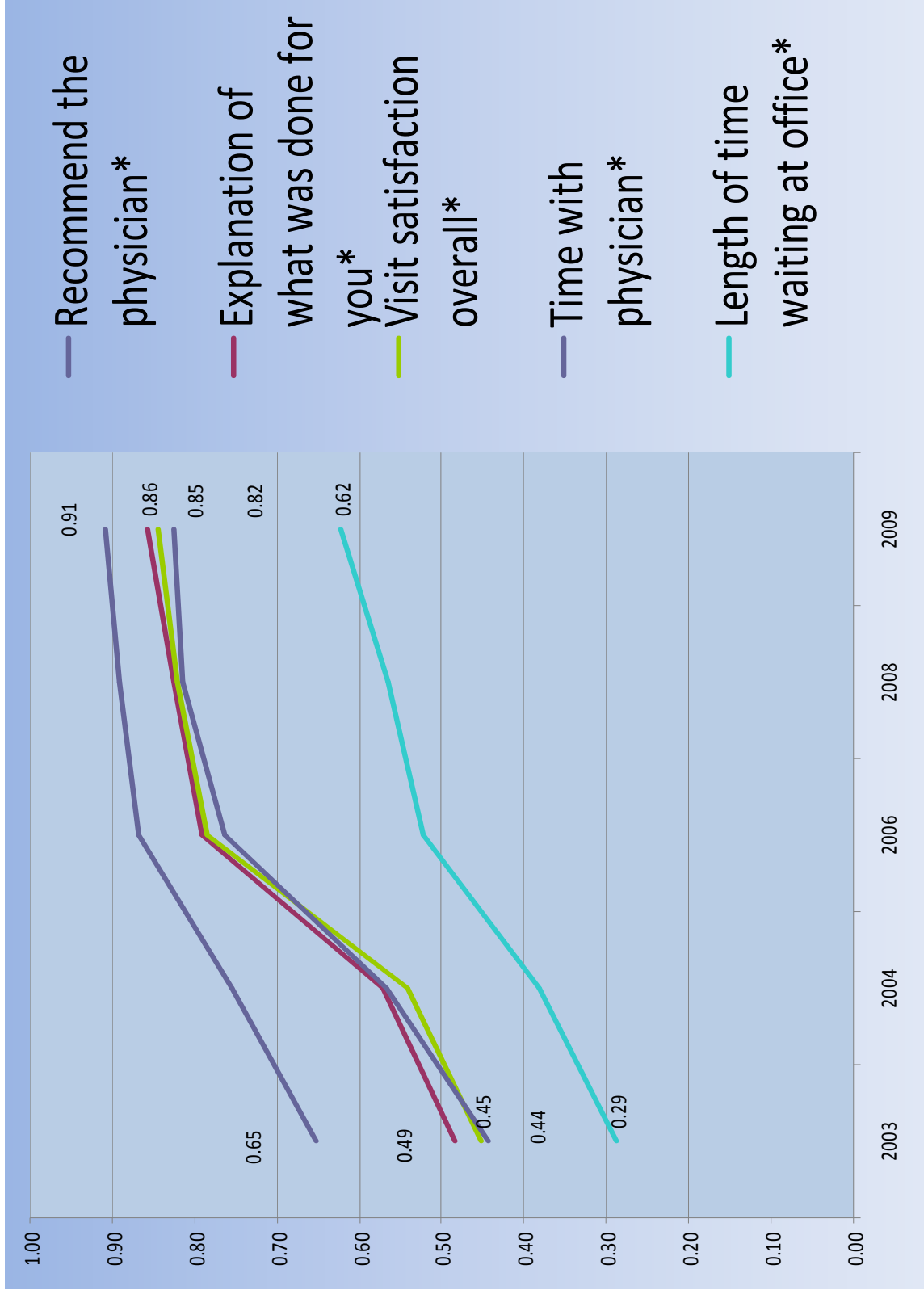
Outcomes

The UUCC developed a large number of benchmarks for measuring progress on this initiative. The organization's investment in health information technology has allowed it to improve patient and financial outcomes, document success and fine-tune where necessary. Ongoing staff, provider and patient satisfaction surveys provide additional feedback on impacts.

Productivity: Along with a 50% drop in patient no-show rates and a decrease visit cycle times from 1.5 hours to 45 minutes per visit,^{viii, ix} the UUCC realized many other positive outcomes as a result of re-engineering operations.

Financial Impacts: As a result of overall operational redesign, the UUCC went from losing around \$20 million per year in 2000 to operating at a small profit by 2009 (\$1.49 million).^x The result of

Figure 1. Patient Satisfaction Improvement 2003-2009



Note: Sample size=705 unique patients who had all measures in FY 2003, 2004, 2006, 2008, and 2009

Source: University of Utah Community Clinics

this success was the freedom to innovate with the redesign initiative. The renewed profitability insured that the new model did not disrupt the organization's financial performance. In other words, earlier initiatives to regain profitability provided the environment in which the MA-based model could thrive.

Overall, the number of provider and staff FTEs decreased between 2003 and 2008, but the number of patient visits *increased*, as did gross and net revenue per visit. While the staff cost per visit and provider increased, even when 2003 costs were expanded to 2008 dollars, the staff cost per work relative value unit decreased.^{xi} An additional factor in cost recovery has to do with improved coding because the physician has more time to document due to increased support staff.

Patient Satisfaction: The UCC surveys patients twice a year. Patient satisfaction has shown a considerable increase since the implementation of the new model. For instance, in 2003 surveys, only about 45% of patients indicated satisfaction with the visit overall compared to over 80% in 2009.^{xii} (See Figure 1.)

Provider Satisfaction: This initiative provided greater support for physicians, which enhanced physician productivity without creating physician "burn-out". Physicians were more likely to agree in 2008 (as compared to 2003) that they had more time available for their personal and family life, and that the volume of their patient load or panel size was reasonable.^{xiii}

Clinical Outcomes: The UCC realized almost across the board quality improvement from 2004-2008. The rate of pneumonia vaccinations, breast cancer screenings and colon cancer screenings all increased over this period. The DM (diabetes mellitus) index improved from just over 40% in 2004 to over 50% in 2008, with increases in the rate of LdL and HbA1C testing, the percent of diabetic patients with LdL under 100 and the percent of diabetic patients with HbA1C under 9%.^{xiv}

Recruitment and Retention: Because of its MA Upgrade Program and MA resource pool, the program has been able to maintain enough skilled MAs to maintain its staffing ratio. Staff believe that the practice model is a recruitment and retention tool in and of itself as it attracts bright and motivate

MAs, who are further incentivized by the additional training and educational support they receive.

"I love it because I feel like I have learned so much. We are not pushed out of the room; we stay in with the doctor. [As a result] I feel like I know the answers to take the calls from patients."

-Jennifer Staples, Medical Assistant-

MA Career Impacts

This initiative created a career ladder for MAs who can improve their wages and receive promotions as a result of completing courses and expanding their skills. Administrators report that this model recognizes the importance of the MA and makes the MA position more of a profession than just a job. MAs have the opportunity to use *all* the skills they learn in MA programs and go beyond that.

Promotional Opportunities: UCC revised its MA compensation strategy upon evaluation of existing job descriptions, roles and training.

MAs now receive a pay differential for years of experience and for additional skills acquired. An algorithm applied to years of experience and base pay generates an initial wage rate. MAs are credited with additional years of experience if they complete an MA program, obtain certification, or complete an Associates or Bachelor's degree.

MAs receive additional pay increases for certification as a Basic Life Support instructor, IV Access Competency, Catheterization Competency, Application of LPRT, achieving (but not currently using) an LPRT license, Specialty Skills and serving as a Preceptor for new MAs. Approximately 80% of the existing MAs have completed at least one of these steps.

Approximately 12% of MAs have been promoted to the category of "Medical Practice Assistant", or MPA, which includes achieving IV, LPRT and MA certification.

MPAs also need to exhibit leadership skills and may be involved in activities such as quality improvement efforts, advanced pre-visit planning, or committee chairmanship.

Benefits: MAs are eligible for an extensive range of employee benefits including an employee health care plan, both pension and voluntary contribution retirement plans, paid leave time and various types of insurance. University of Utah Health Care employees are not union-represented.

Employees may also take part in two programs that would allow them to obtain nursing degrees or other advanced health care training. There is a program that allows staff to attend University of Utah programs at 50% the regular tuition. Through this program, MA staff could obtain a BSN (Bachelor of Science, Nursing) degree. They could also attend the partnership nursing program offered by University of Utah Health Care and the College of Nursing and Salt Lake City Community College. UUCC employees can obtain an ADN (Associates Degree, Nursing) degree free of charge if they are willing to contract to work as a nurse with the UUCC for at least three years after graduation. About four MAs have completed one of these programs over the last year and been hired to work with the hospital.

“We need to shift our mindset that being an MA is an end-stage; we would rather have people who want to continue their career in nursing or other health care fields 3-5 years from now; we need to see this role as a pipeline.”

*-Michael K. Magill, MD,
Executive Medical Director, Community Clinics-*

Satisfaction & Aspirations: Employee satisfaction scores have improved since the implementation of this model. Using a survey tool developed by Moorehead Associates, UUCC was able to document improvements in all areas measured by the survey. For instance, employees were asked how much they agreed with the statement “I am a satisfied employee”. Employee agreement with this statement, measured on a scale of 1-5, increased from an average of 3.5 to

4.5 from 2003-2005. Employees were also more likely to indicate that they felt committed to the workplace, connected to their colleagues and jobs, connected to their supervisor/manager, and connected to the overall organization.^{xv}

Future Plans

The UUCC is in the process of re-assessing and fine-tuning its model. Administrators are continuing to ask, “Is this the right person at the right time for the right job?” This process includes an examination of the current workflow to see if everything really needs to be handled at the time of the visit, or whether it would be more efficient for a care manager to handle some of these tasks *prior* to the visit.

The UUCC has recently received \$4.5 million in federal funding to pilot a new initiative that will help its clinics better manage chronic diseases and provide patient education so individuals can become more engaged in their own self-management.

The UUCC is a subcontractor on the HHS/Beacon Community Cooperative Agreement Program grant, which was awarded to HealthInsight, the Medical Quality Improvement Organization for Utah, New Mexico, and Nevada. This funding will aid the organization in using information technology to improve care protocols for diabetic patients and provide funding to hire care managers to work closely with these patients. The other two grants, both awarded through Agency for Health Care Research and Quality, will help the UUCC expand the diabetes care-management plan developed in the first grant, and evaluate and expand the overall Care by Design model.

The clinics have also worked to collaborate more closely with the University of Utah School of Medicine. The clinics did not start out as a part of the academic system and have worked to incorporate the teaching mission of the institution. They have started hosting first and second year medical students in some of the clinics, teaming them up with the MAs and having them take on some of the MAs duties as a learning experience.

Replication and Lessons Learned

The university offers periodic “learning days” to help others gain a more in-depth understanding of what has come to be known as “the Utah model”. More than 250 individuals from 30 organizations, including Kaiser Permanente, ThedaCare, the University of California at Davis Family Practice Center, and the Mayo Clinic, have attended a Learning Day.

Leaders noted that they learned from other pioneers, and that in turn, others have learned from, and possibly improved on, their model. One group that attended a learning day now says, “We have gone beyond the Utah model,” which Utah innovators see as a sign of success.

An important strategy in dissemination of this model both internally and to other organizations has to do with learning by example. The UUCC leadership group first learned about new models from visiting other clinic sites implementing redesign. The UUCC then developed its own videos and had physicians and staff learn from watching these in-house videos and visiting their own pilot sites, where participants observed successful examples of the new model in action. UUCC learning days conducted for visitors from other health systems include an exercise in which visitors take part in a simulated patient visit, after which they deconstruct the experience.

"You have a vision, and then there is the reality you are working within. You have to continually work on that reality until it aligns with your vision."

-David Owen, MD, Medical Director, South Jordan Health Center-

Finally, the UUCC has developed methods of self-assessment. This is facilitated by its development of information technology resources to track and access data along with internal forums for sharing and analyzing the information generated.

The Care by Design model continues to evolve to accommodate its own success. As implementation spreads to larger and more complex sites, and as patient conditions become more complicated, the group has made some adjustments to re-

incorporate some specialized roles while retaining its MA base.

Notes

- i. Magill, MK; Lloyd, RL; Palmer, D; and Terry, SA. (2006). “Successful Turnaround of a University-Owned, Community-Based, Multidisciplinary Practice Network” *Annals of Family Medicine*. V 4, Supplement 1, S12-S18.
- ii. Ibid. i.
- iii. University Health Care/Salt Lake Community College Medical Assistant Partnership Program FAQ Sheet. 2008.
- iv. Day, J. (2009). “Care by Design: An Operational Model of the Patient Centered Medical Home.” Public and Private Initiatives: Advancing the PCMH, Patient-Centered Primary Care Collaborative Stakeholder’s Working Meeting, Washington, DC. July 16, 2009. PowerPoint Slideshow.
- v. This list was adapted from a list of redesign principals articulated in the paper, “Achieving a New Standard in Primary Care for Low-Income Populations: Case Study 1: Redesigning the Patient Visit” by Pamela Gordon, M.A., and Matthew Chin, M.P.A., The Commonwealth Fund, August 2004. <http://www.commonwealthfund.org/Content/Publications/Fund-Reports/2004/Aug/Achieving-a-New-Standard-in-Primary-Care-for-Low-Income-Populations--Case-Study-1--Redesigning-the-P.aspx> Accessed March 7, 2011.
- vi. Bodenheimer, T. (2007). *Building Teams in Primary Care: 15 Case Studies*. A Report Prepared for The California Health Care Foundation. Oakland, CA.
- vii. “Work-relative value unit” (WRVU). This is related to medical billing practices: “RVUs are determined by committees of the American Medical Association. The committees’ members come from all medical specialties and include representatives from other health professions, including nursing. The committees assign a relative value after hearing testimony from specialty groups on how many hours or minutes it takes to perform a procedure, the level of skill required, the level of education/training required, and the practice expense associated with a procedure.” <http://www.medscape.com/viewarticle/542161> Accessed February 24, 2011.
- viii. University of Utah Health Care, 2008-2009, Learning Day 1 PowerPoint Slideshow, slide #29.

ix. “The office visit cycle time is the amount of time in minutes that a patient spends at an office visit. The cycle begins at the time of arrival and ends when the patient leaves the office.” Institute for Healthcare Improvement. <http://www.ihl.org/IHI/Topics/OfficePractices/Access/Measures/Office+visit+cycle+time.htm> Accessed February 24, 2011.

x. Ibid i.

xi. Ibid vi.

xii. Ibid iv.

xiii. Ibid viii.

xiv. Ibid. iv.

xv. Ibid. viii.

Acknowledgements

This research is funded by the Hitachi Foundation as a part of its Pioneer Employers Initiative. The Hitachi Foundation is an independent philanthropic organization established by Hitachi, Ltd. in 1985. The Foundation’s mission is to forge an authentic integration of business actions and societal well-being in North America. (www.HitachiFoundation.org)



This case study is part of the *Innovative Workforce Models in Health Care* series of case studies prepared by the UCSF Center for the Health Professions. These case studies highlight organizations that are expanding the roles of medical assistants and other frontline health care workers in new directions that benefit both the organization and its patients while providing career development opportunities to the employees.

We would like to thank the Hitachi Foundation for funding this research, and study participants at the University of Utah Hospitals and Clinics for their time and insights.

Views expressed in this case study are those of the authors and do not necessarily reflect those of the Center for the Health Professions; the University of California, San Francisco; the Hitachi Foundation, or the University of Utah Hospitals and Clinics.

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