Teaching Case
ComprehensiveCare and the Re-Adoption of an Electronic Health Records System: Preparing for a Successful Adoption after a Failed Attempt

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ABSTRACT

After a prior failed adoption, ComprehensiveCare plans for a second attempt in adopting Electronic Health Records. The owner-physicians on the board of directors have replaced the administrator due in part to the missteps of the prior adoption. William Shoemaker, the new administrator, must grapple with several important decisions to provide the highest likelihood of success for adopting the large-scale system. He must decide how the organization should choose the new system, the extent to which the system should be customized to their organization's idiosyncrasies, who should be responsible for tactical decisions in the customizations that are planned, what role consultants should play for their small to medium enterprise, how training should be accomplished, and finally how the implementation should be scheduled.

This is the second case in a series of three cases concerning ComprehensiveCare's adoption of Electronic Health Records. This case challenges readers to make decisions based on the organizational context. Part two, provided in the teaching notes, updates readers on decisions made by the board and provides readers the opportunity to think critically about the potential ramifications of those decisions. This case provides a context that would be most relevant in a graduate level IS management course, an undergraduate fundamentals course, or a project management course.

Keywords: Project management, Organizational system, Electronic health records, Training, Teaching case

1. SUMMARY

ComprehensiveCare (CC) has attempted an electronic health records (EHR) system adoption before, with disastrous results. Dr. Francine Harris, CC's managing partner, asks William Shoemaker, CC's administrator, to plan another EHR system adoption. To plan this adoption, William must work closely with IT Director Philip Jennings, Desktop Support Manager Angela Burke, and Network Administrator Curtis Day.

William must plan for choosing the best EHR system for CC, customizing the system to work for CC, training the staff, and implementing the EHR system. William must also consider the potential role of consultants and the organizational change aspects of a large-scale information system adoption. In part two, William discusses the plans with the board of directors and creates buy-in among staff members.

2. CASE TEXT

It has been one year since ComprehensiveCare's first attempt to implement an EHR system. As William Shoemaker, the new administrator at ComprehensiveCare (CC), takes notes in the monthly board of directors meeting, Dr. Francine Harris, managing partner, shakes him from his musings about next month's media buy. "So, William. I think it's time to get EHR in place. What do you think?"

William knows he must tread carefully here. A spectacular failure while attempting to adopt EHR cost his predecessor her job. "It could be, Francine, but I haven't done my due diligence. Shall we put EHR on the agenda for next month? That way, we can all come prepared to discuss our path forward." While a month seems like a long time, William knows he has a lot of decisions to make.

2.1 ComprehensiveCare

ComprehensiveCare (CC) is a multi-specialty healthcare organization consisting of a physician practice, an ambulatory surgical center (ASC), and several satellite offices that feed referrals to the main location and ASC. Twelve doctors own CC, and Dr. Harris is the managing partner. The twelve owners all sit on the board of directors. CC employs three additional doctors that rotate between the satellite offices. When enough patients need specialty care, the doctors from the main location will schedule a day in a satellite office. The organizational chart is in Appendix 1.

William Shoemaker is the Administrator, a role analogous to a CEO. Dr. Harris hired him to replace Jennifer Stanton during a conference about a year ago. Jennifer oversaw the prior attempt to adopt an EHR system. While the official story is that Jennifer found a better opportunity and that CC wishes her all the best in her career growth, the board asked Jennifer to seek that opportunity because they lost confidence in her management after she allowed the prior adoption to go more than four times over its initial budget.

From the job description, it is clear that the board wants an administrator with experience successfully adopting EHR. Fortunately for William, none applied. Therefore, his computer background in his undergraduate studies and his MBA impressed the owners. His twelve years of experience as an administrator sealed the deal, and Dr. Harris offered William the job during the conference.

This position is a step up for William. He has moved from the two doctor practice where he started to the five doctor practice where he worked most recently to this fifteen doctor practice. It brings new challenges for William, but his MBA training has helped him.

The staff members of CC remember the prior EHR experience. "It was a mess," says Head Testing Tech Jonathan Crafton. "We tried to use it as the patients came through, but it was way too slow. And figuring out which patients needed us to use EHR and which needed us to use paper was a royal pain. But our pain was nothing compared to Dr. Harris's techs."

Linda Anderson, Dr. Harris's head tech and recently appointed tech lead, certainly agrees. "It was so bad, I had to ask Dr. Harris to let me get my work done on paper. There was no way we could see our patients with EHR. DocCharts was terrible. I'm glad it's gone!"

Dr. Harris agrees that the EHR system had problems. "We were down to less than half of the patients we normally saw. But I was still paying my staff the same as usual. That means I earned less than a quarter of what I was making pre-EHR. That's totally unsustainable."

While the adoption was before William's time, he is keenly aware of the generalized pain. Since his first day in the corner office, staff members have lobbied him to ensure a new EHR system rollout was not imminent. Even staff not directly involved in using DocCharts expressed concern.

"We don't want it, and we don't need it," says Ruth Turner, Dr. Nelson's head tech. Dr. Nelson is one of the rotating doctors assigned to the satellite offices, meaning Ruth does not have any first-hand experience in the adoption. Everything she has learned about EHR comes from the front desk staff, who have heard about the prior adoption from techs that rotate from the main office when their doctor sees patients

in the satellite locations. But even third-hand, she forms a strong opinion. "It sounds awful. I mean, what's wrong with the way we do things now?"

Three staff members make up the IT department at CC. Philip Jennings serves as Director of IT, a role analogous to a CIO position. He is responsible for strategic decisions, but the practice is small enough that he still gets his hands dirty keeping everything running. Because of the transition between Jennifer to William as Administrator, Philip reports directly to the board. Dr. Shumway acts as the liaison between the board and IT. Angela Burke provides desktop support (her title is Desktop Support Manager, even though she manages nobody) and Curtis Day is the Network Administrator. The IT department is not well-liked by the majority of the staff. "Most of our staff think the IT department is arrogant," says William. "And after the DocCharts debacle, most of the staff think they're incompetent too," adds Dr. Shumway.

Staff perceptions aside, the IT department supports a computerized practice management system that provides the ability to bill insurance companies, computerized time clocks, a cadre of diagnostic testing equipment, copy and print services, accounting software, computerized signage at all of the locations, interconnecting links between the offices, phone systems, a wireless network, and, since the attempted EHR adoption last year, in-house email services. The IT department maintains a 99.9% uptime over the year for each system, meaning the practice experiences three hours or less of unscheduled downtime during the year out of the 2,600 scheduled work hours. Considering the age of the infrastructure and the relatively inexpensive servers used, Philip considers this to be outstanding. He says, "The board has never found a reason to complain."

When discussing the IT department with Linda, a possible reason for the mismatch between IT performance and their reputation emerges. "I just wish the IT folks understood what we do. They don't understand healthcare at all. When I bring a problem to Philip, the answer usually starts with 'When I was at the school district.' We're not a school district!" Philip has staffed the entire IT department with workers with a background in education IT: Angela worked with the school district, and Curtis came from the local college campus.

With Dr. Harris's directive to move towards EHR, William must now work with the staff of CC to make EHR possible, irrespective of the baggage and the strained relationships between IT and the rest of the staff. William is grateful that he has been able to avoid the question of EHR, as this past year has allowed him to get to know the people on staff. He has been able to build some social capital but worries that EHR could be his undoing just as it was for Jennifer.

This next month will bring several important choices: How should CC choose the particular EHR system to install? How much should CC customize the EHR system? Who should be responsible for customization that does occur? What tasks are best left to consultants rather than performed in-house? How quickly will CC roll out the EHR system? How will CC change their organization to fit the new processes? This is going to be a busy month for William as he creates a vision for how to proceed.

2.2 Choosing an EHR system

While the technicians lobby to avoid any EHR system, Dr. Harris proposes that CC should attempt adopting one again. William must quickly decide if CC is ready for EHR. He reasons that with a government mandate, there is ultimately little choice in the matter: they will have to use EHR eventually. So the only decision that remains is timing.

If CC delays adopting an EHR system until after most of the competition have completed their implementations, then CC can avoid pitfalls discovered by other practices. But if CC gets started now, they can fail forward to improve the usage of the system over time. Also, the simple fact that William's job posting mentioned EHR shows him that it is an organizational priority. Raising the issue of EHR in the monthly board meeting solidifies that in William's mind. In the end, William decides that proposing not to adopt an EHR system could be politically dangerous.

Dr. Harris is lobbying for using EasyEHR. She remembers the demo she saw while at the conference where William was hired. She has discussed EasyEHR with several of her colleagues, and a score of practices in their specialty use it with a positive impact on patient flow. "They talked about the speedbump of implementing lasting about six months or so. But after that, they were seeing as many or more patients as before," Dr. Harris says.

William smiles and nods the first few times Dr. Harris brings EasyEHR to his attention, but when it becomes clear that she will not forget about it, William directs Philip to investigate the system. "Will it work on the infrastructure we have here at CC?" William asks Philip. "And exactly how much will the entire implementation cost?"

Philip reports that EasyEHR will run on the infrastructure already present from the prior adoption attempt. No new servers, network equipment, or licenses will be needed other than the licenses for EasyEHR. The licensing cost for EasyEHR is $15,000 per provider with a $3,600 annual maintenance fee per provider. Installation is included in the fees as long as EasyEHR can remotely access the servers. For CC, the total cost for licensing would be $225,000 up-front with $54,000 per year for support and updates. William asks Philip if that is everything that would be needed. "Everything but training and interfaces. There are several options that we can go over." Interfaces cost $2,000 per device if they have already been created by EasyEHR, and $10,000 if CC is asking for EasyEHR to create a brand new interface for a particular device. William will have to think about training and interfaces later, as CC has to choose an EHR system first.

Going with EasyEHR would be a simple process for William and CC. How can William know if EasyEHR is the best package for CC, or at least good enough? He knows that going with Dr. Harris's recommendation is simply satisficing, a combination of something being sufficiently good and being satisfied. It is a recognition that the search cost of finding a better alternative may not be worth incurring if EasyEHR is good enough to meet CC's needs. William is not completely comfortable with this and wants to consider other ways of choosing the next EHR system.

William thinks back to his MBA studies and the suggestions for selecting a large-scale system. Business analysts define business requirements and, in consultation with IT and a project manager, find a system to meet those requirements. It is basically Simon's decision-making model applied to software: gather intelligence, design options, choose an option, implement that option, and monitor the results. But CC doesn't have any business analysts or project managers on staff, and William doubts that they are big enough to justify either. He considers hiring consultants to come in, learn CC's processes, create the requirements, and help find an EHR system. That seems expensive and hard to justify. Also, how will he know if the consultant is doing his or her job well? Are the EHR consultants really impartial, or will they recommend systems that are familiar or provide kickbacks?

William also considers forming a committee from among the staff to define the processes CC uses to provide healthcare, turning those processes into requirements, and then sending the requirements to multiple EHR vendors for a bid. This seems like the most rational choice. William starts tallying up the people needed: one tech from each specialty – that is only eight. A little large for a committee, but not unworkable. Add one tech from testing, one staff member from billing, one from the front desk, and that makes eleven. Now add a doctor, someone from IT, and that makes thirteen. This seems reasonable, though a bit expensive to have so many unproductive hours spent in meetings. But if they choose the best EHR system, it will be worth it. Then William remembers that the EHR system should cover the ASC as well. That adds someone from their check-in, pre-op, operating room, post-op, and patient education. They also have their own billing staff, so that makes a total committee size of nineteen. That is pretty substantial for a committee, especially when it is 10% of the staff.

However, using a committee could provide several benefits to CC and William. CC will benefit by having buy-in among the different departments across the organization. When individuals help to choose a system, they are more likely to defend the system when hiccups occur. In addition, the process will be more transparent to the users so they do not wonder why a particular package was chosen. Advocates and a widespread perception that the EHR system is the best that CC could find would go a long way toward improving the adoption. William would benefit personally by having cover from the committee if the EHR adoption fails again. But these benefits come at the cost of lost productivity when doctors and staff members are closeted in committee meetings.

William starts some rough order of magnitude estimates and figures the process will take roughly 120 hours, which will cost around $36,000 in direct pay to the staff in the meetings. For the doctor in attendance, 960 patients will not be able to be seen, and with an average collection of $225 per patient, will cost CC $216,000 in revenue. Because doctors are paid an average of 7.6% of collections, participation will cost the doctor roughly $16,500, which the practice would probably need to make up out of the general funds. All told, the committee would cost CC roughly $270,000 in direct and opportunity costs for the decision-making process.

Another option available is for William to choose the EHR package and make a recommendation. This is how Jennifer chose DocCharts. William can take the time to talk to practices that adopted different EHR packages, work with Philip to ensure the package will work on CC's infrastructure, and solicit input from different stakeholders in the organization. He could then request bids from the vendors that

would likely work well for CC and invite them to make a presentation to highlight the benefits of their package in person. This process would be efficient, but presents a significant risk if William proposes an EHR system that eventually fails.

William must think carefully about which option to recommend to the board for selecting the next EHR system. He knows he must balance the efficiency of the process against building buy-in among the staff. He enjoys working at CC and wants to insulate himself from the risk of choosing an EHR system that may not work out, but must balance this with CC's needs.

2.3 The Role of Consultants

When considering the human capital requirements for the EHR system adoption, there are a few choices. First, the organization can build the expertise in the employees already in-house. For instance, the IT department could be trained on how to customize templates. The second option for organizations is to buy the expertise by hiring someone who already has the knowledge. CC could hire an EHR analyst with experience with its chosen EHR platform. The final option is to lease the expertise by hiring consultants. In this way, the costs of training can be avoided, there is no long-term commitment to a new employee, and the consultants should be immediately productive.

Consultants can help CC with the EHR adoption project in several ways. First, they can assist CC to select an EHR system by filling the role of business analysts and acting as subject matter experts to match extant processes to available systems. In this role, CC would hire a consultant to come and observe work processes, probably for about a week, conducting interviews with staff to gather information on what aspects are most critical for the practice. This simplifies the selection process further by allowing the practice a single point of contact rather than trying to make contacts with a sales or account manager at each vendor. Consultants can narrow down the focus quickly.

There are potential drawbacks to using consultants. First is the cost of using a consultant. Additionally, if the consultant is most familiar with a couple of EHR platforms, those may be over-represented in recommendations. In other words, consultants are likely to recommend what they already know about rather than completing a new search for every client. Finally, when using a consultant, he or she gains knowledge instead of someone internal to the organization; therefore, that knowledge is only available to the practice later on by incurring additional expense.

Consultants could also assist CC during the installation of the EHR system. Installing a large system may not be as straightforward as running an installer and then having a complete and functional information system. Databases must be set up and configured, interfaces with other systems such as email and printers may need to be established, and user accounts need to be configured for the least possible access to maintain security. In addition, any data that are to be converted from the old practice management system will need to be cleansed and converted. Consultants can help with any of these tasks.

The potential drawbacks for consultants providing assistance during implementation are similar to those for the

EHR system selection. The cost of consultants can add up quickly, especially if travel is involved. Because CC is not in a major metropolitan area, travel is expensive and finding a local consultant is unlikely. More importantly to the organization, the IT department misses an opportunity to build its knowledge and skills to be able to deal with any problems later on. That puts CC at the mercy of the vendor for support and reliant on consultants for anything the vendor will not or cannot address.

Finally, like in the prior adoption, consultants can provide training. Having subject-matter experts train users provides significant value, but so does building that expertise in-house. To capitalize on the best of both worlds, many vendors recommend a training program called "train the trainers." In this model, a few employees are trained by consultants or the vendor, usually off-site. Those employees are then expected to return and train the rest of the staff on the system. In this way, comprehensive training instills a deep knowledge in a few employees while other employees learn a more narrow set of routines to enable them to accomplish their typical tasks. Train-the-trainer suffers from one major downside: what happens when one of the trainers misunderstands something? That incorrect knowledge gets passed along to the entire staff. And when a trainer leaves the organization, that knowledge leaves with him or her. But such a training scheme costs far less than hiring a team of consultants to train everyone in the organization.

William poses the question to Philip, "What do you think the role of consultants should be for this implementation?"

Philip replies, "Thanks for asking. Jennifer just plowed ahead without really talking to me. I guess she didn't think we knew what we were doing. Well, we do know." He continues, "We're good at what we do, and I see no reason to waste our money hiring someone to do what we can do ourselves."

William presses further, "What about training? I mean, I don't expect you to be experts on whatever EHR we choose. That's not your job."

"Isn't it?" chimes in Angela. "We have to help people when they get stuck, when they get frustrated, and when they screw up the data. If we aren't experts, who will support everyone?"

"Yeah," concedes William, "but there's only two of you."

"Three," answers Curtis from the server room in the back. "There are three of us. Just because I spend most of my time on the network doesn't mean I can't do desktop stuff. I fully expect I'll be working with everyone getting it all up and running. Like, all hands on deck, you know?"

"How can three be enough?" queries William.

Philip responds, "Last time, we had the two consultants, remember? And one was more interested in mucking around with the servers instead of helping people in the exam lanes."

"I wasn't here, but as I understand it, that didn't go so well." William is trying not to offend. But he has learned in the last year he has to be blunt to make his point with the IT department. "Using the last attempt as a measuring stick for this implementation may not be the best move for any of us."

"We're smarter than any of the consultants that came here that time. We're also on our home turf – we don't have to play political games," responds Angela.

"It would seem to me that you'd have more politics than the consultants rather than less. Why do you say you'll avoid

the games?" This is an interesting conversation to William. Totally unexpected because he has the impression that IT is completely unaware of the politics of the organization. They have their own space upstairs and rarely come down.

"You know," starts Curtis, "we know we're not liked very well. But we get the job done. People may not like us, but they respect us." "And who knows, this may be the chance for us to interact more with the staff, really get to know them. I'd like that, and I think Philip and Angela would too," he adds.

"Absolutely," agrees Angela.

"Definitely," says Philip. "I think that when the employees see how much we know and can do, they'll get over their technophobia." He continues, "Because that's really at the heart of the whole thing: the techs are afraid of the computer, and when we tell them they have to use the computers, they freak out."

William doubts some of this, but the IT department seems earnest. They really believe what they are saying. He follows up with, "Are you sure you don't need any help during this process? We could bring in a consultant to help us choose the best EHR."

"I thought we were going with EasyEHR. That's what Dr. Shumway said in our last meeting," interjects Philip.

"Dr. Shumway must have been talking with Dr. Harris. She's very much in the EasyEHR camp. I'm not sure if we should really just jump into a package or if we should have a committee of staff members pick the EHR," replies William. "Having lots of people participating would create buy-in, and we could make sure the EHR will fit all of the different departments."

"We'll be fine," responds Philip. "I talked to them already, remember? They gave me a list of fifteen practices in our same specialties that are using it. I've called five at random, and they're all happy."

"And I don't trust vendor lists, so I Googled for failures based on EasyEHR. I found two, so I called them," says Angela. "One failed because they over-customized the templates. The other one failed because the doctor who wanted EHR moved to a new practice before the implementation was done. I couldn't find any failures in our specialty."

"Yeah, but I'm the one who found EasyEHRSucks.com," quips Curtis. "Of course, it's just a bunch of users who don't know how to use the software whining about things the software probably does just fine if they'd read the manual." Smirking, he goes on to say, "I spent a couple of hours trolling and couldn't find any actual complaints about the servers crashing, the software losing data, or anything serious like that. Just a bunch of user error."

"Anyway," adds Philip, "if we get too many users involved, the decision will take forever. The mandate may be years away, but it's not as long as you think. The users have to get used to the new system."

"Interesting," replies William. "I came in to ask about consultants, and you have all done some homework on EasyEHR. Not what I expected. Thank you for your work. But as of now, I want to quash any rumors that we are going with EasyEHR. The decision hasn't been made."

As William prepares his presentation for the board of directors, he knows that consultants can provide important knowledge. The key is finding the right balance of accessing knowledge by using consultants and building internal skills. At the same time, he must manage the overall expense of the adoption. By carefully considering EHR selection, implementation, and training, William can carefully craft a plan to ensure a smooth adoption, using consultants if and when best for CC.

2.4 Customizing the EHR System
William has worked with three different organizations thus far, and although they are in the same subspecialties, the way the doctors practice are vastly different. In fact, two doctors at CC will see the same patient for the same problem with two different processes. Each doctor has reasons for why they have adopted the processes that they use. They are reticent to make large adjustments to their processes unless there is a specific medical justification to do so.

Significant work is being done to create standards of care and best practices for the most common medical problems. These come under the moniker of evidence-based medicine and provide decision tools for physicians to more accurately diagnose complaints from patients. As evidence builds within a particular specialty to enable a systematic review, the results are summarized into clinical practice guidelines (CPGs). But these statements do not prescribe a specific process; rather, they point to steps that need to be taken to deliver the highest quality of health care possible. As such, there is flexibility in the process even when the highest level of research evidence informs the steps that must be taken.

Thus, doctors are likely to have unique processes, and no medical evidence will require them to adopt the same process. These idiosyncrasies lead William to his next conclusion: no matter the EHR package chosen, CC will have to customize it. Customization allows software to fit the processes of the practice perfectly. Each doctor can have a unique set of templates, allowing for variations based on the patient and the physician.

But this customization comes with a cost beyond the obvious expense of creating the templates. Each process will need to be tested by both IT and the clinical users to make sure it works as expected. When the EHR vendor releases periodic updates, those changes will need to be retested to ensure changes in the EHR system do not cause a conflict between the system and the templates. In addition, supporting the complexity involves IT time for maintaining the system as well as training time to bring new staff up to speed on the many templates. This is especially true for the testing technicians that will see patients from a variety of doctors. When the templates are different, the screens can look different and require the same information to be provided in different places.

Customization also carries risk. Templates that are customer-created are not vetted to function well, as CC discovered to their detriment with the first adoption. Just because a template can require information before a staff member can go onto the next screen does not mean it should. In the first adoption, asking extensive details derailed the flow of the exam. That turned the staff against EHR and led to significant resistance, ultimately causing the failure.

William must decide what level of customization should be allowed. It is more nuanced than uncustomized vs. infinite templates. The closer to stock configuration, the easier the

system will be to support and the more performance will depend on the underlying system. The more customized the system, the closer the system will fit CC's processes, but the more complex the system will be to manage.

Determining the level of customization is only one part of the decision, however. The other big question is who will be responsible and accountable for the customization. William, with his limited experience with EHR, reaches out to EasyEHR to see what they recommend.

"Thank you for calling EasyEHR. This is Stephanie. How can I help you?"

"Hello, this is William from ComprehensiveCare. We spoke a few days ago. As you may remember, we are looking at EHR systems. EasyEHR was recommended by one of our doctors, and I am writing up some information for the doctors. I'd like to ask you about customizing the templates. For most of your customers, who is in charge of the templates?"

"That's a great question, William. We really see three primary ways the templates are managed. The first is to have us handle it. We have several engineers that create templates for all kinds of specialties, and we have over 100 templates in your specialty, as well as a new set of ASC templates that are due to be rolled out in the next quarter. The second way is for a centralized person or group to be in charge of the templates. Our customers that are big enough to have an IT department often assign them that function. The last way is for each group to be responsible for their own templates. But no matter which way you choose, we have support to help you if you get stuck."

"Thank you, Stephanie. I have a couple of questions about having EasyEHR manage the templates. First, what is the cost, and second, how do I know that the templates will help us if you're reusing templates from another practice?"

"Good questions," flatters Stephanie. "We charge $15 per template, and that includes any changes you may need. So you can see it's quite inexpensive. That's related to your second question. Many of our customers like to check their process with the best that we have found in all of the practices. But if the template doesn't work for you, we will change it as often as you need. Would you like me to send this information over to you by email?"

"Please and thank you. I see the email now – wow that was fast. Do you happen to know if this pricing is competitive? Like I've said, we are considering other vendors, and any information you can provide is appreciated."

"Our pricing is pretty aggressive. Most other vendors charge between $50 to $100 per hour for developing templates, and you never know how long it will take them."

"Great. Thank you, Stephanie, for your help. We will be in touch if we need a formal quote."

"Thank you for calling, and let me know if I can be of service as you try to compare EHR features."

Based on his conversation with EasyEHR, there are three options for dealing with templates. First, William can contract with someone to develop those templates, whether that is the vendor or possibly a consultant. The benefit of this method is that someone who knows the system well will create the template. The only challenge William can see is that the third party may not be responsive in the event of a problem that requires a quick change. Second, William can put IT in charge of the templates. This seems like a good option in that the IT

department understands computers and are available on-site at a moment's notice. On the other hand, the strained relationship between IT and clinical staff could present a challenge. Or third, each group can be required to come up with their own templates. This has the benefit of each template being perfectly customized to the group that makes it. But this could lead to a proliferation of templates that will all require testing for each EHR upgrade.

2.5 Implementing the EHR System

William needs to plan how to roll out EHR to CC's staff. From his formal education, he knows four ways to implement: pilot, parallel, phased, and plunge. Pilot implementations have just a few users initially to see if the system works. Parallel implementations allow the old system and new system to coexist, allowing quick switches back to the old system should the new system fail. Phased implementations move groups to the new system at different times to minimize disruption to workflow. Plunge implementations switch everyone over at the same time. William seeks input from several of his co-workers.

William finds Linda first. He describes the four types of implementations and asks her which she would prefer. "I think it's best to have the current paper available for people in case we start to slow down. That happened last time and having the paper really saved the day. So I think a parallel implementation is best."

"But how do we make sure people give the EHR a fair shot instead of immediately going back to the paper charts?" asks William.

"If EHR really is better, people will want to use it. If paper is better, then we need to find another EHR before forcing people to use it."

William thanks her and ventures upstairs to get some IT perspective.

"I think we should get it all done at once. Why prolong the pain? A forklift upgrade is the way to go for most big changes like this one," Philip says.

"What do you mean by a forklift upgrade?" asks William.

Philip grins and says, "You bring in a forklift, haul off the old, and bring in the new. When you described it, you called it a plunge implementation. Otherwise, people will just go back to what they are accustomed to."

"And what if it doesn't work?" William objects. "What then?"

"You make it work. When you burn the bridge at your back, you fight a lot harder. Good motivation," points out Philip, "can make people do whatever it takes."

"Do you agree, Angela?" queries William.

Angela looks apologetically at Philip and says, "Mostly. I think we should roll it out to one doctor for a few weeks first to make sure it works the way we think. Then we can fix everything before we roll it out to the entire staff. I guess you called that a pilot implementation."

Curtis looks over at Philip and says, "Sorry boss. It just makes sense."

William asks Emma Knight, the ASC administrator, in the lunchroom how she thinks CC should implement EasyEHR.

"Look," starts Emma, "we're not ready in the surgery center. And we're not going to be for a while. We can't change right now, and we don't have time to learn the EHR.

Put us last. And do you really want to implement all of the offices at the same time? If you focus on one group at a time, you can make sure it goes well. What is it they say about eating an elephant bite by bite?"

"I hope that's not an elephant you're eating," jokes William.

"Nope, it's tofu," says Emma as she wrinkles her nose. "My husband is on a health kick again. Anyway, I'd start with scheduling as of some particular date. All patients scheduled after January 1st would go in the new EHR. Then on January 1st, all of the office staff would use EHR. In February, the satellite offices would start using EHR. And when you are out of other groups, we could try it out in the ASC. I think phased is the way to go."

"Begging your pardon," interrupts Sandra Clark, Dr. Miller's head tech, "but if you want to go in phases, wouldn't it make more sense to implement doctor-by-doctor rather than by department?"

"But what about the shared groups?" asks William. "That would mean billing has to work in the old system and the new system at the same time. Same with scheduling appointments, testing, and anything else that's shared."

"True," says Sandra, "but Emma suggested basically two phases: scheduling and then everyone else. If we are going to run into problems, it will be in that 'everyone else' phase."

William thanks Sandra and Emma for their input. He has a lot to consider in how to recommend that CC roll out a new EHR system.

2.6 Managing Change

William possesses enough experience to know that encouraging people to change how they work can be difficult. As he learned in his MBA studies, people are cognitive misers. Routines provide comfort to people because they can automatically react rather than having to carefully consider alternatives. Changing how an entire organization completes its processes requires a mammoth effort.

William poses the question to Rebecca Palmer, the office manager, "How do you think we should get everyone onboard for EHR?"

Rebecca pauses for a moment and frowns slightly. "I'm not sure we can. The DocCharts implementation was so painful that getting everyone onboard may be impossible. I think the real question is how we get the right people onboard."

Now it is William's turn to frown. "What do you mean by the 'right people.' Everyone here is critical to our success, and everyone will have to use EHR."

"You misunderstand. The point of getting the right people isn't to the exclusion of everyone else. It's about reaching critical mass, of getting people who are leaders on the EHR. Everyone else will follow."

William is impressed. It is clear Rebecca has thought about this and has some good points. He wonders why she did not speak up before. "How do you know who the right people are?"

"I can give you a list," responds Rebecca. "But if you want to make a list, just watch who goes to lunch with whom. Some people always go together, and one person is usually in the front of the pack. That's who you want to make happy."

"I guess that's the advantage of having an office by the back door," replies William.

"Especially one with a glass wall," Rebecca says to William while grinning. "There's not much I don't know about what's going on around here. I just stay out of it most of the time unless it involves check-in, check-out, or billing."

"Any help you can provide is certainly appreciated. You know the people better than I do, and you have some really good ideas."

"Thanks for asking for my input, by the way. Jennifer was autocratic. I guess I expected you'd be the same." Rebecca smiles at William. "By the way, a little food goes a long way. If you feed people, they tend to be happier."

William has a lot to think about, but he knows he should triangulate ideas with other people in the organization. He figures Linda is a good person to tap. As the tech lead, she interacts with all of the head techs. And as the most vocal critic of DocCharts, her input is doubly valuable.

"Linda, I know we already talked about how to implement EHR. But what do you think it takes to get people to want to use a new EHR?"

"So, it's true that we are going to try again? I know Dr. Harris is all excited, but I don't want anything to do with it," Linda says with her arms and legs crossed in her chair. She has a pronounced scowl.

"Why is that? I know you had problems with DocCharts. But we're not going to use that EHR again." William is concerned about the immediate stonewalling. He knows he will have to win Linda over. It's likely that Dr. Harris would again volunteer to be first on the next EHR system.

"I figure they're all pretty much the same. And what do they do for me? I come in, I see patients, I write down what I see, and then I go home. How does an EHR help me at all?" Linda is always the pragmatist. "And besides, it just about ran off Tami last time. Tami is a good girl, really smart. I'd hate to lose her just because you want us to use computers."

"Well, I guess the first thing I'd say is we don't have a choice. Ultimately, we have to use EHR because Medicare and Medicaid will stop paying us as much if we don't. And second, the EHR should make finding records easier, documenting easier, and making sure you don't forget something more automatic." William tries to remember the features of EasyEHR Dr. Harris is most excited about to use as talking points because what is important to Dr. Harris will likely be important to Linda.

"If it could really do all of those things, then I'd give it a shot. But it has to be easy to use. Not all of those red boxes we had to put stuff in to do our job like last time."

"I'd love your help to make sure that whatever EHR we choose will work well. Would you be willing to look at it before we buy to make sure you can get your job done more easily than on paper?" William is making mental notes in case CC uses a committee to choose the EHR system. And if not, having a few key thought leaders vet the system could help avoid mistakes and create buy-in. He just hopes he is not overselling it with the "easier than paper" part.

"As the tech lead, I think it's my job to make sure whatever we get will meet the needs of all of the techs. Could I bring this question to the head tech meeting?"

William is pleased that she is so receptive to taking an active role. "Of course, I would really appreciate that."

William figures he should talk to a stakeholder from the ASC as well, so he approaches Emma again. "Emma, as we discussed before, we are considering implementing EHR. I know you said that the ASC is not ready for such a change. What do you think it would take to get everyone ready for that?"

Emma looks up, obviously still focused on what she was just doing. "Um, I don't know. What do you think?"

"What's going on, Emma? You seem really busy. Maybe I should come back later?"

"We're going through our reaccreditation and inspections and everything. We don't have a lot of time. So from an ASC perspective, I would say that the best way to get us ready is to make sure we have the right timing. That's why I want us to go last."

"Gotcha. Makes sense. Anything else?"

"Yeah, once you decide to implement, just tell everyone they have to use it. We can't have any exceptions. Make it mandatory."

This last piece of advice surprises William because most of the staff appreciates him including them in the decision process, even informally. Mandating usage seems counter-intuitive to him, but then again, management requires holding people accountable. Setting a standard and expecting everyone to live up to that standard is part of the job.

"Thank you, Emma. Good luck on the reaccreditation. Let me know if there's any way I can help."

William now has all of the pieces of information he needs to help him meet with the board. It is time to put everything together. By carefully considering how to choose the EHR system, to what extent and how to customize that system, determining the role of consultants, and the best way to implement the EHR system, William can create a comprehensive plan that will provide the greatest chance for success.

3. REFLECTION QUESTIONS

1. Four options were discussed in selecting an EHR system: (1) going with Dr. Harris's recommendation, (2) bringing in a business analyst, (3) forming a committee to choose the best package, and (4) for William to choose the EHR system himself. Which option do you think is best, and why?

2. What level of customization would you recommend for CC and why?

3. Who should be in charge of the templates at CC and why?

4. What role, if any, do you think should consultants play?

5. Should all training be completed on-site using consultants, all off-site by the vendor, or should a train-the-trainers model be adopted?

6. Would you recommend pilot, parallel, phased, or plunge implementation, and why?

7. How should William help the organization get ready for the change coming with an EHR system?

AUTHOR BIOGRAPHY

David L. Gomillion is a Clinical Assistant Professor in the Department of Information & Operations Management, Mays Business School at Texas A&M University. He earned his Bachelor of Science degree in Computer Science from Brigham Young University and a Master of Science and a Ph.D. in Management Information Systems from Florida State University. Prior to academic life, Dr. Gomillion served as a Director of Information Technology to a group of physicians, a role similar to a CIO position. Dr. Gomillion's teaching interests include systems analysis and design, networking, cyber security, health information technology, and project management.

APPENDIX 1: ORGANIZATIONAL CHART

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Board of Directors ── Administrator
                      William Shoemaker
                                    │
                                    ├── ASC Manager Emma Knight
                                    │
                                    ├── Office Manager Rebecca Palmer
                                    │         ├── Billing Supervisor Marilyn Schneider
                                    │         ├── Check-in Supervisor Elizabeth Reid
                                    │         └── Check-out Supervisor Lisa Jacobs
                                    │
                                    ├── Head Testing Tech Jonathan Crafton
                                    ├── Dr. Harris's Head Tech Linda Anderson
                                    ├── Dr. Franks's Head Tech James Thomas
                                    ├── Dr. Jones's Head Tech Mark Jackson
                                    ├── Dr. Shumway's Head Tech Patricia White
                                    ├── Dr. Johnson's Head Tech Joseph Martin
                                    ├── Dr. Williams's Head Tech John Thompson
                                    ├── Dr. Brown's Head Tech Jose Martinez
                                    ├── Dr. Davis's Head Tech Dennis Robinson
                                    ├── Dr. Miller's Head Tech Sandra Clark
                                    ├── Dr. Wilson's Head Tech Susan Lee
                                    ├── Dr. Moore's Head Tech Helen Young
                                    ├── Dr. Taylor's Head Tech Michael Lewis
                                    │
                                    ├── Director of IT Philip Jennings
                                    │         ├── Desktop Support Angela Burke
                                    │         └── Network Administrator Curtis Day
                                    │
                                    ├── Director of Marketing Jacob Clay
                                    ├── Director of Finance Elouise Smoot
                                    ├── Dr. Baker's* Head Tech Sandra Mitchell
                                    ├── Dr. Nelson's* Head Tech Ruth Turner
                                    └── Dr. Campbell's* Head Tech Deborah Green
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