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Health Case Study

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Creating New Graduate Medical Education Programs in California's Agricultural Heartland: Initial Investment Yields Rich Harvest

Case Study of Kaweah Delta Medical Center

Kaweah Delta Medical Center, located in Visalia, California, was founded in 1963 as a district hospital and is the largest hospital in Tulare County. It is part of the Kaweah Delta Health Care District, a 581-bed district with eight campuses in Tulare and Kings counties serving the agricultural San Joaquin Valley within California's Central Valley. Kaweah Delta operates as a nonprofit hospital and works with more than 4,400 medical professionals. In 2010, it was certified as a Level III Trauma Center, the only one in the Greater Visalia Area. In July 2013, Kaweah Delta established residency training programs in family medicine and emergency medicine, followed by psychiatry in 2014, surgery and transitional year programs in 2015, and anesthesia in 2017. All six programs are accredited by the Accreditation Council of Graduate Medical Education (ACGME) with a Centers for Medicare & Medicaid (CMS) cap set at 129.

Visalia is the fifth-largest city in the San Joaquin Valley and the county seat of Tulare County, the economic and governmental center of one of the most productive agricultural counties in the country. However, despite its agricultural prowess it is also one of the poorer regions in the state, with 60 percent of the population enrolled in Medi-Cal. As of the 2010 U.S. Census, Tulare County had a population of 442,179, over 60 percent of whom identified as being of Hispanic or Latino origin.

The San Joaquin Valley, and especially Tulare County, has a severe shortage of physicians. The region is dominated by independent physicians rather than by large multispecialty groups, and the average age of the physicians is around 60. Needs assessment surveys have identified shortages in all areas, with extreme shortages in family medicine and psychiatry. Historically, it has been hard to attract physicians to the Central Valley, and Tulare County in particular, because of the poor payer mix, low average median income, and agrarian culture of the region, which can make it difficult for physicians entering the workforce to pay off their accumulated debt from schooling. It had become very expensive to recruit physicians to the area. Kaweah Delta administrators recall spending millions of dollars annually, potentially over $100,000 to recruit just one physician, in order to provide competitive packages with signing bonuses and income guarantees. Not only was recruitment difficult, but Kaweah Delta also had problems retaining the recruited physicians.

In the late 2000s, Kaweah Delta decided to investigate beginning a Graduate Medical Education (GME) program to address the physician shortage. Though the Chief Financial Officer initially had some concern that a GME program would be a continuous financial loss for the hospital, administrators decided that the money they were spending to recruit physicians would offset this loss while creating a pipeline for the future workforce. At least one member of the hospital Board of Directors also had reservations at first, worried that a program in a community hospital would not provide a high enough caliber of training. Ultimately, the hospital administration, the Board of Directors, and some of

the physician staff agreed that they should start a GME program. The primary motivation for beginning the GME program was to create a long-term strategy to address physician recruitment and the physician shortages in the community.

Initially, Kaweah Delta thought it would partner with an existing academic program and reached out to several of the University of California (UC) programs, but a partnership wasn't forthcoming. Kaweah Delta then looked at the feasibility of creating GME independently of an existing program and hired consultants to assist with the strategic planning. First, the Kaweah Delta team had to identify members of the current medical staff who were interested in starting a program, as without interest and backing from the medical staff there would be no program. They also hired a Director of GME, an administrator with a background in education, to ensure the planning and implementation process followed ACGME requirements. Planning began several years before the program started, as they needed to resolve many questions and issues. Beyond coordinating the teaching, they had to establish physical spaces such as call rooms and libraries, and an official medical staff GME committee with protections and voting rights. Human resources and legal counsel met to determine how residents and faculty would be employed, following state law and ACGME requirements. Each potential program also needed to hire a physician Program Director, a Program Coordinator and physician faculty members. After hiring the program director, they could begin steps such as starting the ACGME application, identifying and hiring core faculty, and developing the clinical rotations. ACGME needs to see how a program will meet all requirements, including financial planning, before they will approve the possibility of having a residency program and will only approve one program at a time. ACGME also conducts site visits to new GME programs to ensure they meet those requirements; prior to ACGME's second site visit, Kaweah Delta had to set up everything they had committed to in their initial proposal, so proper planning was essential.

The Kaweah Delta team was diligent about projecting the impacts of various decisions. They hired consultants to guide them through some of the challenges or supplement their expertise, but they also learned from the consultants so they could avoid becoming dependent on that support. For instance, there are different options for reflecting information on CMS cost reports or setting time triggers. Kaweah Delta created 20 to 30 versions of financial projections, with variations such as number of residents, location of rotations, which programs to start, and when to add those programs. Initially, CMS regulations set a residency cap at three years; however, during the planning process CMS changed its policy to allow sponsoring institutions to build their cap for the first five years. This allowed Kaweah Delta to expand some existing programs and add other programs.

> **"I know consults are expensive and that's really hard for a lot of places. One option is to get a consult from my GME director – it would be a lot cheaper than you could get a physician consult."**
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> *—Kaweah Delta Hospital Administrator*

Like many other hospitals that start new GME programs, Kaweah Delta initially made its Chief Medical Officer (CMO) the GME Designated Institution Official (DIO). The problem with this approach is that most CMOs don't have any knowledge of GME, beyond their own years as a resident. However, Kaweah Delta was fortunate to get help from several key leaders from UC Irvine, including a mentor for the new Director of GME as well as a physician who became the initial program director for emergency medicine. Locally, the CMO, the hospital CEO, the Director of GME, and a hospital board member met with each department to recruit faculty and gauge interest in developing a GME program. Kaweah Delta also used its recruitment office, changing the message from recruiting for a busy community hospital to developing a new teaching program, and searched professional organizations for faculty and program directors. Word of mouth was also helpful; people hired to fill key positions often knew of additional faculty physicians to bring on board. In fact,

even before the hospital had any residents, it became easier to recruit physicians because they wanted to be part of a teaching program.

Though Kaweah Delta didn't know how successful this workforce development program would be, it was sure that this was a long-term investment with very large up-front costs. Being clear about both of these elements at the outset—the time frame and the initial cost—allowed the administration to weather the uncertainty of the early years. All the startup costs had to be built into the hospital budget. The ACGME expects a significant investment before it approves a residency program. Additionally, the hospital compensated physicians for time away from their patients when they were helping with the planning process. Though ultimately CMS will pay for residency training, federal payments are based on a three-year rolling average that only starts when the first resident begins. Additionally, programs take time for their full complement of residents to ramp up. Most residency programs last three years, and programs don't have their full complement of trainees until the first resident class reaches its final year.

"The first few years, you subsidize it and lose money, but you put together a 5- or 10-year financial forecast that shows at some point things turn. I think the first 10-year forecast we developed for the GME program showed that by the tenth year we would break even.... For the first five years or so, we would lose money, and we had to subsidize GME. But by the sixth and seventh year, we [would have] all six programs, and they would mature, and as our Medicare revenue grew, we would finally see a positive return. Breaking even was all we ever hoped for. We never expected that this was going to be a profitable venture. We just said, "If we can break even but grow our own physicians, that's a victory for us."

—Kaweah Delta Hospital Executive

Kaweah Delta agreed to invest $10 million over 10 years and chose to fund the program out of operations. They justified this by saying it was like starting any other large initiative or program, such as a new cardiac or neurosurgery program. Though the costs showed in the operating margins, the Kaweah Delta team explained this was a long-term investment. Because they could articulate the long-term benefit, they could avoid negative financial impacts, such as lowering their credit rating. They also were careful to look at all potential funding sources. They evaluated their Medicare payer mix and Disproportionate Share Hospital payments and applied for any grants they might be eligible for, such as Song-Brown grants. They hired consultants to determine how best to fill out their CMS cost reports to maximize reimbursement. They also decided to put as many large costs as possible in the first year of residency in order to maximize their Per Resident Amount. They planned to break even in 10 years, which was another reason they were meticulous with their financial projections.

Implementation challenges

Kaweah Delta faced several key challenges to starting the GME program: (1) understanding and reconciling ACGME and CMS guidelines; (2) recruiting and retaining strong program directors and physician faculty; (3) convincing existing physician staff of the benefits of GME; and (4) developing the breadth of rotations required for GME in certain specialties, especially psychiatry.

Reading and understanding the CMS and ACGME requirements was one of the initial tasks in creating a GME program, which was both a necessary time investment and a challenge. GME and hospital leadership emphasized the importance of taking the time to thoroughly read and understand the requirements, which include parameters for clinical training and available resources. One challenge is that some of the CMS requirements do not align with the ACGME requirements.

Developing a new GME program can require changing the established culture at a hospital and obtaining medical staff buy-in. For example, many

physicians were initially resistant to becoming involved in teaching and training. Garnering the support of faculty can require time and approaching physicians carefully. For example, leaders mentioned that "thrusting GME" upon physicians is not the right approach. Rather, it is important to first identify which physicians are receptive to becoming faculty members and which are not. GME program directors then move forward by engaging interested physicians without trying to convert those are not interested. Down the road, many who are initially resistant to GME may see the benefits and come around to the idea of teaching and training.

"I'm a believer culture is everything. You can have all the finances in the world, but the culture is the make or break."

—Kaweah Delta Hospital Program Director

Strong program directors are essential for establishing high quality GME programs, but recruiting and retaining program directors who have leadership qualities and align with the culture of teaching is challenging. Physicians with the leadership qualities and interest in teaching required to run GME programs are rare and can be difficult to find. Identifying people with the energy, leadership skills, and interpersonal skills requires patience and a thorough vetting process. At Kaweah Delta, it took time and some trial and error to hire the right individuals for the GME program director roles. Also noted was that, once a hospital identifies a strong candidate to lead a GME program, it may need to offer a salary above market value—which may be challenging, depending on the hospital's financial resources.

An additional challenge relates to establishing the breadth of clinical rotations for certain specialties. Many specialties require rotations in niche areas that are not commonly provided at most hospitals. In the case of Kaweah Delta, the psychiatry residency programs need to provide rotations in inpatient care, outpatient care, and across adult and pediatric populations. Because Kaweah Delta does not have a pediatric inpatient mental health unit on site, the hospital had to develop a partnership with another hospital and send residents offsite for that rotation. In some cases, developing those kinds of partnerships can require conducting research to identify potential partners and persistently reaching out to them. There are also financial implications of establishing offsite rotations—when residents train in other locations (such as to get experience in inpatient units or working with children), Kaweah Delta still covers their salary and housing costs, but does not receive any federal Medicare GME funding for those residents.

"Your initial program directors [are important]. If you're going to build programs from scratch and start as a new teaching hospital, [it helps] to... recruit somebody who is experienced [and has]... great interpersonal skills to be able to draft the faculty. To get the attending physicians on the unit who may not be faculty but are very dedicated to teaching, getting them on board and sparking that passion in them was a big struggle for us. So, definitely, getting people who have experience and are passionate about teaching [is ideal]. If we did it over again, that's probably how we would have done it."

—Kaweah Delta Hospital Executive

Leaders and staff emphasized that the first years of implementing GME programs are full of challenges. These challenges can be overcome with persistence and creative problem solving, particularly when there is strong support from the hospital leadership. Administrators starting a GME program need to keep the end goal in mind and stay with the initial investment—which is easier said than done when challenges arise. Being adaptable and accepting the instability of the first few years are critical for success.

"You have to consistently be flexible and constantly be changing. You can't get bogged down and say, this didn't work out and I'm sad about it. No, [that partnership] didn't work out, so we moved on and found somebody else."

—Kaweah Delta Hospital Program Director

Implementation facilitators

Overall, Kaweah Delta team members discussed several factors that were instrumental in helping them to establish multiple GME programs, such as the presence of physician champions in each specialty to garner support for GME, support from the hospital and the surrounding community, and mentorship and guidance from an external academic medical center (UC Irvine). Also contributing to success was Kaweah Delta's centralized administration of its GME programs, which promoted efficient communication and collaboration among the specialties.

Physician champions who are passionate about GME and can help muster enthusiasm from other physicians and administrative staff are critical to success. One executive explained that there are a number of obstacles to starting a GME program, but having a program director who is charismatic, driven, respected, and committed to GME is the essential factor in allowing it to come to fruition. Having additional physician champions beyond the program director also helps build support among other physicians within the hospital. For example, physician champions who show enthusiasm for teaching—and for building a larger physician workforce to improve access to care within the community—can make the concept of GME contagious to other physicians and help convert the skeptics.

The support of the hospital and the surrounding community was also critical to the success of Kaweah Delta's GME program. Staff explained that the board of the hospital supported establishing GME and making the required financial investment, and that the continuous backing from the CEO ensured that many of the other initial obstacles could be overcome. Kaweah Delta's status as a district hospital contributed to a community-oriented mindset and a willingness to focus on improving the number of physicians in the community, even if it required some financial investment without commensurate savings initially.

"I think for a community like us to start a teaching program, you have to have that groundswell of enthusiasm and excitement. You have to have one or two physicians—they may never be the program director and are most likely to be faculty—but they really are passionate about teaching and they see the struggles of the community.... They might be local physicians who grew up here and have a deep place in their heart for the underserved population; they want to bring more physicians here and they see becoming a teaching hospital is a part of that."

—Kaweah Delta Hospital Executive

Guidance and mentorship from outside the hospital, and particularly from UC Irvine, were invaluable in helping to develop several aspects of Kaweah Delta's GME program. In particular, Kiweah Delta leaders recommend that other hospitals seeking to develop a new GME program find a mentor with experience developing such a program from scratch to offer advice, field questions, and provide support. Kaweah Delta leaders also indicated that studying topics outside of medicine, such as systems theory, business culture, and educational literature, helped them in forming the GME infrastructure.

Centralizing Kaweah Delta's GME program office and coordinating across specialties helped ensure sharing of best practices and strategies for overcoming common challenges. Kaweah Delta's various GME programs have a centralized office –with all programs physically located within the same office building—and weekly meetings across program coordinators. The close physical proximity of offices facilitated impromptu "hallway conversations" and

allowed program directors to talk about common challenges, share solutions, and coordinate across specialties. In addition, during regular meetings, program directors could coordinate and solve problems collectively.

"We went to the ACGME conference this year,... which was the first year since we started doing this that it was in California. We took everyone on our team, which was a major blessing. As we were going to all the sessions, people would come back to me and say, "Oh my gosh, I'm glad we are set up the way we are, because I just met so and so and they've never even met another coordinator at their institution." And I thought, "Oh, that's got to be such a lonely perspective, that you don't even know the other people in your institution who are doing very similar work." Yes, the specialties have differences, but [the differences are] not so big that you can't have your team learning... from one another."

—Kaweah Delta Hospital Administrator

Benefits to date

The primary reason Kaweah Delta decided to invest in GME was to increase its local physician workforce, and so far it has had resounding success. In some specialties, such as emergency medicine, Kaweah Delta Medical Center is now at capacity and physicians who want to remain in the area are going to neighboring hospitals, further easing the area's physician shortage. In psychiatry, which in previous needs assessment surveys was facing an extreme shortage, Kaweah Delta's physician faculty has increased from 2 to 11 in eight years, with 4 more residents interested in staying in the area after graduating.

Table 1 shows the number of residents remaining in the area, as of July 1, 2020.

Table 1: Kaweah Delta GME retention rate, as of July 1, 2020

Residency program	Number of residents retained	Percentage of program graduates
Family medicine	32	44%
Emergency medicine	41	46%
Psychiatry	9	56%
General surgery	2	50%
Overall totals	84	46%

Additionally, though by definition the transitional year students move away to different programs, at least two have returned or are planning to return after they complete their training: one in ophthalmology and the other in physical medicine and rehabilitation. There are no data for the anesthesiology program because it has yet to graduate any residents.

"The other advantage is that when you... train them yourselves, you can have them align with the mission.... Rather than finding some random [physician] whom you don't know anything about [who might] just... churn through patients and provide mediocre care,... [instead you'll] have somebody who's vested in the community and will actually take care of the patients. It's really good PR because [these are] people you know who live in your community, so the PR, the financial piece, and the ripple effect are the three things that I would focus on if I give a presentation to the CEO."

—Kaweah Delta Hospital Program Director

Because of the influx of new residents-turned-physicians, recruitment costs have decreased significantly and the quality of the local physician population has increased. Retention of existing physicians has also

been higher, whether from an increased quality of life or from being associated with a quality training program, further reducing the need to recruit. The residents who stay in the community have ended up being of higher quality than physicians Kaweah Delta was able to attract before the GME program. Having a GME program also ensures that the older physician faculty members remain current on standards of care, which can suffer the longer they are removed from their own training.

Moreover, the reputation of the hospital as a whole has improved. Its rankings have gone up and Kaweah Delta is now among the top 250 hospitals nationwide. Success of some of the initial programs, such as emergency medicine, has elevated the hospital's reputation among specialty groups, and the transitional year program has given Kaweah Delta a national reputation. The overall perception in the community is that a teaching hospital has a greater commitment to its mission and the community.

Finally, GME has actually increased Kaweah Delta's hospital revenue. The hospital increased the number of beds, which increased its overall capacity as well as its CMS Indirect Medical Education payments. It opened up new service lines, due to the new specialty physician faculty needed to meet the residency training requirements. Residents take the place of other paid hospital staff, reducing the amount of staff needed in those areas. And the family medicine clinic has been approved as a federally qualified health center look-alike, increasing the reimbursement it receives. With the reduced need for recruitment, Kaweah Delta had originally hoped to break even after 10 years. In reality, it has surpassed expectations and GME is now helping to fund hospital operations.

"Yes, it adds to the bottom line, it elevates the reputation and performance of the organization. It helps us attract outstanding faculty and new attending physicians and helps us add to our physician bench by keeping the graduates here."

—Kaweah Delta Hospital Executive

Beyond the measurable benefits to date, such as physician retention and hospital revenue, are perceived benefits that have yet to be studied. Physicians at Kaweah Delta feel that other metrics, such as decreases in hospital mortality, the time it takes to see a patient or for an order to be placed, and the costs associated with damages or Paid Time Off from disruptive or aggressive patients, are also benefits. Specific programs such as street medicine, or just having a psychiatrist on staff at all times, may have led to reduced emergency room visits and hospital stays, and better chronic disease or withdrawal management.

Recommendations for potential new programs

One of the main messages that came across in talking with people at Kaweah Delta was that GME needs to be looked at as a long-term investment. Additionally, trying to understand as much as possible about the potential financial implications from the outset is advantageous. This would include understanding the value of recruitment versus GME; how financial and programmatic calculations work and their impact; and how to access available funding sources, from federal reimbursements to grants. If the program developers do not know much about GME at the beginning, they can use consultants to gain knowledge and expertise, and should learn from those consultants so they will not need to depend on them. Ultimately, the hospital administration will want to see any operational and financial impacts of GME, with quality data if available.

"What residency programs bring is new faculty who provide additional services, and you actually get new service lines. Hospitals are not good at projecting costs, expenses, and revenue from new service lines."

—Kaweah Delta Hospital DIO

When starting out, finding allies and fellow champions is important so plans do not get derailed and momentum can build. That being said, it is also important to follow the proper chain of

command: obtain support from the medical staff before approaching the executive team and obtain support from the administration before approaching the board. Getting support from the board can be a challenge but is essential for success. There will be hurdles and bumps along the way, and it is easier to surmount them with united support. With a physician champion and the full support of the hospital CEO, most obstacles can be overcome.

"If you try to make change before you've developed the trust, then even though your change is going to be good it will be resented."

—Kaweah Delta Hospital Program Director

Communication with leadership is also essential. Hospital administrators do not know about training doctors, and program directors, DIOs, and CMOs do not know about running a hospital, so ensuring everyone is on the same page and understands one another's goals and needs is beneficial. Fostering a close relationship between the financial and operational teams so that decisions consider both sides can go a long way to easing any tensions created by implementing something new. Program directors and DIOs, in particular, should know and understand the financial impacts of their programs, and effects that features like rotations have on reimbursements.

"If they're walking into an environment that is GME-naive and their job is to...get people who've never worked together to work together—if they don't have those communication skills, it's going to be really hard."

—Kaweah Delta Hospital Program Director

Learning enough to get started is another large hurdle, as there is a lot to learn. ACGME requirements, CMS requirements, and understanding the operational and financial impacts can be new territory. In addition to hiring consultants, finding mentors for specific roles, such as the DIO or program coordinator, can be extremely valuable as unexpected questions arise. Recruiting seasoned personnel, especially program directors, is helpful, particularly if they have grown a new program already.

It is far better to find the right person for the job, no matter how long it takes. A program director should be not only knowledgeable about the program, but also a passionate leader who can generate enthusiasm about the program, especially when it is new. After the program is established, inexperienced program directors can be considered because the framework is in place, but a new program should have an experienced program director to make sure it will be effective. Likewise, the DIO position should not necessarily be assigned by default to the CMO, but to the person who knows the most about GME. This may mean hiring someone from outside the hospital. Finally, having a good program coordinator should not be overlooked. The position has been likened to that of a general manager, or the manager of a baseball team. Program coordinators need strong organizational and communication skills, and the ability to be a team player but also operate independently.

"It takes a special person, right? [Someone who is] willing to say, "I'm going to change my career. I'm going to a place where I have no promise that there's going to be a program eventually. I'm going to spend a lot of time building systems and processes and applications." We were fortunate that we found the right fit for most of our programs early on."

—Kaweah Delta Hospital Administrator

New programs will always have challenges, and they need time to mature. It takes commitment and resolve to start GME at a previously non-teaching hospital. and there will be growing pains, but with enough support from all levels of the hospital, the experience at Kaweah Delta demonstrates that success is possible.

> **"Human beings don't like to wait that long. And you have to. The leaders of GME have to make sure that they understand that long-term value is there, and it's been shown over and over again in other places. You have to wait it out and do what you can to try and minimize any kind of financial cost while you're doing that. And wait for the gifts to come because they will and they come in many forms."**
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> *—Kaweah Delta Program Director*