Should a questionably competent resident be allowed to continue in the program?

Sanford M. Zeigler, MD, a Sandra L. Starnes, MD, b and Robert M. Sade, MD a

INTRODUCTION
Robert M. Sade, MD
Among the most difficult problems facing the faculty of surgical training programs is how to deal with a resident physician who is not living up to expectations. Every training program likely has experienced such a challenge. We do the best we can in selecting applicants who will succeed, but no selection process is perfect, and occasionally we make choices that result in problematic circumstances for the trainee and the faculty. Graduate medical education officers suggest helpful procedures, but they often seem dry in the context of real-life, emotionally draining situations.

At the 102nd Annual Meeting of The American Association for Thoracic Surgery, 2 academic surgeons who are deeply involved in cardiothoracic surgery training programs engaged in a debate. Their discussion focused on the fictional case of a surgical resident who was failing to keep up with his peers in meeting training milestones.

The Case of the Deficient Resident
Florence Goodheart is director of University Hospital’s integrated 6-year (I-6) cardiothoracic surgery training program. She is faced with a vexing problem. A third-year resident, Michael, is not performing well, and the director is considering what to do about the situation. Michael came from a top medical school with a sterling academic record and excellent recommendations. During his first-year rotations, problems became apparent early. He was obviously quite bright, knew the literature related to his patients, answered questions about diseases and surgical approaches accurately, and scored very well on in-training examinations. Some patients commented on his friendly, comforting bedside manner.

From the outset, however, he often did not respond to pages promptly, was perceived as not doing his share of patient workups, and appeared late to his assigned operations. His surgical skills were below average for his level of training. On morning rounds he was sometimes found to have been poorly prepared to answer questions about his patients and was believed occasionally to have made up laboratory results when asked for specific information.

Dr Goodheart counseled Michael on several occasions about his deficiencies and has thoroughly documented those discussions. Toward the end of his second year, he showed some improvement but his performance warranted formal remediation through a letter of deficiency with specification of performance goals, and a warning that he could face probation if he did not meet these goals.

Toward the end of his third year, his overall performance improved, but was still well below that of his fellow residents, despite counseling and encouragement from Dr Goodheart, all of which is well documented in Michael’s personnel record. Michael has repeatedly insisted that he is eager to continue in the program and become a cardiothoracic surgeon. On the advice of the graduate medical education office, Dr Goodheart placed him on probation.

From the outset, however, he often did not respond to pages promptly, was perceived as not doing his share of patient workups, and appeared late to his assigned operations. His surgical skills were below average for his level of training. On morning rounds he was sometimes found to have been poorly prepared to answer questions about his patients and was believed occasionally to have made up laboratory results when asked for specific information.

Dr Goodheart counseled Michael on several occasions about his deficiencies and has thoroughly documented those discussions. Toward the end of his second year, he showed some improvement but his performance warranted formal remediation through a letter of deficiency with specification of performance goals, and a warning that he could face probation if he did not meet these goals.

Toward the end of his third year, his overall performance improved, but was still well below that of his fellow residents, despite counseling and encouragement from Dr Goodheart, all of which is well documented in Michael’s personnel record. Michael has repeatedly insisted that he is eager to continue in the program and become a cardiothoracic surgeon. On the advice of the graduate medical education office, Dr Goodheart placed him on probation.

The end of his probation is approaching and various faculty members have provided mixed reports on his performance, including both personal behavior and technical skill; some saw little to no improvement, others saw Michael’s efforts to improve showing some progress. Under
hospital policy and legal requirements, Michael could be terminated on grounds of marginal performance as a resident. He has shown some improvement, but still after 4 years is not up to par for his level of training and has met only a few of his assigned goals.

Dr Goodheart is torn between 2 options: the program can continue to guide his development, even consider repeating a year of training, making his I-6 into a 7-year program—he says he wants to stay, has shown modest improvement in his performance, and the program may suffer a setback in reputation for firing a resident; or the program can let him go—he believes it’s quite possible that the program will not be able to provide a positive recommendation on his application to the American Board of Thoracic Surgery 2 years hence, or even after an extra year of training, and he might personally benefit by seeking a different specialty that would be better suited to his abilities, now rather than after spending 2 or even 3 more years in the I-6 program. Dr Goodheart asks 2 colleagues for their thoughts on what he should do.

PRO
Sanford Zeigler, MD

Dr Goodheart should advocate for Michael to repeat a year of training. In our vignette, Michael began on par with his peers. As a student, he was a hardworking, intelligent team player. Over time he has fallen behind his peers by failing to develop skills at the expected rate, in part because he seems to have lost his motivation and confidence. The cause for this lapse during residency has not been identified or addressed, and he has been given insufficient tools for improvement.

To start, Dr Goodheart should explore the mechanisms for his failure. A confidential evaluation by a licensed counselor is necessary to ensure that any substance abuse issues are identified and treated. If Michael has been treating patients while impaired, he should be removed from the program without delay.

To save Michael’s career and the program’s reputation, Michael should repeat a year of training while Dr Goodheart arranges for focused mentorship. During this time, the gaps in his motivation, confidence, and skills can be intentionally and deliberately addressed. He should be told clearly that if he doesn’t reach an acceptable level of competence after a sixth or seventh year of training, he could finish the program but will not be recommended to sit for the American Board of Thoracic Surgery qualification examinations, clouding his future as a cardiothoracic surgeon.

MECHANISMS OF FAILURE

Consideration of motivation and skills is helpful when evaluating performance problems. Skills training will not fix motivational deficits, and vice versa. Highly motivated and skilled individuals may fail because of systemic issues; for example, a Black resident might falter because the institution has a racist undercurrent, or a left-handed resident might fall behind because the faculty has no left-handed surgeons to teach him relevant techniques. For residents in these situations, either the system must change, or they should leave. Highly motivated but unskilled residents will improve with simulation training, self-guided learning, and experience—the classic resident education framework. Skilled but poorly performing residents often lack motivation, and will benefit from mentorship. Unchecked demotivation leads to arrested technical development, further eroding motivation and confidence.

Without confidence, the Herculean task of completing cardiothoracic surgery training is impossible. Peak performance depends on complex interactions between confidence, skill, motivation, and acquisition and application of knowledge. Confidence protects and strengthens performance. Without confidence, the many-headed beast of doubt becomes manifest, variously known as imposter syndrome, the yips, performance anxiety, stage fright, or the jitters.

Unmotivated residents with major skills deficits are in serious trouble. Rehabilitation is costly, painful, and time-consuming, requiring intense mentorship and skills training to close both gaps. Even then, they may still fail. For most programs, termination may be justifiable because the costs of rehabilitation are too high.

CONSEQUENCES OF DISMISSAL

Michael’s dismissal would have considerable consequences for himself and the program. The sunk cost—that is, the expenditures by the institution for training a cardiothoracic trainee—is $333,000 to $670,000 annually. Additionally, Michael has spent 4 years, accrued substantial debt during medical school education, and risked his physical and mental health. Without general surgery certification to fall back on, he is essentially unemployable without years of additional training. His co-residents, possibly already struggling with burnout, will have to absorb his call shifts and his clinical duties. Moreover, the reputation of the training program may suffer, potentially influencing the applicant pool for years.

Removing Michael from cardiothoracic surgery training promotes a leaky pipeline when we need it least. A 2018 workforce analysis estimated a 120% increase in per-surgeon case volume by 2030, based on an aging population, aging workforce, and the long training pathway for cardiothoracic surgeons. Although some attrition is inevitable, we cannot afford to lose well-qualified trainees who wish to finish training. Reddy, Ikonomidis, and Crawford have stated the need for flexibility in training in this way (emphasis added):
The landscape of cardiothoracic surgery residency is changing. Programs and program directors must maintain a very open mind and be nimble with regard to their approaches to the nature and timing of residency training, operative skills assessments, and simulation. ...[A]nyone in academic cardiothoracic surgery must have the teaching and development of new young surgeons as a high priority.

As changes to training structures and medical education yield younger, more diverse, and less experienced cardiothoracic surgery trainees, programs will see more residents struggle. Grades and Board examination scores are often less useful in differentiating the academic capabilities of applicants than they were in earlier times, and, consequent to the necessity of virtual interviews in the pandemic era, in-person interviews may be gone for good. As efforts to attract more women and underrepresented minority applicants to programs succeed, each program is likely to match some residents who do not fit their historical training mold. To successfully train them, we must develop and use tools to support struggling residents today.

MECHANISMS FOR SUCCESS

Michael’s additional year must be structured to include additional simulation training, relevant clinical exposure, and focused mentorship to restore his confidence and motivation. He should also be referred for confidential mental health counseling, a program requirement of the Accreditation Council for Graduate Medical Education. In fact, steps like these should have been undertaken during his probation period.

Simulation curricula can rapidly improve resident skills and technical confidence without the pressures of patient outcomes and financial productivity. After surveying resources and enlisting faculty, Dr Goodheart should create a tailored curriculum of proctored and self-guided simulation training toward achievable technical goals. These goals should be mirrored by real-time feedback during and after operative cases.

The prescription for motivation and confidence is easily written, but difficult to fill. Focused mentorship requires commitment and honest self-appraisal. By restoring confidence, a good mentor pushes trainees to excel and pulls them out of darkness during painful growth. Mentors help their mentees to both envision and realize future success. To avoid conflicts of interest, Dr Goodheart should recruit a different faculty member for this role, and may consider someone outside the division or the institution.

Extreme mentoring has been prescribed for young faculty and is easily adapted to residents. Although it is time-consuming and expensive, it is less so than the costs of losing a trainee, so the time and financial cost problems will have to be solved on an ad hoc basis depending on local conditions. The key to extreme mentoring is to show the mentee the proper path: “Our mentees may have the very best of intentions, but never actually step onto the pathway that leads to the outcome they desire... we have been on that pathway and know what it looks like—our experienced eyes are needed.”

First, proposed mentors must perform an honest self-appraisal of their mentoring abilities and commitment to the task. Next, the mentor needs to honestly evaluate the mentee’s career potential, then set clear goals and expectations for their relationship. The mentor should identify appropriate career goals and illustrate the pathway to achievement. Mentor and mentee should meet at least monthly.

The mentor’s job is to coach the mentee’s performance, build confidence, guide through hard times, and to help with building a cohort of allies to help them throughout their career. Frequent external affirmations will eventually become internalized, helping the mentee stay motivated when times are tough.

At the outset, the 2 should identify ways to capitalize on strengths and correct deficiencies; set quarterly and annual goals in academic, technical, and personal arenas; and develop paths to achieve those goals. The mentor should identify a top-10 list of other mentors, make introductions, and encourage these relationships. The mentor should create opportunities, and, when appropriate, praise the mentee to other faculty. Praise should be public, whereas criticism should be frank, but private. Whenever possible, the mentor should promote the mentee’s career development. Finally, the mentor is a role model for success, projecting his or her own confidence, sharing in celebration, and helping cope with failure. Above all, the mentor is available for anything the mentee needs, whether personal or professional.

THE CHALLENGE OF FAILED HONESTY

For many, Michael’s flashes of dishonesty are a red flag. The difficult question is, Can honesty be taught? Current theory recognizes that moral development does not end in childhood, but is characterized by rapid growth in the 20s and 30s, and continued maturation through adulthood. In these frameworks, moral individuals transition away from self-interest, through social interest, to finally incorporate internalized and universal concepts of morality with self-interest, social interest, and altruism.

As educators, we constantly interact with our residents’ personal and moral development. The culture of our programs and our personal role-modeling influence our trainees’ growth. We are even implicated in our trainees’ ethical lapses. Burnout, a consequence of sleep deprivation, moral injury, and chronic stress, is linked to lapses in professionalism. Although most postcollegiate education
accelerates moral development, medical education, particularly the clinical years, actually leads to regression.\textsuperscript{19,20}

Despite ample evidence that ethics and professionalism can be taught to medical students and residents,\textsuperscript{21-24} there is little consensus among residency program directors regarding whether or not honesty and integrity can be learned.\textsuperscript{35,26} Studies to date demonstrate improved performance only in ethical tests and simulations.

However, the existence of solid moral education is accepted in other spheres. The core values of the US Army include honor, integrity, and personal courage\textsuperscript{27}—not unlike our expectations of surgeons and trainees. Soldiers are taught to use deadly force and the moral framework to wield it, or they become ungoverned assassins. In this light, the tortures at Abu Ghraib prison provoked public disgust. We inherently trust that the military provides adequate moral and ethical education, given their license to use deadly force. Similarly, if moral development were limited to early life, organized religion, prison rehabilitation programs, 12-step programs, marriage counseling, and personal counseling would be fruitless after adolescence.

Although some individual trainees may be outliers and beyond ethical learning, most ethical lapses should be correctable with appropriate discussion and role modeling. However, important gaps persist between what we perceive as important ethical principles and what is actually taught to residents.\textsuperscript{26} If prior work in moral development holds true, the process of remediation may even lead to accelerated maturation and greater empathy.\textsuperscript{28} It is likely that residents who are successfully remediated will serve as excellent role models to following generations of struggling residents.

In summary, many factual and theoretical considerations point to the possibility or even probability that Michael can undergo successful remediation and become a solid candidate for certification as a competent cardiothoracic surgeon. Dr Goodheart should enthusiastically endorse his continuation into an additional year of training, supported by extreme mentorship.

CON

**Sandra Starnes, MD**

Dr Goodheart should advocate for the program letting Michael go. Educating the next generation is among the most rewarding and influential aspects of my career as a program director. However, with this comes immense responsibility. These surgeons and educators have accountability to individual residents, the residency program, the patients in their care, and society as a whole. The resident in the vignette has persistent deficits in the Accreditation Council for Graduate Medical Education core competencies of Patient Care (specifically technical skills) and Professionalism. What is our accountability to this particular resident? We do not have a responsibility to graduate an individual resident at any cost. We do have a responsibility to identify correctable deficiencies and provide resources to help correct weaknesses. We also have a responsibility to ensure due process as trainees are protected from arbitrary and bad faith dismissal.\textsuperscript{29}

So, are the deficits correctable and did the program provide appropriate resources? I argue that after 4 years, if a resident is still significantly lagging in technical abilities and demonstrating persistent lapses in professionalism, the deficits are not correctable. Certainly, the program should provide resources such as mentoring, simulation, and appropriate cases for education to advance Michael’s technical skills. However, lapses in professionalism are at the control of the resident and have no place in the field of medicine where we are given the highest trust by patients in our care. Schenarts and Langenfeld\textsuperscript{26} describe the elements of just cause in resident dismissal. These include adequately informing trainees of expectations, having uniform expectations, providing adequate warning for not meeting expectations, appropriate documentation of this warning, and providing an adequate amount of time to correct deficiencies. Following a standard and fair process is critical with resident remediation and dismissal. Formal remediation, which would include a letter of deficiency or probation, depending on the institutional guidelines, must include the identified deficiencies, specific goals and expected outcomes, a timeline for correction of deficiencies, and consequences of not correcting the deficiencies. This must be documented in writing and signed by the resident and program director. All of this seems to have been done appropriately in the current case. Finally, we must consider the individual resident’s well-being. Is this resident best served by remaining in a specialty or program that he is not suited for? We must also consider our responsibility to the training program as a whole. There can be significant deleterious effects of an underperforming resident remaining in the program, with extra work for the remaining residents, and the faculty time that is diverted away while focusing increased time and effort on remediation.

We also have accountability to our individual patients and society as a whole. Under the principle of beneficence, we have an ethical and legal obligation to act for the benefit of our patients. Resident participation in the care of patients is not always in the best interest of the patient. However, society accepts this due to the need to train the next generation of surgeons who will ultimately provide care for them and their families. So, what is the limit of responsibility to train an individual resident who is underperforming? According to Capozzi and Rhodes,\textsuperscript{30} this limit occurs when the risk to patient safety goes beyond an acceptable level. Society governing
physicians significant leeway to self-regulate and when programs graduate a resident, the assumption is that they are competent to practice independently. Capozzi and Rhodes\(^3\) state, “Unless they are prepared to deny an inappropriate certification, they cannot properly wield that decision-making authority.”

So, getting back to our current dilemma. Michael has persistent deficiencies in technical abilities and professionalism. Keeping him in the program produces an unacceptable risk to current patients as well as future patients under his care. Graduation of a questionably competent surgeon also breaches our social contract to self-regulate. It also produces unnecessary stress to the current residents in the program and risks credibility of the program. Our training program’s obligations include optimization of resident education, preservation of patient safety, and maintaining the standards of our specialty.\(^3\) and we must take these responsibilities very seriously. In their article on the legal implications of resident dismissal, Lefebvre and colleagues\(^3\) state that the “program’s responsibility to remediate a trainee’s performance does not supersede its duty to protect patients.” We must be willing to make difficult decisions when it is clear that a trainee will not succeed despite everyone’s best efforts. The program director should advocate for the program letting Michael go.

The current situation is very unfortunate, but is it avoidable? Attrition rates in thoracic surgery residency and fellowships range from 3% to 7%,\(^4\) which is low, but not ideal.\(^5\) In a survey of thoracic surgery trainees, almost 50% screened positive for depression and 25% would not choose the specialty again if given the opportunity.\(^6\) In a recent survey of graduates from US thoracic surgery training programs, 40% pursued additional training. The reason for this was inadequate training in 28% of cases, which represented 10% of all respondents.\(^7\) So, this begs the question, are we doing the best job with resident selection and training? We are still using old methods for resident selection such as standardized test results, personal statements, letters of recommendation and unstructured interviews that have little validity in predicting future performance. Selection science uses validated and reliable process to select best-fit candidates, and has long been used by industry, including more than two-thirds of medium-large organizations.\(^8\) This methodology includes personality testing, grit testing, structured interviews, and situational judgment tests, and has been shown to better predict future performance, improve interrater agreement, and increase diversity. This may be particularly important for integrated residency in which we do not have a history of success from prior general surgery training.

The Accreditation Council for Graduate Medical Education mission is “grounded in the societal contract between the profession and society … [which] grants doctors special privileges, including self-regulation. Physicians’ professional obligations include a commitment to patients and society, and the effacement of self-interest.”\(^9\)

Educating the next generation of thoracic surgeons is not easy, but provides us the opportunity to have long lasting impact on the lives of many future patients. As a program director, I find nothing more rewarding than the graduation of a fully competent surgeon. To have a resident to whom we have made a commitment not succeed is one of the most difficult things we will face as educators. And it’s impossible to not see this as our own failure. Any failure presents an opportunity to learn and grow as individuals and as a specialty. In his John H. Gibbon Jr. lecture, Dr Ed Verrier stated, “We have an old educational system that has worked but we can and must do better.”\(^10\)

CONCLUSIONS

Robert M. Sade, MD

Zeigler’s and Starnes’s arguments demonstrate the difficulty in dealing with problem residents like our fictional Michael. Both discussions are persuasive yet reach opposite conclusions based on the facts presented in the vignette. Starnes believes sufficient remediation and documentation have occurred, leaving Dr Goodheart little choice other than dismissal. Zeigler finds additional support that could offer some hope of turning Michael into a competent cardiothoracic surgeon at the conclusion of his training. Although we know of no data, it seems likely that most cardiothoracic surgeons, whether practicing in academic or nonacademic settings, witnessed a similar case during their own training or later in their careers. We each will find ourselves in sympathy with 1 position the other, perhaps largely depending upon our personal experiences with similar situations.

A subtle point is usually overlooked in discussions of surgical training. Even in the case that residents complete a surgical training program in 6 or 7 years, a judgment of competence is not necessarily implied—a positive recommendation to the ABTS is critically important, but is not a foregone conclusion, as in Michael’s case. The term “graduation” generally carries with it the implication that the graduate has fulfilled all the necessary competencies that the high school or the university requires. Finishing a surgical training program does not carry with it the granting of a diploma or a degree; certification is achieved when competency is determined by passing both parts of the ABTS, leading to Board Diplomate status. Recommendation by the training program to the ABTS that the resident has been judged competent and is ready to sit for the Board examinations is a necessary first step to certification, and that recommendation requires that the judgment (not the determination) of competence has been made by the faculty at the end of the training period, however long it is. Perhaps we should not be using the term graduation to refer to completion of a surgical training program because...
determination of competence is only provisional at that point—the final determination is in the province of the ABTS.

Zeigler and Starnes agree that the program faculty’s responsibility to support residents through to finishing the program is important but is not without limit. Their discussions make it clear that Michael’s case is unique, and that every such situation requires evaluation based on the particular facts of the case. We are grateful to the essayists for exploring and explaining some possible pathways for managing the problem of a questionably competent resident.

Conflict of Interest Statement
The authors reported no conflicts of interest.

The Journal policy requires editors and reviewers to disclose conflicts of interest and to decline handling or reviewing manuscripts for which they may have a conflict of interest. The editors and reviewers of this article have no conflicts of interest.

References

Key Words: education, ethics, professionalism, surgery training