Published in final edited form as:

Ann Thorac Surg. 2013 March ; 95(3): 779–786. doi:10.1016/j.athoracsur.2012.11.017.

HCV Infected Resident: End of Residency, End of Career?

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Keywords

Ethics; Health policy; HCV infection; Professional affairs; Education

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Introduction

Every surgeon faces the possibility of becoming infected by a bloodborne pathogen during the course of an operation. Cardiothoracic surgeons are among those with the highest risk because of the confined, deep spaces in which we operate. The possibility of cross-infection between surgeon and patient has been recognized since the existence of bloodborne viruses has been known, but came into high relief in the early days of the human immunosuppressive virus epidemic of the 1980s.

Hepatitis C virus (HCV) is the most common such infection, affecting 2.7–3.9 million Americans (about 1–1.5% of the U.S. population). [1] The number of cardiothoracic operations carried out annually is well over 300,000, suggesting that cardiothoracic surgeons face roughly 3,000 potential exposures every year. The number of surgeons who become infected is unknown, is probably low, but definitely occurs.[2] The CDC has no guidelines for surgeons who become infected with HCV, but recommends standard precautions for all health care personnel—this would seem especially important in the operating room where the risk of transmission is particularly high. Once infected, a surgeon can transmit the virus to a patient during surgery, but this risk is apparently very low.[3]

The consequences of infection with a bloodborne pathogen are most notably worrisome when the infected surgeon is a resident in training, because the stigma of such an infection

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may affect the chances of the resident finding a position when his training is completed. We present a case of an infected resident and a difficulty faced by his residency director: he must write a letter of recommendation (LOR) to accompany the residents job applications.

The Case of the Unlucky Resident and the Perplexed Director

A resident becomes infected with HCV, probably from an incidental sharp injury during a routine cardiac surgery operation. He is later found to have high HVC RNA titers and cannot participate in the training program for a year while treated with interferon. His titers fall over the course of the year to a level that the infectious diseases consultants declare to be compatible with the resident resuming his place on the CT surgery team, including in the operating room.

The well-liked and respected resident completes his residency successfully and the CT faculty believes he is clinically well-prepared and technically competent to start working independently in either private practice or an academic setting. He still has a low HCV titer, and is deemed by the infectious diseases consultants to be able to operate safely, posing minimal risk to his patients.

His residency director is writing a LOR for job applications. The director believes that anyone who learns that the applicant is HCV positive is unlikely to hire him, perhaps to the point that he cannot get a job at all as a CT surgeon. He also believes that the information about the resident's HCV status is relevant to his job application, so perhaps should be disclosed in the letter he is writing. Should the director disclose the resident's HCV status?

DreslerCarolyn

Pro

I was fourteen years old when I decided that I wanted to find the cure for lung cancer – as a result of a strong family history and heavy smoking. After medical school, I trained for 10 years to develop the expertise to address the research, clinical and surgical treatment of lung cancer. I had high expectations of my thoracic surgical career. Somewhere during my chief residency in general surgery and the surgical oncology fellowship, prior to my cardiothoracic training, my liver function tests became asymptotically elevated. I had been vaccinated for hepatitis B (HBV) and had been tested for HIV – I was glad that I had made it through training without these acquired diseases, but had no idea why the LFTs were elevated in 1987.

Seven years into my real career in academia, which I thought was progressing well, I had blood tests performed for an insurance application. My world fell apart when I received the blood test results in the mail that said “HCV” and positive. This was the end of 1997 – the HCV antibody test first became clinically available in 1991, about 2 years after I had finished my clinical training.

I did not know what to do or who to talk to or how to be treated. Of course I was worried about my health and prognosis, but I was petrified of what it meant to my career. I had trained for over 10 years, and I was just beginning my eighth year of practice. This was very unfair. I thoroughly researched the basic and clinical science, and searched for the best clinician to treat me. I decided I needed legal advice and sought a referral – without disclosing the reason why. I did not tell my employer. The legal advice stated unequivocally that I was required to disclose my HCV status to my employer and patients and that I must not operate. They said they would not represent me further if I did not agree. They also said that they could no longer represent me anyway, as their law firm also represented the Cancer

Center in which I was employed, and the Cancer Center had a prior claim to their services. It was a disastrous time for me.

However, what guided my decisions reflected more my personal ethics than from the legal opinion. I had decided from early in my surgical education, that I would always strive to treat patients how I personally wanted to be treated. In this case, it meant full disclosure of my HCV status, with an understandable explanation (exceedingly low risk of transmission, but possible, as anything in medicine is possible) and the decision would be mine (or my patient's) on whether to proceed based on my (their) values or assessment. With this personal opinion of what I believed was most ethical, I decided that my realistic options were to leave surgery in the US or move to another country that did not have the surfeit of thoracic surgeons as was available in the US who did not have a potentially transmissible infectious disease.

Thus, I enter this ethical discussion today with a strong personal opinion. Now, let us review some of the bioethical opinions from experts in the literature that would support the disclosure of the viral status of the cardiothoracic resident in the directors LOR. There are many bioethical models of ethics that can be drawn upon to support this recommendation.

"First do no harm" or more precisely "I will do no harm or injustice to them" derives from the Hippocratic Oath.[4] This oath translates into the concept of non-maleficence, meaning that physicians will not provide the patient any treatment or intervention that is intended to harm or injure them. Related to non-maleficence is the concept of beneficence[5]:

- One ought to prevent evil or harm
- One ought to remove evil or harm
- One ought to do or promote good

These concepts of non-maleficence and beneficence are core concepts for all physicians and are deeply engrained into our behavior – probably well before our entry into medical school. Most physicians are driven in their careers to help their patients to improve or resolve their medical conditions to provide a more healthy and/or prolonged life. Our primary obligation to patients is to be beneficent.

However, two other concepts within biomedical ethics must be considered: the balance between autonomy and paternalism. The importance of autonomy is best illustrated by the progressively focused attention on informed consent over the past decades. When a truly informed consent is obtained, the patient is fully informed of and understands the risks and benefits of the proposed treatment or procedure. The information or explanation is provided in a language or method that provides for as complete understanding of the issues as the patient is capable of achieving. For purposes of this discussion, it will be assumed that the patient is competent and of average cognitive capabilities. The patient then makes the decision for participation based on his/her values and judgment. Informed consent has become much more complicated and longer over the years. As a result, there is much interest and research into the understandability, literacy competency complexity, etc. that occur with the intent to obtain a valid informed consent.

Contrary to the idea of autonomous informed consent, and more pervasive historically and culturally, is the concept of paternalism. Basically, with a paternalistic approach, the physician makes the decision concerning the appropriate intervention for the patient – with the assumption and intention that it is a beneficent intervention. Traditionally, paternalistic decisions were made because it was felt that the physician knew what was the best course of action for each patient and the concepts or issues might be too difficult, confusing, alarming

or not understandable by the patient Beauchamp and Childress define paternalism as “the intentional overriding of one persons preferences or actions by another person, where the person who overrides justifies this action by appeal to the goal of benefiting or of prevention or mitigating harm to the person who preferences or actions are overridden.” They further divide paternalism into ‘hard’ and soft’ categories. Within ‘soft’ paternalism, the physician makes decisions for a compromised patient, for example, as a result of depression or addictions – but the decisions are consonant with the patients’ values. In contradistinction, with ‘hard’ paternalism, the decisions made are not consonant with the values of the intended beneficiary- the patient. Thus, there is a spectrum of decision-making for the patient between fully informed (and understood) consent and a paternalistic decision made for the patient. It is critical to remember that the entire spectrum of decision-making is to provide the most beneficent outcome for the patient – there is no intent of maleficence.

To understand the question of autonomy versus paternalism concerning disclosure of viral status, a national survey in 2000 queried 2353 adults in the United States.[6] To the statement “It should be mandatory for doctors and dentists who are infected with HBV or HCV to tell their patients before they provide medical care”, 82% of adults responded that they either strongly agree or agree. Americans want to know if their healthcare providers have a potentially communicable disease (89% wanted the HIV information). The conclusion of this article was that improved public education and communication is required to increase the knowledge of the multitude of steps that are taken to prevent such transmission and that the risk is extremely low. But, Americans want to know the viral status of their surgeon.

Next to consider in this bioethical discussion, is the approach to the compromised physician, whether by mental health diagnosis, alcohol or other substance abuse, or other diagnosis, such as a communicable infectious disease. It is well established in medical licensure and legal arenas, that physicians compromised by mental health or addiction diagnoses have their clinical practices monitored or limited to ensure patient safety. For communicable diseases there are guidelines and recommendations for physicians with such diagnoses as HBV, HCV, or HIV. The Society for Healthcare Epidemiology of America (SHEA) in 2011 provided a comprehensive summary of such guidelines that should be considered within the context of all impaired physicians.[7] The three infectious diseases are considered separately as the data and issues do vary between the three types of viruses. To briefly summarize background information in this comprehensive document, specifically in reference to HCV:

- The prevalence of HCV is still rising
- There is no vaccine for HCV
- Provider to patient transmission is very uncommon (rate estimated at 0.13%)
- Rate of transmission of HCV is intermediate between HBV (higher) and HIV (lower)
- The rate ‘may be complicated by low rate of voluntary reporting’
- Of the known providers transmitting the disease to patients, 3 of 7 were cardiothoracic surgeons
- There is no known level of HCV viral titer that predicts higher or lower rates of transmission (there are such levels in HBV and HIV)
- UK and European Consortium state that HCV-infected providers cannot perform exposureprone procedures.

On the basis of this background information, SHEA makes several recommendations for the healthcare provider with HCV. Of pertinence to this discussion of the HCV infected resident, if the viral load is 10^4 genome equivalents/ml, it is permissible for the surgeon to perform Category I, II and III (III being the most invasive, encompassing cardiac and thoracic procedures) with double glove technique and frequent glove changes. Five other recommendations to follow are similarly made that include:

1. Not detected as having transmitted infection to patients
2. Advice from Expert Review panel about continued practice
3. Twice annual assessment of viral burden to confirm 10^4 genome equivalents/ml
4. Follow-up by expert personal physician
5. Compliant with written contract concerning responsibilities

IF the surgeon has HCV viral titers above 10^4 , they are NOT to perform Category III (standard CT procedures), despite usual infection control measures.

More recently, the CDC published their recommendations for HBV infected healthcare providers.[8] This document is an update from their 1991 guidelines on the same topic, and although it does not explicitly cover HCV, the issues are similar enough for consideration. The 2012 document reverses the 1991 recommendation that patients are informed of their healthcare provider's viral status but re-affirms that viral positivity should not disqualify the healthcare provider from the practice of their profession. The 2012 CDC guidelines are otherwise not different from the SHEA guidelines above – there is an emphasis on appropriate infection control measures, knowledge of viral titers, non-curtailing of professional practices (if low titers) in exposure-prone procedures and expert review panel oversight.

What do these recommendations mean for our cardiothoracic resident completing his training and searching for a job? The resident underwent treatment and although the viral titers are not provided, his infectious disease program said that they were 'low' and he was 'deemed' to be able to operate safely, posing minimal risk to his patients'. In 2012, these steps by his cardiothoracic training program are not fully compliant with the 2011 SHEA or 2012 CDC recommendations. If the resident is to follow the recommendations as above, he would need to work with his new setting -whether academic or otherwise—to establish the indicated oversight. Thus – who should tell the new employer? The resident or the director? Arguably the director and the training program have not fully complied with the current recommendations – or, the brief case presentation has not delineated them. The CDC guidelines also stress the importance of respecting confidentiality for the healthcare provider as much as possible. However, as mentioned above – legal considerations of the 'impaired' physician are clear. Appropriate oversight and review of the adequacy of the mental health, addiction – or viral status is critical. Per the concern in the SHEA guidelines, many physicians choose to not volunteer their positive viral status, due to the very real concern over their viability to continue their practice, similar to the concerns from impairment from mental health or substance abuse. The director has a duty to fully represent the qualifications and limitations of the resident under his purview for conditions that may impact patient care, whether it is drug abuse or a communicable disease. This duty to disclose the resident's HCV status is based on a higher principle than a legal responsibility. Rather, it is an issue of honesty and transparency with an eye towards the director's fiduciary responsibility to both the resident and future patients—to train not only a technically facile surgeon, but an ethical one as well. One hopes that frank conversations about such ethical decisions had be occurring and thus, not news to the resident The director needs to disclose in his letter of

recommendation, that the resident is HCV positive and delineate how the program has instituted measures to ensure patient safety.

This answers the question posed by the case study. However, to go further, the resident has a duty to provide beneficent treatment in the context of an autonomous, i.e., fully informed consent which includes disclosure of his HCV viral status to his patients. This disclosure is not supported by the SHEA or CDC recommendations. However, as discussed above, the surgeon undertaking the highest category of exposure-prone procedures has a duty to fully inform his patients of the risks, inclusive of the information of the extremely low risk of transmission of the virus, despite its low risk. This 'deliberative model' of surgeon-patient decision making is therefore a collaborative effort, fully exploring the patient's fears and concerns not only of the significant surgical procedure but also of the surgeons transmission risk, and is based on trust [9] The surgeon does not have the right to make the paternalistic decision that s/he knows the values and judgments of the patient better than herself/himself. To decide otherwise denigrates the competency of the patient and is destructive to the fiduciary relationship that is so critical to physician-patient relationships. Profound empathy for the resident should not cloud the bioethical path of disclosure.

KentMichael S.WhyteRichard

Con

Approximately 180 million people worldwide are infected with HCV[10]. The sequelae of chronic infection are significant: end-stage liver disease, hepatocellular carcinoma, and death. As a result, HCV infection is the most common indication for liver transplantation in the United States and Europe[11].

The most common pathway for transmission of HCV is intravenous drug use, followed by sexual contact. However, iatrogenic transmission of HCV is well-recognized, specifically through blood transfusion or in dialysis centers[12]. Transmission from infected patients to health-care workers (HCW), and from HCW to patients, as described in this case, are distinctly uncommon. However, so-called exposure-prone procedures, defined as invasive procedures in which the blood of patient and HCW may come into contact, are a well-recognized pathway for transmission of HCV.

Cardiac surgery is the prime example of an exposure-prone procedure, and several case reports have documented transmission of HCV from patients to surgeons, and from the infected surgeon to subsequent patients[13,14]. Given the high prevalence of blood-splash and needle stick injuries during open-heart surgery, it is no surprise that cardiothoracic surgeons are more likely to transmit HCV to patients than other health-care workers[15]. Indeed in a retrospective investigation of a HCV infected cardiac surgeon, the risk of transmission to a patient during openheart surgery was 6%. In contrast, the risk of a HCW developing infection after percutaneous exposure to HIV-infected blood is only 0.3%[16].

The risk of transmission of HCV from a cardiothoracic surgeon to a patient need not, however, be this high. For example, the rate of needle-stick injuries is known to be higher among less-experienced surgeons[17]. In addition, the risk of transmission will depend on the specific operation in question. In the Olsen study discussed above, the infected surgeon performed cardiac, vascular and pulmonary surgery, in equal proportions. While the rate of transmission was 6% in cardiac surgery, it was 0% in non-cardiac surgery. Finally, the transmissibility of HCV from patients to HCW (and presumably the converse as well) increases with a higher viral load[18]. The surgeon in the Olsen study was not aware that he was infected and consequently was not receiving antiviral treatment. Had the surgeon received appropriate treatment, it is likely that the transmission rate would have been far lower than 6%, although not zero.

Two other issues are relevant to the current case. The first regards the significant recent advances in treatment for HCV. For years the standard treatment involved the use of interferon alpha in combination with ribavirin. Standard treatment led to cure rates in treatment-naïve patients of 40–50%[19]. Treatment time was lengthy (48 weeks) and associated with significant toxicity and low rates of compliance. However in 2011 two new drugs (telaprevir and boceprevir) were approved for HCV patients. These agents impair viral replication and are associated with a sustained virologic response (i.e. cure) in up to 75% of patients treated[20]. In another study, the rate of sustained virologic response was as high as 86% for those who relapsed after standard treatment[21]. These studies not only established the efficacy of protease inhibitors, they also showed that treatment times could be 50% shorter in certain patient populations. Several other agents are expected to be available for commercial use within the next few years, with early studies indicating cure rates approaching 100%[22,23,24].

The final issue concerns the official policy of health care workers infected with HCV. In Europe, guidelines vary widely. In the United Kingdom, infected health-care workers are barred from performing exposure-prone procedures, although there is no mandatory testing. In Ireland, mandatory testing for HCV is required to perform invasive procedures, whereas no policy for HCV infected health-care workers has been established in the Netherlands[25]. In the United States, the Centers for Disease Control website states “There are no CDC recommendations to restrict a health care worker who is infected with HCV. The risk of transmission from an infected health care worker to a patient appears to be very low. All health care personnel, including those who are HCV positive, should follow strict aseptic technique and standard precautions, including appropriate hand hygiene, use of protective barriers, and safe injection practices[26].” In the US, therefore, there is no mandate that a HCV infected surgeon limit his or her practice, or inform patients of their health status.

The Present Case

In the present case, we are asked to determine whether the residency director should disclose the HCV status of a highly-regarded cardiothoracic resident in a LOR. It is clear that disclosure of this information will likely result in the resident becoming unemployable as a cardiothoracic surgeon.

We strongly believe that this information should not be disclosed in a LOR. It is important to note that we are not being asked to render an opinion on the national policy for health care workers infected with HCV. This remains a matter of vigorous public debate[27,28] and is outside the scope of this article. The question in this case revolves around the specific obligations of the residency director in writing a letter, and whether confidential health information should be disclosed.

There are no official guidelines regarding LORs for surgeons concluding their training and seeking employment. However, guidelines do exist for medical school deans letters[29], and for applicants to emergency medicine residencies[30,31]. These guidelines indicate that a writer of such a letter has an ethical duty to be honest and accurate, and to limit and acknowledge bias. The writer does not have an obligation to write a flattering letter, although that may be the expectation of the resident. However, the writer clearly has an obligation to his or her profession, and to the institution to which the resident is applying. In this particular case, the residency director will surely wonder whether writing a LOR that allows the resident to begin a cardiothoracic practice will put future patients at risk for HCV infection.

The resident in this case is both a physician seeking employment and a patient. As a patient, his HCV status is private health information and is protected by the Health Insurance

Portability and Accountability Act It is reasonable to assume that the resident would not want this information disclosed, and as a patient he has every right to expect this.

However the residency director is not the resident's healthcare provider, and he is asked to write a letter regarding the resident's capacity to practice cardiothoracic surgery. Given the obligations of letter writers discussed above, we would argue that in certain circumstances confidential health information should be disclosed in a LOR. For example, if the resident contracted HCV by illicit drug use, or was non-compliant with antiviral therapy, the residency director would be ethically bound to discuss this. These health issues reflect on the professionalism of the resident, and have a direct impact on patient safety.

But in this case, there are no issues that would put patients at risk. The resident is widely regarded as professional and technically competent, and contracted HCV while providing patient care. In fact, the resident was deemed safe to operate on patients at the institution of the program director. Given this, It seems inconsistent, if not hypocritical, that the resident would be allowed to care for other physicians' patients while in training but not his own.

Furthermore, there is no national policy regarding health care workers infected with HCV. HCV infected surgeons are not restricted from practicing nor do they need to disclose their health status to patients. In general, private health information should not be disclosed in a LOR, unless there is a compelling reason to do so. In this case there is no such compelling reason.

There is a reason why health information is protected by law. Patients may be denied rights or face discrimination as a result of such disclosures. In this case, the HCV resident is likely to be rendered permanently unemployable as a cardiothoracic surgeon. And the reason for this is the person reviewing the resident's letter, whether it be a physician or an administrator, is likely to know very little about HCV infection, its treatment, or policies regarding infected health care workers. Indeed the poor knowledge base of surgeons regarding HCV has been welldocumented[32]. It is far easier to deny employment to such an individual than to thoroughly research the subject and understand the national policy regarding infected physicians.

It is important to note that the resident also has a responsibility to disclose his HCV status, when appropriate. Hopefully this well-trained resident will find employment, and this information will be disclosed to the occupational health office at his new institution. This is not "passing the buck" on the part of the program director. The resident is widely regarded as professional, and it is reasonable to expect that he will disclose this information when asked. Those in the occupational health office will know the policies regarding HCV infected health care workers, and in specific that infected physicians are not proscribed from engaging in exposure-prone procedures. Appropriate precautions, whether this be periodic surveillance serology or some other measure, will certainly be taken.

Given the advances in treatment for HCV, there is a high likelihood that the resident either has been cured, or will be with new agents now available. There is no reason to think that patients cared for by the resident will be placed at unnecessary risk. Inappropriate disclosure of his HCV status in a LOR will preclude the resident from finding employment, even though he was considered safe to operate while in training. The residency director should understand the consequences of such disclosure, and respect the resident's right to privacy.

SadeRobert M.

Concluding Remarks

The central issue of this debate is whether the director of the residency program should report the resident's HCV status to potential employers. A substantial part of both discussions concerns ethical and scientific issues that are not directly relevant to this point, rather, they are related to the reasons why the patient should or should not know of the surgeons HCV status, the obligations of the resident to his present and future patients, and recent improvements in the treatment of HCV infections.

At the heart of the debate over what the director should do lies the issue of telling the truth. The question of whether honesty requires the director to disclose potentially harmful information is reminiscent of the ancient conundrum posed by St. Augustine in the 5th century—should one disclose to the authorities the location of an innocent fugitive whom one wishes to protect? This is the classic case questioning whether it is ever permissible to lie. Augustine's answer was that it is not permissible to lie, but it is permissible to refuse to disclose the information. Thomas Aquinas summarized the Augustinian position in this way: "Therefore it is not lawful to tell a lie in order to deliver another from any danger whatever. Nevertheless it is lawful to hide the truth prudently, by keeping it back, as Augustine says." [33] The debate over the importance of honesty when the truth can do harm to oneself or others has continued over the centuries; the most prominent contemporary authority on truth-telling is Sissela Bok, who has written extensively on the subject. With regard to this case, perhaps her most salient words are those in the last sentences of her wellknown book, *Lying*: "Trust and integrity are precious resources, easily squandered, hard to regain. They can thrive only on a foundation of respect for veracity." [34]

Addressing the question of the director's dilemma, Dresler is quite clear that the director must be honest and transparent in communicating with potential employers, so has a duty (which is stronger than an obligation) to fully inform potential employers of the applicant's qualifications, including any factors that limit his professional activities. Kent and Whyte, are also clear in asserting that the director has no such duty or obligation. If patients should be informed of their surgeons' viral status, it is the surgeons' responsibility to disclose it, they say, and the well-trained and respected resident in the current case can be trusted to take appropriate steps to protect his patients.

The essayists miss some important points, however. Dresler does not mention the stigma attached to HCV infection and the likelihood that future employers will consider the opportunity cost of learning the implications of a surgeon's HCV infection to be too high, so will simply reject the application. More importantly, however, she does not consider an important limitation of her argument: viral infections are known to be transmitted from patients to surgeons and from surgeons to patients, the rates of which have been estimated to be very low but are not known accurately. Moreover, the incidence of HCV infection is estimated to be 1–1.5% in the U.S. population,[1] so it seems likely that 1 or 2 of the approximately 125 cardiothoracic residents finishing their training each year (not to mention many attending surgeons) are HCV positive and do not know it. The likelihood that a surgeon is unknowingly HCV positive and therefore poses a risk to his patients is unknown; it is quite possible that the resident in this case poses no greater risk to his patients than is posed by other residents who have cryptic infections—both risks are extremely small. If Dresler's arguments are correct, we could protect patients more fully by identifying the surgeons who are HCV (and HBV and HIV) positive, accomplished by requiring blood tests on all residents who are about to finish their training (or, by extension, on all practicing surgeons); this would be overly intrusive, however, with low cost-benefit balance. The CDC has considered such questions and has decided not to address them because of the paucity of reliable data upon which to base recommendations.

Kent and Whyte argue that the opportunity cost of seeking information about the implications of a surgeon's HCV infection is likely to be avoided by future employers, resulting in immediate rejection of the resident's job application, and therefore is a reason not to mention the resident's viral status. They do not, however, consider the possibility of disclosing the resident's HCV status in the LOR, in the interest of honesty and transparency, and explaining that the resident, on the advice of infectious diseases consultants, safely operates without limitation (save perhaps oversight by an expert review committee) on patients in his training institution's cardiothoracic surgical service. Given that information, some might reject the resident's application out of hand, but it seems likely that some would not, considerably reducing the likelihood that the resident would be unable to find a job. The authors also do not consider a practical implication of withholding information: the possibility that the reputation of both the director and his program will be damaged if the resident's HCV status is not disclosed and is later discovered by the program that hires him. Reputations for honesty and reliability have suffered because of similar situations.

Unfortunately, the data that could settle some of these questions are not available, and we are left with the need to strike a balance between risks of viral transmission to patients that are very low and the risk of joblessness for the resident that is not certain, but seems far from zero. Surgeons have many obligations, but caring for their patients is their paramount (though not absolute) responsibility. They also have a responsibility, albeit a lesser one, to ensure that years of training of the individuals under their purview are not wasted and that a well-trained surgeon is not lost to the domain of surgical manpower. It seems that neither side in this debate has won decisively—the director must weigh the many factors supporting both horns of the dilemma and make his decision.

Acknowledgments

Dr. Sade's role in this publication was supported by the South Carolina Clinical & Translational Research Institute, Medical University of South Carolina's Clinical and Translational Science Award Number UL1RR029882. The contents are solely the responsibility of the authors and do not necessarily represent the official views of the National Center For Research Resources or the National Institutes of Health.

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