Raising Awareness of the Hidden Curriculum in Veterinary Medical Education: A Review and Call for Research

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ABSTRACT

The hidden curriculum is characterized by information that is tacitly conveyed to and among students about the cultural and moral environment in which they find themselves. Although the hidden curriculum is often defined as a distinct entity, tacit information is conveyed to students throughout all aspects of formal and informal curricula. This unconsciously communicated knowledge has been identified across a wide spectrum of educational environments and is known to have lasting and powerful impacts, both positive and negative. Recently, medical education research on the hidden curriculum of becoming a doctor has come to the forefront as institutions struggle with inconsistencies between formal and hidden curricula that hinder the practice of patient-centered medicine. Similarly, the complex ethical questions that arise during the practice and teaching of veterinary medicine have the potential to cause disagreement between what the institution sets out to teach and what is actually learned. However, the hidden curriculum remains largely unexplored for this field. Because the hidden curriculum is retained effectively by students, elucidating its underlying messages can be a key component of program refinement. A review of recent literature about the hidden curriculum in a variety of fields, including medical education, will be used to explore potential hidden curricula in veterinary medicine and draw attention to the need for further investigation.

Key words: hidden curriculum, veterinary medical education, inter-professional relations

INTRODUCTION

The hidden curriculum has been recognized as having a profound influence on how students in medical fields learn to be professionals.1–3 Defined as unintentionally imparted information about the culture of an institution,1,4,5 the hidden curriculum provides students with cues about how to cope and thrive within a particular community of practitioners, staff, and other students.6,7 Students learn tacit information about what it means to be a medical professional from the relationships they experience, behaviors exhibited by teachers and peers, the colloquial terms that are used within the institution, the distribution of resources within the institution, and the manner in which policies are (or are not) enforced. This tacitly conveyed information about the realities of everyday life in the clinic or hospital often conflicts with the ideals that are overtly taught by the institution,6,8–12 and faculty members are typically unaware that the attitudes, behaviors, and values they exhibit contribute to this conflict.12 When faced with this pedagogical mismatch, students are most likely to internalize the information provided by the hidden curriculum.12,13 Because this tacitly conveyed information permeates all aspects of the educational experience and can have such a lasting impact on what the students experience, it is of value to explore how the hidden curriculum relates to other components of the curriculum.

The hidden curriculum is often defined by illustrating its relationship within a tripod of educational pillars. The formal curriculum classically represents what an institution has planned to teach.1,5,7 The informal curriculum can be thought of as what is being taught or the delivery of the formal curriculum5,7 (although this term has also been confined to the unscripted teaching that occurs in clinics1,5). The hidden curriculum captures what is being experienced by the students5 (including information implicitly conveyed by institutions, teachers, and peers about the values and moral judgments of the profession). Although it can be useful to separate the three, in practice, the lines between them are indistinct. The terms informal and hidden curriculum are often used interchangeably2,7,12,14 and inexplicit information about what is valued by the institution (as evidenced, for example, by the amount of class time or other resources awarded to each specialty) can be gleaned from the formal curriculum as well. A variety of unintended educational outcomes across diverse educational domains have been elucidated as a result of research into the hidden curriculum. These range from positive institutional messages about the impor-
tance of community service\textsuperscript{15,16} to the negative impacts on society of perpetuating social inequality and transforming altruistic medical and veterinary students into less patient-centered professionals. Despite the challenges in defining such an elusive and evolving concept, there is evidence in a variety of fields that identifying the clearly but unconsciously transmitted messages within an educational program is a necessary component of its self-evaluation and growth. To better illustrate the multifaceted and complex nature of the hidden curriculum, the following will provide a brief history and examples of hidden curricula from a variety of educational fields. These examples will then be examined for possible applications in the field of veterinary medicine.

**THE MANY FACETS OF THE HIDDEN CURRICULUM**

The term hidden curriculum has been credited to a researcher named Philip Jackson,\textsuperscript{17} who in 1968 reported a set of unwritten rules that grade school students must follow to succeed in the classroom. These expectations had no relationship to educational goals, but were necessary for progression through the public education system. Jackson identified a list of social and behavioral attributes that were being inadvertently taught in the classroom, examples of which included waiting quietly, keeping busy, showing allegiance to both teachers and peers, and being courteous.\textsuperscript{17} Jackson’s contemporaries broadened the definition to include the subliminal perpetuation of societal race, gender, and class inequities,\textsuperscript{18} which continue to be recognized and reported in educational research today.

In a study of female African-American students enrolled in graduate programs in sociology, it was reported that hidden curricula included rewards for competitive behavior, a focus on grades above all other skills, and a tendency among faculty to associate these students with affirmative action rather than with particular areas of study.\textsuperscript{19} Similarly, a study about women admitted to a medical school about the importance of patient communication revealed that undergraduate medical students receive considerations in the field of veterinary medicine.

A study that used classroom observations to explore students’ perceptions of science illustrated that science classes in particular reinforced the notion that there is only one correct answer to any given problem and, in doing so, failed to demonstrate conflicting theories or hypotheses that have been ultimately disproved.\textsuperscript{22} The author concluded that what the students were tacitly learning about science was that scientific knowledge has special value and represents irrevocable truth and that the only reality that is deserving of academic pursuit is the “observable everyday world.”\textsuperscript{22(p.375)} Likewise, exploration of the hidden curriculum in end-of-life care revealed that undergraduate medical students receive conflicting messages during their training.\textsuperscript{9,10,23} Although they are taught during the didactic portion of medical school about the importance of patient communication in end-of-life care, what they observe during their clinical rotations reinforces the black-and-white nature of science as truth.\textsuperscript{10} The students reported that they rarely observed attending physicians’ communication skills and that they were rarely assigned a dying patient under the pretense that there was “nothing to learn.”\textsuperscript{10(p.648)} It was argued that the students were being taught that researchers are the “rock stars of academic medicine”\textsuperscript{23(p.632)} and that spending time with patients is not as valuable as the endeavor of scientific discovery. As illustrated in this last example, a complex intertwining of science, ethics, business, and humanities exists in medical education, making it a rich landscape for discussions of possible hidden curricula and their associated consequences. The following defines the hidden curriculum as it relates to medical education, particularly with regard to the impact of the individual teacher.

Recent evidence shows that students are less patient-centered when they graduate than when they entered medical school.\textsuperscript{24} As the discussion has turned to whether formalized ethics courses fill the perceived need to train empathic and ethical doctors, it has been argued that a veiled process of “replicating the culture of medicine” is responsible for the way in which patients can be transformed into “objects of work and sources of frustration and antagonism” by faculty members and students alike.\textsuperscript{6(p.860)} The idealistic qualities of patient centeredness and ethical behavior that are expected of medical school applicants can be supported by positive role models\textsuperscript{25} but can also be eroded by role models who impart, in addition to the formal curriculum, “bad habits, inappropriate behaviors and questionable attitudes.”\textsuperscript{4(p.21)} Examples of some of these inappropriate behaviors have been described in a qualitative study conducted in one medical school in the United Kingdom and include teaching by humiliation, perpetuating traditional hierarchies, and being uncommitted to teaching.\textsuperscript{22} While the hidden curriculum has been viewed as “a set of influences that function at the level of organizational structure and culture,”\textsuperscript{22(p.404)} it is clear that individual teachers play an important role in perpetuating these influences and are likely unaware that they are doing so.\textsuperscript{4}

In an article about the hidden curriculum within the medical specialty of orthopedics, the teacher’s role in the...
hidden curriculum was described in this way: “we are teaching far more than we know. Every word we speak, every action we perform, every time we choose not to speak or act, every smile, every curse, every sigh, is a lesson in the hidden curriculum.”4(p.21) While these mannerisms may seem subtle, the messages contained within them are not. Every time we teach, whether as a representative of an institution or a representative of a discipline, we are unconsciously communicating a hidden curriculum. Because it is a significant component of what our students learn and has been illustrated to have the ability to shape the future of fields of study, it is worth exploring the potential tacit information conveyed in the field of veterinary medicine.

**HIDDEN CURRICULA IN THE FIELD OF VETERINARY MEDICINE**

Veterinary medical education is just beginning to explore its own hidden curricula. Despite a paucity of published information about what students are tacitly learning about their chosen profession as they study veterinary medicine, some of the themes previously identified in this paper are starting to be addressed; perpetuation of traditional views about gender, the value of scientific knowledge over communication skills, and a decline in the importance of altruism for first-year veterinary students compared with graduates. To initiate this important conversation, the following examples draw on literature from our field and others as a means of examining the impact of hidden curricula on our students and our profession.

The shift in veterinary medicine in English-speaking countries from a male-dominated to female-dominated profession14,27 has evoked discussion about where we stand with regard to institutional beliefs about traditional gender roles. In a study that surveyed veterinary students and faculty about professionalism in a veterinary school in England, the “feminization of the profession” was identified as a positive contribution to the academic environment as female study participants ranked interpersonal competence as more important compared to their male counterparts.27 This skill set was viewed as imperative for the future success of the profession. In contrast, the National Commission on Veterinary Economic Issues (NCVEI) report on leadership in the field of veterinary medicine identified a lack of female leaders in academia (despite the recent gender shift) and pointed to the hidden curriculum as the “strongest educator” with regard to this deficit.14(p.1065) In keeping with literature from other fields of academic pursuit,1,4,19,20 the lack of female leadership in veterinary medical education is not part of the formal curriculum, yet sends a strong message to both male and female veterinary students about what personal qualities are acceptable for leaders in our profession. The cause of this phenomenon has not been explored in detail in our field but has been considered in other medical specialties in light of societal expectations regarding motherhood. In a report on the hidden curriculum in the medical specialty of orthopedic surgery, female candidates were deterred from pursuing careers as orthopedic surgeons in part because of a perceived incompatibility with motherhood.4 Similarly, female Australian undergraduate medical students reported learning about which specialties would not be available to them if they chose to have children.1 In each of the reported examples above, identifying the anti-family hidden curriculum allowed misperceptions to be addressed and, in the case of one orthopedic medicine specialty program, it resulted in an increase in the retention of both male and female specialists.8 It is certainly feasible that research into our hidden curricula about gender roles could result in similar interventions that would improve quality of life for diverse members of our profession.

As was illustrated in an article about the hidden curriculum in secondary education,22 the idea that scientific facts hold special value over other life skills has been reported as a source of crisis in diverse fields,2,6,10,14,24 including our own. Veterinary faculty and students alike unanimously ranked technical competence above interpersonal competence as the aspect most important to the veterinary profession in a previously mentioned study performed in England.27 The “stigma and secrecy”14(p.1065) associated with self-improvement were seen as barriers to individuals seeking formalized training in interpersonal skills, communication, and time management. Similarly, it has been suggested that opportunities to observe good communication skills with patients are lacking in the informal curricula of undergraduate medical schools. The tacit message points to the fact that there is no reward, financial or otherwise, for spending time with patients other than what is clinically necessary.9,10,23 While medical education is directing research and resources toward understanding the impact of the hidden curriculum on the training of more patient-centered doctors, understanding of the concept of the hidden curriculum is just beginning to shed light on this issue in veterinary medical education. This is an important deficit in light of the ethical and psychological issues that veterinarians face on a daily basis.

In the previously cited study that surveyed students and faculty in an English college of veterinary medicine about aspects of professional conduct, the authors identified a dramatic decline in the importance placed on altruism when comparing freshman responses to those of final-year students.27 The authors of the study identified the hidden curriculum as responsible for contributing to this surprising drop in students’ desires to put the interests of others before their own and called for further exploration into this aspect of veterinary medical education. The institutional support for altruistic activities like volunteering in no-cost clinics15,16 has been proposed as an improvement to undergraduate medical curricula but the degree of influence that such an intervention might have has yet to be determined. Like our counterparts in medical schools, the future of both the public perception of our profession and our own emotional well-being will rest in learning to see our patients/clients not as a burden but as a source of reaffirmation. If we teach this concept but do not believe it ourselves, the students will sense the inconsistency in the message.

In a field where it is likely that scientific fact is valued over immeasurable elements like human emotion, we struggle with issues like how to deal with individual responses to the grief that can accompany euthanasia.28–31 While the hidden curriculum has been reported to under-
value knowledge about the process of death and dying in medical education,\textsuperscript{10} we have not yet explored tacit messages that veterinary students learn from us about the death of a pet, an animal used in research, or an animal raised for food. Does our focus on scientific fact fail to address or validate the day-to-day emotional experiences of our colleagues and ourselves? As in other fields, do we unconsciously transmit to our students that the psychological impact of our job is not a concern? And, as has been reported in human medical specialties, are these hidden messages preventing recruitment and retention of caring individuals into our field? Is the lack of diversity among veterinary faculty members and veterinarians in general\textsuperscript{52} preventing recruitment and retention of talented individuals from all walks of life? These questions are currently being addressed by the NAVMEC Roadmap for Veterinary Medical Education in the 21st Century\textsuperscript{53} as professional competencies, like diversity and leadership, are integrated into formal curricula. However, the choices that institutions make with regard to implementation and faculty buy-in will have an impact on the hidden curriculum. Because most of what students learn about professional values is tacitly conveyed,\textsuperscript{11} it will be imperative to include the hidden curriculum in research into the impact of these changes. While there appear to be obvious benefits to uncovering the hidden messages that veterinary students (and prospective students) receive, it is important to question whether there are risks to pursuing such information.

**SHOULD THE HIDDEN CURRICULUM BE MADE EXPLICIT?**

Revealing the hidden curriculum means recognizing that much of what students and faculty know is “grounded in interactions that take place outside formally identified learning environments”\textsuperscript{26}(p.404) and acknowledging that all teaching takes place within communities with established moral and cultural norms. This process goes beyond analysis of student test scores, updated content, and teacher evaluations. Seeking out the hidden curriculum requires venturing into the heart of who we are as human beings. It is a process of exploring our own values, since it is our personal beliefs and attitudes that are being transmitted as part of the hidden curriculum. Exposing this aspect of our role as teachers is not without risk. For example, a qualitative study that explored what medical students know about the hidden curriculum revealed that interactions with other students was a significant source of learning about the culture of practicing medicine.\textsuperscript{5} This begs the question of the consequences of actively investigating the hidden curriculum as taught by other students. Would attempts to do so place limits on students’ interactions with one another and impinge on their freedom to develop their own professional personas? Likewise, revealing and formalizing the hidden curriculum by way of forcing compliance with what is thought to be the ideal medical professional places unrealistic expectations on students and faculty alike. On the other hand, it has been shown that when students learn through observation and participation in a community of practice, this process is susceptible to misinterpretation.\textsuperscript{7} Students may not fully understand what they are seeing, because they can only view the situation through the lens of their own previous experiences. Unless the instructor allows for opportunities to reflect and discuss experiences (possibly providing an opportunity to confront the hidden curriculum), he or she may never be aware of misinformation or misinterpretation that has occurred.\textsuperscript{7} Ultimately, it is up to each institution and each teacher to decide on the risks and benefits of exploring the hidden curriculum. The unique ethical considerations that we face as teachers in the field of veterinary medicine make it particularly important for us to reflect on the tacit information that we may be conveying as we execute our craft. But if even we are not aware of our own hidden curricula, how can we determine what it is that we are teaching our students? The following are some suggestions for evaluating the contents of the hidden curriculum.

**METHODS FOR UNVEILING THE HIDDEN CURRICULUM**

Several recommendations have been made for identifying the hidden curriculum as it applies to training in medical education.\textsuperscript{3–5,24,26} While only one of these methods was specifically developed for studying education in veterinary medicine,\textsuperscript{3} many of the concepts could be applied more broadly. The following provides examples of mechanisms by which institutions and/or individuals may consider exploring the influence of the hidden curriculum within their own programs.

Because administrators and faculty are likely to be firmly engrossed in the culture of the institution, aspects of the hidden curriculum may be considered to be part of the normal day-to-day function of the institution and thus be unapparent. It stands to reason that an appropriate source of information about hidden curricula would be individuals who are new to the institution and, better yet, new to the field. First, it is important that teachers pay attention to the perceptions of students who are new to the institution and, better yet, especially those who have diverse backgrounds.\textsuperscript{6} New students have not had enough time to become enculturated and to internalize the norms of the institution; they have more “lay-like” reactions to statements from seasoned veterans of the field and serve as “an important barometer of the presence and content of the hidden curriculum.”\textsuperscript{6}(p.868) Second, a validated instrument is key to being able to gain access to information that is specific to the hidden curriculum. A group of researchers used the concept of a cultural web to reveal aspects of the hidden curriculum in a newer veterinary medical program in the UK, which they found to be reflective of key components described by their counterparts in medical undergraduate education.\textsuperscript{5} Although this study revealed key aspects of the program that contributed to the hidden curriculum, it did not explore whether students became less client-centered as they progressed through the veterinary curriculum. In contrast, a survey was developed and validated that measured the degree of patient-centeredness taught to medical students at 10 different medical schools as a result of the hidden curriculum.\textsuperscript{24} Although this set of questions was specific to the experiences of medical students, it could easily be adapted for students studying veterinary medicine. As an example,
a survey question that asks medical students to report the frequency with which they observed clinicians developing a good rapport with patients could easily be converted into a question that invites veterinary students to report the frequency with which they observed faculty veterinarians establishing good rapport with clients. Both instruments are limited by the fact that using newcomers to the field as sole sources of information about the hidden curriculum must acknowledge that this group may not have enough information to interpret the true meaning behind what they experience. To balance this potential source of misinterpretation, it has also been recommended that outside observers be included in endeavors to expose the hidden curriculum.

It is important to recognize that the "content and possible impact of a hidden curriculum are best identified and addressed within a consortium of faculty, students and outside observers," particularly when social scientists are engaged in the process. While such a team could be recruited using resources available to most programs associated with larger academic institutions, Hafferty's article on confronting the hidden curriculum warns that this process is likely to be fraught with controversy. Whether performed in the context of a medical school or veterinary school, the findings of such a team-based analysis are likely to "run counter to ... prevailing wisdom ... and stand a good chance of being rejected out of hand." The key is to emphasize the importance of making sure that the formal, informal, and hidden curricula are in alignment and to allow individuals ample opportunities to reflect on the relationship between their own beliefs and the principles of the institution.

Bearing in mind the uphill battle that is likely ahead during the process of exposing the hidden curriculum, how are we to inspire reflection within well-established institutions? On this level, Gofton and Regehr challenge institutions to reassess their policies frequently to make sure that their explicit messages reflect the institution's goals and directives. They illustrated the power of changing institutional policy in response to changes in social norms by describing a department within a well-established medical school that was able to increase the number of women expected to remain in academia by 183% and the number of men who remained in academia by 57%. While this illustration lacked the details of the challenges involved in confronting the status quo, the benefits to the institution and the people working within its walls are clear. Of course, these changes do not occur simply by reflecting on and updating the policies. It is the individual educator who must reflect on whether his or her behaviors are in keeping with professional standards and institutional policies.

It is our ultimate responsibility as educators to model professional behavior and professional ethics. How well are we doing that? As previously discussed, methods of self-reflection can include seeking feedback from students, colleagues, and outside observers. Keeping a journal or recording training sessions for analysis at a later time are additional methods to explore. A combination of self-reflection and seeking the perspectives of others can help to reveal our own hidden curriculum, which in turn allows us to refine our craft to the benefit of our students and ourselves.

CONCLUSIONS
The hidden curriculum is the unwritten, unplanned information that is transmitted on a subconscious level to our students. It is communicated to and among students by the way teachers and institutions choose to allocate resources, in the slang that is used, by the way people are treated, and by the policies that an institution upholds. Teachers in the field of veterinary medicine in particular face unique ethical questions as they work to train veterinary students, residents, clients, researchers, and staff, placing them at increased risk of being unaware of the complex messages transmitted as part of the hidden curriculum. Self-reflection, input from outside observers, and feedback from neophyte students are all means by which to reveal the hidden curriculum. While exploring the hidden curriculum is not without controversy or risk, it is a process that reveals important information about who we are as teachers. Are we graduating students who have learned through our body language and tone of voice that clients are "sources of frustration"? Are we perpetuating societal stereotypes about who should become a veterinarian? Are we teaching our students that there is value in developing leadership skills and living a balanced life? This is an avenue for research that is just beginning to be explored in our field. For educators in the field of veterinary medicine to truly understand what it is that their students are learning, it is essential that they explore the hidden curriculum being transmitted in each arena of their teaching. Conscientiously engaging in this conversation with faculty, clients, and students stands to reveal key aspects of veterinary medical education that will shape future generations of our profession.

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