12

INFORMAL LEARNING IN THE HEALTHCARE INDUSTRY

The Detrimental Effects of a Hidden Curriculum

Britany N. Telford, Keaton A. Fletcher, and Wendy L. Bedwell

> *Medicine's complexity has exceeded our individual capabilities as doctors. The core structure of medicine—how health care is organized and practiced—emerged in an era when doctors could hold all the key information patients needed in their heads and manage everything required themselves. . . But you can't hold all of the information in your head any longer, and you can't master all the skills. . .We train, hire, and pay doctors to be cowboys. But it's pit crews people need.*
>
> *(Gawande, 2011: 9)*

In a 2001 report, the Institute of Medicine (IOM) boldly proclaimed that the breach between our current healthcare system and the healthcare system that we could (and perhaps, should) have was not a gap, but a chasm (IOM, 2001). The above quote from noted physician Atul Gawande highlights the need for healthcare practitioners to adapt their skill sets to meet modern population needs. The purpose of this chapter is twofold: 1) to highlight the role of autonomous learning in the drive to aid practitioners in adapting their skills, and 2) to discuss the potential for negative effects due to the presence of a hidden curriculum. The job of a healthcare professional is marked with a number of characteristics, both task and contextual, which lead these professionals to depend heavily on informal, autonomous learning for skill development. While this reliance may seem benign in concept, there is a dark side.

The chapter begins with a historical overview of how the health care profession has changed and its implications for how medical professionals acquire the knowledge and skills necessary to effectively treat patients. Next, we outline why today's medical professionals must rely on autonomous learning to gain skills crucial for job and career success. We then explain the hidden curriculum and why it is so pervasive in this industry by identifying a series of structural

and organizational factors that reinforce the power and presence of a hidden curriculum. These factors help illustrate how autonomous learning can have a dark side such that employees learn problematic, rather than effective, behavior. Finally, the chapter closes with a discussion of the realities facing the healthcare industry should these issues go unaddressed, followed by possible ways that autonomous learning scholars could assist via research efforts.

The Changing Role of Health Care Professionals

The twentieth century has seen dramatic shifts in the nature of healthcare. Prior to 1880 and the popularization of Louis Pasteur and Robert Koch's work on immunization and Germ Theory, the role of the physician involved comforting the patient, using humor to balance crude treatments like blood-letting, and isolating disease either through amputation or quarantine (Marsh, 2005). As Germ Theory began to dominate the field, the recognition that illnesses were caused by microorganisms led to changes in behaviors like handwashing (Best & Neuhauser, 2004).

It would be another 50 years, however, before physicians would be armed with a revolutionary weapon against their microscopic enemies: penicillin. For the first time, physicians could consistently provide effective treatment for a limited set of illnesses (Quirke, 2001). Over the next 60 years, there was a boom in the discovery, production, and administration of vaccines and antibiotics targeting a variety of the deadly diseases like polio, small pox, cholera, and syphilis (Armstrong, Conn, & Pinner, 1999). Behind every illness, it seemed there was a microorganism, and for every microorganism, there was a drug that could prevent or reverse its effects.

Despite these advances, the physician's workload still consisted primarily of acute diseases, but nearly all of them were treatable. Thus, the life expectancy of the average male in the United States shot up from 46.3 years in 1900 to 65.6 years in 1950, a number that continued to rise through the remainder of the twentieth century to a staggering 74.3 years in 2000. This trend may continue well into the future, with estimates suggesting that the percentage of Americans over the age of 65 will grow from 13 percent in 2000 to 20 percent by 2040 (US Census, 2008).

Although bacteria and viruses are no longer the primary killer in developed nations, the increased age of our population has led to different challenges in healthcare. Chronic diseases such as cardiovascular disease, type 2 diabetes, cancer, and Alzheimer's disease are the dominant concern (Xu *et al.*, 2016). Antibiotics and vaccines are relatively useless against these threats. A singular doctor is unable to singlehandedly manage all of these chronic diseases in addition to infectious diseases that still plague patients. Given the prevalence of issues and the magnitude of patients, the physician, who was once a patient's sole healthcare provider, must now choose to specialize in one of many disciplines to provide a high standard of care.

In recognition of this need for specialization, the landscape of the medical community began to change. The American Board of Medical Specialties, for example, was established in 1933 to represent the major specialties of the era (Dermatology, Obstetrics & Gynecology, Otolaryngology, and Ophthalmology). This organization laid the groundwork for standards of training and certification for specialties beyond standard physician education. Today, the American Board of Medical Specialties represents and certifies 24 medical specialties.

Why Healthcare Professionals Must Rely on Informal Learning

As the need for specialized knowledge and training has increased, so too has the traditional physician job changed from being a "cowboy" to participating as a "pit crew" member. Medical professionals today must be capable of frequent, high-quality teamwork and collaboration (Bedwell *et al.*, 2012), such as communicating effectively with other personnel and patients (Gawande, 2011). Such sentiments are echoed in healthcare policy as leadership and communication skills have been identified as imperative for avoiding medical errors and malpractice (Joint Commission, 2016). However, clear communication between specialties and the various medical personnel who must work together when treating a patient (e.g., physicians, nurses, anesthesiologists, medical assistants) can be difficult as each contributing member of the medical "pit crew" often has a differential educational background and corresponding jargon (Manser, 2009).

Take, for example, a patient handoff, which is "the process of transferring primary authority and responsibility for providing clinical care to a patient from one departing caregiver to one oncoming caregiver" (Patterson & Wears, 2010: 53). Without the appropriate information, the incoming provider cannot make timely, appropriate clinical decisions (Cohen & Hilligoss, 2010). However, this transfer is not often done well. In a study of 889 medical malpractice claims, 40 percent identified poor teamwork as a major contributor—particularly in handoffs, which occurred in 15 percent of the cases (Singh *et al.*, 2007). This has led to the patient (and, in some cases, the patient's family) becoming one of the main sources of information continuity (e.g., Heggland & Hausken, 2014; Song *et al.*, 2015). Physicians and other healthcare professionals must, therefore, not only be able to communicate effectively with their own team, but also the incoming team taking over responsibility for the patient during shift changes *and* the patient and the patient's family. In particular, communication with patients requires the physician to elicit knowledge and participation (e.g., asking questions and providing information) from the patient (Song *et al.*, 2015). Unfortunately, formalized training programs commonly address only the need for specialized technical knowledge and skills, leaving nontechnical skills such as communication, interpersonal abilities, and teamwork to be learned by practitioners through some other means on the job (Bedwell, Fiore, & Salas, 2014).

Yet even more problematic to the often ignored, but clearly important nontechnical skills, many formalized healthcare educational programs provide minimal opportunity to master technical skills, particularly for non-physicians. For example, recent graduates of nursing programs reported feeling inadequately prepared by their training programs for not only leadership roles but also pharmacology issues, clinical practice, and the use of electronic medical records (Candela & Bowles, 2008). This is likely due to the fact that many nursing programs, in particular, rely heavily on a lecture-based pedagogy, rather than hands-on practice or experiential learning (Candela & Bowles, 2008). Nurses leave these programs knowing *how* to complete a procedure in theory, yet lack the practical experience necessary to effectively execute such complex tasking in real world, pressure-intense situations.

One likely reason for this issue is the fact that nurses have been required to vastly increase their scope of work in recent years. A report by the IOM focusing on the results of a 2009 initiative to overhaul the nursing education system, asserts new nursing competencies include "community and public health, geriatrics, leadership, health policy, system improvements and change, research and evidence-based practice, and teamwork and collaboration" (IOM, 2011: 6). Results of this initiative suggested that: 1) more nurses are working outside of hospitals than ever before, 2) nurses need to be able to lead teams, and 3) no single certification can provide nurses with all of the information necessary for the entirety of their careers. Thus, the issue is not necessarily the fault of formalized healthcare training programs as they cannot possibly provide the level of practice that would be needed for nurses and other healthcare professionals to master each of the ever-increasing number of necessary competencies. Further complicating this challenge is the rapid rate at which best practices and guidelines are updated and changed (Padua, Hobson-Webb, Martinoli, 2013). This requires medical professionals to keep their skills up-to-date long after they graduate from formal learning programs. Lifelong learning is, therefore, essential for avoiding skill obsolescence, decay, and stagnancy (IOM, 2011; American Nurses Association, 2010: 56). Although programs can instill a belief in the necessity of lifelong learning and underscore the dynamic nature of the content they are providing, in the end the burden of learning and mastery falls to the healthcare professional.

Thus, among the many reasons healthcare professionals must rely upon informal learning to maximize their job and career success, we believe the following should be highlighted.

1 Nontechnical skills have become increasingly important, but are not adequately addressed in formalized training or education programs.
2 Opportunities to practice technical skills in high fidelity environments are often limited, if at all provided, in formalized training or education programs.
3 Healthcare is a dynamic field with rapidly changing standards and best practices that one must continually learn.

Methods of Informal Learning in Healthcare

Mentoring programs. As mentioned previously, due to these three needs, the burden of continued learning and mastery has shifted from formalized training and education programs to informal learning opportunities provided to—or sought out by—healthcare professionals. Because complex healthcare procedures have steep learning curves before proficiency is met, opportunities to practice with feedback are critical (Dagash, Chowdhury, & Pierro, 2003). One of the many informal learning opportunities provided to healthcare professionals is mentoring programs. Programs such as preceptorships, which allow undergraduate or newly hired nurses to work with more tenured professionals (Mamchur & Myrick, 2003), have become common in the industry. They provide an opportunity for new employees (protégés) to acquire complex skills on the job in a closely supervised environment, while simultaneously providing an opportunity for both the seasoned healthcare professionals (mentors) and protégés to practice nontechnical skills (e.g., communication, provision of feedback) and enables mentors to learn updated information from their protégés (e.g., Allen & Eby, 2003). A nursing preceptor assists new nurses to "reflect on clinical experiences and promote professional growth, leadership, and future career planning" (Anderson, Hair, & Todero, 2012: 205). In addition to identifying skill gaps, preceptors also serve as a model for appropriate behavior in nontechnical tasks such as prioritizing, communicating with patients, and working with other specialties. Evaluations of such programs have largely been positive and suggest that they improve desirable outcomes such as behavioral performance, critical thinking, and self-confidence (Beecroft *et al.*, 2001; Anderson, Hair, & Todero, 2012). Mentoring programs, like nursing preceptorships, may also help create an understanding of which knowledge, skills, and competencies gained during formalized education programs will be most relevant on the job (e.g., Kram, 1988; Lankau & Scandura, 2002).

Feedback and reflection. Informal learning in healthcare may also occur in response to the multiple sources of feedback inherent in these jobs. Feedback in relation to job performance is information (positive or negative) that leads to improvements in task execution (Herold & Greller, 1977). Within the context of informal learning, feedback specifically refers to information an individual receives from either the task (e.g., a patient's vital signs) or others (e.g., a mentor's advice) that can be used to improve attitudes, behaviors, or cognitions for future performance cycles (e.g., Tannenbaum *et al.*, 2010). Feedback can occur during task execution (e.g., changes in vital signs during administration of analgesics) or at the end of a performance cycle (e.g., end-of-shift rounds). For healthcare professionals, the feedback process may be structured, as is the case with many residency and clinical experience programs, or unstructured occurring during daily activities and interactions.

Intrinsically linked to feedback reception is the opportunity for healthcare providers to reflect upon their experiences, knowledge, and environment in

order to further promote growth. Specifically, reflection involves cognitively linking behaviors to outcomes to understand the experience and potentially revise the mental model (Marsick & Volpe, 1999; Tannenbaum *et al.*, 2010). This requires actively working to understand the event or issue, which should result in improved self-knowledge (Duggan, Vicini, Allen, & Shaughnessy, 2015) and ultimately, performance. Consider the example of nontechnical skills. Medical students, particularly poor performers, often rate themselves higher than a subject matter expert in interpersonal skills (Gruppen *et al.*, 1997; Langendyk, 2006). However, reports detailing the root cause of surgical errors suggest that 43 percent were due to communication issues rather than technical expertise issues (Yule, Flin, Paterson-Brown, & Maran, 2006). Yet, interpersonal skill feedback was not routinely provided in healthcare settings. This clearly made reflection of one's skills difficult. However, the increased use of patient satisfaction surveys enables detailed feedback regarding bedside manner (Nelson & Niederberger, 1990). Thus, providers are able to reflect on their interactions with the patients to improve interpersonal skill abilities.

One of the most commonplace examples of feedback and reflection is that of a team debrief or an after-action review. Team debriefs are commonly used to provide feedback that can improve a medical team's understanding of their individual roles within the team, as well as how and when information and tasks should be shared with team members (Tannenbaum & Cerasoli, 2013). Patient outcomes are complex and influenced by many antecedents. The highly interdisciplinary nature of patient care makes it difficult for novices to pinpoint what and whose behaviors were incorrect. Debriefs are a discussion of the performance episode designed to provide feedback on task and teamwork so that future performance is improved. Debriefs are not simply receiving feedback, they are active, involve self-discovery and reflection, and have been shown to improve performance by nearly 25 percent (Tannenbaum & Cerasoli, 2013). Proper debriefing techniques can be formally taught in healthcare-based crew resource management programs such as TeamSTEPPS so that employees have the skills they need for future informal learning (Alonso *et al.*, 2006).

Observation. Last, many healthcare workers, particularly those in the formative stages of their careers, learn through observation. Opportunities for observation range from shadowing opportunities for high school and undergraduate students interested in the field to formalized observation-based rotations included in medical school or residency. Beyond these opportunities, healthcare workers who are in transition from one hospital or unit to another might rely upon observation to understand the social norms and expectations within their new environment. By watching others complete their tasks, whether they are technical or interpersonal in nature, healthcare providers establish a mental model of appropriate attitudes, behaviors, and cognitions within their new environment. This can aid in diffusion of novel methods or with cultural shifts in attitudes toward teamwork or knowledge of new drugs. Opportunities to observe abound

in healthcare, particularly in the modern era in which technology increases an individual's access to information or videos (e.g., TED talks, webinars, YouTube videos, etc.). Together, these opportunities can help foster or promote autonomous learning in healthcare.

To recap, we outlined three of the primary methods and sources of informal learning that can help healthcare professionals supplement their formal training and education.

1 Mentorship programs and preceptorships offer both mentors and protégés an opportunity to learn.
2 Feedback and reflection are critical methods of autonomous learning in healthcare that are particularly fostered by debriefs and environmental cues.
3 Opportunities for observation of peers and respected colleagues or supervisors are another main source of informal learning in healthcare.

The Dark Side of Autonomous Learning in Healthcare: The Hidden Curriculum

Autonomous, informal learning is unstructured, experiential learning controlled by the individual (Marsick & Volpe, 1999). Tannenbaum and colleagues (2010) consider informal learning to be self-directed, deliberate learning that does not occur in a formal setting, but rather on the job by participation. In this model, informal learning has four components: 1) intent to learn, improve, and develop; 2) experience and action; 3) feedback; and 4) reflection. Each component is influenced by both the learner and the organization in which the learning occurs. Tannenbaum and colleagues (2010) assert that not all four components are necessary for learning to occur, but each component incrementally improves learning. Understanding the nature of autonomous learning can help illustrate why it can have a dark side, even within an industry that thrives on this type of learning and sees it as the key to success.

Medical education, as delineated by Hafferty (1998), is influenced by three sources: 1) the formal, intentional, endorsed curriculum; 2) the informal curriculum; and 3) the hidden curriculum. The first is the formal outline of what should be done on the job. This is what is taught in medical school and vocational training programs. The second is the unscripted learning describe above (e.g., observation, reflection). However, it is the *hidden curriculum* that we believe is critical to acknowledge. Hidden curriculum refers to values, attitudes, beliefs, and behaviors gleaned through organizational culture and norms. These aspects are implicitly endorsed and passed on from one healthcare professional to another. Management support, reward structures, informal policies, resource allocation, and job design give rise to the hidden curriculum. The hidden curriculum may never be explicitly stated, but rather emerges from the interactions between individuals, the policies that are (and are not) enforced, and the artifacts present in

the environment that communicate organizational values. Autonomous learning is the only way in which the "content" of this curriculum is acquired.

The hidden curriculum may often be in contrast to formalized learning. For example, many surgeons are formally taught the necessity of debriefing after a surgical procedure is completed. However, hospitals are paid based on the number of procedures completed; therefore, scheduling often does not leave adequate time for debriefing. By not providing the necessary time, the organization is unintentionally telling surgeons that behavior is not valued or rewarded in the organization. Thus, employees learn that to be successful, they should not debrief. This issue is not unique to healthcare. Organizations in all industries may have multiple goals that compete with one another. For example, research universities often promote faculty solely based on the number of quality publications they produce. If the quality of faculty teaching is not also a factor in the promotion decision, faculty may divert attention to their research at the expense of their students.

The social, epidemiological, and economic developments that have increased the need for informal learning as a supplement to formal education programs have also created a variety of organizational and cultural structures. These structures and factors give rise to the hidden curriculum, which can have positive or negative effects (Bennett *et al.*, 2004) such as enforcement of detrimental behaviors, performing invasive procedures on terminally ill patients, retrospectively completing supervisors' notes, or performing tests without patient consent (e.g., Hawryluck *et al.*, 2002; Lempp & Seale, 2004; Paice *et al.*, 2002; Stephenson, Higgs, & Sugarman, 2001).

The power of a toxic culture or poor norms for behavior are quite strong in shaping younger professionals and role modeling expected behavior. For example, medical schools are working hard to suggest that error reporting is a valuable learning tool for healthcare professionals; yet Madigosky and colleagues (2006) found that over the course of their internships, medical students' belief that medical errors should be kept secret increased, while a belief that improving patient safety was important decreased. These attitudes were likely not explicitly expressed by workers, neither were they endorsed by the formal or even informal curricula. Instead, experiences and actions while on the job convey these troubling attitudes as part of the hidden curriculum.

Organizational and cultural structures that perpetuate the hidden curriculum

Hierarchy. Strict hierarchies within healthcare organizations create an environment that pressures employees to learn the hidden curriculum, and learn it quickly. Newcomers or lower status workers must learn and accept social norms, specifically those regarding their social status and amount of power (e.g., Mahood, 2011). Those in low-status positions often feel an "intense pressure to

'know their place' in the medical hierarchy and endorse the dominant culture" (Gaufberg *et al.*, 2010: 1711) and report feelings of disempowerment and disrespect (Gaufberg *et al.*, 2010). Newcomers may be intentionally humiliated by individuals with higher status in the hierarchy in order to motivate newcomers to learn and adopt behaviors congruent with the norms that are expected by senior staff (Lempp & Seale, 2004).

Gaufberg and colleagues (2010) suggest that the nature of the strict hierarchies in healthcare allow individuals with senior status to define expectations of performance and other behaviors like professionalism, while also evaluating those of lower status by these definitions. This centralization of power within the top of the hierarchy motivates low-status employees to rapidly learn and adopt these norms and unspoken performance expectations to avoid negative evaluations. Interestingly, one study found that students were more impressed by a healthcare worker's status in the hierarchy than with that individual's skills and abilities (Paice, Heard, & Moss, 2002). This infatuation with hierarchical status motivates newcomers to autonomously learn what is needed to more effectively assimilate into the hierarchy while gaining the approval of senior members of the organization.

Competition and demands. Competition and resource hoarding due to a scarcity of physical resources and time (Bennett *et al.*, 2004) is commonplace. This also provides opportunities to teach inappropriate behaviors. As noted above, newcomers are highly motivated to learn group norms. Younger healthcare professionals quickly seek to understand what is required to function effectively in this environment, and when time is limited and opportunities to work with desired personnel are limited, this serves to reinforce a culture of competition (Bennett *et al.*, 2004). In fact, Lempp & Seale (2004) found that half of medical students sampled "reported that competition rather than cooperation is the defining characteristic of medicine" (Lempp & Seale, 2004: 772).

Time demands also present barriers to engaging in high-quality debriefing such as time or lack of priority (Ahmed *et al.*, 2013). Therefore, when team debriefs do occur they often focus on taskwork rather than teamwork (Smith-Jentsch, Cannon-Bowers, Tannenbaum & Salas, 2008). This emphasis reinforces the hidden curriculum by focusing reflection solely on task performance and adherence to social roles and norms versus interpersonal interactions (Smith-Jentsch *et al.*, 2008).

For others, time demands may motivate unethical behavior (e.g., taking short cuts; Gaufberg *et al.*, 2010). In these cases, the hidden curriculum may endorse various unethical behaviors while punishing behaviors that adhere to formal training. For example, when the healthcare environment promotes quick but inexpensive service (e.g., drop-in clinic), some healthcare providers have reported "pretending to examine patients or making up vital signs, ignoring contamination" (Mahood, 2011: 983) among other questionable behaviors. Providers may miss critical symptoms because the organization values seeing as many patients as possible. This will result in suboptimal diagnoses.

Social job tasks. Many tasks within healthcare require social interaction with colleagues. During these interactions, particularly if there are power differentials, individuals need to understand the hidden curriculum. Newcomers must learn social norms (e.g., the acceptability of asking for a break, who is responsible for what actions within a particular unit, the desired method of handoffs) to avoid negative emotions and experiences during transitioning to new jobs, units, or organizations. During rounds, for example, subordinates learn a variety of skills and behaviors, some of which can be negative. If learners are humiliated or embarrassed by the leader when they incorrectly answer questions, they learn to treat others with humiliation for mistakes (Lempp & Seale, 2004).

Gaufberg and colleagues (2010) suggest that newcomers likely learn to dehumanize patients during rounds when asked to "practice clinical skills on patients who were pragmatically powerless to refuse" (Gaufberg *et al.*, 2010: 1711). Specifically, this dehumanization helps newcomers cope with their inability to prevent the mistreatment patients may receive during rounds when subjected to newcomers who are unprepared and unsure. Consider the case of needing to take blood from a patient whose veins are constricted. The pressure of potentially harming the patient as one practices this skill forces a coping response (i.e., dehumanization). In this way, the salient demands of rounds force a secondary lesson, one that underlies the technical procedure being practiced. Such secondary lessons pose ethical dilemmas, yet the ubiquity of the hidden curriculum means such dilemmas may go unrecognized by the learner and unacknowledged by any formal training (Ginsburg, Regehr, Stern, & Lingard, 2002).

In addition to rounds, many newcomers are motivated to learn a hidden curriculum during periods of patient transition. Healthcare personnel learn handoff protocol informally while on the job (Hilligoss & Cohen, 2011). Although the Joint Commission supports the use of the SBAR (Situation-Background-Assessment-Recommendation) framework for patient handoffs, there are many formal and informal protocols for this procedure (De Meester, Verspuy, Monsieurs, & Van Bogaert, 2013; Haig, Sutton & Whittington, 2006; Hilligoss & Cohen, 2011). The desired protocol may differ across organizations, across units, or even across people. Therefore, in order to ensure that the desired information is transferred, individuals need to learn the preferred qualities (e.g., speed, level of detail, provision of contingencies) of varying handoffs (e.g., between units, between equals, from a subordinate to a supervisor, from one shift to the next) on the job. Despite potentially being formally taught the importance of a high-quality handoff, many healthcare workers (informally) learn that handoffs are not valued by a particular healthcare organization. For example, obstetric anesthetists reported a number of organizational and social norms barriers preventing optimal handoffs such as a lack of handoff policy in their unit (90 percent), no allocated time for handoffs (21 percent), and skipping the handoff due to pressure from non-elective work (25 percent; Sabir, Yentis, & Holdcroft, 2006). Together, these cues promote a hidden curriculum that undervalues handoffs, teaching newcomers that they

need not worry about the quality of their handoff behaviors. Because these cues and pressures create a hidden curriculum (e.g., high-quality handoffs are not valued) that is in direct contrast to formal education and training (e.g., high-quality handoffs are necessary for patient safety), the healthcare provider may experience a certain amount of dissonance. In order to resolve this dissonance, providers may alter their behaviors to align with the more relevant information (the hidden curriculum) and engage in poor handoff behaviors (e.g., not providing all necessary information). This can ultimately result in negative outcomes for patients (Kitch *et al.*, 2008).

Patient interaction. A key job requirement for any healthcare professional is interaction with patients. These interactions may also promote the negative effects of the hidden curriculum. If, for example, a patient has a serious negative reaction to a newer therapy or drug, physicians are likely to overweight that one case and ignore the scientific evidence backing that method of treatment (Bennett *et al.*, 2004). Healthcare requires significant levels of empathy, but the empathy resulting from one patient's negative experience can drive medical professionals to adopt rigid opinions about care options that result in future patients receiving lower-quality treatment. A separate study found that some physicians intentionally mislead patients by introducing medical students as doctors, potentially to avoid negative feedback from the patient about receiving care from an inexperienced professional (Ginsburg *et al.*, 2002). This unethical behavior saves the healthcare professional time and is met with positive feedback from the patient, resulting in a reinforced hidden curriculum.

Healthcare providers are also at high risk of abuse from patients (e.g., Yassi, 1994). The relatively high level of autonomy in healthcare regarding when non-critical patients can be seen means that patients who are difficult often are avoided until they can be passed off to different providers (Ginsburg *et al.*, 2002). Similarly, healthcare providers may avoid informing patients of undesirable diagnoses, prognoses, or outcomes (Ginsburg *et al.*, 2002). Rightly or wrongly, these types of unprofessional behaviors are reinforced by the negative feedback healthcare providers receive when faced with unhappy patients receiving undesirable news or unhappy patients who perceive (whether accurate or not) that they are being ignored and respond with verbal abuse. Indeed, the mere opportunity to avoid negative feedback or abuse from patients may certainly be enough to enforce the hidden curriculum of certain unethical behaviors designed to avoid difficult patient interactions.

Paperwork and care documentation. Healthcare workers have become inundated with paperwork, with some estimates suggesting that for every hour of patient care, there is up to an additional hour of paperwork (American Hospital Association, 2003). This paperwork, particularly when completed away from the patient in electronic medical records, may actually be causing employees to reflect upon their patients and cases in an emotionally neutralized or detached manner, thus reinforcing the dehumanization of patients (Gaufberg *et al.*, 2010;

Haque & Waytz, 2012). Paperwork and the electronic medical record are intentionally designed to capture case-relevant information, not personal information that might reinforce the humanity of the patient (Haque & Waytz, 2012). Also, paperwork is often completed individually or in isolation, thus potentially reinforcing the notion of the healthcare practitioner as an independent actor.

Discussion

Healthcare organizations, more than ever before, need to capitalize on informal learning experiences to make up for the fact that professionals: 1) are not able to garner all necessary technical skills in formal training programs due to time constraints and the dynamic nature of the competencies required for effectiveness, and 2) are not learning adequate effective interpersonal skills in educational settings. Yet, one of the most concerning aspects of opportunities for positive learning is the potential for an organizational climate to undermine formal learning, or even sanctioned informal learning like continuing medical education, in favor of a toxic hidden curriculum (Bennett *et al.*, 2004). When a majority of employees within a healthcare organization, particularly those in positions of power, do not overtly support codified learning and development, instead favoring a set doctrine of preferred practices that may not be positive in nature, individuals who are trained in novel, evidence-based practices will be unable to transfer these skills to the workplace (Bennett *et al.*, 2004). Workers learn what their organization values through their experiences with enforced policies and practices. If healthcare workers are expected to adhere to new guidelines, but are not able to change their own behaviors and actions due to cultural constraints, then they learn from the hidden curriculum that the organization does not truly value the new guidelines (Bennett *et al.*, 2004).

For example, many nurses report that they do not perceive their hospital as promoting people that have engaged in formalized continuous education to expand their knowledge base (Bahn, 2007). With no reward for formal learning experiences, employees are less likely to sacrifice resources, such as time, to engage in that type of learning. Bahn (2007) also found that nurses did not feel they could engage in lifelong learning tasks because no one could cover their patient load. This barrier is echoed in a 2001 Audit Commission report, which identified a systemic lack of policies to deal with patient coverage when engaging in continuing professional development. As another example, hospitals want healthcare practitioners to use up-to-date, evidence-based practices, but only 36 percent of surveyed nurses stated they had access to electronic databases through their place of employment (Pravikoff *et al.*, 2005). Many nurses, therefore, reported a perceived lack of value for research in practice (Pravikoff *et al.*, 2005). This suggests that the reported lack of time and physical resources required to engage in these behaviors might actually represent

a lack of prioritization by the organization. The unfortunate end result is the strengthening of the hidden curriculum. Progress and innovation are halted and the practice of medicine is reduced to knowing "how we've always done it around here" versus how it should be done in order to stay current and evolve to an ever-higher standard of care.

The hidden curriculum in healthcare also continues to thrive because of the feedback that workers receive from their organizations, supervisors, and peers. For example, although formal performance evaluations typically target official competencies, the process of evaluation (Bennett *et al.*, 2004) and the actual criteria used convey messages about the content of, and necessity to adhere to, the hidden curriculum. The feedback employees receive may actually stand in contrast to lessons learned through formal training or organizationally-endorsed informal learning (Bennett *et al.*, 2004). Furthermore, the criteria on which individuals are evaluated may not be clear (Ginsburg, Regehr, Stern, & Lingard, 2002) or even stated, let alone job-relevant (Gaufberg *et al.*, 2010). When desired performance is ambiguous, fear of negative feedback may lead learners to compromise their knowledge or integrity in order to adhere to the hidden curriculum, potentially risking their own or others' safety (Feudtner, Christakis, & Christakis, 1994; Gaufberg *et al.*, 2010).

Furthermore, even if many in the organization are aware of the negative consequences of the hidden curriculum and recognize the risks associated with questionable behavior, it can be difficult or uncomfortable to provide meaningful feedback (Mahood, 2011). But by failing to provide clear and powerful feedback, healthcare organizations may actually be promoting the unethical or undesirable behaviors they intend to quell since the absence of clear direction otherwise serves as an endorsement of the hidden curriculum (Mahood, 2011). Together, this pattern of ambiguous or questionable evaluation processes and poor or absent feedback from organizational representatives may perpetuate a hidden curriculum that endorses unethical or undesirable behavior.

Implications for Scholarship and Practice

By implementing hospital-wide, structured policies for covering workload, healthcare facilities can communicate support of continuous education and provide departments with the resources to do so. It is important that organizational and managerial support for learning is perceived by employees (Ellinger, 2005; Sambrook & Stewart, 2000; Skule, 2004), otherwise intent to learn, a critical component of autonomous learning, is curbed and the hidden curriculum prevails. For example, by creating an environment in which healthcare workers are prompted to, and rewarded for, turning errors and ambiguity into performance feedback and concrete, discernable revisions in processes and practices, autonomous learning becomes a positive vehicle for change.

Informal learning scholars can aid in the transition of hidden curricula. It is important to identify the sources that lead to the greatest negative behavioral changes. Is it the role modeling of short cuts that are conveniently overlooked, as seeing more patients helps the bottom line? Does the status of the role model matter or is it possible to have culture change from the ground up when policies are aligned to promote positive behaviors that lead to desired (and rewarded) outcomes? Questions abound, but the bottom line is that such research requires systems thinking (Katz & Kahn, 1978).

The hidden curriculum will always play a role in the behavior of employees, regardless of the industry. The goal is not to ignore it. In the end, to change the hidden curriculum, one must also change the organizational culture (Lempp & Seale, 2004), thus shaping the experiences and actions of employees in a manner that is consistent with formal and organizationally-endorsed informal learning. Systems thinking suggests that a change to one part of the system begets a change to another. Therefore, a piecemeal approach to improving informal learning opportunities, particularly autonomous learning, will not result in desired outcomes. There are multiple inputs into the hidden curriculum as discussed above (e.g., time, status, lack of policy enforcement, etc.), and its power to shape behaviors is dictated in large part by norms of behavior that may not be readily visible. Interdisciplinary research efforts aimed at understanding the impact of changes to any one component of the system is required to truly understand the potential dark side of the hidden curriculum.

References

Ahmed, M., Sevdalis, N., Vincent, C., & Arora, S. (2013). Actual vs perceived performance debriefing in surgery: Practice far from perfect. *The American Journal of Surgery*, *205*(4), 434–440.

Allen, T. D., & Eby, L. T. (2003). Relationship effectiveness for mentors: Factors associated with learning and quality. *Journal of Management*, *29*(4), 469–486.

Alonso, A., Baker, D. P., Holtzman, A., Day, R., King, H., Toomey, L., & Salas, E. (2006). Reducing medical error in the military health system: How can team training help? *Human Resource Management Review*, *16*(3), 396–415.

American Hospital Association. (2003). Patients or paperwork? The regulatory burden facing America's hospitals. Retrieved from http://www.aha.org/content/00–10/FinalPaperworkReport.pdf.

American Nurses Association. (2010). *Nursing: Scope and Standards of Practice*. Silver Spring, MD: American Nurses Association.

Anderson, G., Hair, C., & Todero, C. (2012). Nurse residency programs: An evidence-based review of theory, process, and outcomes. *Journal of Professional Nursing*, *28*(4), 203–212.

Armstrong, G. L., Conn, L. A., & Pinner, R. W. (1999). Trends in infectious disease mortality in the United States during the 20th century. *Journal of the American Medical Association*, *281*(1), 61–66.

Bahn, D. (2007). Orientation of nurses towards formal and informal learning: Motives and perceptions. *Nurse Education Today*, *27*(7), 723–730.

Bedwell, W. L., Fiore, S. M., & Salas, E. (2014). Developing the future workforce: An approach for integrating interpersonal skills into the MBA classroom. *Academy of Management Learning & Education*, *13*(2), 171–186.

Bedwell, W. L., Wildman, J. L., Diaz Granados, D., Salazar, M., Kramer, W. S., & Salas, E. (2012). Collaboration at work: An integrative multilevel conceptualization. *Human Resource Management Review*, *22*(2), 128–145.

Beecroft, P. C., Kunzman, L., Krozek, C. (2001). RN internship: Outcomes of a one-year pilot program. *Journal of Nursing Administration*, *31*(12), 575–582.

Bennett, N., Lockyer, J., Mann, K., Batty, H., LaForet, K., Rethans, J. J., & Silver, I. (2004). Hidden curriculum in continuing medical education. *Journal of Continuing Education in the Health Professions*, *24*(3), 145–152.

Best, M., & Neuhauser, D. (2004). Ignaz Semmelweis and the birth of infection control. *Quality and Safety in Health Care*, *13*(3), 233–234.

Candela, L., & Bowles, C. (2008). Recent RN graduate perceptions of educational preparation. *Nursing Education Perspectives*, *29*(5), 266–271.

Cohen, M. D., & Hilligoss, P. B. (2010). The published literature on handoffs in hospitals: deficiencies identified in an extensive review. *Quality and Safety in Health Care*, *19*(6), 493–497.

Dagash, H., Chowdhury, M., & Pierro, A. (2003). When can I be proficient in laparoscopic surgery? A systematic review of the evidence. *Journal of Pediatric Surgery*, *38*(5), 720–724.

De Meester, K., Verspuy, M., Monsieurs, K. G., & Van Bogaert, P. (2013). SBAR improves nurse–physician communication and reduces unexpected death: A pre and post intervention study. *Resuscitation*, *84*(9), 1192–1196.

Duggan, A. P., Vicini, A., Allen, L., & Shaughnessy, A. F. (2015). Learning to see beneath the surface: A qualitative analysis of family medicine residents' reflections about communication. *Journal of Health Communication*, *20*(12), 1441–1448.

Ellinger, A. D. (2005). Contextual factors influencing informal learning in a workplace setting: The case of "reinventing itself company." *Human Resource Development Quarterly*, *16*(3), 389–415.

Feudtner, C., Christakis, D. A., & Christakis, N. A. (1994). Do clinical clerks suffer ethical erosion? Students' perceptions of their ethical environment and personal development. *Academic Medicine*, *69*(8), 670–679.

Gaufberg, E. H., Batalden, M., Sands, R., & Bell, S. K. (2010). The hidden curriculum: What can we learn from third-year medical student narrative reflections? *Academic Medicine*, *85*(11), 1709–1716.

Gawande, A. (2011). Cowboys and pit crews. *The New Yorker*. May 26, 2011. Retrieved from http://www.newyorker.com/news/news-desk/cowboys-and-pit-crews.

Ginsburg, S., Regehr, G., Stern, D., & Lingard, L. (2002). The anatomy of the professional lapse: Bridging the gap between traditional frameworks and students' perceptions. *Academic Medicine*, *77*(6), 516–522.

Gruppen, L. D., Garcia, J., Grum, C. M., Fitzgerald, J. T., White, C. A., Dicken, L., . . . & Zweifler, A. (1997). Medical students' self-assessment accuracy in communication skills *Academic Medicine*, *72*(10), S57–S59 (published erratum appears in 1997, *Academic Medicine*, *72*(12), 1126).

Hafferty, F. W. (1998). Beyond curriculum reform: Confronting medicine's hidden curriculum. *Academic Medicine*, *73*(4), 403–407.

Haig, K. M., Sutton, S., & Whittington, J. (2006). SBAR: A shared mental model for improving communication between clinicians. *The Joint Commission Journal on Quality and Patient Safety*, *32*(3), 167–175.

Haque, O. S., & Waytz, A. (2012). Dehumanization in medicine causes, solutions, and functions. *Perspectives on Psychological Science*, 7(2), 176–186.

Hawryluck, L. A., Espin, S. L., Garwood, K. C., Evans, C. A., & Lingard, L. A. (2002). Pulling together and pushing apart: Tides of tension in the ICU team. *Academic Medicine*, 77(10), S73–S76.

Heggland, L. H., & Hausken, K. (2014). Patient participation, decision-makers and information flow in surgical treatment. *Journal of Clinical Nursing*, *23*(9/10), 1430–1444.

Herold, D., & Greller, M. (1977). Feedback: The definition of a construct. *The Academy of Management Journal*, *20*(1), 142–147.

Hilligoss, B., & Cohen, M. D. (2011). Hospital handoffs as multifunctional situated routines: implications for researchers and administrators. *Advances in Health Care Management*, *11*, 91–132.

IOM. (2001). Committee of Quality Healthcare in America. *Crossing the quality chasm: A new healthcare system for the 21st century*. Washington, DC: National Academies Press.

IOM. (2011). Committee on the Robert Wood Johnson Foundation Initiative on the future of nursing. *The future of nursing: Leading change, advancing health*. Washington, DC: National Academies Press.

The Joint Commission. (2016). Sentinel event statistics data-root cause by event type (2004–2015) Retrieved from: http://www.jointcommission.org/sentinel_event_statistics/.

Katz, D. & Kahn, R. L. (1978). *The social psychology of organizations*, 2nd ed. New York: Wiley.

Kitch, B. T., Cooper, J. B., Zapol, W. M., Marder, J. E., Karson, A., Hutter, M., & Campbell, E. G. (2008). Handoffs causing patient harm: A survey of medical and surgical house staff. *The Joint Commission Journal on Quality and Patient Safety*, *34*(10), 563–570.

Kram, K. E. (1988). *Mentoring at work: Developmental relationships in organizational life*. Lanham, MD: University Press of America, Inc.

Langendyk, V. (2006). Not knowing that they do not know: Self-assessment accuracy of third-year medical students. *Medical Education*, *40*(2), 173–179.

Lankau, M. J., & Scandura, T. A. (2002). An investigation of personal learning in mentoring relationships: Content, antecedents, and consequences. *Academy of Management Journal*, *45*(4), 779–790.

Lempp, H., & Seale, C. (2004). The hidden curriculum in undergraduate medical education: qualitative study of medical students' perceptions of teaching. *British Medical Journal*, *329*(7469), 770–773.

Madigosky, W. S., Headrick, L. A., Nelson, K., Cox, K. R., & Anderson, T. (2006). Changing and sustaining medical students' knowledge, skills, and attitudes about patient safety and medical fallibility. *Academic Medicine*, *81*(1), 94–101.

Mahood, S. C. (2011). Medical education: Beware the hidden curriculum. *Canadian Family Physician*, *57*(9), 983–985.

Mamchur, C. & Myrick, F. (2003). Preceptorship and interpersonal conflict: A multidisciplinary study. *Issues and Innovations in Nursing Education*, *43*(2), 188–196.

Manser, T. (2009). Teamwork and patient safety in dynamic domains of healthcare: A review of the literature. *Acta Anaesthesiologica Scandinavica*, *53*(2), 143–151.

Marsh, J. (2005, May 25). Health & medicine in the 19th century. Retrieved from http://www.vam.ac.uk/content/articles/h/health-and-medicine-in-the-19th-century/.

Marsick, V. J., & Volpe, M. (1999). The nature and need for informal learning. In V. J. Marsick & M. Volpe (eds.), *Informal learning on the job*. Baton Rouge, LA: Academy of Human Resource Development, pp. 1–9.

Nelson, C. W., & Niederberger, J. (1990). Patient satisfaction surveys: An opportunity for total quality improvement. *Hospital & Health Services Administration*, *35*(3), 409–427.

Padua, L., Hobson-Webb, L., & Martinoli, C. (2013). The international society of peripheral neurophysiological imaging: Pioneering innovation in a multidisciplinary context. *Clinical Neurophysiology*, *124*(4), 631–633.

Paice, E., Heard, S., & Moss, F. (2002). How important are role models in making good doctors? *British Medical Journal*, *325*(7366), 707–710.

Patterson, E. S., & Wears, R. L. (2010). Patient handoffs: Standardized and reliable measurement tools remain elusive. *The Joint Commission Journal on Quality and Patient Safety*, *36*(2), 52–61.

Pravikoff, D. S., Tanner, A. B., & Pierce, S. T. (2005). CE credit: Readiness of U.S. nurses for evidence-based practice. *The American Journal of Nursing*, *105*(9), 40–52.

Quirke, V. M. (2001). History of penicillin. In *Encyclopedia of life sciences*. Chichester, UK: John Wiley & Sons Ltd.

Sabir, N., Yentis, S.M., & Holdcroft, A. (2006). A national survey of obstetric anaesthestic handovers. *Anaesthesia*, *61*(4), 376–380.

Sambrook, S., & Stewart, J. (2000). Factors influencing learning in European learning-oriented organizations: Issues for management. *Journal of European Industrial Training*, *24*(2), 209–221.

Singh, H., Thomas, E. J., Petersen, L. A., & Studdert, D. M. (2007). Medical errors involving trainees: A study of closed malpractice claims from 5 insurers. *Archives of Internal Medicine*, *167*(19), 2030–2036.

Skule, S. (2004). Learning conditions at work: A framework to understand and assess informal learning in the workplace. *International Journal of Training and Development*, *8*(1), 8–17.

Smith-Jentsch, K. A., Cannon-Bowers, J. A., Tannenbaum, S. I., & Salas, E. (2008). Guided team self-correction impacts on team mental models, processes, and effectiveness. *Small Group Research*, *39*(3), 303–327.

Song, L., Toles, M. P., Bai, J., Nielsen, M. E., Bailey, D. E., Sleath, B., & Mark, B. (2015). Patient participation in communication about treatment decision-making for localized prostate cancer during consultation visits. *Health*, 7(11), 1419–1429.

Stephenson, A., Higgs, R., & Sugarman, J. (2001). Teaching professional development in medical schools. *The Lancet*, *357*(9259), 867–870.

Tannenbaum, S. I., Beard, R. L., McNall, L. A., & Salas, E. (2010). Informal learning and development in organizations. In Kozlowski, S. W. J.., & Salas, E. (eds.), *Learning, training, and development in organizations* (pp. 303–331). New York: Routledge/Taylor & Francis Group, pp. 303–331.

Tannenbaum, S. I., & Cerasoli, C. P. (2013). Do team and individual debriefs enhance performance? A meta-analysis. *Human Factors: The Journal of the Human Factors and Ergonomics Society*, *55*(1), 231–245.

U.S. Census Bureau. (2008). 2010 to 2050 Population projections based on Census 2000. Retrieved from: https://www.census.gov/population/projections/data/national/2008.html.

Xu, J., Murphy, S. L., Kochanek, K. D., & Bastian, B. A. (2016) Deaths: Final data for 2013. *National Vital Statistics Reports: From the Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System*, *64*(2), 1–119.

Yassi, A. (1994). Assault and abuse of health care workers in a large teaching hospital. *Canadian Medical Association Journal*, *151*(9), 1273–1279.

Yule, S., Flin, R., Paterson-Brown, S., & Maran, N. (2006). Non-technical skills for surgeons in the operating room: A review of the literature. *Surgery*, *139*(2), 140–149.

AUTONOMOUS LEARNING IN THE WORKPLACE

Edited by

Jill E. Ellingson and Raymond A. Noe

Routledge
Taylor & Francis Group
NEW YORK AND LONDON

First published 2017
by Routledge
711 Third Avenue, New York, NY 10017

and by Routledge
2 Park Square, Milton Park, Abingdon, Oxon, OX14 4RN

Routledge is an imprint of the Taylor & Francis Group, an informa business

Library of Congress Cataloging in Publication Data
Names: Ellingson, Jill E., editor. | Noe, Raymond A., editor.
Title: Autonomous learning in the workplace / edited by Jill E. Ellingson and Raymond A. Noe.
Description: New York, NY : Routledge, 2017. | Series: SIOP organizational frontiers series | Includes bibliographical references and index.
Identifiers: LCCN 2016047512| ISBN 9781138940734 (hardback: alk. paper) | ISBN 9781138940741 (pbk. : alk. paper) | ISBN 9781315674131 (ebook)
Subjects: LCSH: Self-managed learning. | Organizational learning. | Employees—Training of. | Knowlege management.
Classification: LCC HD58.8 .A87 2017 | DDC 658.3/124—dc23
LC record available at https://lccn.loc.gov/2016047512

ISBN: 978-1-138-94073-4 (hbk)
ISBN: 978-1-138-94074-1 (pbk)
ISBN: 978-1-315-67413-1 (ebk)

Typeset in Bembo
by Swales & Willis, Exeter, Devon, UK

5 Organizational Communities of Practice and Autonomous Learning 78
John Cordery and Ramon Wenzel

6 Regulating Our Own Learning: Stuff You Did Not Realize You Needed to Know 95
Jeffrey B. Vancouver, Leah R. Halper, and Kyle A. Bayes

7 Strategies for Supporting Self-Regulation during Self-Directed Learning in the Workplace 117
Bradford S. Bell

PART II
Organizational and Societal Influences Shaping Autonomous Learning 135

8 Work Design Growth Model: How Work Characteristics Promote Learning and Development 137
Sharon K. Parker

9 Effects of Human Resource Management on Informal Learning 162
Karin Sanders, Huadong Yang, Helen Shipton, and Timothy Bednall

10 Continuous Development throughout a Career: A Lifespan Perspective on Autonomous Learning 179
Margaret E. Beier, W. Jackeline Torres, and Jacqueline M. Gilberto

11 How Do Conditions Known to Foster Learning in the Workplace Differ across Occupations? 201
Eva Kyndt and Simon Beausaert

12 Informal Learning in the Healthcare Industry: The Detrimental Effects of a Hidden Curriculum 219
Britany N. Telford, Keaton A. Fletcher, and Wendy L. Bedwell