Change Management and Athletic Training: A Primer for Athletic Training Educators

David C. Berry, PhD, MHA, AT, ATC; Christine Noller, JD, LLM
Saginaw Valley State University, University Center, MI

Context: Change management is a discipline guiding how organizations prepare, equip, and support people to adopt a change to drive organizational success and outcomes successfully.

Objective: To introduce the concept of change management and create a primer document for athletic training educators to use in the classroom.

Background: While Lean and Six Sigma methodologies are essential for achieving a high-reliability organization, human resistance to change is inevitable. Change management provides a structured approach via different theoretical methods, specific principles, and tools to guide organizations through growth and development and serves an essential role during process improvement initiatives.

Synthesis: There are several theories or models of change management, 3 of which are specifically relevant in health care. Kotter and Rathgeber believe change has both an emotional and situational component and use an 8-step approach: increase urgency, guide teams, have the right vision, communicate for buy-in, enable action, create short-term wins, and make-it-stick [Kotter J., Rathgeber H. Our Iceberg is Melting: Changing and Succeeding Under Any Circumstances. New York, NY: St. Martin's Press, 2006]. Bridges' Transitional Model focuses on the premise that change does not influence project success; instead, a transition does [Bridges W. *Managing Transitions: Making the Most of Change*. Reading, MA: Addison-Wesley Publishing, 1991]. Lewin's model suggests that restraining forces influence organizations and that driving forces cause change to happen [Lewin K. Problems of research in social psychology. In: Cartwright D, ed. *Field Theory in Social Science: Selected Theoretical Papers*. New York, NY: Harpers; 1951].

Recommendation(s): Whether athletic trainers approach change management in a leadership role or as a stakeholder, newly transitioning professionals and those seeking leadership roles should value and appreciate change management theories and tools. Moreover, while no best practice statement exists relative to the incorporation of change management into a curriculum, addressing the subject early may allow immersive-experience students an opportunity to use change management during a process improvement initiative, facilitating a greater appreciation of the content.

Conclusion(s): Athletic training curriculums should consider including change management course content, whether separately or in combination with other process-improvement content, thereby familiarizing athletic trainers with a common language for organizational and professional change.

Key Words: Process improvement, change theory, transition, resistance, management

Dr Berry is currently Department Chair and Professor of Kinesiology at Saginaw Valley State University. Please address correspondence to David C. Berry, PhD, ATC, Saginaw Valley State University, 7400 Bay Road, University Center, MI 48710. dcberry@svsu.edu.

Change Management and Athletic Training: A Primer for Athletic Training Educators

David C. Berry, PhD, MHA, AT, ATC; Christine Noller, JD, LLM

KEY POINTS

- Health care organizations achieve high reliability through robust process improvement with the adoption of 3 distinct yet complementary methods: (1) Lean, (2) Six Sigma, and (3) change management.
- Resistance, or the refusal to accept or comply with something, the attempt to prevent something by action or argument can create apprehension and one of the most significant barriers to change that must be overcome as part of the change management process.
- Stakeholders resist change for several reasons: (1) misunderstanding why change is needed, (2) fear of the unknown, (3) living in the past, and (4) lack of competence to change, to name a few. All these barriers need to be broken down for change to occur.
- Clear, concise, and consistent communication are vital components of any change management process.

INTRODUCTION

The 2014 Standards for the Accreditation of Postprofessional Athletic Training Programs[1] and Postprofessional Athletic Training Residency Programs[2] focus on developing students' knowledge, skills, and abilities to integrate the Institutes of Medicine's 5 core competencies. One core postprofessional competency focuses on quality improvement. According to the standards:

> Healthcare organizations are increasingly adopting quality assessment methods that originated in the industrial manufacturing sector to minimize waste, decrease errors, increase efficiency, and improve quality of care. Competency in quality improvement relates to the athletic trainer's (AT's) recognition of the need for constant self-evaluation and life-long learning, and it includes the ability to identify a quality improvement objective, specify changes that are expected to produce an improvement, and quantitatively confirm that an improvement resulted from implementation of the change (eg, improved patient outcomes from administration of a specific intervention or utilization of a specific protocol).[2(p4)]

Quality improvement, though, is not unidimensional, particularly for an organization seeking high reliability, often described as a condition of persistent and collective mindfulness within an organization.[3] High-reliability organizations (HROs) continually strive to evaluate and create an environment in which potential problems are anticipated, detected early, and virtually always responded to early enough to prevent catastrophic consequences.[4] Chassin and Loeb[5] contend that health care organizations achieve high reliability through robust process improvement (RPI) with the adoption of 3 distinct yet complementary methods: (1) Lean,[6–8] (2) Six Sigma,[7,9–11] and (3) change management.[5] While Lean and Six Sigma (often done simultaneously as Lean Six Sigma) are powerful resources in the quest for achieving high reliability, human resistance to change represents a significant challenge to process improvement initatives[12,13] facing all types of organizations. Recognizing humans are innately resistant to change (Table 1), any quality improvement initiative requires change management to move any organization (eg, athletic training) forward.

Therefore, this paper builds upon the foundational context outlined in the previous article examining HROs[3] and Lean Six Sigma[15] in athletic training. Second, this paper creates a primer document for athletic training educators to use in the classroom as a learning tool to introduce change management, so students understand the language and concepts needed to successfully promote and adopt change to drive organizational success and outcomes in their chosen work environments.

CHANGE MANAGEMENT

When engaging in any RPI initiative, leaders (at all levels) must complete several change management steps. Process improvement teams must understand their stakeholders and how they will be affected by the proposed change(s). As a fundamental premise of RPI, stakeholders (ie, health care leaders, clinicians, staffs, and patients) must be empowered to become a part of the solution. Stakeholders should have ownership by being actively involved in the planning and implementation of the proposed improvements. This makes sense, as those closest to the process (ie, people doing the work and, in the case of health care, the end user) are best able to offer insight and articulate plausible solutions. It is equally crucial for stakeholders to fully understand the ramifications of the changes proposed and the ultimate impact on job performance.[12] Change management guides how organizations prepare, equip, and support individuals to adopt change to drive success and outcomes. Change management uses processes, tools, and techniques to manage the human side of change in an orderly and transparent fashion.[16]

While there are several theories or models of change management, 3 are commonly applied in health care and may be applicable in athletic training. These include Kotter and Rathgeber's theory of change managment,[17] Bridges' transition framework,[18,19] and Lewin's 3-step change model.[20–22]

Kotter and Rathgeber's Theory of Change Management

Kotter and Rathgeber's[17] landmark book *Our Iceberg is Melting: Changing and Succeeding Under Any Circumstances* communicates the tale of Fred the Penguin as he presents dire warnings of a melting Antarctica iceberg to the penguin leadership council. This representation of dire consequences and management response illustrates the 8 principles of problem solving in bringing about lasting and meaningful change (Table 2).

Kotter and Rathgeber's theory is directly applicable to athletic training, as ATs are problem solvers who seek to

Table 1. Reasons People Resist Change[14]

Reason	Rationale
Misunderstanding about the need for change or when the reason for the change is unclear	Stakeholders do not understand the need for change, expect resistance.
Fear of the unknown	Stakeholders only take active steps toward the unknown if they genuinely believe—and perhaps more importantly, feel—that the risk of standing still is more significant than those of moving forward.
Lack of competence	Organization change necessitates changes in skills, and some feel that they will not be able to make the transition very well.
Living in the past	Emotional connections to the "old way" or "historical perspectives" are hard-wired into stakeholders and must be broken.
Low trust	Stakeholders do not believe they or the organization can competently manage the change, thus creating resistance.
Fad	Stakeholders believe the change or initiative is a temporary fad and that the organization will revert to the "old ways."
Not being consulted	If stakeholders are not allowed to be part of the change, there will be resistance. Clear, concise, and consistent messaging with input from stakeholders lessens resistance.
Changes to routines	Stakeholders enjoy living in their comfort zone. When they feel outside of this, resistance is inevitable.
Change in the status quo	Why change what is not broken? Resistance stems from when stakeholders feel they will be worse off at the end of the change.
Exhaustion or saturation	Do not mistake compliance for acceptance. Stakeholders overwhelmed by continuous change resign themselves "to go with the flow." They are there in body, but not in spirit, and will resist change when given a chance.

bring about lasting and meaningful change in the protection and management of the patients and organizations we serve. No specific examples of the application of Kotter and Rathgeber's theory exist in athletic training; thus, we opted to look to other areas in health care, as change management is an interprofessional endeavor.[13,20,24] One guiding case example is that of the Ohio State University Health System (OSUHS) as it implemented its computerized physician order entry (CPOE) system. The OSUHS guiding team included 2 components: a design team and physician consultant team. The physician consultant team was responsible for approving the system design and operational policy relative to the CPOE implementation. Team members included all physician constituencies and specialties as well as junior and senior attending staff and fellows. Management therefore established a diverse, multispecialty group of physicians to guide the change management project according to Kotter and Rathgeber's theory of change management. Table 2 outlines and process undertaken by OSUHS to guide the change and is adaptable in athletic training.

Bridges' Transition Framework

Bridges' transition framework rests on the premise that change does not influence the success of a project; instead, *transitions* do. Changes are situational, whereas transitions are psychological.[18,23,25,26] People are often conscious that a change is occurring; however, people are less aware of their emotional response to it.[25] In health care, old technology is replaced with new. The change in technology entails new transitions for the end users. If leaders do not manage the transition well, the change management project inevitably will fail, often a result of the emotional response of the stakeholders. This too is seen in athletic training. In the collegiate setting, new coaches are constantly hired. The change in coaching philosophy toward athletic health and safety may entail new procedures and guidelines for the athletic training staff overseeing the athletes' wellbeing. If the athletic training staff does not manage the transition well, the procedures put in place to serve the end user (ie, athlete) may inevitably fail, and athletes are injured. Bridges[18,19,25] believed that people must proceed through 3 stages of transition for change to succeed. These stages include endings (ie, ending, losing, and letting go), the neutral zone, and beginnings.[19,23,25] Table 3 outlines Bridges' 3-step transition framework.

Application of Bridges' Transition Framework. *Letting Go.* For change to occur, individuals must first let go of their existing (current) state. Bridges opined that people do not resist change. Rather, they resist the transitions associated with losses experienced with change. Since change disrupts people's beliefs, it is essential for leaders and guiding teams to document individuals' beliefs, acknowledge their importance, and make implementation decisions sensitive to those beliefs.[23] It is equally vital for the guiding team to recognize individuals' loss and be tolerant of their overreactions. As with any loss, people will work through the stages of anger, bargaining, anxiety, sadness, disorientation, and depression. This process holds for ATs. In response, the guiding team (eg, head AT) must remain sympathetic, be willing to talk, and provide information to help the athletic training staff overcome a fear of the unknown. The guiding team must assure the athletic training staff they will be able to adjust to the new change if they first work through their feelings.[23]

Bridges[18,19,25] also suggested finding ways to compensate individuals for their perceived loss, whether tangible (monetary) or intangible (status, perceived competence). In athletic

Table 2. Kotter and Rathgeber's 8 Principles of Change Management

Principle	Explanation	Ohio State University Health System (OSUHS) Example
Create a sense of urgency for change	Help others see the need for change and acting immediately. Dedicate more energy to action.	Administrators sent a letter detailing the need for more cost-effective prescribing with a copy of the $400,000 check the group had to pay the health plan to cover losses. Physician group members immediately recognized the gravity of the situation and altered their prescribing practices accordingly.[23]
Building a guiding team	Pull together a guiding team with leadership skills, credibility, communications ability, authority, analytical skills, and a sense of urgency.[17]	Team members must have relevant knowledge about the changes needing to occur in health care. They must have credibility with peers, emanate a sense of trust and believability. They must also possess a working knowledge of the department, division, or group within which the changes will impact. They must demonstrate managerial skills specific to planning, organizing, and identifying steps and actions required for the achievement of short-term goals. Finally, they must display the ability to communicate a central vision and motivate others to advance and achieve that vision.[23]
Develop the change vision and strategy	Articulate how the future will be different from the past and how to make that future a reality.	The team seeks to create a clear vision for electronic health record (EHR) implementation, and they would first ask the following questions. What does it mean to be a completely wireless health care organization? What does it mean to redesign physician workflow to enable electronic documentation completely? What does it mean to be a paperless health care organization, a paperless physician practice?[23]
Communicate for understanding and buy-in	Ensure as many people as possible understand and accept the vision and strategy. Instead of stopping resistance, the objective should be to encourage more people to help.[17]	Group met daily for 2 h to discuss prototypes. After each meeting, physicians described prototypes with colleagues, seeking feedback. Findings were shared the following day; repeating the cycle until the computerized physician order entry (CPOE) pathway was complete. Because department physicians were involved in the design of the pathways, they engaged meaningfully in the process.
Empowering others to act	Empower others to act by eliminating barriers and enlisting the help of key players to become part of the solution.	Reluctant physicians were asked to perform several patient documentation tasks using a patient's paper chart and electronic record. The see-feel-change approach provides physicians with hands-on experience of how their workflow would improve.[23]
Producing short-term wins	Short-term wins demonstrate for stakeholders that the change management process is working. Short-term wins drive momentum.	Every win demonstrated to the entire organization that CPOE change project was moving forward in the right direction.[23]
Don't let up	Press harder and faster after the first successes, relentlessly initiating change until the vision becomes a reality.	When the CPOE went live, a special team of physicians (red coats) received extensive training on the CPOE system and conflict resolution. Whenever a physician or staff member had a problem, a red coat was deployed to address the problem, responded when recalcitrant physicians claimed the system was too difficult to use. The red coats investigated to determine if the problem was system related or user (physician) related.[23]
Making change stick	Create a new culture by holding onto new behaviors until they are strong enough to replace old traditions	OSUHS developed a practice called "Post Live" or "Focused Rounds," in which an expert was sent on physician rounds to help physicians make the system more efficient.

Table 3.   Bridge's 3 Stages of Change Management Transition[19]

Stage(s)	Stage is. . .	Stakeholders may experience. . .	Guide stakeholders by. . .
Ending, losing, and letting go	Marked with resistance and emotional upheaval because stakeholder is forced outside his or her comfort zone.	Fear, denial, anger, sadness, disorientation, and uncertainty about the change.	Accepting stakeholders' resistance and appreciating emotions, allowing time for emotion to be expressed, listening empathically, and communicating openly about change.
Neutral zone	Marked with confusion, uncertainty, and impenitentness.	Resentment toward change, low morale, and productivity; anxiety about the role and identity; and skepticism about the change.	Providing lost stakeholders with a solid sense of direction, encouraging the team to communicate feelings, establishing short-term goals to see quick wins. Quick wins help to improve motivation and allow stakeholders to see the benefit of the change effort.
New beginning	Marked with acceptance and energy as the change initiative has been embraced.	High energy, openness to learning, commitment to the organization, and change.	Developing efforts directed at sustaining change, establishing long-term goals, allowing stakeholders to take action to monitor and highlight success, rewarding stakeholders for hard work.

training, an intangible may include sending the staff member to a change management certification course. This gives people a sense of control over the transition to change. While painful to experience, endings are an inevitable constant in life. Without change, organizational and individual growth cannot occur. Sometimes, individuals must be reminded of that fact as a final step in dealing with endings. Once an ending occurs, the individual will move onto the neutral zone.[23]

Neutral Zone. In the neutral zone, people may still yearn for the way "things used to be" while anticipating the new beginning. During this phase, individuals may display anxiety, lack of motivation, absenteeism, illness, overload, confusion, and failure to communicate, likely because they are not yet comfortable with a new way of doing things and find themselves suspended in an "in-between place."[26] The neutral zone is where psychological "realignment and repatterning" take place, and therefore, while unsettling, it is also the place where creativity occurs.[26] Bridges offers several recommendations to move individuals through the neutral zone successfully.[23,25]

One recommendation is the process of normalization. It begins when individuals and groups realize that the transition from an old ending to a new beginning will take time. Fear, confusion, and even ambiguity are reasonable. Leaders and guiding team members must be willing to accept these emotions from staff and work with them accordingly.[23] To further provide staff with direction, Bridges offered 7 neutral zone guidelines (Table 4).

New Beginnings. Once people reach the end of the neutral zone, they are ready to proceed onto new beginnings. At this stage, leaders encourage staff by providing a purpose, a plan, a picture, and a role for people to play in the new beginning. For the purpose, individuals should understand the 5 W's of the problem and the evidence-based solution to correct the problem.[23] As human motivation, in part, is guided by mental pictures, the health care organization needs to provide staff with pictures of how work-life will look in the new beginning. Within athletic training, the picture could be as simple as the athletic training staff looking at change in the process of referring athletes to sports medicine physicians. The change plan should set forth how individuals' work-lives are going to

Table 4.   Bridges' 7 Neutral Zone Guidelines

Guidelines	Definition or Example
First	Protect staff from becoming overwhelmed with change. Break change into more easily manageable blocks or clusters.
Second	Consider updating policies, procedures, and organizational charts to help move through the neutral zone.
Third	Support people and groups to establish short-term goals that lead to project achievement.
Fourth	Be realistic in expectations; people in the neutral zone will not produce results at a high level.
Fifth	Consider types of specialized training needed for supervisors and managers to lead through the neutral zone effectively.
Sixth	Develop a sense of connectedness within the organization with weekly meetings, question-and-answer sessions, special off-campus events, or Web site devoted to transition.[23]
Seventh	Create a transition monitoring team comprised of representatives from throughout the organization that meets on a biweekly basis to discuss transition progress. While not a decision-making body, this team exists solely to demonstrate the administration's commitment to obtaining feedback and disseminating accurate information.[23]

Table 5. Lewin's 3-Step Model of Change Management[20,21,24]

Step(s)	Explanation	Be sure to. . .	Application in Health Care	Athletic Training Example
Unfreeze (alerting traditional clinical paths or approach)	Unfreezing or creating problem awareness, making it possible for individuals to let go of old ways and upending the current equilibrium by educating, challenging the status quo, and demonstrating issues and problems.	Determine what needs to change, ensure there is strong support from senior management, create the need for change, manage and understand the doubts and concerns.	Attempts to alter a traditional clinical path or approach.	Athletic training leader is working with the athletic training staff to embrace changes in how athletes are referred to physicians, must recognize and remove the barrier to changing the status quo.
Change	Changing or moving (ie, seeking alternatives, demonstrating change benefits, decreasing forces that prevent change). Executed via brainstorming, role modeling, coaching, and training.	Be sure to communicate often, dispel rumors, empower actions, involve people in the process.	Refining the emergent provider behaviors.	Athletic training staff needs to recognize the need for change and that change can improve return to play via positive communication, staff training, and an examination of the cost of the financial and human resources.
Refreeze	Integrating and stabilizing a new equilibrium into the system so that it becomes a habit and resists further change via celebrating success, retraining, and monitoring key performance indicators.	Anchor the changes into the culture, develop ways to sustain the change, develop ways to sustain the change, celebrate success.	Reinforcing through changes in the organizational structure.	After a process improvement plan which all members engaged in, the athletic training staff's new process becomes policy.

change, when they will receive training and information to perform their jobs, and what precisely they will need to make the transitions to the new process.[23] Finally, individuals need to know the role they will play in the transition process.

Lewin's 3-Step Change Model

Lewin's[20,22] 3-step change model builds upon the premise that people and groups are influenced by restraining or *static forces* (forces opposing change, maintaining status quo) and forces that promote or drive change referred to as *driving forces* (forces pushing for positive change).[27] The resulting tension between balancing restraining and driving forces maintains organizational equilibrium. When organizations fully understand what behaviors drive or oppose change, then work to strengthen the positive driving forces, then change can occur successfully.[20,21,24,27,28] Lewin's 3-step change model is outlined in Table 5.

CHANGE MANAGEMENT AS A LEADERSHIP SKILL

Leaders facing the challenges of a rapidly evolving health care system must develop a distinct change management skillset; this includes athletic training leaders. Effective leaders must be able to assemble a team of people committed to the organization's core values (ie, supporting a values-based culture). Not only must values be shared, but they must also be communicated and understood.[29]

A clear plan for change must be set forth and articulated. Leaders are responsible for educating staff and patients on the direction the organization is moving, offering a compelling argument for why.[29] Leaders should have a long-term plan consistent with the desired improvements driving the need for change. In this sense, change management mirrors RPI initiatives with predetermined targets and means to measure progress and success.[30]

It is equally important not to take a myopic view of change. Too often, leaders make strategic decisions based primarily upon financial factors. Decisions are based upon present-day cash flows, rather than future opportunities. This relates to a lack of vision or the inability to communicate the broader context of the proposed change effectively.[29]

Change management leaders possess high emotional intelligence. They understand the needs of others and can build strong relationships. They are flexible and able to adapt and create change.[18] This skillset represents a proactive rather than reactive approach to change.[29] Successful leaders are creative and astutely aware of their employees' perspectives as they create an impetus for change. They respect the past while advancing the future. This means acknowledging the contributions of staff members and their ownership interest in the way things were. Change is difficult (especially interprofessional change),[13] as is letting go of the past as leaders advance change throughout the organization.[30]

CHANGE SUSTAINABILITY

As health care organizations and leaders (including athletic training leaders) respond to the quality and safety challenges of today's evolving and rapidly changing health care system, they can become overwhelmed with the sheer scope and number of issues, and RPI initiatives are needed for survival and success. Two decades after the Institute of Medicine's *To Err Is Human: Building a Safer Health System*,[31,32] medical errors remain the third-leading cause of death in the United States. Moreover, while RPI initiatives have dominated the health care landscape since 1999,[33] the concept of change management has evolved as attention shifts from implementation to sustainability. Change management now entails a combination of culture, process, investment, and sustainability and commitment[34]; however, its discussion and application in athletic training is limited. The lack of true leadership training during educational preparation, limited exposure during the transition to practice and onboarding, and mindset that ATs are not part of the change process are possible reasons for the limited application.

Lessons on Sustainability

First, a difference exists between values and tools. Values (ie, culture) alone are insufficient to drive outcomes. Instead, there must be a thoughtful balance between values and tools, a balance that differs for each organization. Executive leadership identifies aspirational goals to inspire staff, then provides them with the tools and support needed to effectuate change. A useful tool Lean can make change easier.[15] Lean makes processes more efficient, which in turn, makes change feel more of a win than a burden.[20,34]

Second, ensure that progress measures are accurate. Health care organizations tend to choose only metrics in which they are already proficient. Preferably, measurement should occur at multiple levels, both process and outcome. Organizational comparisons should measure progress against both their past results and against top performers over time.[34] One common tactic is to create dyad teams of clinical and nonclinical leaders who collaborate to establish and monitor meaningful change measures based on the evidence.[13,24,34,35]

Third, create a sense of purpose, not a collection of projects. Thus, do not lose perspective of the long-term goal as short-term setbacks are inevitable. Gunderson Health in La Crosse, WI, set an ambitious goal in 2008 to reduce carbon admissions by 90% and to be powered by 100% renewable sources by 2014.[34] However, the turbines that were to generate power failed to work as planned. A plan to use vented gas from a local brewery to power a generator failed when the brewery changed from beer to hard lemonade. Rather than becoming mired in setbacks and unanticipated challenges, Gunderson's leadership remained focused on their sense of purpose in lowering patient care costs, improving the local economy, and reducing pollution. Ultimately, Gunderson did meet its goals by October 2014.[34]

Fourth, do not assume that an improved process will remain so. Often, a goal is established, resources allocated, and then when 1 person leaves, the process reverts to its preintervention state, and sustainability is lost. In this sense, hardwiring a process should include asking the right questions so that leaders can accurately assess if process measures are inadequate.[3,34]

Fifth, celebrate wins, then move on quickly. Celebrating goal attainment serves as an inspirational tool that motivates individuals forward. Understand there must also be a balance between celebration and continuous process improvement efforts. The leadership team must recognize success while transitioning to the next step, improvement and initiative.[20,34]

Six, do not accept tradeoffs. Leaders should not fear that improvement in 1 domain will be met with decreased performance in another. Instead, safety, quality, experience, and engagement are interrelated.[3] For example, data reveal that there is no tradeoff between the reduced length of stay and the patient experience. In high-performing organizations, high nurse engagement is not met with low physician engagement. The logical explanation is that culture drives improvement across all domains. It is further hypothesized that high-performing organizations have cultures of improvement and goals that staff members believe and embrace.[3,34]

SOFTER SKILLS OF CHANGE MANAGEMENT: LEADERSHIP EDUCATION AND TRAINING

Leaders in organizational change must be able to create and articulate a vision, build relationships, and allocate and prioritize resources to facilitate change. To prepare for their change management roles, leaders must participate in focused leadership development programs. These programs are designed to increase the process improvement competence of the health care workforce, improve efficiency in education and development activities, reduce staff turnover, and focus organizational attention upon strategic priorities related to quality, safety, and efficiency.[36]

Performance improvement requires experience in information sharing, teamwork across disciplines, team design and development, goal setting, and oversight of teamwork. Change leaders must further possess skills in operational design, financial management, negotiation and conflict resolution, innovation, improvement, and patient and family engagement. The goal is to prepare leaders to respond to operational challenges, including quality and efficiency, with limited resources in a rapidly changing environment.[36]

The American Hospital Association, in its 2014 report "Building a Leadership Team for the Health Care Organization of the Future,"[37] concluded, in part, that successful health care organizations need to develop change management as a core competence. Executives and leaders across the organization need to have business judgment, strategic insight, comfort with uncertainty, social intelligence, self-awareness, and people management skills to manage in a changing environment. Embracing change and taking sound risks are required in today's health care environment.[38]

LIMITATIONS

To our knowledge, no salient athletic training examples in the literature address explicitly change management at this time of this publication. However, the theories and models identified in this paper are just that, theories and models that can be easily replicated in sports medicine clinics, orthopedic practices, outpatient rehabilitation facilities, secondary schools, military, performing arts, and virtually any other athletic training venue in existence. Remember, change

management guides how organizations prepare, equip, and support individuals to adopt change to drive success and outcomes. Often in an interprofessional or interdisciplinary manner, change management uses processes, tools, and techniques not specific to 1 setting, environment, or organization to manage the human side of change to achieve a desired, meaningful, and lasting outcome embraced and valued by all. We also recommend the National Athletic Trainers' Association consideration of the development of programming related to high reliability, RPI, and change management to assist future and current ATs in achieving leadership roles.

RECOMMENDATIONS AND CONCLUSIONS

Whether ATs approach change management in a leadership role or as part of the team, all must acquire a working knowledge of the change management theories and models. Without a working knowledge of specific theories and models and its tools, it will be difficult for ATs to serve an essential role during a process improvement initiative or during times of organizational growth and development, especially during strategic planning and emergent situations. According to the Board of Certification's *Practice Analysis*, 7th edition, entry-level ATs should have knowledge of "organizational management styles and processes" and "skill in communicating effectively, collaborating with professionals (eg, teamwork) and providing leadership appropriate situations and people,"[39(p61)] but are they acquiring this knowledge?

Within athletic training education, limited time is spent on the theories or models of change management. The reasons why are not understood; however, change management as part of the graduate course of study or certificate training should not be limited to only executive leadership and management personnel. Athletic training educators should embrace the concepts of change management, and programs should strongly consider adding content related to change management to their graduate curriculum, whether separately or in combination with other RPI concepts such Lean Six Sigma. The addition of the content ensures meeting educational standards set forth by Commission on Accreditation of Athletic Training Education, the content knowledge established by the Board of Certification, and more importantly, it equips new graduates with the processes, tools, and techniques needed to manage the human side of change.

REFERENCES

1. Standards for the accreditation of post-professional athletic training degree programs. Commission on Accreditation of Athletic Training Education Web site. https://caate.net/wp-content/uploads/2018/02/2014-Standards-for-Accreditation-of-Post-Professional-Degree-Programs_.pdf. Updated February 16, 2018. Accessed November 12, 2020.

2. Standards for the accreditation of post-professional athletic training residency programs. Commission on Accreditation of Athletic Training Education Web site. https://caate.net/wp-content/uploads/2018/02/Residency-Standards-Final-2014_.pdf. Updated February 16, 2018. Accessed November 12, 2020.

3. Noller C, Berry DL. High reliability: a prime for athletic training educators. *Athly Train Educ J*. 2020;15(4):251–258.

4. Patient safety primer: high reliability. Agency for Healthcare Research and Quality Web site. https://psnet.ahrq.gov/primers/primer/31/high-reliability. Updated September 2019. Accessed November 12, 2020.

5. Chassin MR, Loeb JM. The ongoing quality improvement journey: next stop, high reliability. *Health Aff (Millwood)*. 2011;30(4):559–568.

6. Black JR, Miller D, Sensel J. *The Toyota Way to Healthcare Excellence: Increase Efficiency and Improve Quality with Lean*. 2nd ed. Chicago, IL: Health Administration Press; 2016.

7. D'Andreamatteo A, Ianni L, Lega F, Sargiacomo M. Lean in healthcare: a comprehensive review. *Health Policy*. 2015;119(9):1197–1209.

8. Liker JK, Convis GL. *The Toyota Way to Lean Leadership: Achieving and Sustaining Excellence through Leadership Development*. New York, NY: McGraw-Hill Publishing; 2011.

9. DelliFraine JL, Wang Z, McCaughey D, Langabeer JR 2nd, Erwin CO. The use of Six Sigma in health care management: are we using it to its full potential? *Qual Manag Health Care*. 2014;23(4):240–253.

10. Lee JY, McFadden KL, Gowen CR 3rd. An exploratory analysis for Lean and Six Sigma implementation in hospitals: together is better? *Health Care Manage Rev*. 2018;43(3):182–192.

11. Lin M. What is better for engaging staff: Lean or Six Sigma? Virginia Mason Institute Web site. https://www.virginiamasoninstitute.org/2016/02/better-engaging-health-care-staff-lean-six-sigma/. Published February 10, 2016. Accessed November 12, 2020.

12. Lighter DE. *Basics of Health Care Performance Improvement: A Lean Six Sigma Approach*. Burlington, MA: Jones & Bartlett; 2011.

13. Patterson C, Arthur H, Peachey G, et al. Planning for interprofessional change in primary health care: exploring the use of the Interprofessional Resource Centre. *Adv Med Educ Pract*. 2013;4:117–125.

14. Rick T. Top 12 reason why people resist change. Torben Rick Web site. https://www.torbenrick.eu/blog/change-management/12-reasons-why-people-resist-change/. Published May 23, 2011. Accessed November 12, 2020.

15. Noller C, Berry DC. Lean Six Sigma and athletic training: a primer for athletic training educators. *Athl Train Educ J*. 2020;15(2):259–268.

16. Change management: making organizational change happen effectively. Mind Tools Web site. https://www.mindtools.com/pages/article/newPPM_87.htm. Published 2020. Accessed November 12, 2020.

17. Kotter J, Rathgeber H. *Our Iceberg is Melting: Changing and Succeeding Under Any Circumstances*. New York, NY: St. Matin's Press; 2006.

18. Bridges W. *Managing Transitions: Making the Most of Change*. New York, NY: Perseus Book; 1991.

19. Bridges' transition model: guiding people through change. Mind Tools Web site. https://www.mindtools.com/pages/article/bridges-transition-model.htm. Accessed November 12, 2020.

20. Wojciechowski E, Pearsall T, Murphy P, French E. A case review: integrating Lewin's theory with Lean's system approach for change. *Online J Issues Nurs*. 2016;21(4):4.

21. Lewin's change management model: understanding the three stages of change. Mind Tools Web site. https://www.mindtools.com/pages/article/newPPM_94.htm. Accessed May 22, 2020.

22. Lewin K. Problems of research in social psychology. In: Cartwright D, ed. *Field Theory in Social Science: Selected Theoretical Papers*. New York, NY: Harpers; 1951.

23. Campbell RJ. Change management in health care. *The Health Care Manager*. 2008;27(1):23–29.

24. Manchester J, Gray-Miceli DL, Metcalf JA, et al. Facilitating Lewin's change model with collaborative evaluation in promoting evidence based practices of health professionals. *Eval Program Plann*. 2014;47:82–90.

25. Bridges W. *Managing Transitions: Making the Most of Change*. 2nd ed. New York, NY: De Capo Press; 2003.

26. Shy Y, Mills LG. A critical new pathway towards change in abusive relationships: the theory of transition framework. *Clin Soc Work J*. 2010;38(4):418–425.

27. Bozak MG. Using Lewin's force field analysis in implementing a nursing information system. *Comput Inform Nurs*. 2003;21(2):80–85.

28. Shirey MR. Lewin's theory of planned change as a strategic resource. *J Nurs Adm*. 2013;43(2):69–72.

29. Atchison TA. The ability to change: a core leadership skill. Learn to adapt in a transformational landscape. *Healthc Exec*. 2017;32(2):70–71.

30. 5 change misconceptions. *Healthc Exec*. 2015;30(3):51–52.

31. Institute of Medicine. *To Err Is Human: Building a Safer Health System*. Washington, DC: The National Academies Press; 2000. https://doi.org/10.17226/9728.

32. Bates DW, Singh H. Two decades since To Err Is Human: an assessment of progress and emerging priorities in patient safety. *Health Aff (Millwood)*. 2018;37(11):1736–1743.

33. Makary MA, Daniel M. Medical error—the third leading cause of death in the US. *BMJ*. 2016;353:i2139.

34. Molpus J. Change management 2018: the new rules. Healthleaders Media Web site. https://www.healthleadersmedia.com/strategy/change-management-2018-new-rules. Published February 1, 2018. Accessed November 12, 2020.

35. Sutherland K. Applying Lewin's change management theory to the implementation of bar-coded medication administration. *Can J Nurs Inform*. 2013;8(1–2). http://cjni.net/journal/?p=2888.

36. Hart CK, Dykes C, Thienprayoon R, Schmit J. Change management in quality improvement: the softer skills. *Curr Treat Options Pediatr*. 2015;1(4):372–379.

37. Health Research & Educational Trust. Building a leadership team for the health care organization of the future. Hospitals in Pursuit of Excellence Web site. http://www.hpoe.org/Reports-HPOE/leadership-team-future-2014.pdf. Published April 2014. Accessed November 12, 2020.

38. White BA, Baron JM, Dighe AS, Camargo CA Jr, Brown DFM. Applying Lean methodologies reduces ED laboratory turn-around times. *Am J Emerg Med*. 2015;33(11):1572–1576.

39. *Practice Analysis*. 7th ed. Omaha, NE: Board of Certification; 2015.