

Twelve tips for managing change in medical education

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Abstract

Healthcare systems and organisations are continually exposed to change, and medical educators are increasingly expected to manage change, such as curriculum transformations and educational reforms. However, leading change can often be challenging, and medical educators often lack the resources, knowledge, and skills to successfully manage change initiatives. In managing change, it is important to recognise that organisations do not change, rather it is *people* that change, one person at a time. However, change can have a destabilising effect on individuals and an approach to support individuals through change is strongly advocated. This article offers twelve tips for managing change using the Prosci ADKAR model for achieving individual change. The article explores how ADKAR can be used as a systematic framework to guide the formulation of change management plans. Finally, the article considers the current context of the COVID-19 pandemic and offers an appraisal of such frameworks and models during a time of unprecedented change and transform.

Keywords: change management; medical education; ADKAR; COVID-19; project management; change management models

Introduction

It is increasingly expected that medical educators should acquire various change management and leadership skills for working efficiently in complex and evolving clinical environments, and also fulfil the commitment of training junior colleagues and students to become effective practitioners (Parkar and Nayak, 2015). This involves changes related to faculty development, disseminating educational research, and introducing reforms to curricula, assessment, and evaluation (Gale and Grant, 1997; Bland *et al.*, 2000; Genn, 2001; Norman, van der Vleuten and Newble, 2002). Several reasons have been attributed to changes to medical education, including practice shifts in stakeholders like physicians and patients, development of alternative and effective pedagogical models for medical education, and increased access to information due to technological advances (Parkar and Nayak, 2015). Moreover, the unprecedented transformations that have occurred due to the COVID-19 pandemic are likely have a significant and lasting impact on medical education and foster wide-reaching teaching, learning and assessment changes (Goh

and Sandars, 2020; Veasuvalingam and Goodson, 2020).

Successfully managing such transformations requires resources, knowledge, and skills. However, there are concerns that medical educators are offered little specific training in this area (Schlegel, McLeod and Selfridge, 2018). There is also a lack of clear and practical guidance in the medical education literature regarding how to manage change successfully and there is a need for faculty development in the arena of change management (McLean, Cilliers and Van Wyk, 2008). For example, Cartwright *et al.* (2017) argue that whilst there is much literature on the topic of curriculum change, comparatively little is reported regarding how to successfully drive curriculum change and practical strategies for success.

Leading change can often be challenging and a systematic approach to change management is strongly advocated. However, change management tends to be ad hoc and reactionary with many change programmes failing to realise their intended outcomes (By, 2005). Such failures have been attributed to the lack of valid and practical change management frameworks, as well as the plethora of contradictory or confusing theories and approaches, which are often based on unchallenged hypotheses and lack empirical evidence (By, 2005). In managing a change, it is important to recognise that organisations do not change, rather it is *people* that change, one person at a time. Therefore, an approach to support individuals through change is strongly advocated. The tips outlined in this article are not presented in any hierarchical order but provide a framework for successfully managing change in medical education.

Tip 1: Consider individual change

Change management is defined as a structured and methodological process for managing the "people side of change" (Hiatt and Creasey, 2012). Only through individual change - and the new capabilities of individuals - can a proposed transformation be fully realised. However, leaders and managers often ignore the 'people side of change' and focus on technical or procedural aspects of a solution, or deployment and implementation. Change will be unsuccessful if the people impacted by an initiative do not support and engage in the change. As people's engagement with change is not uniform or consistent, a model that illustrates individual change can be a powerful tool for change management practitioners.

The Prosci ADKAR model for achieving individual change has been highlighted as an important tool for managing change within medical education (Sandars *et al.*, 2020). ADKAR is an acronym for *Awareness, Desire, Knowledge, Ability* and *Reinforcement*. It represents five sequential building blocks that must be achieved for individual change to be successful. Hiatt and Creasey (2012) emphasise that for a change to be successful an individual must complete each step sequentially before moving on to the next.

ADKAR has been used in healthcare settings to assess change readiness and is seen as a convenient and practical tool for change practitioners to deploy (Franzen *et al.*, 2013; Kachian, Elyasi and Haghani, 2018; Wong *et al.*, 2019). ADKAR can be used as a diagnostic tool for building profiles, which can help with assessing and understanding the change position of both individuals and groups and identifying possible *barrier points* during the change process. Understanding ADKAR *barrier points* to a proposed change can help diagnose gaps in a change management program and identify corrective actions. For example, Kachian, Elyasi and Haghani (2018) illustrate how the ADKAR model informed the design of a questionnaire which aimed to evaluate the readiness of Iranian nurses in using a medical information system. The responses from the questionnaire identified specific barrier points to the change.

Tip 2: Anticipate resistance to change

Individual change management is valuable in managing personal transitions through a change and focusing conversations, especially when dealing with resistant colleagues. Resistance to change is normal and expected, however it is complex and multidimensional (Sveningsson and Sörgärde, 2019). Common causes for resistance include:

- psychological reasons (e.g. innate dislike of change);
- political reasons (e.g. the change is not in my interests);
- lack of sensemaking or readiness for change (e.g. lack of conviction that the change is necessary or too much change); and
- resistance towards the process (e.g. disagreement with how the change is managed).

The root cause of a resistance to change can be very personal and vary from person to person. Resistance can manifest in many ways, including avoidance of the change (e.g. reverting to old behaviours), building barriers (e.g. formulating excuses and recruiting dissenters), and negativity which can be damaging to the change initiative (e.g. rumours/miscommunication, complaining, and celebrating failure). People's perceptions of a proposed change are also dynamic – they are shaped over time and maintained by a range of factors (Sveningsson and Sörgärde, 2019).

The stages of the ADKAR model provides a high-level framework for understanding resistance to change and can be used as a framework for formulating resistance management plans (Balluck, Asturi and Brockman, 2020). Developing a resistance management plan provides an effective strategy for proactively addressing resistance. A resistance management plan should include consideration for identifying and reacting to resistance that occurs throughout the course of the change initiative. This is important as dismissing the concerns of individuals can intensify resistance and cause unnecessary barriers to change (Sveningsson and Sörgärde, 2019). Plans should consider any physical or psychological barriers and seek to remove these.

Tip 3: Ensure adequate change management resources

Effective change management is seen as a critical factor in project success and projects should have sufficient change management resource for the specific initiative (Hornstein, 2015). Here it is important to define a change management team structure and ensure resources are appropriate based on size and scope of the change. It is important to evaluate the size and scope of the change, the characteristics of the organisation, and the strength of the change sponsorship. Based on these assessments, a change management strategy can be developed which is aligned with the type and size of the change (Hiatt and Creasey, 2012). For example, a radical and widespread change made to a large 'change-resistant' organisation – such as modernising the undergraduate medical curriculum with case-based learning (CBL) and novel teaching methods at a UK Medical School - may entail considerable project risk and require substantial change management resource. Conversely, a curriculum change on a specific module led by an enthusiastic academic team - such as replacing didactic lectures with a 'flipped learning' approach - is likely to affect fewer people and require less change management resource and activities.

Depending on the level of risk and overall impact, the size of change management team might vary considerably (e.g. from one part-time individual to a large core team with several sub-teams). The change management team structure should detail where the change management resources are positioned in relationship to the project manager(s) and project sponsor(s). However, within medical education securing dedicated change management resource might be extremely challenging and there is an identified faculty development need in this area (McLean, Cilliers and Van Wyk, 2008). Assessing the size and scope of the change provides evidence for justifying

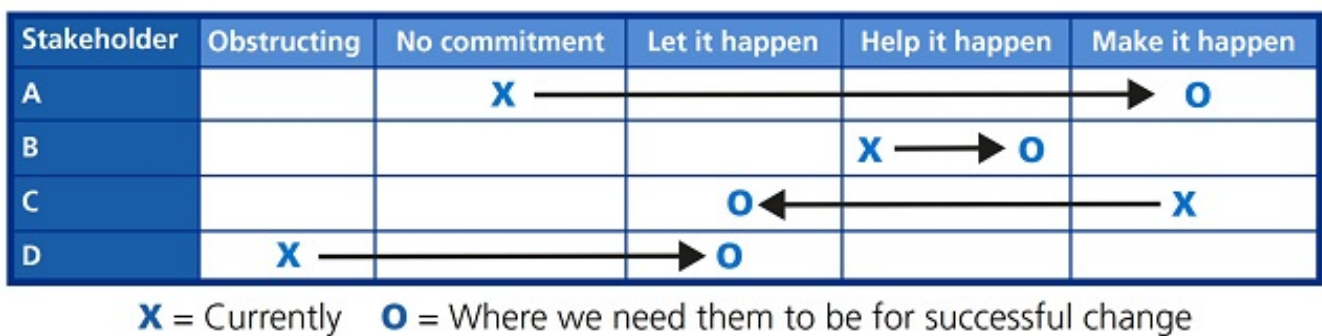
appropriate change management resources; identifying and securing resources ensures projects have the right personnel and structure for effectively managing the change at hand (Hiatt and Creasey, 2012).

Tip 4: Establish active and visible sponsorship

Mobilising effective leadership and sponsorship for change within medical education is seen as a key success factor (Norman, van der Vleuten and Newble, 2002). Successful change initiatives require strong sponsorship and require sponsors to be active and visible throughout the change. Influencing people’s perceptions of the change process requires active presence and constructive dialogue, which contributes to transparency, trust, and confidence (Sveningsson and Sörgärde, 2019). Developing a sponsorship map helps outline the actions needed from the various change sponsors across the organisation and the actions required by sponsors (e.g. communications planning, identifying alignment with areas of the organisation).

Sponsors should help establish coalitions and communicate directly with those undergoing the change. Identify the coalition of leaders who will need to act as sponsors of the change and consider their position in relation to the change. These may be internal and external stakeholders, ranging from students to academic leaders and communities (Schlegel, McLeod and Selfridge, 2018). Complete a *continuum of commitment analysis* (Figure 1) to assess where stakeholders are currently in terms of their commitment to the change and where they need to be in order to achieve the project aims (NHS England, 2018). This helps to identify early on any possible challenges with certain sponsors and assists with formulating plans to support leaders to become visible and active sponsors of the change.

Figure 1: Example of a continuum of commitment analysis table (NHS England, 2018).



Tip 5: Create ‘desire’ to engage in the change

Building the *desire* for change is an explicit milestone in the ADKAR model and it is important that individuals are willing and motivated to support the change initiative. Managers should be equipped and trained to be effective change agents, who should actively champion the change and support those who they manage through the change process. Clearly addressing the question "What's in it for me?" (WIIFM) can be an effective strategy for raising desire in individuals to engage in the change process. Clearly communicate the relevance of the change to individuals and explain how the change may impact them directly, emphasising the expected benefits for engaging in the change. This could involve improvements in efficiency and productivity, enhanced educational effectiveness (e.g. enhancing inclusivity or implementing pedagogical improvements), or increased opportunities/responsibilities which may benefit individuals progression or promotion.

Storytelling can be an effective strategy for building desire in individuals and can be a powerful method in contributing to shared sense-making of the change (Sveningsson and Sörgärde, 2019). Published literature, case

studies, reports, conference proceedings, anecdotes, or posters can be used to influence meanings and present compelling narratives. Such artefacts can explain the need for change, by highlighting retrospective issues or challenging the current status quo, as well as present prospective stories which highlight the opportunities presented by the proposed change.

Tip 6: Manage change with effective training and coaching

It is important to develop change management plans, which ideally should become integrated within a project plan. The change management plans should outline the strategies to support the individuals impacted by the change and importantly should help individuals move through the ADKAR model. The change management plans should include communications, training, coaching and resistance management.

A coaching plan details how managers and supervisors will be equipped with the necessary tools and skills to lead the change efforts. However, it is important to recognise that this group can often resist change and they will require support in navigating their own ADKAR change process before leading the same change process within their own teams (Hiatt and Creasey, 2012).

Training is an essential part of most change initiatives and is critical to help individuals build the *knowledge* and *ability* they need fully engage with the change. Training plans should be developed to identify who needs training, their specific needs, and a schedule of deliverable activity. Importantly, training plans should be sequenced according to the ADKAR model and should not be undertaken before *awareness* and *desire* building (Hiatt and Creasey, 2012). Within the training plan, try to provide opportunities for practical experiences within a safe environment. This could involve role play, simulations, or authentic hands-on experience with new roles and processes. It is also important that training and coaching activities are continuously evaluated and iteratively improved to ensure they meet the needs of those participating in the change.

Tip 7: Develop effective communication plans

Communication is seen as integral to the success of change management; however, it is insufficiently used in many organisations (Varkey and Antonio, 2010). Effective communication plans should identify the impacted groups and create tailored key messages for that group (Table 1). Effective communication plans should consider the timing of the communications, aim to repeat key messages (ideally at least 5 times), and utilise *preferred senders*; people who have influence and credibility with the impacted group, such as senior managers and direct supervisors. Messages should be adapted for each segmented group and designed to meet their specific needs. Importantly, communications should explain the internal and external *drivers* behind the change, explain the risk of not engaging in the change, and begin to raise *desire* amongst impacted groups by addressing the important personal question of "What's In It For Me?" (WIIFM).

Table 1: Example of a communications matrix

Timing	Targeted stakeholder (group or individual)	Message content (including WIIFM?)	Delivery mechanism (e.g. email, 1:1, social media, meeting)	Preferred sender	Estimated date
First indications of change					
Early stages of the project					
During the design of the change					
Before/During/Post-implementation					

Tip 8: Engage in constructive dialogue

Engaging in constructive dialogue can facilitate the development of shared views on the change process and enable the organic spreading of the change within the organisation. Support for the change can be established by interactions between people and it is recommended that one-way or monologic communications are avoided (Sveningsson and Sörgärde, 2019). Throughout the change process it is essential to engage in active dialogue with sponsors, change agents and change recipients, and position everyone as co-producers of the change. Take an active interest in people’s opinions and experiences, and explore opposing ideas, as these may provide value contributions to the change process (Sveningsson and Sörgärde, 2019). Develop and support opportunities for collaboration; social learning can be an effective method to spread knowledge in an organisation (e.g. user groups, networks, and forums).

Tip 9: Create opportunities for co-design

Successful change is seen as a collaborative effort and it is recommended that opportunities for co-designing the change with impacted groups and individuals should be offered (Salmi and Mattelmäki, 2019). The focus of the change should be placed equally on the both the anticipated outcomes and the process, whereby individuals should be offered opportunities for partnership working and participative decision making. Engaging individuals and groups in the change process permits access to experiences and insights which can actively shape the proposed change. For example, engaging with ‘students as partners’ (SaPs) (Healey, Flint and Harrington, 2014) or actively involving patients in medical education (Howe and Anderson, 2003) can provide unique insights and perspectives, which can inform the design, implementation and evaluation of educational change.

Design opportunities for individuals affected by the change to mutually shape elements of the change, such as shared decision-making regarding vendor or tool selection, collaboratively designing elements of new processes, consulting on strategy, or evaluating future directions. Co-designing elements of the change with those impacted can be an effective way to manage resistance and help create ‘buy in’, for example engaging students as curricula co-creators and supporting student roles in leading medical curriculum changes (Burk-Rafel *et al.*, 2020).

Tip 10: Reinforce the change and celebrate successes

Often overlooked, it is important to develop and implement action plans for ensuring that the change is sustained and maintained. This can involve developing mechanisms for evaluating the change progression, to identify and correct gaps, and to celebrate successes. Compliance audits can be deployed to collect feedback on the change process. Collected data should be used to develop corrective action plans and resistance management activities. Here, the ADKAR model can assist in evaluating why certain individuals may not be engaging with the change and address any barrier points. Strategies for reinforcement can include ongoing training and coaching.

It is important to acknowledge the achievements of individuals and groups who have participated and embraced the change. Consider recognitions that will resonate with the individuals and openly celebrate successes of the initiative and provide opportunities to commemorate the achievements and hard work of individuals. Developing a rewards system which showcases individual efforts and successes can be an effective strategy to sustain the change (Cartwright *et al.*, 2017).

Tip 11: Begin the change process early

Project management and change management are two distinct disciplines which should be integrated during the implementation of projects (Hornstein, 2015). Project management should consider the full implementation of an initiative, beyond design and development (Schlegel, McLeod and Selfridge, 2018). Integrating change management plans into the project management approach allows for the specific change outcomes to become *milestones* in the project plan (Schlegel, McLeod and Selfridge, 2018). Importantly, early integration of change management in the project process is seen as critical to project success, as this reduces the risk of ‘firefighting’ if change management is applied to the middle or end of a project (Hiatt and Creasey, 2012). For example, the opportunity to actively involve those impacted by the change process is enhanced if you begin change management early in the process. Potentially damaging resistance can be prevented if effective change management strategies are applied at the beginning of a change initiative.

Tip 12: Use ADKAR to develop a change management plan

As discussed, ADKAR is seen as an important tool for managing change within medical education, including managing curriculum change (Parkar and Nayak, 2015; Cerimagic and Hasan, 2018; Sanders *et al.*, 2020). When considering changes in medical education it is important to recognise that many different individuals may be impacted. The ADKAR model should be considered from multiple perspectives, including those of both the learners and educators (Sanders *et al.*, 2020). ADKAR can be used as a systematic framework to guide the formulation of a change management plan (Table 2).

Table 2: The ADKAR milestones and strategies to address them

ADKAR Stage	Considerations	Example strategies
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<p>Awareness of the need for change.</p>	<p>The nature of the change (size/scope/timings). The rationale behind the need for change and the internal/external drivers. The risks of not changing. The impact of change on individuals.</p>	<p>Communicate effectively and make information accessible. Target communications and consider the <i>senders</i> of the communications. Identify and communicate with key sponsors who will understand the drivers behind the change and will become advocates. Enable open dialogue for reflection, asking questions, and sharing concerns.</p>
<p>Desire to make the change happen.</p>	<p>"What is in it for me?" (WIIFM). A deliberate and personal decision to participate and engage.</p>	<p>Engage colleagues in the change process early on. Offer opportunities to co-design elements of the change. Demonstrate successful case studies and engage in storytelling. Equip managers to be effective change leaders. Provide coaching, training, and tools to key individuals. Anticipate resistance and devise plans to mitigate resistance. Define the size/scope of the change and assess how the change will affect impacted groups.</p>
<p>Knowledge about how to change.</p>	<p>Understanding how to change. Training on new roles, systems, processes, or tools. Learning new skills, competencies, and behaviours.</p>	<p>Design and implement effective training and education programs. Support opportunities for collaboration. Social learning can be an effective method to spread knowledge in an organisation (e.g. user groups, networks, and forums). Provide 1:1 coaching sessions. Customise training to specific individuals who might be adversely impacted during the change.</p>
<p>Ability to implement new skills and behaviours.</p>	<p>The demonstrable capability to implement the change. Successful accomplishment of the desired change in performance or behaviour.</p>	<p>Ensure individuals have appropriate time to develop new skills and behaviours. Remove any physical or psychological barriers. Provide on-going coaching and support. A one-time training event or education programme is unlikely to result in sustained change. Provide hand-on exercises in a safe environment. This could involve role play, simulations or authentic hands-on experience with new roles and processes. Provide assistance and encouragement throughout the change by offering visible support and provide readily available access to managers.</p>
<p>Reinforcement to retain the change once it is made.</p>	<p>Strategies that increase the prospects that a change will be maintained. Recognition and rewards that sustain the change.</p>	<p>Acknowledge and celebrate successes. Share messages about successful parts of the change. This may help others transition through the ADKAR process (e.g. increase <i>Desire</i>). Collect feedback and implement iterative improvements. Evaluation provides valuable information and may identify issues with the change which need addressing. Rewards can be highly motivational for individuals, but ensure you are able to honour these and ensure transparency (e.g. explicit criteria for a reward).</p>

Adapted from Hiatt (2013, p. 36).

Conclusion

Global healthcare systems and organisations are continually exposed to change, such as recent advances in treatment modalities, diagnostic tools, and technological procedures (Young, 2007; Parkar and Nayak, 2015). Understanding and managing change is an essential part of professional practice (Fox and Bennett, 1998; McLean, Cilliers and Van Wyk, 2008). However, medical educators often assume change management responsibilities with little resources, tools, training, and specific skills (Schlegel, McLeod and Selfridge, 2018).

Within medical education, there is growing demand for faculty to successfully lead change initiatives and educational innovations under constraining conditions (Schlegel, McLeod and Selfridge, 2018). It is also important to recognise that change is not inherently valuable; benefits come from changes that individuals adopt and utilise. However, attempts to reform educational practices often face some element of opposition (Shimizu, Mori and Kanno, 2020). Poorly managed change can lead to frustrations, uncertainty, and resistance among those affected by the change, especially if their individual needs are not taken into consideration. Importantly, successful change management depends on choosing appropriate strategies that fit the change context and unique qualities of the organisation (Bland *et al.*, 2000).

It is strongly recommended that a methodological approach is adopted to manage *planned* or *emergent* change (Sveningsson and Sörgärde, 2019). Tools and models, such as ADKAR, can help guide the planning and assessment of change management activities. This article has offered an overview of individual change management, whereby individuals need to transition through the five ADKAR milestones to successfully engage in a change. This methodological approach provides busy medical educators with a simple framework for developing change strategies with clear milestones. However, the COVID-19 pandemic has vividly demonstrated how external factors – including the emergence of new knowledge, political forces, economic factors, and technological developments – can act as powerful drivers and triggers for unplanned change, such as the rapid and substantial reliance of digital education (Goh and Sandars, 2020). The forcible changes, and accelerated transformations caused by the pandemic, calls into question the value of traditional change management approaches, which might be unhelpful at a time when rapid adoption and usage is critical for people as well as organisations. However, Shimizu, Mori and Kanno (2020) appraise the ADKAR model within medical education in light of COVID-19 and observe that the pandemic has raised *awareness* and *desire* for substantial change, which offers a solid platform for future educational reforms. Moreover, when managing a rapid change, without adequate time to prepare and support individuals during the initial phases of the change, there needs to be a pivot to support people *during* and *after* the change implementation (Kempton, 2020). The framework presented in this article acknowledges the dynamic forces which can influence the nature of the change process and provides a model for developing iterative and rapid change management activities, which can be adapted in response to current needs (Balluck, Asturi and Brockman, 2020).

Take Home Messages

- Medical educators are increasingly expected to acquire change management knowledge and skills. However, there is a plethora of contradictory and confusing theories and approaches.
- Change management is defined as a structured and methodological process for managing the "people side of change".
- The Prosci ADKAR model provides a straightforward, practical, and responsive framework for identifying

and addressing barrier points to change. ADKAR can be used as a framework to develop effective change management strategies to support individual and group change.

- Robust change management involves communications and training, but also includes the tools and processes for managing resistance and building effective sponsorship.
- Where possible, change management processes should be initiated early in the project.
- Effective change management plans should also include reinforcement activities, such as celebrating successes, to cement the change.

Notes On Contributors

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Figure 1. "[Continuum of commitment analysis table](#)" by NHS England Sustainable Improvement Team and the Horizons Team is licensed under Creative Commons BY-NC.

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Appendices

None.

Declarations

The author has declared that there are no conflicts of interest.

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