Twelve Tips for Curriculum Sharing and Implementation: Don’t Reinvent the Wheel

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Abstract

In this era of decreased funding, academic health centers have found that sharing educational best practices is a responsible way to allocate resources as well as lead to new innovations and venues for scholarship. While much has been written about sharing these practices via large databases and public dissemination there is a paucity of information regarding externally imposed partnerships explicitly created to facilitate the sharing of curriculum. Two medical schools in Texas partnered in response to an NIH request for proposals that focused on curriculum sharing. This article details twelve tips learned from this five-year partnership and revolves around two best practices successfully shared, adapted, and then implemented. Practice one is a workshop that targets implicit bias in healthcare and how it impacts patient care. Practice two is a large scale, mass casualty simulation that capitalizes on interprofessional team delivery of health care. Don’t reinvent the wheel; share instead.

Keywords: Curriculum Development, Teamwork

Introduction

Decreased funding has had an impact on academic health centers in both research and medical education. As a result, teaching institutions strive to maximize resources and increase efficiencies by promoting collaborative research and teaching efforts among institutions (Dorsey, 2008). Sharing best practices is not only a responsible way to allocate resources; it has led to new educational innovations and venues for scholarship. Indeed, the success of MedEdPORTAL (Reynolds & Chandler, 2008) and MedEdWorld (AMEE, 2016) demonstrates the need of an open exchange of health-related teaching resources and ideas (AAMC, 2016).
A review of the literature revealed few articles specific to unyoked institutions sharing educational, curricular products. While much has been written about sharing educational best practices through large databases and public dissemination (Ellaway et al, 2014, Dogra et al, 2015, William et al, 2016, Fowler & Gill, 2015), little is known about externally imposed, collaborative partnerships explicitly created to facilitate the sharing of curriculum.

Baylor College of Medicine (BCM) and Texas TAMHSC Health Science Center College of Medicine in College Station (TAMHSC) represent two medical schools who partnered in response to an National Institutes of Health request for proposals that focused on curriculum sharing. While collaborative partnerships can present challenges, the benefits of collaboration allow best practices to be propagated, and can reduce burdens on human and capital resources along with costly errors, which are intrinsic during the creation of content specific, validated curricular products.

What follows are twelve tips or "lessons learned" from our partnership of sharing and implementing best practices from 2011-2015. Recognizing that partnerships benefit from a team approach, we have employed Salas’s (Salas et. al, 2013) "Six C's" heuristic to frame the tips. As described by Salas, the Six C's are non-linear and may overlap. The factors include cooperation (motivation and valued input from others), communication (information exchange), conflict (trust and processes to manage challenges), coordination (sense making and deferring to expertise), coaching (promoting, reinforcing, and shared leadership), and cognition (shared understanding and purpose) (Salas, date unknown). The tips are labeled by factor but are presented in a chronological, step-wise manner that represents our experience.

### TIPS

**Tip 1 – Coordination - Identify another institution with reasonable proximity**

Even with advanced technology such as videoconferencing and other virtual meeting capabilities, we posit that proximity to partnering institutions matters. Exporting curriculum to different regions or countries is important to establish generalizability and validate content. Coordinating with close neighbors fosters a shared mental model of the culture, community and geopolitical environment engendering a sense of legitimacy and ownership of the product. This in turn creates a kinship as stakeholders in the future success of our learners; many of whom will go on to practice in our local and regional communities.

In addition to the societal factors, we believe there are other advantages in collaborating with partners in close proximity. Eventually, face-to-face contact is optimal, and close proximity decreases cost in terms of time, travel, and other operating expenses. This allows for more frequent face-to-face contact and the ability to rapidly respond in the event of unexpected educational exigencies.

**Tip 2 – Cognition - Discuss existing best practices at each institution feasible for adaptation**

At the outset, collaborators should review the best practices of the partnering institution for mutual educational goals and objectives. A schools' mission and vision statement can help institutions identify areas of consensus or areas where an institution excels and the partner school wishes to expand.

To better understand the best practices, we began a series of quarterly "Think Tanks" or collaborative, face-to-face meetings, which lasted from 2-6 hours. We discussed institutional practices regarding workshops on unconscious bias, interprofessional home visits with medicine and pharmacy students, an IPE and preclinical patient safety interprofessional case presentation, delivering bad news to a standardized patient in interprofessional teams of
nurses, medical and pharmacy students, and a massive resource intensive Disaster Day event. These were described, dissected, and explored in-depth to fully appreciate the content, teaching goals and objectives, faculty training, required resources, and evaluation. While tedious, this level of examination was necessary to assess the portability and sustainability of each best practice.

**Tip 3 – Cognition - Observe relevant curricular activities**

No matter how one tries to defend against preconceptions, mental models emerge from the review of a curricular or educational offering. As humans, we try to make sense of curricular content by placing it in a contextual frame that is familiar to ourselves. For us, traveling to the partner institution and observing curriculum delivery in real time was essential to fully grasp the impact of the content. The TAMHSC "Disaster Day" is an extremely complex, interprofessional educational offering that could not be digested by merely reading the scenarios or the outcome data. It was the in-person experience that led the leaders at BCM to realize they did not have the faculty, facilities, or other resources necessary to replicate this offering on the same scale. Likewise, it is hard to communicate the emotional impact of the BCM "Implicit Association Test, Best Intentions Workshop" from reading of the facilitator's guide. The TAMHSC faculty who observed the BCM small group sessions in situ experienced the shock, anger, and awareness that organically emerges from this session, underscoring the importance of required training for all facilitators.

**Tip 4 – Cooperation - Analyze available resources at your institution**

In our experience, it is important to take a step back after identifying best practices and observing the delivery of the curriculum for an honest appraisal of what can realistically be implemented based on available resources. In some cases, faculty expertise may be a limiting factor. For instance, at BCM full implementation of appreciative inquiry activities ended after a key faculty member left the institution. Likewise, at TAMHSC, the implementation of an intense interprofessional implicit bias standardized patient scenario was not adopted due to difficulty mobilizing faculty evaluators from different locations around the state.

Other resources such as technology, space, and materials should also be taken into consideration. For example, IAT training at BCM was conducted via webinar. While the faculty are dispersed on the TAMHSC campus, face-to-face training is preferred. Videoconferencing and other modes of faculty development were options but they were viewed as ineffective for preparing faculty for the complex scenarios. When considering a Disaster Day option at BCM, space was a major concern. At TAMHSC, Disaster Day is held in a large open venue with interdisciplinary teams working with rows and rows of patients on cots. Recreating the activity at BCM in Houston would have been a very resource intensive undertaking, especially for the first year of the activity. Therefore, a smaller scale "Interprofessional Crisis Management" activity was created to mimic Disaster Day.

**Tip 5 – Communication - Using consistent and effective communication to discuss the details of adoption and implementation**

Think Tanks, which were initially used to examine best practices, were also utilized for planning purposes to determine effective and ineffective approaches in order to improve future practices. A key for effective communication is that it occurs on a consistent basis and that everyone is honest and open. When existing materials are adapted and/or implementation processes are changed, they need to be clearly described and the rationale for the adjustments must be grounded in the curricular goals and objectives. This allows the partnering institution to provide constructive feedback based upon their experiential knowledge. Each institution made some adjustments throughout the process that had already been tried and corrected by our partner institution. This type of communication enhanced our collaborative efforts as we learned from one another.
Tip 6 – Coaching - Invite partner institutions to participate in training, the activity and to share materials

Faculty development is essential when adopting and implementing best practices. When the IAT workshop appeared to be feasible at TAMHSC, TAMHSC faculty decided to participate in training for the IAT workshop at BCM. In order to be fully immersed in the BCM workshop, the TAMHSC faculty were instructed to complete IAT tests, read an article to prepare for the session, and participated in facilitator guide training conducted by BCM. Then, the TAMHSC faculty served as guest facilitators at BCM. BCM also provided TAMHSC with their pre and post-test and shared additional articles relevant to how biases impact patient care.

Likewise, TAMHSC trained BCM faculty on the observation instrument to be used in TAMHSC’s Disaster Day. The training included describing the items, discussing the rating schedule, going over the simulation set up and logistics. BCM faculty then served as observers for the Disaster Day event at TAMHSC and evaluated interprofessional teamwork by completing the observation instrument and participating in the entire disaster simulation from pre-briefing to debriefing. All of the instruments used for evaluating Disaster Day were then shared with BCM. This included the team evaluation, the standardized patient questionnaire, and the observation instrument. Other materials such as scenarios and logistical information were also sent to BCM for their review.

Tip 7 – Coordination - Customize materials for your institution

The IAT facilitators guide provided by BCM to TAMHSC did not undergo significant changes. The modifications only included institution and campus specific logistics. For example, TAMHSC edited the materials so that the guide referenced TAMHSC and not BCM and included room numbers and contacts at TAMHSC. Since BCM did not replicate the Disaster Day experience at TAMHSC, they did not adopt all three instruments and decided to modify the observation instrument for use in their Interprofessional Crisis Management experience. The modified instrument contained some common items but was arranged BCM’s core graduation goals with the context of IPE topics (values and ethics, roles and responsibilities, communication, and teams and teamwork).

Working with existing curricular materials provides a solid foundation for revision and avoids recreating the wheel. Also, it is important to maintain some continuity with respect to evaluating the curricular activities. If outcome measures are not completely adopted and implemented, having common items for comparative purposes between institutions is beneficial.

Tip 8 – Coaching - Implement practices under the guidance of the institution that developed the activity

As the best practices are adapted and implemented at the partner institution, it is important that the institution that developed the curricular activity stay actively involved and offer guidance. Their prior experience and expertise may enable faculty at the adopting institution to anticipate problems and be more proactive. For the IAT workshop, TAMHSC requested that BCM conduct the facilitator training. TAMHSC organized the workshop and materials and brought personnel together for the training. For Disaster Day, the simulation director from BCM attended and participated in the College Station event. From this experience, the BCM simulation director designed an Interprofessional Crisis Management experience to mimic Disaster Day on a small scale and implemented a modified version to fit what was feasible for BCM the following year. In 2016, BCM, with TAMHSC’s guidance, utilized the modified TAMHSC observer instrument and both institutions provided a team of observers to evaluate the ICM event. TAMHSC was invited to participate in Crisis Management as observers as BCM had done for TAMHSC’s Disaster Day.

Tip 9 – Cognition - Reflect and evaluate the effectiveness of the shared best practices
BCM's IAT workshop targets implicit bias in healthcare and how it impacts patient care. As mentioned previously, TAMHSC trained at BCM and then implemented the same program with all TAMHSC fourth-year medical students. This workshop has been offered twice by TAMHSC. Pre and posttests were given to students who participated in the implicit bias workshop at TAMHSC. Comparison of data over the two years that the workshop has been offered consistently shows an improvement in awareness of bias for participating students.

TAMHSC created Disaster Day, a large scale, mass casualty simulation, that capitalizes on interprofessional team delivery of health care. BCM sent faculty to observe this simulation and then adapted it on a smaller scale as an Interprofessional Crisis Management Day. Disaster Day also has three years of survey data that show achievement of IPE objectives. Additionally, there is an increase in the competency of team-based care from year to year. This competency was assessed by IPE observers; team based reports, and standardized patients. Students also found the ICM Day to be a positive learning experience that facilitated communication and teamwork.

**Tip 10 – Communication - Debriefing between institutions regarding successes and challenges**

Debriefing should take place as soon as possible after the curricular activity. While internal debriefing with the host institution participants is important, involving the partner institution in the process is essential. What worked for us was to participate in the activity, debrief individually, and then debrief as an inter-institutional group in the form of a Think Tank.

This process allowed initial reactions and comparisons to be captured as soon as the activity was over and allowed a period of reflective analysis prior to the large group collaborative meeting. Indeed, some of our Think Tanks originated from the initial reactions by participants at each institution. These comment/topics acted as a springboard for further discussion and insights into potential revisions for future curricular offerings. For example, following TAMHSC Disaster Day event, the TAMHSC team talked briefly about what went well and what did not as they were collecting the evaluations after the event. On the drive back to Houston, BCM discussed similar elements and what they would need to change when implementing a revised version at their institution. Approximately a week later, we convened for the collaborative debriefing where we shared our insights and outlined potential adjustments.

**Tip 11 – Cooperation - Adjust materials and resources for the next iteration**

An essential component of quality improvement is to reflect on what went well and what needs to be changed. After TAMHSC replicated the Implicit Bias workshop adopted from BCM and examined the positive outcomes the first year, they decided to modify the workshop by changing the participant population. The decision to extend the replicated practice and have the activity become an interprofessional learning opportunity was supported by BCM. The second Implicit Bias workshop was held on one campus instead of simultaneously across four campuses. While one would assume that the logistics would be less complicated, it actually was more complicated. For example, training was needed for new facilitators, scheduling was more difficult to coordinate due to the schedules of different disciplines, and the small group meetings were not in close proximity due to locations of faculty facilitators. The interprofessional experience was unique, but TAMHSC discovered that additional disciplines needed to be included since the majority of the small groups were made up of nursing and medical students. Having a variety of perspectives during the small group discussions of implicit bias may have a greater impact on workshop participants and needs to be investigated.

Disaster Day has grown in size and scope from its origins while still meeting IPE objectives. Currently, nursing, medicine, and pharmacy play a vital role in Disaster Day, and other disciplines have been involved over time as well. Public Health faculty and students have asked to be part of this simulation and will spend a year as observers in order to identify and specify where they may best fit for Disaster Day 2017. An identified need for trained IPE
observers during the simulation has generated pre-simulation training sessions and distribution of survey instruments. It is important to keep pace with the growing number of students and disciplines so as to accurately capture the nuances of team based care. This year, after Disaster Day at TAMHSC, they decided to critically analyze the cumulative three years of data and use it to refine the team and observation instrument. These changes will be implemented during Disaster Day 2017 and we will compare the outcomes to previous years to determine if the revisions yielded better data.

Tip 12 – Conflict - Monitor Relationships and Adjust

The exceptional good will and espirit de corp between our respective institutions eliminated many of the potential relationship-based conflicts that one might expect from an externally imposed partnership. We, the faculty, represent multiple health professions, including clinical, non-clinical and community based, health educators. As a team, we came to clearly identify, and value as a significant strength the Think Tanks. We developed a very open and inclusive communication style, which helped us explicitly express our rationale for decisions, and actions, which prevented task, or process based conflicts (Mesmer-Magnus 2009). Several of us now collaborate regularly as we explore ideas for reaching our students and fostering new team activities. We work together to discover how to help the students to work outside of their comfort zones/settings, to work in collaboration thus learning about other roles, and to develop skills which are supportive of interprofessional teamwork. We have grown through our experiences and have watched student growth in the midst of our collaborative work.

Take Home Messages

In sharing our twelve tips, we hope others will benefit from our experiences and avoid reinventing the wheel. We described what we considered to be our strengths and acknowledged areas where we found challenges. Regardless of the outcomes, we know that the collaborative nature of the work produced colleagues and friends for now and for future collaborative efforts.

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Appendices

Declaration of Interest

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