

Optimizing Faculty Recruitment for Quality Enhancement Plan Programs at UT Southwestern

by

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ABSTRACT

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Background: Patient handovers serve as a major source of preventable adverse patient outcomes in healthcare settings. While standardization of this process can help reduce error, no consensus exists as to the best method of improving handover education. One potential method would focus on optimizing the recruitment of faculty scholars as leaders of new courses, thereby providing strong leadership as well as reducing recruitment and retention costs for institutions. Improved handover education will ensure that future physicians are prepared to work as effective members of healthcare teams and as a result improve patient care and safety.

Local Problem: At UT Southwestern, the Team FIRST initiative seeks to improve handover education through creating new courses addressing this topic. However, faculty will need to be successfully recruited to ensure their success. Current faculty recruitment practices need to be identified in order to guide the optimal approach for maximizing the number of faculty scholars identified among potential candidates for course leadership.

Methods: Based on the emphasis of incorporating simulation education into the new educational activities comprising Team FIRST, learning communities at UT Southwestern utilizing simulation education were identified and faculty in either recruiter or recruit roles in each were identified. These faculty would serve as the source of data on current recruitment practices. Two sets of questions were created and used to guide 30-minute standardized interviews with the selected faculty in five different learning communities at UT Southwestern. Questions focused on outlining motivators and deterrents for position acceptance, ideal characteristics of candidates, steps in the recruitment process, and faculty development opportunities available after hire. Questions were revised as appropriate to improve the yield of pertinent data. The data from each interview was used to create a process map outlining the recruitment process for each educational program. These along with summaries of the question responses were sent back to interviewed faculty for verification of accuracy. Process maps were compared to identify general patterns in recruitment at UT Southwestern, and the responses to the other questions were tabulated for easy comparison and review. The patterns identified based on the data collected

were used to create an application that will be used for faculty recruitment for the Team FIRST educational activities in upcoming years.

Interventions: The interventions used included the interview questions asked of faculty, which served to obtain data on and outline current recruitment practices at UT Southwestern. This information was then used to create an application for the newly created educational activities comprising Team FIRST, which will be evaluated to determine its reliability in identifying highly-invested faculty scholars from among the potential faculty candidates.

Results: Recruiters sought individuals with previous experience related to the position they were seeking and used student evaluations of faculty members to evaluate the quality of their previous engagements. Recruiters also emphasized enthusiasm, motivation, and realistic expectations as additional ideal characteristics. Recruiters identified financial incentives, opportunities for career development and advancement, and contribution to student growth as potential motivators for accepting a position, while time constraints and limited financial compensation were identified as deterrents. From the recruit perspective, an interest in teaching, departmental and student advocacy, and innovation served as both ideal characteristics and motivators for seeking a position while a lack of time, promotion, and tenure opportunities served as deterrents. The first step of faculty recruitment processes at UT Southwestern was the identification of a potential candidate either by invitation by higher-level faculty involved in the program or due to expressed interest by the candidate in the program which then led to their compilation into a list for consideration for the position. Once a current position opened, or new positions were created due to expansion of the program, the candidate's suitability for the position was assessed using an application often requiring endorsement from the department chair. Once an individual was selected, they would receive onboarding training to prepare them for the position in the program.

Conclusion: Through multiple discussions with faculty in various learning communities, general pattern and trends in faculty recruitment practices at UT Southwestern were outlined. Based on these similarities, ideal faculty recruit characteristics were identified that could be used to guide the creation of an application for to help with the faculty recruitment process for the educational activities that make up Team FIRST. Through using this application and revising it as needed to improve the rate at which faculty scholars are identified, faculty recruitment can be optimized to ensure strong leadership for new courses aiming to improve patient handover education.

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CHAPTER 1: Introduction

Handovers, which can be defined as “the transfer of role and responsibility from one person to another in a physical or mental process” [1], occur countless times in healthcare systems. They take place between physicians, nurses, and other healthcare professionals and between individuals at different levels of training including students, residents, and attending providers. These interactions ideally should serve as the primary means of sharing information about patients to coordinate between individuals and teams involved in their care. However, there is no standardized method of teaching patient handovers in medical school education. Without the successful incorporation of patient handover education onto medical education, future physicians and healthcare providers will not be able to appropriately perform this essential skill, which will result in adverse patient outcomes and potential patient harm.

While ideally patient handovers aim to transfer information, they can also serve as a significant source of miscommunication and resultant medical error, especially when multiple healthcare teams and more individuals within each team are involved [1, 2]. The number of handovers in healthcare settings has increased for multiple reasons. One factor is the recent change in resident duty-hour regulations, which has led to residents spending less continuous time with patients, which then requires more handovers during the transfer of care [2]. Additionally, patients admitted to hospitals are becoming increasingly sicker, and this higher patient acuity results in both more complex care plans requiring more information to be accurately communicated and multiple health care teams participating in the care of a single patient [1]. These changes illustrate the necessity of appropriate handover training to address the increasing number and complexity of handovers and ensure safe patient care.

Table 1: Factors contributing to increased patient handover frequency and complexity

Factors Leading to Increased Handover Frequency and Complexity
Resident duty-hour regulations reducing time spent in hospital
Increased patient acuity
Increased number of healthcare teams involved in care of each patient

One method of addressing this issue would be the standardization of the handover process, which has been shown to reduce the frequency of error [1, 2]. While using standardized templates outlining the information that should be included in patient handovers ensures the inclusion of essential information and can decrease the amount of time needed for rounding [1], applying interventions earlier on in medical training can potentially provide greater benefits. For example, Starmer et al 2014 found that providing a formal handover education program at several pediatric residency training programs led to a 23% reduction in overall medical error rate, a 30% reduction in preventable adverse events, and a 21% reduction in near misses and nonharmful medical errors. Given these significant reductions in error, improving patient handover education at both the resident and medical student level would be a viable method for improving patient safety.

Currently no pedagogical consensus exists for the ideal method of improving handover training, illustrating the necessity of a concentrated effort to determine the best possible intervention to address this issue. While the application of an Entrustable Professional Activity framework could provide a method of assessing trainee competency, the skills and handover components to be assessed have not been consistently defined for general applicability [10, 11]. A potential method of addressing this issue would be to focus on the successful recruitment of faculty scholars to serve as leaders for the newly created handover education courses. The successful identification and recruitment of faculty scholars to new patient handover education programs would serve multiple benefits to a given academic institution. Faculty scholars could identify and

develop methods of improving handover education through their direct involvement and leadership in such courses, and the availability of training for faculty interested in becoming faculty scholars could serve as an opportunity for career advancement and motivator for faculty retention, further fostering the success of such programs. Additionally, such an approach could reduce the financial burden of faculty turnover given their expected high level of commitment. By developing a reliable method for identifying faculty scholars among potential candidates interested in patient handover education, these individuals can more readily be hired and contribute to strong leadership to drive the advancement of patient handover education forward.

In order to implement such change, new courses for teaching skills for effective patient handovers would need to be created, requiring the effective recruitment and retention of faculty. Optimizing the successful recruitment of faculty scholars would provide a top-down approach for faculty development for new handover education programs that would reduce the cost of faculty recruitment and development. Faculty turnover can incur significant expenses for an academic institution, with faculty attrition accounting for approximately 5% of an annual academic medical center budget [3]. Most academic institutions have an average annual faculty turnover rate of 8-10%, with the cost of replacing a single faculty member ranging between \$110,000-\$900,000 [4] and costing on average over \$400,000 [5]. These direct costs, however, only account for only 15-30% of faculty turnover costs. Additional costs are incurred from decreased productivity of faculty while involved in their job search, disruption of responsibilities, reduced morale of coworkers, retention packages, and lost patient referrals and care hours [5]. As a result, it can take two to four years of revenue generation of a new faculty member to offset the total cost of the turnover of one faculty member [5].

Given this data, optimizing the recruitment of highly invested faculty that will stay committed to a given program and provide leadership to ensure its success would serve as a feasible first step to ensuring the success of new patient handover curricula. In addition to identifying the qualities that would make an ideal candidate for these programs, factors contributing to faculty turnover would need to be minimized as well. Major deterrents that lead to faculty leaving a position include lower financial compensation in academic settings compared to private practice [5, 6], poor relationship with departmental or institutional leadership [4-6], lack of flexibility to individualize tenure tracks or slow rate of career progression [3, 4, 6], absence of mentorship [4], poor work-life balance, and lack of a supportive community and network of colleagues [4].

Table 2: Potential deterrents from academic medicine positions

Potential Deterrents from Academic Medicine Positions
Lower financial compensation
Issues with leadership
Limited career opportunities or advancement rate
Lack of mentorship
Poor work-life balance
Lack of sense of community

Gender and ethnicity also impact faculty retention. Women tend to leave academic medical positions at higher rates compared to men, as reflected by an annual attrition rate of 9.1% compared to 7.7% for men [3, 4]. Women reported leadership issues and personal reasons more frequently as the cause of leaving compared to men and reported worse advancement opportunities, difficulty finding mentors and salary inequality as deterrents [3]. Minority faculty also reported personal reasons for leaving more frequently [4], which according to Cropsey et al

could reflect relative isolation within the campus community, more time dedicated to mentoring and community service, or perceptions of advancement as inaccessible.

Mentorship can serve as a strong factor in faculty retention. Interaction with more senior faculty can provide new faculty with networking, academic writing, and presentation skills in addition to potentially affecting career goals, productivity, and career satisfaction [3, 7]. While formal mentorship can provide a structured system for establishing this support, peer mentorship can be useful as well due to increased relatability among colleagues due to shared interests and demographic factors such as gender and age [6, 7]. Such opportunities can improve the sense of community among faculty which can then translate into more opportunities for collaboration and increased productivity [8]. The availability of multiple perspectives to help guide a new faculty member, whether in the form of multiple mentors in different roles [7] or working as a member of a interdepartmental team [4], can help improve faculty retention.

Because faculty turnover tends to be higher among newer faculty [5], successful recruitment of highly-invested faculty from the beginning could serve as a potential method of maximizing faculty retention. The optimal candidates for such faculty would be faculty scholars, individuals who exemplify “leadership in curriculum development, evaluation, and governance” [9]. The Medical Education Scholars Program at the University of Michigan Medical School, designed to train faculty to become faculty scholars, assesses applicants based on their current educational and research responsibilities, goals and expectations for program participation, curriculum vitae, and letter of support from their department chair. Individuals selected for the program receive mentorship, training through workshops, funding and a half-day of release time per week. Participants are evaluated based on their accomplishments during their involvement for further support. The implementation of this program resulted in increased number of promotions,

educational responsibilities at regional and national levels, and new educational programs. While such a faculty development program would be useful for faculty retention, successful identification of faculty scholars during the recruitment process could reduce the amount of time and resources required by an institution to secure strong leadership for its educational programs.

At the University of Texas Southwestern Medical Center (UTSW), the Team FIRST initiative, implemented by the Office of Quality Improvement, Quality Safety, and Outcomes Education and the Office of Undergraduate Education, seeks to increase the quality of hand-off education in the medical curriculum to ensure efficiency in this skill early on in training. The success of the Quality Enhancement Plan (QEP) programs comprising this initiative, including Convergence, Transitions to Clerkships (T2C), Human Factors in the Clinical Learning Environment (HF CLE), and Post-Graduate Essentials (PGE), requires the involvement of faculty scholars who are highly invested in developing these new courses. By developing a tool to accurately identify and successfully recruit faculty scholars, UTSW could optimize the faculty recruitment process for QEP programs at the institution, ensuring strong leadership and minimizing the expenses associated with faculty turnover. Through defining current faculty recruitment practices at UTSW in existing learning communities such as Academic Colleges, Convergence, Simulation Education, Southwestern Academy of Teachers (SWAT), and T2C, patterns can be identified which can be used to create a tool to assess potential faculty participants in new QEP programs, which in turn through maximizing the identification of highly motivated and invested individuals will optimize faculty recruitment for future QEP programs at UTSW. The aim of this project is to achieve 100% of faculty recruitment, development, and scholarly activity targets for T2C by December 2021.

CHAPTER 2: Methods

At the University of Texas Southwestern Medical Center (UTSW), the Team FIRST initiative, implemented by the Office of Quality Improvement, Quality Safety, and Outcomes Education and the Office of Undergraduate Education, aims to improve patient handover education at the resident and medical student level. The program will include four major Quality Enhancement Plan (QEP) programs: Convergence, Transitions to Clerkships (T2C), Human Factors in the Clinical Learning Environment (HF CLE), and Post-Graduate Essentials (PGE). Testing, piloting, implementing and optimization of Team FIRST will occur over a 5 year period (AY20-24), as summarized in the figure below.

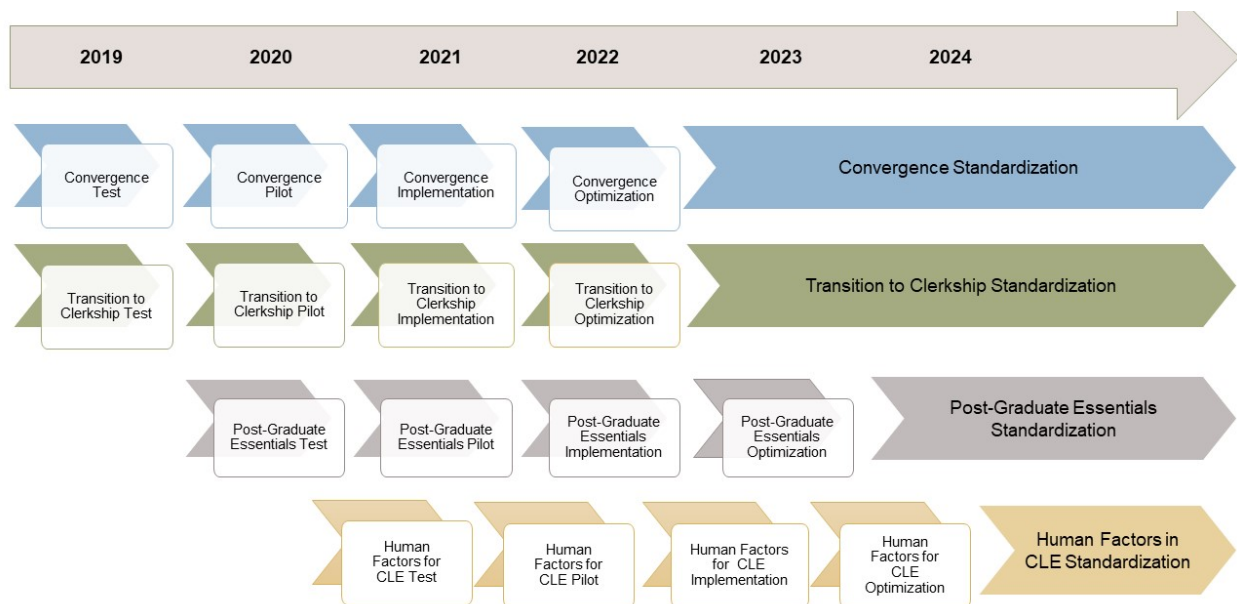


Figure 1: Timeline for testing, piloting, implementing, and optimizing QEP educational activities

Faculty recruitment and development for Team FIRST will require the coordination of efforts among the Team First Director and the program leads for the unique learning activities. The Team FIRST Faculty Development lead will collaborate with the Team FIRST director and

the program leads to optimize the recruitment and development of faculty participants within each program, as illustrated below.

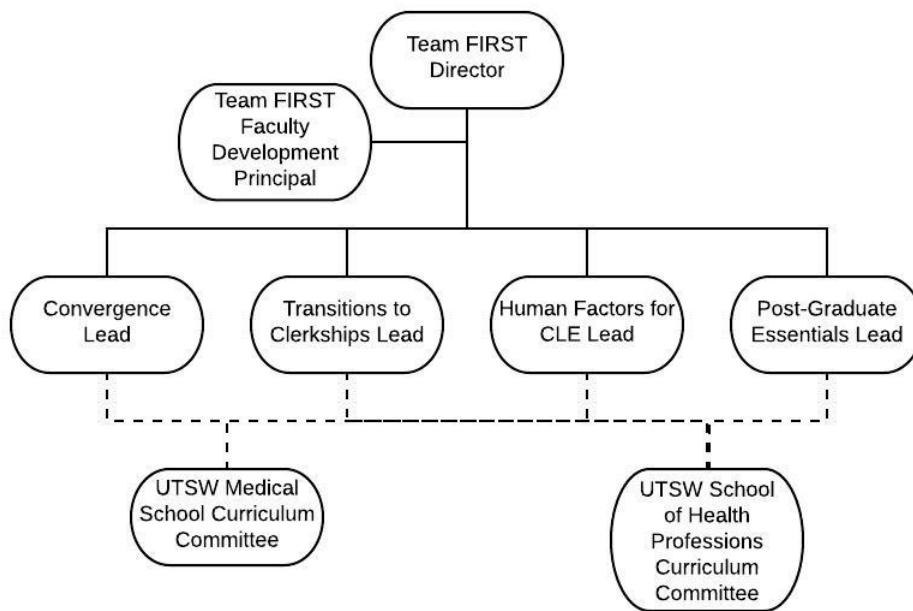


Figure 2: UTSW Team FIRST organizational structure. Solid line represents direct responsibility, dashed line represents advisory role.

Within each educational activity, the roles and responsibilities of the faculty recruited are as follows. The QEP Scholars will include individuals highly invested in developing curriculum for the program directors and producing generalizable knowledge related to interprofessional team-based communication during handovers. These individuals ideally will have previous experience in interprofessional or simulation-based education as well as leadership in developing educational curriculum. QEP Leads will include individuals with an academic interest in simulation, teaching, and team-based communication and will aid in the training of QEP instructors, who teach and assess the team skills of the participating students in the educational

experiences. A QEP Principal, a QEP Scholar, 5-7 QEP Leads, and 40-50 QEP Instructors need to be recruited for each educational program. Although there may be overlap in the QEP faculty for each educational activity, a separate roster will be maintained by the Program Leads for each activity. A complete complement of faculty for Convergence and Transition to Clinical Training will be needed by June 2020. A full complement of faculty for HFE for CLE and PGE will not be needed until 2021. The anticipated distribution of faculty for each educational activity are summarized below.

Table 3: Anticipated faculty distribution for each educational activity

Faculty Title	Number Per Educational Activity
QEP Principal	1
QEP Scholar	1-2
QEP Lead	5-7
QEP Instructor	40

Based on the following assumptions: 1) 800 students; 2) 10 students per group; 3) 20 groups per session; 4) 2hrs training session; 5) 2 training sessions per day; 6) over 2 days

In order to ensure the success of the QEP programs, invested faculty need to be recruited from the UTSW Schools of Health Professions and Medicine and non-UTSW Schools of Nursing and Pharmacology for each of the four educational activities. They will be sought from established learning communities, Clinical Clerkship Directors and other faculty activities given the overlapping skills and interests between these programs. The distribution of faculty from the UTSW Schools of Health Professions and Medicine as well as non-UTSW Schools of Nursing and Pharmacology should reflect the distribution of the students comprising the classes. The distributions of faculty and students for Convergence in 2018/19 are illustrated below, illustrating the need for adjustment of faculty representation from the Medical and Health Professions schools.

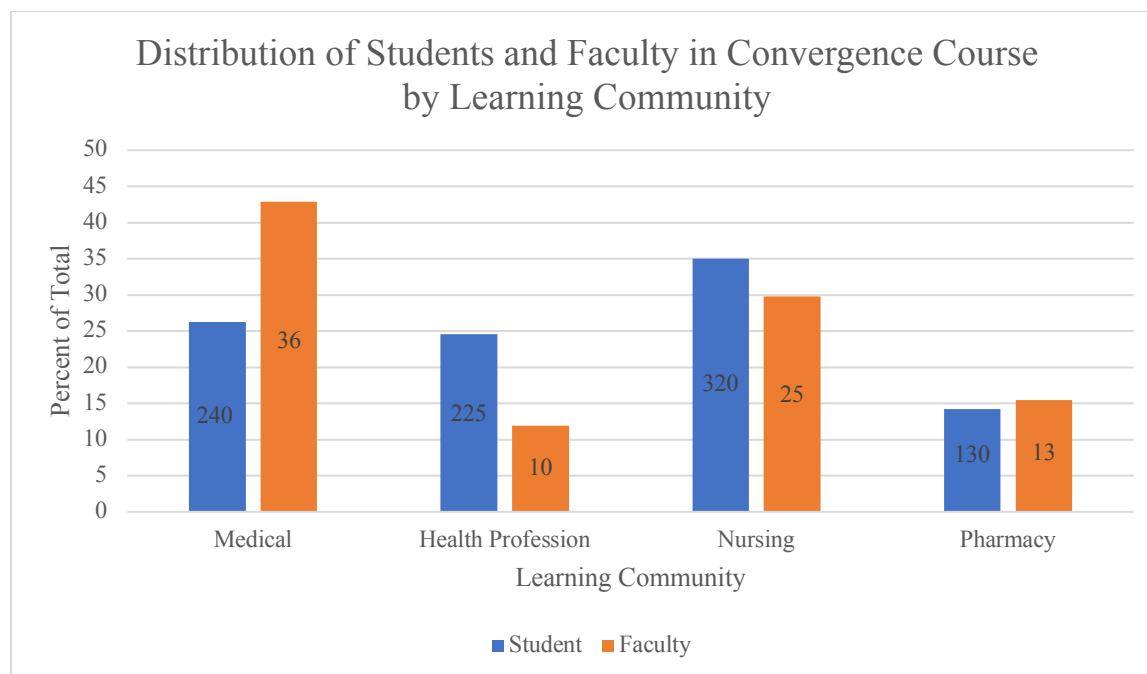


Figure 3: Percentage distribution of students and faculty for Convergence 2019 among graduate schools. Numbers within bars indicate count of participants.

The current state of faculty recruitment practices at UTSW had previously not yet been clearly defined. As such, the initial focus of the project was to identify the current state and the voice of the customers. The customers or stakeholders benefiting from this investigation included recruiters and recruits for educational activities at UTSW, and information on the perspectives of individuals from both groups needed to be collected to gain an accurate understanding of the factors involved in the recruitment process of each program investigated. Discussion among the project leads led to a clearer outline of the current distribution of faculty at UTSW and potential faculty to consider interviewing. Three types of faculty were identified among clinicians. The majority of faculty fell into the category of clinician educators, who are primarily involved with clinical responsibilities but have some additional time to teach. The next category of clinical scholars included individuals who dedicated more time to research but were

still involved in clinical care. The last category, which was the smallest, was that of the clinician researchers, who dedicated over 80% of their time to research. Of these categories, most of the faculty to be interviewed would fall into the clinical scholar category.

In addition to these considerations, faculty within a given department or program would have to be stratified based on their involvement to roughly parallel the categories sought for the QEP. For this, the first tier included new recruits to the program or department, the second included individuals already involved in simulation education but without an identified niche within the department, and the third included individuals advancing new program development as well as involved in both curriculum development and academic writing and publication. Faculty in this last category would be prioritized for interviews given that this group would correspond to the QEP Scholars that serve as the primary target of recruitment.

Once the ideal interview candidate characteristics were outlined, the learning communities from which these faculty would be identified were determined. Departments in which simulation education had been integrated into training were identified and included anesthesiology, surgery, emergency medicine, obstetrics/ gynecology, and pediatrics, and department chairs of these departments were considered as potential faculty recruits to interview. In addition to these departments, Academic Colleges, Convergence, Simulation Education, Southwestern Academy of Teachers (SWAT), and Transitions to Clerkships (T2C) were also selected to be investigated. Faculty from all these learning communities were reviewed to determine faculty to interview during the data collection phase of the project and a stakeholder management table was created using the selected faculty. A list of potential QEP faculty was compiled and used to select the main recruiter and former recruits or potential candidates to interview.

Once the sources of the data were determined, the tool for acquiring the data needed to be created. Based on the available literature, factors influencing faculty recruitment and retention at academic medical institutions were identified (Figure 4). These served to guide the generation of two sets of questions, one for use in standardized interviews with faculty in recruiter positions and one for faculty in recruit positions (Tables 4 and 5). These questions focused on identifying motivators and deterrents for position acceptance, ideal candidate characteristics, institutional barriers to recruitment, steps of the recruitment process, and faculty development opportunities available after hire for each program.

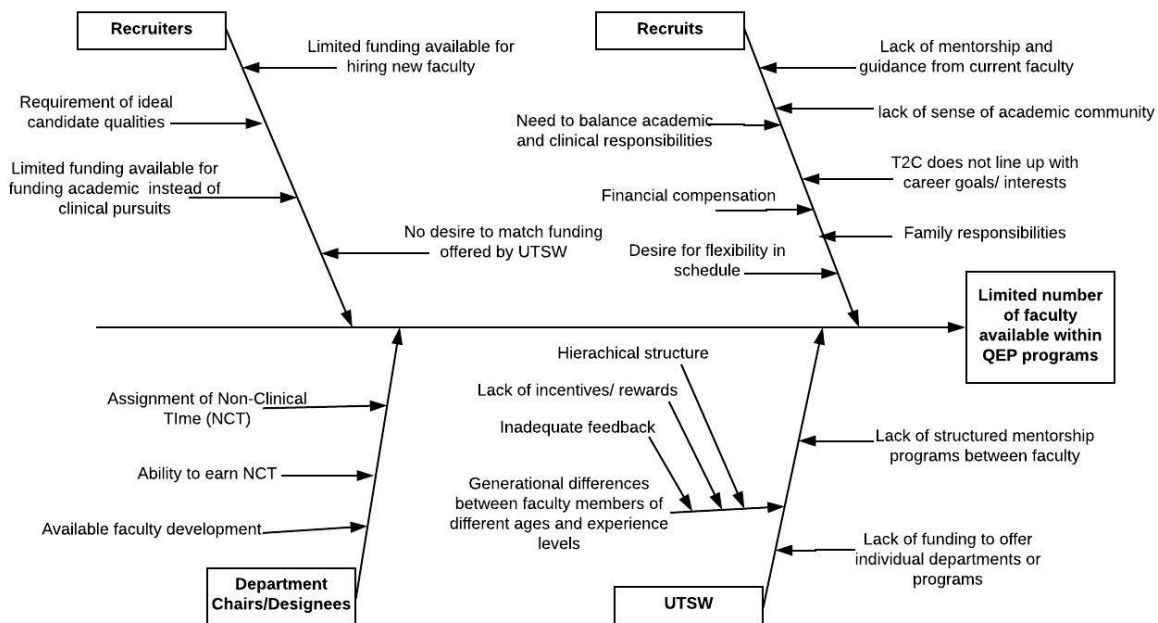


Figure 4: Potential factors limiting the number of faculty scholars at UTSW

Table 4: Interview questions for recruiters

Questions for Recruiters
What are the key characteristics you look for in faculty you are trying to recruit for your QEP program? Are there characteristics that make you reluctant to recruit someone?
What incentives do you offer to prospective new faculty? Are these financial, time off, promotion, etc.?

What are any institutional practices or regulations that limit your ability to recruit a prospective member of your QEP program?
Could you outline the process of recruiting a new member to your program? What frequently prompts the search for new faculty? What do you consider the endpoint of the recruitment process?
Once brought on board, what training or mentorship do faculty receive? How are training resources accessed, and who owns them? Are there measures in place for developing a sense of community among the faculty members? Is faculty satisfaction measured, and if so, how is this information obtained?

Table 5: Interview questions for recruits

Questions for Recruits
What were some key factors that increased your desire to accept the position within the QEP program you are a member of?
What factors made you hesitant to accept the position?
What do you perceive as your personal strengths that helped you obtain the position? Do you feel like there were any personal traits that might have made you seem like a less ideal candidate?
Could you outline the recruitment process as you experienced it for your given program? What did you perceive as the starting and ending points?
Do you feel that there is adequate and effective communication among the members of the program, both in terms of amongst your peers and with your supervisors? Do you feel like there is a sense of community within the program? Do you feel like there is adequate mentorship and guidance offered?

Each set of five questions as asked during a 30-minute interview held by the project co-leads with either a recruiter or recruit for a given program. The notes obtained from these discussions were summarized in a written-out form and were also used to generate a process map reflecting the faculty recruitment process as outlined by the interviewee. After review among the co-leads of the project, both documents were sent back to the interviewed faculty member for confirmation of accuracy and completeness, and any necessary revisions were made based on received feedback. The quality of the questions used for the standardized interviews were reviewed and refined between each interview to maximize the yield of pertinent data. While initially only a single question was asked regarding each topic of inquiry, based on the first

interview completed it became evident that the data obtained was not detailed enough to get an adequate understanding of the recruitment process. Additional questions were created to clarify each topic and were asked the faculty interviewed in this first discussion to complete the data and were used in the rest of the interviews as well. After each interview these questions were reviewed as well and revised as needed, representing PDSA cycles to ensure their continued improvement.

Each of the topics served as process measures that contributed to the outcome measure of clearly defined recruitment processes for each of the educational activities investigated. The measures chosen included motivators and deterrents for recruits, ideal faculty characteristics sought by recruiters, institutional barriers to ideal candidate recruitment, steps in the recruitment process, and faculty support once recruited. The primary sources of variation in the quality of the data obtained were the standardized questions asked during data collection interviews. Each interview served as a PDSA cycle in which the effectiveness of each in obtaining the desired data was assessed and the questions were edited accordingly. The completeness of obtained data was assessed by generating a written summary of all the data as well as producing process maps of the recruitment process as outlined by the interviewee, which was sent to the interviewed faculty member for confirmation of accuracy. The accuracy of the data obtained for each position within a program will be confirmed by cross verifying the data with the individuals in the opposite position of either recruiter or recruit, thereby controlling for variation in the representation of the recruitment process for each program by combining these perspectives.

The information collected from the interviewed faculty members about motivators, deterrents, and ideal candidate characteristics influencing faculty recruitment was compiled into multiple tables for easy review. The data regarding the various faculty recruitment processes

were utilized to generate process maps outlining each sequence of events. The tables and process maps were reviewed and common features among the different programs were identified, outlining the current faculty recruitment practices at UTSW.

CHAPTER 3: Results

Originally each topic of inquiry was contained in a single question to be proposed to interviewed faculty. However, after the completion of the first interview with the recruiter for Academic Colleges, there remained ambiguity regarding the recruitment process. To address this, additional clarifying questions were added to each topic of discussion. The major constraint to data collection was time, both due to availability of all individuals involved in an interview on a given day as well as the 30-minute limit to the interview. While the data collected was still complete and verified, additional time during the interviews could have potentially yielded additional details to outline the recruitment process of each program. Data from faculty within each program in the opposite role of recruiter or recruit could not be collected due to time constraints, representing missing data that should be collected during the continuation of the project.

For the initial phase of this project, which focused on defining the current state of recruitment practices at UTSW, the outcome measures included clearly defined recruitment processes for each of the educational activities investigated. Process measures in each program included motivators and deterrents for position acceptance, ideal candidate characteristics, institutional barriers to ideal candidate recruitment, steps in the recruitment process, and faculty support once recruited. While variability existed between the recruitment processes of individual educational activities, general patterns for faculty recruitment at UTSW were identified by comparing the answers and process maps obtained from all interviews, as summarized in the figures and tables below.

Table 6: Recruiter-identified motivators for position acceptance

Program				
Motivator	Colleges	Convergence	Sim	SWAT
	Contribution to student growth	SAC	Access to resources for curriculum development	Honorary status
	Financial compensation	Advising opportunity	Promotion opportunities	Fellowships and grants
		Assistance and opportunities for career advancement		
		Interprofessional training experience		

Table 7: Recruit-identified motivators for position acceptance

Program	T2C
Motivator	Interest in education and teaching
	Student advocacy

Table 8: Recruiter-identified deterrents against position acceptance

Program				
Deterrent	Colleges	Convergence	Simulation	SWAT
	Lack of supported time	Time constraints	Only available for individuals at faculty-level position	Lack enough education experience at UTSW
		Limited SAC		
		Must be willing to serve as preceptor		
		Distribution of faculty should match the scope of students		

Table 9: Recruit-identified deterrents against position acceptance

Deterrent	Program	
	T2C	
	Time constraints	
	Lack of promotion and tenure opportunities	

Table 10: Recruiter-identified attributes of high-impact education scholars

Characteristic	Program			
	Colleges	Convergence	Simulation	SWAT
	Previous teaching experience	Interprofessional orientation	Previous simulation experience	Investment in UTSW
	Positive medical student reviews	Realistic expectations	Realistic goals	Effective communication
	Generalist/interaction with several specialties	Positive medical student reviews	Enthusiasm/inner motivation/commitment	Education scholarship
		Amiable to training and shared mental model of program	Effective communication	Interprofessional and interdepartmental orientation

Table 11: Recruit-identified attributes of high-impact education scholars

Characteristic	Program	
	T2C	
	Teaching	
	Student advocacy	
	Departmental advocacy	
	Innovation	

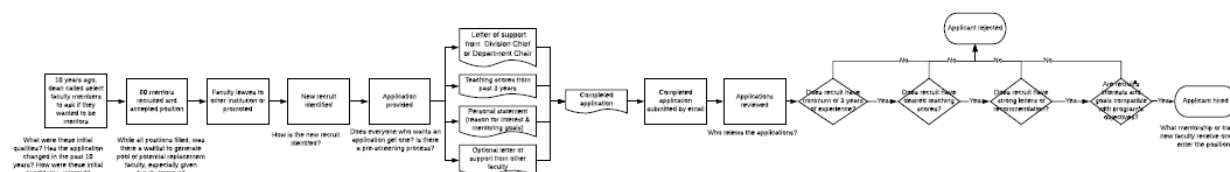


Figure 5: Recruiter's Perspective of Academic Colleges Recruitment Process

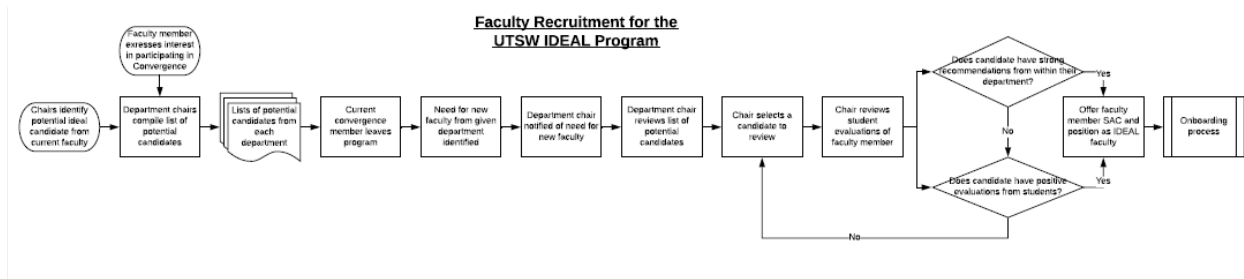


Figure 6: Recruiter's Perspective of UTSW IDEAL/ Convergence Recruitment Process

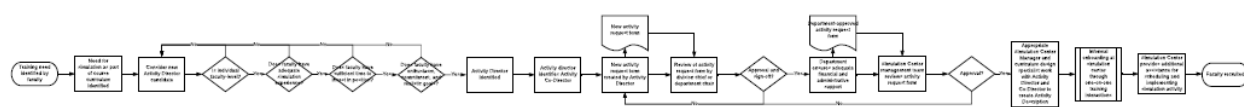


Figure 7: Recruiter's Perspective of Simulation Education Recruitment Process

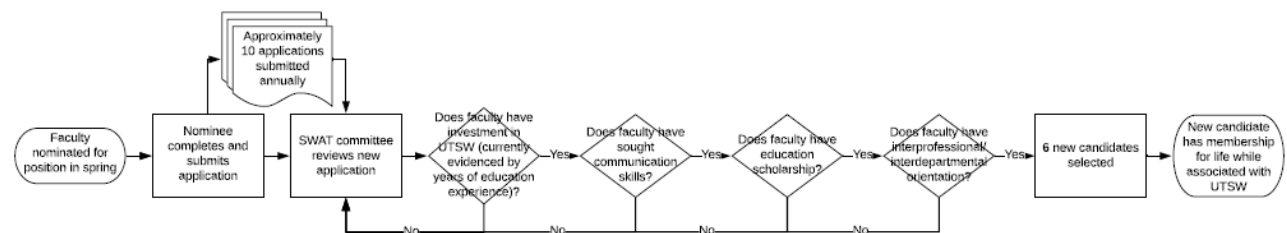


Figure 8: Recruiter's Perspective of SWAT Recruitment Process

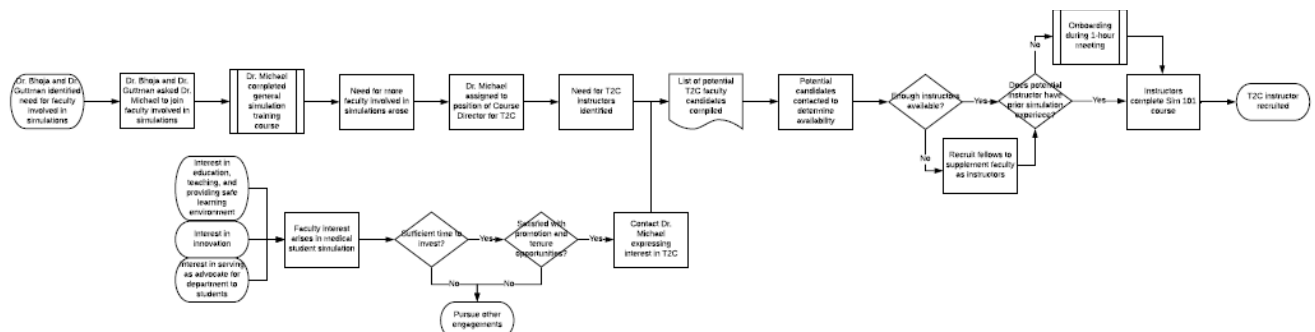


Figure 9: Recruit's Perspective of T2C Recruitment Process

CHAPTER 4: Discussion

Upon review of the data collected from QEP program faculty interviews, patterns regarding ideal faculty characteristics as well as motivators and deterrents for accepting a position were identified. Recruiters sought individuals with previous experience related to the position they were seeking and utilized student evaluations of faculty members to evaluate the quality of their previous engagements. While enthusiasm and internal motivation were assets, recruiters also emphasized the importance of realistic expectations of what could be achieved in the position. Recruiters identified financial incentives, opportunities for career development and advancement, and contribution to student growth as potential motivators for accepting a position, while time constraints and limited financial compensation were identified as deterrents. From the recruit perspective, an interest in teaching, departmental and student advocacy, and innovation served as both ideal characteristics and motivators for seeking a position while a lack of time, promotion, and tenure opportunities served as deterrents.

Regarding the faculty recruitment process, the initial step involved the identification of a potential candidate. This occurred either by invitation by higher-level faculty involved in the program such as a dean or departmental chair or via expressed interest by the candidate to the program which then led to their compilation into a list for consideration for the position. Once a current position opened, or new positions were created due to expansion of the program, the candidate's suitability for the position was assessed using an application often requiring endorsement from the department chair. Once an individual was selected, they would receive onboarding training to prepare them for the position in the program.

A major strength of this project was its utility in outlining recruitment processes for multiple different educational activities and allowing for the identification of common patterns among them. The results obtained from this investigation were like those expected based on previous research conducted at other institutions regarding faculty recruitment and retention. Limited financial compensation, time availability, and career advancement options were identified as deterrents in multiple programs at UTSW. Issues with leadership, poor sense of community, and poor work-life balance were expected deterrents based on literature review that were not identified in this project. While this could potentially reflect the uniqueness of UTSW as the context of this study, it more probably resulted from bias in the data given that most of the faculty interviewed were in the recruiter role. Collecting additional data from more individuals in the recruit role who would more directly perceive these factors would potentially address this discrepancy.

A limitation to the generalizability of the work conducted in this project is the completeness of the data. Time served as a limiting factor to the number of interviews that could be conducted for data collection, resulting in an initial focus on obtaining the recruiter perspective for each learning activity. This led to a limited and biased perspective on the recruitment processes which ideally should be complemented by recruits' perspectives to gain a more accurate depiction of the recruitment processes. Another limitation to generalizability is the number and type of programs investigated. While investigating more programs with a heavy simulation education component would provide additional data to strengthen the foundational knowledge from which future intervention in line with this project's aims can be planned, expansion to include other types of programs from UTSW and other institutions would make this work more generalizable.

Currently the project is at the Improve phase of its DMAIC methodology. Based on the information obtained from this work, patterns in recruitment practices at UTSW have been identified that can in turn guide the implementation of a successful faculty recruitment and development plan for the newly created educational activities comprising Team FIRST. The trends in the data obtained so far can be applied to the optimization of faculty recruitment through successfully maximizing the identification of faculty scholars by outlining the ideal requirements for each of the three levels of faculty development of instructor, facilitator, and faculty scholar based on ideal candidate characteristics (Table 12). In order to serve as a QEP instructor, a faculty member should be able to invest both time and effort into teaching the course and should undergo basic simulation education training if they do not already possess previous experience in this field. By contrast, a QEP Scholar should already have previous experience that establishes their expertise and provides a pragmatic framework to guide their innovation and enthusiasm toward realistically achievable goals. The title of QEP Lead would apply to a faculty member who is in the process of accumulating leadership skills by expanding their exposure to their field and is transitioning from an Instructor to Scholar.

Table 12: Key characteristics of faculty candidates

Key Characteristics of Faculty Candidates
Previous related experience
Positive student reviews
Interprofessional/ interdepartmental orientation
Realistic goals and expectations
Motivation
Communication skills
Education scholarship
Innovation
Departmental advocacy

The next steps of this project will focus on designing and testing a tool based on the collected data to optimize faculty recruitment. This tool will be an application (Appendix 1) used for each educational activity to assess each candidate for the identified ideal characteristics and stratify them into three levels of potential commitment. In order to ensure the success of the QEP programs, invested faculty need to be recruited from the UTSW Schools of Health Professions and Medicine and non-UTSW Schools of Nursing and Pharmacology for each of the four educational activities. They will be sought from established learning communities, Clinical Clerkship Directors and other faculty activities given the overlapping skills and interests between these programs. Information about the QEP programs will be provided to department chairs and leadership of established learning communities to allow for the active referral of potential ideal candidates. An introduction in the form of a brief presentation of the QEP goals will be shared with each of these organizations during organizational meetings to inform potential candidates of available opportunities. Emails containing additional recruitment information as well as a link to the QEP website will be provided to the members of these communities as active recruitment for each educational activity starts.

Information provided to the potential candidates through referrals or made available on the QEP website will serve to spark interest and inspire faculty to inquire about opportunities within the QEP programs. Interested faculty will be considered for a position as a result of either direct face-to-face interaction with the QEP Faculty Development Lead program, referral from their departmental chair or other QEP faculty, or expressed interest through email outreach. By visiting the QEP website they will be able to access the application form, and all completed applications will be reviewed and undergo a selection process evaluating their qualifications, resulting in invitations being sent to selected faculty.

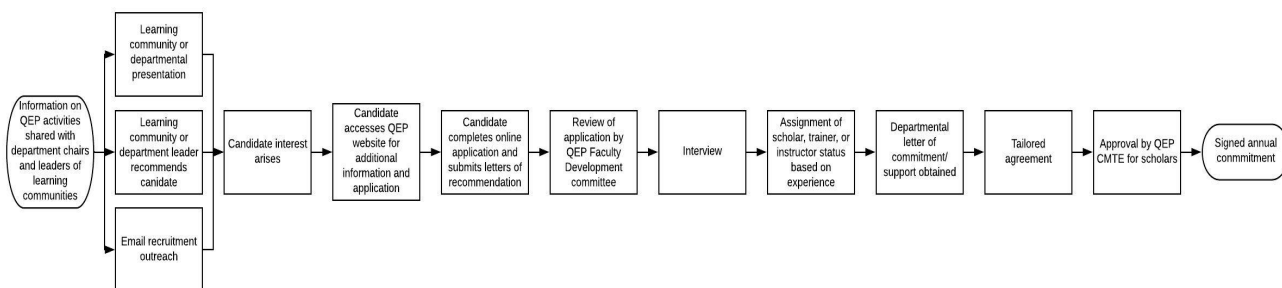


Figure 10: Candidate application and approval process

During the application process, the qualifications and attributes of a candidate will be assessed. Faculty currently involved with Convergence, simulation education, or transition in medicine programs will have valuable experience that will give them priority in consideration. Incentives for becoming a QEP faculty member include leadership opportunities, manuscript support, SAC payment, non-clinical time funded by Department and QEP, mentorship, support from students and scientists working on the QEP.

During the recruitment process, three levels of faculty support will be identified based on an individual's portfolio and potential for becoming an educational scholar. In order to determine the eligibility of faculty for each stratum of involvement, the UT Southwestern Academy for Performance Excellence (APEX) will be used as a model with its levels of recognition roughly correlating with those of the faculty levels in the QEP activities (Appendix 2). More specifically, APEX bronze level will correlate with Instructor, APEX silver with Lead, and APEX gold with Scholar. This parallel will also serve as a guide for advancement of a given faculty member from one level of involvement to another based on involvement in education, research project participation, and scholarship. The qualifications of the faculty will be reviewed annually in order to review progress and set goals for advancement. The addition or loss of Departmental

and QEP support for non-clinical time will be contingent on satisfactory review of progress and the level of portfolio development as outlined by APEX criteria.

The utilization of the application tool in the faculty recruitment process for Transition to Clerkships based on the implementation plan outlined above will serve as the next step in the project. By using the application tool in the recruitment process for each educational activity and revising it between each recruitment cycle in multiple PDSA cycles, it can be continuously refined to help maximize the accurate identification of faculty scholars who can lead the future development of QEP programs at UTSW.

Appendix 1

UTSW Team FIRST QEP Program Application

Please submit the following application in addition to one (1) letter of recommendation from your department chair or division chief as well as two (2) letters of recommendation from peer faculty (2 page maximum each) to the application portal accessible at

<https://www.utsouthwestern.edu/education/qep/>

1. Name:
2. Department:
3. Academic Rank/ Title:
4. Personal Statement: Briefly describe your interest in the program and your intended goals (500 word maximum).
5. Nominating sponsor (if available):
6. List of completed education courses and certifications:
7. Teaching scores/ evaluations from students from the past 3 years:
8. List of past teaching experiences:
9. List of major teaching and educational achievements:
10. List of past mentorship experience:
11. List of research abstracts, publications, and presentations:
12. List of research awards or grants:
13. List of current teaching responsibilities:
14. List of current clinical responsibilities:
15. List of current administrative responsibilities:
16. List of current research responsibilities:

Appendix 2

Table 13: Eligibility requirements for levels of faculty support

Faculty Level	Minimum Education Points	Minimum Project Participation Points	Minimum Scholarship Points
Faculty Instructor	1	1	1
Faculty Trainer	1	4	2
Faculty Scholar	1	6	5

Table 14: Points awarded for eligible activities in determining levels of faculty support

Activity	Category	Points Awarded
Clinical Safety and Effectiveness Course	Education	1
Lean Six Sigma Green Belt Certification	Education	1
Lean Six Sigma Master Black Belt Certification	Education	2
Institute for Healthcare Improvement Basic Certificate in Quality and Safety	Education	1
QI Project Team Member	Project Participation	1
QI Project Team Leader	Project Participation	2
QI Team Facilitator	Project Participation	2
QI Project Abstract (Not Peer-Reviewed)	Scholarship	0.5
Peer-Reviewed QI Project Abstract	Scholarship	1
Local Presentation of QI Project	Scholarship	0.5
Regional/ National Presentation of QI Project	Scholarship	1
Peer-Reviewed Published QI Article	Scholarship	2
Published QI Article (Not Peer-Reviewed)	Scholarship	1.5
One Hour Lecture Involving QI Principles	Scholarship	1
Awarded Competitive Federal Grant as PI	Scholarship	4
Awarded Competitive Federal Grant as Co-PI	Scholarship	2
Awarded Competitive Non-Federal Grant	Scholarship	2

Awarded Pharma, Non-Competitive, or Institutional Grant	Scholarship	1
Mentoring One Faculty Member at Trainer Level	Scholarship	1

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Vitae

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