

Using Kotter's Change Management Framework to Redesign Departmental GME Recruitment

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ABSTRACT

Background In light of the COVID-19 pandemic, dramatic change in the graduate medical education (GME) trainee recruitment process was required. Kotter's 8-Step Change Model is a change management framework that has been successfully applied to a variety of GME initiatives but not for recruitment redesign.

Objective To implement major change in program recruitment during the COVID-19 pandemic while maintaining Match outcomes and a high-quality candidate experience.

Methods In 2020, we applied Kotter's 8 steps to implement major changes to program recruitment for a department of internal medicine including 15 GME programs (1 internal medicine residency and 14 subspecialty fellowships). We collected each program's Match fill rates and used Google Analytics to collect monthly website traffic for the year prior to our change process and the subsequent 2 years. Standardized post-interview survey questions were created, and these results were reviewed for descriptive analysis.

Results We successfully used Kotter's 8 steps to change recruitment to a virtual format. Program fill rates remained high after implementation. Website engagement improved with peak monthly page rates doubling over previous values. During the highest traffic month, the average time on site increased for 7 programs, while the bounce rate decreased by more than half for 10 programs. Candidate descriptive feedback was positive.

Conclusions The application of Kotter's 8 steps guided major changes to GME recruitment for 15 programs and was associated with maintained Match fill rates and increased website engagement.

Introduction

As our graduate medical education (GME) programs approached the recruitment season of 2020, we recognized a need to change our practices drastically and rapidly due to the COVID-19 pandemic. We immediately redesigned recruitment for a virtual environment where candidates could not make in-person visits. Although expert guidance was later provided for this specific situation (including methods of increasing programs' digital visibility,¹ transitioning to virtual interviews,² and selecting social media platforms³), these insights were not available at the time of our initial planning. We thus implemented a well-known change management strategy developed by John P. Kotter and known as Kotter's 8-Step Change Model,^{4,5} which has been successfully applied to many industries, including health care.^{6,7} GME programs have used this model to address the transition to competency-based medical education,⁸ didactics redesign,⁹ and trainee wellness,¹⁰ but we are

not aware of previous descriptions applying it to recruitment. The objective of our article is to describe the application of Kotter's framework in our redesign efforts, describe our interventions, and report on the outcomes, including feasibility and acceptability of using the framework to guide change and the interventions themselves.

Methods

Setting and Participants

This study was completed at Wake Forest University School of Medicine, within the Department of Internal Medicine, which includes 15 GME programs (one general internal medicine residency and a wide range of subspecialty fellowships). In 2020, 2 faculty co-chairs assembled an 8-person virtual recruitment committee at the direction of the chair of medicine. A departmentally funded project manager was assigned to assist with administrative tasks including communication and group organization.

Interventions

We followed Kotter's 8 steps for our process using committee video conference meetings every 2 weeks

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Editor's Note: The online version of this article contains the mind map exercises used in the study, resources provided, a summary of implemented major changes, and further data from the study.

for 8 sessions and smaller subcommittee meetings in the off weeks. Each meeting led to tangible and deadline-driven action items that were detailed in emailed meeting minutes. At the same time, we alerted programs via email of both the need for change and impending support that our group would provide in the coming months.

Early discussions focused on 2 ways of process thinking that ultimately informed larger group brainstorming exercises: the candidate-centered strategy and the resource-centered strategy. Mind map exercises were used to visualize early brainstorming considerations for these 2 strategies. Areas for specific content development or improvement were distributed to all 15 programs.

Below we describe steps 1 to 3 in Kotter's 8 steps for our process, which culminated in forming a strategic vision and initiatives. Steps 4 to 8 of our process follow from this implementation. All 8 steps are outlined in TABLE 1.

Outcomes Measured

Our primary goals were maintaining program fill rates and providing a high-quality candidate experience. Outcomes of the National Resident Matching Program (NRMP) Medical Specialties Match were collected from the NRMP report "NRMP Program Results 2018-2022 Specialties Matching Service."¹¹ We considered also obtaining and reporting each program's maximum rank to fill, though program directors did not agree to disclose this information.

To assess the candidate experience and acceptability, we collected data on website engagement and candidate perceptions. Within Kotter's framework, these align with identifying short-term wins to help promote ongoing change.

Google Analytics was used to compare data from all internal medicine subspecialty fellowship program websites from 3 recruitment seasons: 2019-2020, 2020-2021, and 2021-2022 (through December 2021). We examined monthly website page views, mean time on site (measured in seconds), and bounce rate (the percentage of visitors who left the web page or closed their browsers instead of clicking something on the page). Data were compared from pre-pandemic (2019-2020) and pandemic (2020-2021 and 2021-2022) recruitment seasons. We analyzed monthly views for the main residency, separate from the fellowships, since the Match timings are separate. September of each year had consistently high amounts of website traffic, and we specifically examined time on site and bounce rate for each program during this month.

Objectives

Apply Kotter's change management framework to graduate medical education (GME) recruitment redesign for multiple programs within a department of internal medicine.

Findings

Change from in-person to virtual recruitment strategies was managed with maintained program fill rates and increased levels of candidate website engagement.

Limitations

This study applied change management in the context of urgent recruitment changes for a single department brought on by the COVID-19 pandemic. The success of this approach in other contexts is not addressed.

Bottom Line

Kotter's 8 steps was utilized to successfully coordinate a large and complex change management project in GME recruitment.

Data on candidate perceptions of our recruitment process were limited to informal communications and some program-initiated surveys. Our task force developed several standardized questions to be included in post-interview surveys of candidates, but not all programs used these questions. Due to this and an overall low response rate, statistical analysis was not possible. Thus, summary description was performed by the authors.

This project was deemed exempt from Institutional Review Board oversight by the authors according to institutional policy.

Results

The application of Kotter's 8 steps and resultant interventions are described in TABLE 1. Here we detail steps 1 to 3, which resulted in specific actions to implement change.

Step 1: Create a Sense of Urgency

In March 2020, many societies including the Association of American Medical Colleges, the Alliance for Academic Internal Medicine, and the NRMP recommended all programs commit to online interviews and virtual visits.¹² The sense of urgency thus created was palpable, leading our department chair to select 2 faculty co-chairs to build and lead a team to redesign GME recruitment strategy for all 15 programs within our department.

Step 2: Build a Guiding Coalition

The co-chairs assembled a team of 6 additional education-focused faculty members representing varied educational roles, training programs, experience with social media and information technology, and seniority. The group included 5 fellowship program directors, one residency associate program director,

TABLE 1

Virtual Recruitment Task Force Process According to Kotter's 8 Steps of Change Management

Kotter's Step	Our Virtual Recruitment Process Approach
1. Create a sense of urgency	<ul style="list-style-type: none"> ▪ Reviewed AAMC, AAIM, NRMP, and other organization recommendations that all recruitment should be virtual for the 2020-2021 recruiting season. ▪ Working with department chair and residency program director, workgroup co-chairs reviewed and refined a draft charge and timeline for the workgroup.
2. Build a guiding coalition	<ul style="list-style-type: none"> ▪ Co-chairs recommended additional GME faculty for the workgroup, selecting a diverse representation of specialties, experience, and demography.
3. Form a strategic vision	<ul style="list-style-type: none"> ▪ Held initial broad-scope discussions regarding the workgroup charge and areas of focus. ▪ Used mind-mapping technique for brainstorming with time for reflection and revision. ▪ Selected 5 focus areas and subcommittee working groups. ▪ Identified "personal touch" as a guiding concept for implementation.
4. Enlist a volunteer army	<ul style="list-style-type: none"> ▪ Communicated to all department training programs regarding the project, including opportunity for dialogue and FAQs. ▪ Solicited input and direct support from trainees and faculty for website and social media additions in addition to video roles.
5. Enable action by removing barriers	<ul style="list-style-type: none"> ▪ Centralized contract with videographer and producer, including filming location. ▪ Developed suggested video content templates. ▪ Purchased departmental video interviewing solution with training for coordinators. ▪ Scaffolding support for website design, social media content generation, and interview day structure were implemented. <ul style="list-style-type: none"> ○ Specific website developers assigned to the project. ○ Marketing department contacts and hiring of a new marketing and social media content coordinator. ▪ Interview gift developed, purchased, and postage funded through department.
6. Generate short-term wins	<ul style="list-style-type: none"> ▪ Rapidly reviewed and discussed new website design and initial video products. ▪ Rapidly developed, deployed, and then analyzed a social media survey exploring how our current trainees learned about their respective program. ▪ Launched program-specific landing page designed for applicants offered interviews.
7. Sustain acceleration	<ul style="list-style-type: none"> ▪ Reviewed website completion at monthly department fellowship meetings. ▪ Updated on all focus areas via email biweekly. ▪ Updated with brief video on gift box development. ▪ Just-in-time support given for interview day through program coordinators. ▪ Post-interview, updated web page that targeted the ranking decision process and follow-up email reminding applicants of key program features. ▪ Post-Match, sent accordion postcards to celebrate new house staff and increase social media exposure.
8. Institute change	<ul style="list-style-type: none"> ▪ Ongoing planning for future recruitment years, including further integration of website and social media content including candidate interactivity. ▪ Measure and report on success of the class recruited during this process.

Abbreviations: AAMC, Association of American Medical Colleges; AAIM, Alliance for Academic Internal Medicine; NRMP, National Resident Matching Program; GME, graduate medical education.

and 2 teaching faculty in general medicine. We met for 1 hour, biweekly, via video conferencing for a total of 8 meetings (8 hours) over 4 months. Pairs of members met more frequently as they took the lead on focus areas of our strategy. Time spent on work outside of committee meetings, including on email, was not recorded. The faculty did not receive extra funding support, but all held roles in leadership of fellowship and residency programs and would have been developing these types of activities individually for them. The committee was allowed to present

proposals to the department chair for funding of shared resources.

Step 3: Form a Strategic Vision and Develop Initiatives

The vision for our change process was to implement a recruitment strategy that would maintain a high program fill rate and a high-quality candidate experience. Specific initiatives were developed over the course of our first 2 meetings, which were

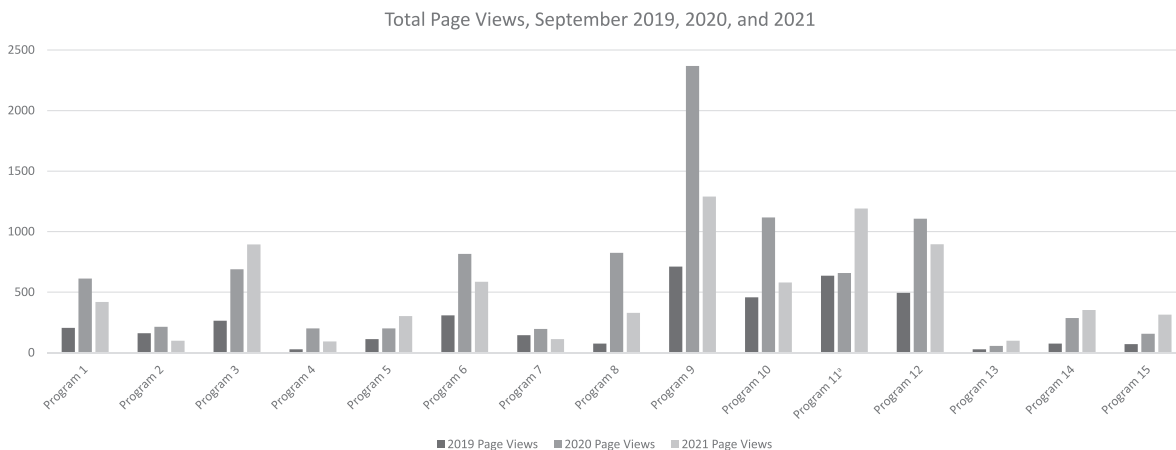


FIGURE 1
September Page Views per Program

^a Program 11's data is reported as one tenth of actual views since this program's traffic far exceeded the others. All other programs' data are actual page views.

intentionally open-ended and utilized brainstorming. We elaborated on 2 themes: the candidate's needs regarding recruitment and the program's needs for successful recruitment. Mind map exercises were used to visualize shared perspectives for these 2 strategies (see online supplementary data). To create these maps, we used the free version of MindMeister. In the candidate-centered map, we attempted to understand how the candidate engages with a potential training program throughout the recruitment season. We used this initial mind map to inform 5 key focus areas, which were each assigned to a pair of committee members. The 5 focus areas were program website, video content, social media content, interview day experience, and interview gift. Resources provided and major changes implemented are summarized in the online supplementary data.

Candidate Experience

Number of monthly page views for our subspecialty websites increased during the first year of the pandemic, from a previous peak of 7000 per month to a new peak of 15 000 per month. These remained similar during the second year. During both pandemic years, peak views occurred in September for fellowships and September or October for the core residency (online supplementary data). Comparing September page views year-over-year, there was a large increase as displayed in FIGURE 1. When comparing September time on site and bounce rate across 3 years, 7 programs saw an increase in average time on site, and 10 programs saw bounce rates decrease by half (FIGURES 2 and 3).

Two of our programs shared post-interview follow-up survey data from 30 of 100 surveyed candidates.

Representative comments include: "The gift box was memorable as it showed effort from the program to give us a chance to learn about [the city]," "The website is so far ahead of all other programs I interview at," and "I thought it was very well organized. I was able to talk with the fellows independently of faculty members before talking with faculty members during my interview. I did appreciate the dedication to the website. The amount and quality of the videos on the website as well as the information provided on the website was very helpful."

Final fill rates for our programs in pre-pandemic (2020) and pandemic years are displayed in TABLE 2. Match results showed 100% fill rates for all but 2 programs, including some programs in specialties with much lower national fill rate averages.

Discussion

Challenged with urgency, we were able to effectively facilitate large-scale changes to our recruitment process for 15 programs using Kotter's 8 steps. This change management process allowed for coordination among multiple stakeholders and was associated with positive outcomes in website engagement and Match results.

Implementing this process required time investment from several faculty and staff. These team members were usual participants in program recruitment activities, and some of the time spent on this change process was in service of their usual job duties (contributing to feasibility). We did not specifically track the additional number of hours spent on recruitment activities during our intervention year. Step 1 in Kotter's process (Create a sense of urgency) was particularly accelerated by the unique setting of

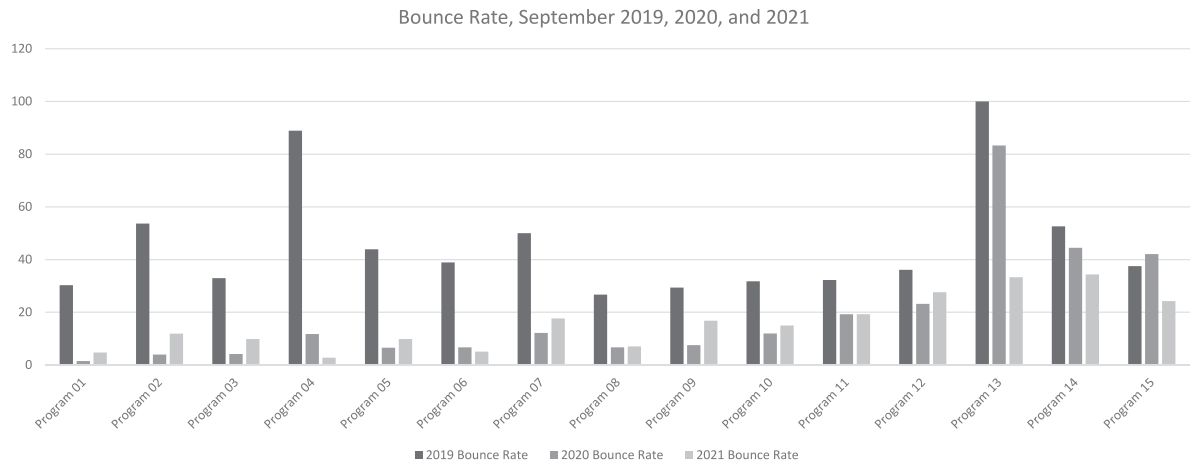


FIGURE 2
September Bounce Rate per Program

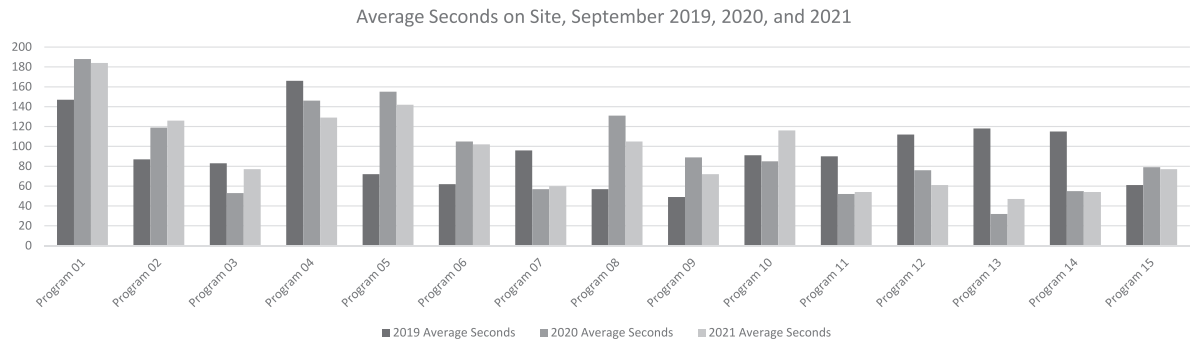


FIGURE 3
September Time on Site per Program

TABLE 2
National and Local Positions Filled in the Medical Specialties Match (2020-2022)

Program ^a	National Positions Filled 2020, %	Local Positions Filled 2020, %	National Positions Filled 2021, %	Local Positions Filled 2021, %	National Positions Filled 2022, %	Local Positions Filled 2022, %
1	93.1	100	92.8	100	98.3	100
4	76.6	50	85.1	50	85.3	100
5	54	100	53.6	25	53.6	50
6	99.7	100	99.7	100	99.6	100
7	97.7	100	99.3	100	98.0	100
8	79.3	100	87.7	100	82.1	100
9	99.8	100	99.7	100	99.8	100
10	99.6	100	99.2	100	99.7	100
12	99.7	100	100	100	99.1	80
14	97.2	100	97.3	100	97.8	100
15	60.1	100	71.2	100	69.2	100

^a Numbering is not sequential because only programs participating in the National Resident Matching Program are represented.

the COVID-19 pandemic and a shared sense of urgency and purpose among our faculty.

Other work in GME is relevant to our study. Successful application of Kotter's 8 steps has been shown for multiple areas of GME and now, in our study, to the area of recruitment redesign. Others have shown that bounce rate and web analytics are useful in evaluating improvement after a website redesign,¹³ and our findings were similar. Lastly, ours is the first study to report NRMP Match results during a time of recruitment redesign.

Our study of these processes has limitations. We do not assert that our recruitment changes alone drove these favorable outcomes. Data on website engagement are influenced by many factors, and the societal shift toward online interaction also contributed to changes in engagement. Future data are needed to confirm permanence. Data on Match rates are influenced by multiple factors, and true success of recruitment will not be known until newly matched trainees complete their training. Lastly, we could not implement a fully standardized post-interview survey for all candidates. Future research should compare website traffic statistics with other measures of candidate engagement and Match success, including satisfaction, wellness, and job performance of residents matched after a virtual recruitment process.

Conclusions

A change management approach was successfully applied to a recruitment redesign project impacting multiple GME training programs. Using Kotter's 8 steps, we implemented major changes during 2020 and found increased website engagement with maintained program fill rates over 2 successive recruitment cycles.

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