The Revision of a Joint Fellowship Curriculum

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THESIS

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DEDICATION

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Table Of Contents

LIST OF ABBREVIATIONS

ACGME	American College of Graduate Medical Education
MCW	Medical College of Wisconsin
JFC	Joint Fellowship Curriculum
PD	Program Director

SUMMARY

Focus groups of program directors and pediatric subspecialty fellows were conducted at the Medical College of Wisconsin. The participants were asked series of questions related to the Joint Fellowship Curriculum, an educational curriculum already in place that teaches non-clinical skills and content to all pediatric fellows at MCW. The questions centered around the major goals of the JFC, the strengths and weaknesses of the current curriculum, and suggestions for change. A total of 10 pediatric fellows and 10 pediatric program directors participated in 6 separate focus groups.

Previous curricular revisions of the JFC had occurred, but those revisions only utilized suggestions provided by program directors. Despite previous curricular revisions, the JFC is still not viewed positively by fellows. This is the first attempt at eliciting feedback and suggestions for improvement from fellows participating in the curriculum. The goal of conducting separate focus groups of PDs and fellows was to determine if their feedback was similar or if each group offered a unique perspective, thus necessitating fellow involvement in all future curricular change.

Both written and oral feedback provided in the focus groups were analyzed, using the method of constant comparative analysis associated with grounded theory, to formulate themes and sub-themes. A large number of themes were generated by both groups, and there was definite overlap between themes from the PDs and the fellows. There were, however, a significant number of themes uniquely generated by each group and the fellows, as recipients of the curriculum, had many unique themes. Therefore, future revisions of the JFC that don't incorporate fellow opinions may lose rich and important data.

Introduction

Every medical fellowship program is required to educate its trainees in subspecialty specific knowledge and competencies. Additionally, they must educate their fellows on broader knowledge and skills, which are not specific to each medical specialty. The American College of Graduate Medical Education (ACGME)'s required core competencies[1] of patient care and medical knowledge are generally developed through clinical experiences in each subspecialty. Clinical experiences alone, however, do not prepare a fellow for mastery of all of the ACGME core competencies. The competencies of interpersonal and communication skills, professionalism, practice-based learning, and systems-based practice must also be developed through other experiences in fellowship training. It is education in these competencies that can vary tremendously within a department, from division to division, despite the overlapping needs of all of fellows at that institution. Learning objectives, such as, finding mentorship, negotiating for and obtaining a staff position, demonstrating cultural sensitivity, and supporting patient safety, are not unique to a particular division; all fellows must develop these skills prior to completion of fellowship education.

It was with these overlapping, non-clinical education needs for all fellows in mind that in 2006, the fellowship education leadership in the Medical College of Wisconsin (MCW) Department of Pediatrics endeavored to reduce the gaps and redundancy in the education for the new competencies for fellows in each pediatric division. The intent was to create a formal curriculum and process of instruction that brought all pediatric fellows together

for lectures and workshops focused on these general competencies, thereby reducing the teaching demands for each individual division, and standardizing each fellow's education experience. The new curriculum was framed to be consistent with the ACGME core competencies; and each module was mapped to ensure student learning and development of those competencies.

The initial content in that curriculum, called the Joint Fellowship Curriculum (JFC), was mapped out by physician leaders within the pediatric fellow education program, with the input of fellows and program directors (PDs). Over the next 11 years, several revisions of that curriculum were undertaken, with input coming solely from PDs, keeping the ACGME content specifications for training in mind.

Despite several revisions of the JFC, anecdotal data (collected through JFC session evaluations and word of mouth from fellows and PDs) indicated poor fellow attendance at sessions, general dislike of the sessions, and lack of individual division buy-in to protect time for fellow attendance. Organizing the campus-wide multi-disciplinary JFC is a labor-intensive and cost-intensive endeavor. Since the program was not viewed positively by the fellows, re-evaluation of the JFC was necessary, to determine areas for improvement and potential change. With previous revisions of the JFC, the only stakeholders who were elicited for input were the PDs. With fellow satisfaction regarding the JFC perennially low, we felt that it was time to obtain their insights into areas for improvement of this curriculum.

Seeking trainees' help in guiding evaluation and improvement of their education is not an innovative concept. The importance of learner input in programmatic change has been

described in the literature, primarily in the clinical realm. Sisson et al[2], in 2012, describe the revision of an online ambulatory medicine curriculum for internal medicine residents. They demonstrated that written feedback from the residents about the quality of the education content delivered in their online modules drove valuable content changes. Ultimately, the resident-driven content changes resulted in improvement in knowledge gains for learners.

Additionally, utilizing qualitative methods for a curricular needs assessment has been shown to be an effective way to obtain stakeholder input. Boet et al[3] discuss finding unintended challenges and issues, when meeting with PDs and residents about implementing a new competency-based medical education (CBME) program for post-graduate anesthesia residents. They suggest that the information and perspectives they elicited, through semi-structured interviews and focus groups with stakeholders, helped them to create a shared framework of expectations, to avoid pitfalls, and that ultimately, they may help other institutions as they implement similar CBME programs.

Crawford et al.[4] used a similar methodology when interviewing residents and faculty, attempting to define the competencies associated with telepsychiatry in post-graduate psychiatry training. They elicited perspectives and information about the skills required to competently practice telepsychiatry, and also asked questions pertaining to the desired teaching and learning methods most useful for acquiring telepsychiatry skills. They found that all participants argued that learners needed “hands on experience” more than anything, when trying to master this discipline. They also found that learners perceived that lectures, especially focused on evidence-based medicine, played a key role in teaching telepsychiatry. It was with the information gathered in this needs assessment

that they ultimately demonstrated how competencies could be developed in the newly emerging field of telepsychiatry.

The purposes of this study were to obtain stakeholder input, about the strengths and potential areas for improvement of the program, from the fellows as well as the PDs and to compare and contrast the feedback provided by both groups. Were we missing a key group of stakeholders by not involving the fellows? Or, would fellows and FDs provide similar enough feedback that for future potential JFC revisions, we could continue to only elicit feedback from the FDs, a much smaller and easier to access group.

Methods

Institutional Review Board (IRB) approval for the present study was obtained through the University of Illinois – Chicago. and quality improvement waiver obtained through the Medical College of Wisconsin (MCW), to conduct separate focus groups of current senior pediatric fellows (fellows in their second and third year of a three-year fellowship) and pediatric fellowship directors. Focus groups were conducted at MCW, where the PI is academically appointed, and where the JFC is delivered. Senior fellows were chosen to interview because, at the time of focus group participation, they would have already participated in learning at least one year of the JFC content. PDs were chosen to interview because they have frequent contact with their fellows and are directly responsible for fellow education within their divisions. An initial group of fellows, called the Fellowship Advisory Committee (FAC), was emailed invitations to participate in a focus group. The FAC is a group of five senior fellows elected by their peers to serve as representatives and advisors to faculty about fellowship and JFC related issues. The first fellow focus group consisted entirely of FAC members. Subsequently, all remaining senior fellows (approximately 40 total fellows) were emailed an invitation to participate in focus groups. Participation was voluntary and if fellows did not respond to e-mail invitations, they were considered to have declined the invitation to participate in focus groups. Some fellows agreed to participate in focus groups, but were unable to attend focus groups on suggested dates. Ultimately, a total of 10 fellows consented to participate, and a total of 3 focus groups were conducted. PDs were made aware of the upcoming focus groups, during bimonthly program directors' meetings, and emailed invitations to participate. Ultimately 10 of the 15 PDs within the Department of

Pediatrics were able to be scheduled to participate in three focus groups. Of note, the author and moderator of the focus groups is the program director of one of the pediatric fellowships, and so only 14 program directors were eligible for focus group participation. No focus group had fewer than three or more than six participants.

Participants were given consent forms to sign. Once consent was completed, the participants were given worksheets on which to take notes. The worksheet included 10 questions; the same questions were asked of both PDs and fellows. (Appendix). The worksheet was created and revised with the assistance of the PI's thesis committee, consisting of regional medical education experts. Participants were given approximately 15 minutes to read the questions on the worksheet and take notes on the worksheet; and were instructed that worksheets would be collected at the end of the focus group for PI and colleagues' analysis at a later date. Once the participants had finished taking notes, the focus groups began. The moderator of the focus groups reminded all participants that their comments would be audio recorded (also stated in consent forms) and the group discussion began. The 10 questions from the worksheet were asked in numerical order in all focus groups, but organic discussion by group members occasionally led data to be collected out of order, with respect to the 10 questions. The moderator of the focus groups asked for additional information, when necessary, and provided for the focus group members to engage with each other to stimulate further discussion. Focus groups generally took an hour to complete, but were completed when all group members felt that the conversation had run its course and no new perspectives or information was being communicated. The moderator took field notes from the discussion during each focus group.

Due to scheduling difficulties with clinically busy fellows and PDs, the focus groups were conducted between November 2017 and January 2019. All senior fellow focus groups were completed prior to the onset of the PD focus groups.

Both written and oral feedback, provided in the focus groups, were analyzed, using the method of constant comparative analysis associated with grounded theory, to formulate themes and sub-themes. Themes from each focus group were coded independently by two individuals, to ensure the trustworthiness of the analysis. Codes generated by both individuals were compared, and unique codes were documented until saturation was reached. The two coders had 98.5% percent agreement in code generation from field notes and audio recordings.

Themes generated from fellow focus groups were compared to themes generated from PD focus groups and identical as well as unique themes were identified. What follows is a description and analysis of the perspectives and information elicited from the focus groups.

Results

The initial question on the worksheet was meant to elicit participants' understanding of why the JFC existed and what were its major goals. The next questions pertained to the strengths and weaknesses of the instructional methods utilized in the JFC. The final questions focused on the strengths and weaknesses of the entire JFC, as well as ways that we might improve the curriculum and instructional experience.

Participants were first asked what they felt should be the most important learning outcomes for the JFC. The moderator further asked for examples of knowledge, skills, or attitudes that might be developed, after participating in the JFC. Two predominant themes were most commonly shared between the PDs and fellows. The first was that the JFC was in place to teach practical, but not necessarily clinical, skill sets. As one fellow stated, "*other things you may not necessarily get in your fellowship*". The second theme was that the JFC focused on material that was often challenging to teach within small divisions, but was required material for all fellows, with one PD commenting, "*really good speakers that take the heat off the sections to find everything*". Both groups felt that the JFC was intended and designed to reduce redundancy in fellowship education and make teaching of these core competencies easier for individual divisions. As one PD commented, "*The purpose of the curriculum is to cover areas that are ACGME requirements and also that are helpful to them in their careers, that are not easily taught in individual programs and are better taught in a group*." Both sets of participants listed specific skills that they felt were best addressed by the JFC which included: non-clinical skills, described by a participant as "*non-clinical education that's practical*"; research skills including scientific writing; career preparation and development; and contract

negotiation and job searching. The most frequent non-clinical topic mentioned by both groups was that the JFC provided for fellows to interact and "*network*" (expressed by fellows) or "*commiserate*" (expressed by one PD). PDs also mentioned that the JFC was in place to promote fellow well-being, self-reflection, and character development. Noteworthy was that none of these themes were mentioned by fellows. Fellows, on the other hand, brought up ideas that were formulated in themes not suggested by the PDs that included: learning to teach residents/students; discussions about life outside of medicine; exposure to campus experts; options for non-traditional academic careers, and discussion of academic promotion.

Participants were then asked about the strengths of the current JFC instructional methods. On the worksheet, the term "instructional methods" was defined for participants as "the way in which a teacher creates an instructional/learning environment. Can be teacher-centered (lecture, demonstration), or learner centered (case-based learning, discussions)." Both groups agreed that the methods that most involved the learner, and were most interactive, were the most effective for fellows and their learning. As examples, fellows stated, "*those that engage us more are more interesting as opposed to PowerPoint*" and "*I hate the didactic lectures, I stare out the window and pretend I'm not there*". An example of a PD comment on this topic is, "*I strongly resist doing lectures, the person that gets the benefit is the one that creates the lecture, not the learner*."

Both groups, fellows and PDs, specifically endorsed the use of adult learning styles and small groups and discussions, with a fellow commenting, for example, that small group discussions are useful because: "*things come up that other people are thinking, and I*

hadn't thought of". Fellows additionally stated that the sessions at which they worked on a physical product, (e.g., scientific abstract review and writing), were extremely helpful.

A new instructional method, online modules, was implemented just prior to the start of the focus groups, which complemented the already occurring in-class sessions. These online modules were created with the hope that fellows would have access to some content, (those topics that lent themselves to online delivery), 24/7, keeping in mind the availability of the fellows, given their schedules, and the variability of the timing of their need for education focused on certain topics. Additionally, while the fellows are expected to complete a certain number of these modules each year, they are allowed to select the modules most pertinent to their chosen career path or scholarship. When asked specifically about this online content, both fellows and fellowship directors felt that it was "*excellent*". Examples of PD comments are, "*anything that can be given to them digitally is great*!" and that the modules are especially strong because they are, "*driven by interest and then they're going to dig in to them*."

Both groups, fellows and PDs, felt that utilizing campus-wide experts to teach was a strength of the curriculum. The fellows also appreciated that these content experts could be later used as resources for them should they require more information, perspectives or assistance regarding a topic. Both groups also commented that the separation of fellow classes by year, instead of combining all three years of fellows in one group for sessions, was more desirable. This way, content could be more directed for fellows' stages of education and could perhaps be more pertinent when the content was delivered to individuals at specific and appropriate times during their fellowship education.

Noteworthy with regard to this question was that the fellows typically had more to say about this topic than FDs, as most FDs do not personally attend all/any of the JFC sessions. In addition to the previously listed themes, fellows specifically said that sessions with a higher faculty/fellow ratio were typically more effective, including panel discussions and small group breakouts with more than one faculty member precepting. They also reiterated that sessions during which work products were created were very valuable.

Participants were next asked about weaknesses or areas for improvement in the instructional methods currently used by the JFC instructors. Once again, both groups focused heavily on increasing interaction among fellows and PDs and reducing didactics/lectures. Answers mirrored those given in response to the previous question, as the discussions about strengths and areas for improvement migrated from strengths to weaknesses very organically. No new "instructional method" weakness themes were identified.

The next question asked of participants was to identify "ideal instructional methods" for the JFC. Each group's data was analyzed, and of the 9 themes that were based on fellows' comments and the 11 themes that were based on PD comments, 5 were shared amongst the groups. These shared themes included: panel discussions, podcasts/online webinars, workshops (producing a product), interactive discussions, and short lectures paired with discussions. In addition to these shared themes, the fellows also felt that more desirable instructional methods included: question and answer sessions; didactics/lectures when it suited the topic; small group breakout discussions, and also, as one fellow stated, "*everything you are currently doing*". Themes mentioned by the PDs,

but not by the fellows, included: simulation; case-based discussions; demonstrations; role-play exercises; and flipped classroom models.

Participants were then asked if they would generally consider their time well spent after having attended a JFC session. The major theme, based on fellow comments, was that if the topic was "relevant", then their time was well spent, but that it depended entirely on each session and presenter. There was insight by fellows regarding the subjectivity of that issue, with one fellow stating: "*Is the topic going to be useful for the future? Then yes, but that's where we're all not going to be same.*" Fellows felt that, in general, the networking and education on non-clinical topics was important as well. Finally, fellows questioned the need for the sessions being two hours long, and suggested the possibility of making sessions shorter, expressed by one fellow in commenting that the best sessions are, "s*hort and to the point, which everyone likes*". Fellows often utilized the terms: 'relatable', 'practical', 'concise', and 'engaging', when describing the most useful sessions. PDs, too, focused a lot on the "usefulness" of the workshops and practical topics, with PDs commenting, for example "*The ones they see as most helpful are those when they bring a work product.*" and "*practical things, those that are perceived to be helpful and worth their time*". So, while both groups commented about the practicality and usefulness of the topics driving their perception of overall utility of the JFC, the fellows added comments questioning the need for a two-hour duration of sessions.

The next question asked of participants related to the overall strengths/benefits of the entire JFC. Many of the topics previously mentioned, when participants from both groups were asked about the major goals of the JFC, were restated in response to this question. Both groups felt strongly that the networking with other fellows was a major

strength of the JFC. They also reiterated their comments about: covering topics not covered or difficult to cover in their divisions, the ability to teach "practical education", and the ability to get "campus experts" to teach. Additional themes, suggested by only the fellows, included: getting time away from clinical work and having the lectures/teachers as resources for use at a later point in their training/positions. Comments, that comprised the themes mentioned only by the PDs, included those that centered on the reduction of education workload for individual divisions including: the elimination of redundancy in teaching by individual sections; the broad range of topics and program requirements covered in the JFC; the separation of fellow classes by year for individualized education; and the availability of online material.

Next, participants were asked was what could be done to improve the JFC. Two major themes were identified that were consistent in both groups: logistics and content. Regarding the logistics of the sessions, members of both groups commented that fellows have come to sessions, that turn out to be cancelled without notification and that there is frustration about wasted time in these instances. Advanced warning about cancellations, and in turn, respect for participants' time was deemed imperative. Fellows also commented that email reminders would be helpful for PDs and fellows prior to sessions, to make sure that fellows remember to attend and PDs remember to protect the time and encourage their faculty colleagues to relieve fellows of their clinical responsibilities to be able to attend the sessions. Additionally, both groups suggested that food and/or beverages provided at the sessions may be an enticement for greater attendance, with one PD for example, commenting, "*maybe it should be a social hour, with beer*?". Another frequently mentioned logistics concern, that was raised by both groups, was the timing of

the sessions in each year of the fellowship, meaning attempting to schedule particular sessions at specific times during training. Both groups had suggestions for moving specific sessions from certain months to other months, to make them timelier and ultimately more useful for the fellows. Additionally, both groups mentioned that a two-hour session duration may be too long and that shortening sessions or making them drop in for workshopping a product (e.g., an abstract) may be a better use of time than a dedicated two-hour session each month. A logistics issue raised only by the fellows, and not the PDs, was also the set-up of the room, in that the majority of their sessions are given in a large lecture hall. They commented that the current set-up (rows of chairs facing forward) provides for minimal interaction and engagement of fellows and that setting the room up in a round or in a small groups format may encourage greater discussion.

Areas for improvement in content were mainly expressed by fellows who described some sessions as "*dry and boring*", some as "*redundant from residency training*", and some as skewed by the beliefs of the presenters, which may be unique to those presenters. These sentiments were not shared by PDs which may be attributed to the lack of PD attendance at sessions or the lack of fellow awareness that the content is mapped to the ACGME competencies and content specifications and not chosen arbitrarily. Specific themes formulated in fellows' suggestions for improvement also included: adding non-medical guest lectures (e.g., leadership, presenting at a meeting), more career planning advice, and "letting the fellows pick the content". Additional PD suggestions for content improvement were predominantly focused on topics that they felt were not well taught by

their individual divisions and included: more discussion of quality improvement, "*clear teaching on basic statistics*", and teaching of professional communication.

Next, participants were asked what they felt the barriers were to attendance and participating in the JFC. For both groups, the comments provided mapped to four major themes: service, logistics, sentiment, and content. The robust discussion of service requirements versus education was the most predominant theme identified for both groups. PDs mainly commented that the barrier to participation in sessions was patient care and balancing their clinical time with the JFC requirement. Fellows added many more details in their responses to this question, such as: the inability to hand off their pager/phone; being "too busy" to leave the clinical service; violating duty hours requirements by attending JFC after call; getting protected time from their divisions for JFC; or being able to attend sessions when they are on service during months when they were physically outside of their normal division. Both groups seemed to have similar feelings, akin to comments stated by one PD, as, "*we can all work on our support of them going, we don't take their phones*", and another, "*are you really gonna leave?'... because they're not always encouraged to go*". Further discussion about these points suggested that fellows do the majority of the "work" in a division or unit. When fellows leave to attend JFC, the work falls to the attendings, with one PD commenting, "*enforcing attendance (at JFC) changes the culture of fellows not being slaves, the deeper issue is that faculty are overworked*".

Another theme indicated in comments made by both groups is that they commonly just forget when the sessions are scheduled, and the fellows may remember when the sessions are scheduled, but don't feel comfortable reminding the faculty about the schedule for

sessions. As one PD commented, *"I just don't remember when it is, it's just not on my radar and I forget to remind them* (to go)." "*If I'm forgetting (as the PD), I know for a fact that other faculty aren't encouraging them to go*." Both groups suggested scheduling reminders as a potential remedy for this barrier to participating in the sessions.

The third theme identified was that of "sentiment" or feelings. Fellows described feelings of conflict with other commitments and a sense of deprioritization by their (or other) divisions, with comments such as *"if (insert another division's name) isn't here, is it really required then?"* Fellows also expressed general fatigue as a barrier to attending any additional activities outside of their responsibilities for their divisions. PDs felt that the lack of fellow motivation, and generally taking the JFC for granted, often stood in the way of attendance, with one PD commenting, "*I think I should talk more about it, and I take it for granted*", since "*this is a strength of our fellowship and this institution*". The PDs also suggested that the lack of any penalty for poor attendance by an individual or a division was also a barrier, stating "*This is an educational experience, and you should get dinged if they don't show up*."

The next questions, focused on perceptions of fellows or PDs not present, that participants may be able to effectively represent. Overall, the fellows portrayed a rather negative perception of the JFC. They stated that some fellows felt it was a "*waste of time*" that takes away from clinical education, that it was talked about negatively in their sections, with comments such as: "*JFC was just talked down about."* or "'*JFC told on you, that you're answering your pager, so do it quietly!'",* and that it is done to "*check a box for the ACGME*". As one fellow put it, "*Uuhhh, not the JFC again*!". Fellows felt that this negative association with the JFC had a lot to do with prior perceptions that have

been cultivated over many years amongst fellows and divisions. However, the fellows commented that once they got to JFC, they felt that most sessions and topics were useful and effective and that some fellows were even surprised at the value of the sessions once they attended, with a fellow, for example, commenting, "A*nytime there's a session that's required there will be a certain amount of grumbling…but that doesn't mean that when they show up its not appreciated*." Additionally, the fellows really liked when members of their divisions were the guest speaker or moderator of sessions, stating "*seeing my division there inspires me!".*

The PDs had more mixed feelings when discussing their perceptions of the JFC, ranging from: negative and an "*obligation that's not useful*", to overall positive perceptions, with one PD, for example, commenting, "*I get good fellow feedback on content*". The PDs also appreciate that the content, however necessary, may not be received well by fellows, due to either dislike of the topic, bad personal timing, or just irritation with additional schedule requirements, with an PD, for example, commenting, "A*ll of us understand that these are important things, but on that day you just might be like, ugh.*" and "Y*ou're never gonna hit every person.*" PDs did also comment that while fellows may not "like" the additional requirements in their schedule, the JFC was still important, likening it to themselves attending required departmental meetings, stating: "*Maybe we need to emphasize that. Maybe our fellows need to see that when I'm not on service, I go to these things too*."

No further comments were elicited relating to the last question, "Any other comments about the JFC?", as all groups felt they had said everything they wanted to say in response to the other nine questions.

Discussion

Overall, very rich commentary was provided by both the fellows and the PDs regarding the joint fellowship curriculum. There were very similar comments in response to many of the questions asked of the groups. According to both groups, the importance of all fellows being in class together cannot be underestimated. At a busy teaching institution, there may be a big push toward asynchronous learning and online education, to improve learner efficiency and the balance of clinical service and education. Both groups, however, feel that the value of networking (or commiserating), and the robust in-class discussions and opinions offered during class sessions, cannot be replaced by removing the classroom experience and replacing it entirely with online learning.

Additionally, the opinions offered about teaching methods that are currently/should be utilized in an ideal situation were very similar between the groups. Learner-centered and interactive methods of teaching were favored by both groups. While PDs did offer many more suggestions on ideal instructional methods than fellows did, this may be because all of the PDs are educators and may have more experience with more diverse education methods than fellows have. Additionally, the knowledge that the PDs have about the ACGME core competencies, and the requirements for their fellows, may give them additional insight about more robust content and methods suggestions for the JFC.

Both groups also stressed the importance of making the content concise and pertinent to learners, to engage them fully. Both groups suggested reducing the duration of each JFC session and adding refreshments for participants at the sessions to improve the

environment. Discussing the potential for individual session time reduction with the JFC instructors is easily done and we may find that all instructors aren't utilizing or requiring the two hours that are being given to them. Additionally, we may find that a small refreshment stipend may increase fellow attendance and satisfaction enough to support its addition to the budget.

Another suggestion offered by both groups was the sending of automated reminders and calendar invites to fellows and PDs so that they are reminded of the timing of sessions just prior to session dates. This is an easy administrative task that in and of itself, may increase attendance of fellows and potentially PDs at JFC sessions. In addition to this intervention being easy to implement, measuring attendance pre- and post- the reminder launch will also be relatively simple.

Clearly, the fellows and PDs share a lot of common ground when it comes to their opinions and suggestions about the JFC; however, more interesting for this discussion may be the themes that were uniquely addressed by the fellow group. Previous JFC curricular revisions have only involved surveying the PDs about suggestions for curricular or logistics changes. If these focus groups had been conducted only utilizing PDs, the following information would not have been gathered.

Several fellows stated that the way the lecture room is set up sets the stage for the entire session. If we want them to interact, we should make the space mirror our expectations and not allow fellows to hide in the back and "stare out the window". All fellows should engage in the sessions and contribute and setting this expectation with the physical arrangement of the room is a good way to start.

Additionally, the fellows feel that the PDs and other division faculty must demonstrate that the JFC is a priority. This perspective may come in many forms but includes having fellows turn pagers/phones off during sessions so that their learning is not disrupted, and the fellows can get the most out of each session. In addition, prioritizing that fellows be released from their clinical duties in a timely fashion to attend sessions will go a long way to show that the JFC matters to their divisions. Also, fellows would like to see their division members teaching JFC sessions, to show the ultimate investment in fellow education by their respective divisions.

Finally, the fellows feel that steps such as online modules being integrated into the curriculum would show that feedback (albeit from their PDs) is taken seriously by the JFC leadership and they hope that the feedback provided in these focus groups is utilized in the same meaningful way.

Conclusions

In conclusion, from conducting focus groups with PDs and fellows about our Joint Fellowship Curriculum, a number of good ideas were generated. Some very meaningful suggestions about content, culture, and teaching methods have been brought up by both groups. Integration of these suggestions into the program will enable us to initiate meaningful changes in our curriculum.

While many of the suggestions offered were similar between the groups, many were unique to either the fellowship directors or the fellows. Analysis of comments on the worksheets and data collected suggests that the areas where the program directors had more comments to add versus the fellows, were those about ideal instructional methods. This follows logic, as most of the directors are educators and may have more knowledge about instructional methods and curriculum development as compared to fellows in training. The fellows, on the other hand, had more to suggest when it came to the logistics of the actual JFC sessions and the ideal content of the sessions. Logically, the fellows would have more input on what actually occurs at the JFC sessions than the PDs as the FDs rarely attend the sessions.

In past curricular revisions, the JFC leadership has only sought the input of fellowship directors to guide change. As shown by the data we have collected, future revisions of the program without the input of the fellows would be incomplete with respect to valuable suggestions. We learn not only from the areas where opinions from the fellows and PDs align, but also from where they differ. In the future, we may endeavor to seek out the opinions of hospital leadership to add to the robustness of the feedback. As we

have learned from this project, the input of one portion of stakeholders is not a good proxy for getting input from all involved parties.

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Appendix: JFC Focus Group Worksheet

This group is convening to get perspectives from all stakeholders in the Joint Fellowship Education. The purpose of the JFC is to provide education on common core topics for all pediatric fellows pursuing subspecialty training.

Please give us your initial thoughts in response to the following questions. The term "instructional method" is defined below and is used in the first 4 questions.

***Instructional Method: the way in which a teacher creates an instructional/learning environment. Can be teacher-centered (lecture, demonstration) or learner-centered (case-based learning, discussions).*

1. What do you think should be the most important learning outcomes for the JFC, e.g., knowledge, skills, attitudes?

2. What are the strengths of the current instructional methods used by the faculty in JFC sessions?

3. What are the weaknesses, (or areas for improvement) for the current instructional methods used by faculty in the JFC?

4. Describe some ideal instructional methods for the JFC sessions.

5. Having attended JFC sessions, would consider your time well spent? Please explain.

6. Overall, what are the strengths/benefits of the current JFC?

7. What are the most important things we could do to improve the JFC? (e.g. time allotted, time of day/week offered, content of JFC sessions, instructional methods, faculty teachers)

8. What are some barriers you or other fellows face in attending and participating in the JFC?

9. From what you see or hear, what are the perceptions of others, faculty and fellows who are not present at this focus group, about the JFC?

10. Any other comments about the JFC?

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