Supplement 1: Summer Match Interview Guides

This document includes the guides the interviewer used for all interviews in addition to a description of how the guides were created and their revisions. Note, as this was a think aloud methodology, some questions were clarified with participants meaning that perfect fidelity to the below was not achieved.

All indented questions were considered optional and were skipped if the interviewer felt that the material had already been covered or if the interview time was short. Finally, the interview guides additionally contained other questions that we predetermined to be for a second related project. These are not included below.

Creation of the Guides

The guides were generated by the first author with input from the entire research team. Our intent was to address our two aims: (1) explore stakeholder opinions on the feasibility, value, and consequences of an optional Summer Match, and (2) identify the ideal logistical parameters to operationalize this proposal. For the first aim, we generated questions designed to ascertain participant opinions on the Summer Match idea itself. For the second aim, we used the current structure of the residency application process as the conceptual framework for our questions and additionally always asked participants if they had any other thoughts about the Summer Match before closing the interview. We intentionally asked the logistical questions (for aim 2) first to force participants to think through any logistical challenges prior to answering any questions about value or feasibility.

We decided to include the extensive background explanation despite the possible risk of bias it created as we felt it was necessary for participants to fully understand the context before making informed responses to the interview questions.

The interviewer piloted the initial guide in practice interviews with the rest of the research team and made changes to the flow and structure based on their feedback. The interviewer made some changes in the first five interviews based on participant responses; these changes are below.

We created the learner version of the guide after the educator version but prior to our first learner interview (interview 7). This version removes questions that we deemed to be only relevant to educational administrators and adds questions about learner impressions of the current system.

Revision History

- Q0. (Initial impression) was added following interview three due to multiple participants feeling the need to give feedback at that stage prior to the individual logistical questions.
- Order of Q1-Q6 was changed following interview four due to confusions generated by the original order
- Q7 was altered and Q7.5 was officially added after interview five, the original Q7 read 'benefit or harm', but participants generally only answered either the benefit or harm categories, not both. In prior interviews, interviewer still asked for both individually if participant only answered for one.

General Overview Given to All Participants at Call Start

<u>Introduction</u>

"The interview will take about 30 minutes and will be recorded and transcribed, although your name and any identifying data will be removed during transcription, are ok with both of those things?"

<wait for reply>

"OK, thank you. I will start the recording now. If we get disconnected, please just wait and I will call you back. Trying to log back into Zoom is painful sometimes."

[Optional if not answered in email correspondence] "We would also like to request that you keep the contents of this interview and research secret until we publish the data."

<u>Overview</u>

"Could you please tell me what your position is at your institution?"

"I am going to start by spending a couple of minutes going over the project itself and fleshing out the information I emailed to you earlier.

"This project emerged in response to the increasing number of residency applications submitted by senior medical students over the past two decades. Specifically, ERAS data show an almost linear increase in the number of applications of about 2–4% per year over that time period. This is tightly associated with a dramatic increase in the amount of time and money spent by both applicants and programs.

"Published data show that applicants are spending about three times as much money (about $6,000 vs $2,400, adjusted for inflation) and a lot more time than they used to. Program data are difficult to obtain, but it is reasonable to assume that they are in a similar boat. Obviously, there is a lot of variation by specialty and applicant strength.

"Despite this increase, we know that the match rate for US seniors has remained fairly constant at around 95% since the 90s.

"Some possible solutions have already been proposed, but none have so far gained traction (and I'll cover some of those later in the interview). The solution we are proposing, which we are calling the Summer Match, is to implement a system similar to the early decision programs that already exist for colleges and medical schools. Specifically, we are proposing adding an additional match, administered through NRMP, that is optional (for both programs and applicants) and early—applicants and positions that are unmatched would roll over into the main Match.

"It is our belief that if applicants are limited in the number of applications they can submit, similar to other early decision programs, then the amount of work for participating programs will decrease substantially.

"So that's the Summer Match idea and the purpose of this interview today is to get your input on ideal parameters that would make this program valuable to you, as well as input on the feasibility and value of creating such a program to begin with.

"So, before I go over the interview technique, do you have any questions about the project itself?"

Methods

"The way this interview will work is that I will ask you specific questions, some with open-ended answers and some with close-ended answers, but regardless of the question, I am going to ask you to 'Think Aloud' as you answer the question. What that means is that I am going to ask you to explain your reasoning as you come to an answer and to essentially say everything that goes through your mind as you answer the question. The reason for this is that we will be doing a thematic analysis of people's answers later to look for common themes that participants are thinking about when answering questions. Does that make sense?"

Interview

OK, let's begin the interview itself. There are 15 questions, and in total they should take about 20 minutes to complete. So, we are aiming for an average of a little over one minute per question."

Guide for Educational Administrators

Q0. [Optional if not answered above]: "Before I ask the individual questions, could you spend a minute letting me know what your initial impression of the Summer Match idea is?"

Section 1: Match Parameters

"I am first going to ask about the parameters that we would like your help optimizing for a successful Summer Match. For these questions, please assume that the rules of the Summer Match would be similar to the existing Match."

Q1: "How many applications do you think each student should be allowed to submit in a Summer Match?"

Q2. "What percentage of program positions do you believe should be entered into a summer match, knowing that some may not be filled?"

    [Optional/Time] Q2.5: "How many candidates do you think should be interviewed per program position?"

Q3: "What do you think is the ideal time for the Summer Match to happen, i.e. for the match lists to be submitted?"

Q4: "Do you think away rotations should be completed, for programs that already use them, prior to any Summer Match?"

Q5: "How soon before the match lists are submitted do you think an MSPE (Dean's) letter, or a similar abbreviated letter, should be available?"

Q6: "Do you think that remote interviews for a summer match would be acceptable for non-local candidates?"

"These complete the specific variables we want your input on for the summer match implementation. Before I move on to other questions about the value of the summer match idea, are there any other variables or factors that you believe will be important for a successful Summer Match program?"

Section 2: Value and Implementation

"Thank you."

Q7: "Given everything you know about the Summer Match now, are there any particular groups of applicants or programs that you believe it would benefit?"

Q7.5: "Would any be disadvantaged?"

Q8: "Could you please rate the value that you believe the Summer Match idea could have, if implemented well, on a scale of 1–10, where 1 is no value/should not be tried and 10 is high potential value to both applicants and programs and you would potentially be interested in participating.

Q8.5: "Would you consider implementing a Summer Match at your program if it were implemented by NRMP?"

Closing

"That is everything I wanted to ask you. Is there anything else that you believe is important for us to consider before I end the interview?"

"Great, thank you so, so much for your time. We really appreciate it."

Guide for Learners

Q0. [Optional if not answered above]: "Before I ask the individual questions, could you spend a minute letting me know what your initial impression of the Summer Match idea is?"

Section 0: Student Perceptions

"Thank you, I am going to start the main questions now. The first questions are just about your own opinions of the current process."

QA. "Can you tell me how many applications you think an average applicant should submit to be reasonably sure of success in the match?"

QA.1 "How many applications are you planning on submitting?

QA.2 "How many applications did you decide to submit?"

QB. "How fair do you think the current process is?"

[Optional/Time] QC. "How do you feel about the way that interview spots are assigned in the current process?"

[Optional/Time] QD. "How much stress do you/did you feel about the application process?"

Section 1: Match Parameters

"Thank you. I am now going to start the Summer Match questions. I am first going to ask about the parameters that we would like your help optimizing for a successful Summer Match. For these questions, please assume that the rules of the Summer Match would be similar to the existing Match."

Q1: "How many applications do you think each student should be allowed to submit in a Summer Match?"

Q2. "What percentage of program positions do you believe should be entered into a summer match, knowing that some may not be filled?"

Q3: "What do you think is the ideal time for the Summer Match to happen, i.e. for the match lists to be submitted?"

Q4: "Do you think away rotations should be completed, for programs that already use them, prior to any Summer Match?"

Q5 Skipped

Q6: "Do you think that remote interviews for a summer match would be acceptable for non-local candidates?"
"These complete the specific variables we want your input on for the summer match implementation. Before I move on to other questions about the value of the summer match idea, are there any other variables or factors that you believe will be important for a successful Summer Match program?"

Section 2: Value and Implementation
"Thank you."

Q7: "Given everything you know about the Summer Match now, are there any particular groups of applicants or programs that you believe it would benefit?"

Q7.5: "Would any be disadvantaged?"

Q8: "Could you please rate the value that you believe the Summer Match idea could have, if implemented well, on a scale of 1–10, where 1 is no value/should not be tried and 10 is high

potential value to both applicants and programs and you would potentially be interested in participating.

> Q8.5: "Would you [have] consider applying in a Summer Match if one was available to you?"

Closing

"That is everything I wanted to ask you. Is there anything else that you believe is important for us to consider before I end the interview?"

"Great, thank you so, so much for your time. We really appreciate it."