# CMEology

## HAE – Hereditary Angioedema

## Interview with “04”

# June 3, 2024

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**CMEology**

## Interview with 04 – Hereditary Angioedema

[START 04 6.14.24.M4A]

[IRRELEVANT MATERIAL OMITTED]

QUESTION: First question is: what is your personal experience evaluating the HAE literature in terms of its implications for clinical practice?

04: Does that include guidelines and stuff, or actual literature like search on PubMed type?

QUESTION: Yes, I mean whatever it is that you find in your practice, when you find yourself going to the literature, what are you looking for, what kind of questions are you often asking about HAE?

04: Right. Definitely more before [phonetic] kind of things, but like sometimes we'll refer to the different diagnostic kind of criteria; the different hormone levels, the protein levels [phonetic], C1 esterase levels; what's increased, what's decreased, what's normal; and the different types sometimes to refresh, I may refer back to those. And then, more so though for what kinds of treatments are out there, and there's always something new, but mainly on-demand treatments or for prophylactic therapies that we've been starting to use over the past couple years. So kind of looking for data on how effective those are, side effect profiles, things like that.

QUESTION: Is there a particular way that you look for the literature? Everyone is a little different in terms of what they use in their practice.

04: Yes. [Unintelligible] it's been a while since I've actually gone down and done an actual literature search on like PubMed or something like that. To be more efficient, I'll use UpToDate which is [unintelligible] more of a combined literature review from experts and stuff; so I do tend to go there most often. Or I will go to the package inserts, so PIs for the specific drugs to read up on those; websites for those as well. So that's kind of more of what I will go to.

**Commented [1]:** Codes (1563-1710)
Literature review

**Commented [2]:** Codes (1710-1814)
Literature review
Expert opinion/Up To Date/Google/Medscape

**Commented [3]:** Codes (1814-2012)
Literature review

QUESTION: And clearly, when you're in clinical practice, you want answers quickly.

04: Yes. Sort of, yes.

QUESTION: I'm a medical writer and former physician.

04: Oh.

QUESTION: And I do PubMed searches a lot; that's part of the arsenal [phonetic] of what I do. And it is just incredibly painful sometimes. I mean, I don't know, maybe I just never, I probably—

04: I agree with you: I think it was painful. I mean, we did it so much in training that I'm kind of like over it. It was really different [phonetic].

(Overlapping Voices)

QUESTION: Kind of different, yes.

(Overlapping Voices)

QUESTION: And it is nice I think to go into UpToDate and then have somebody make a statement, and then you find the reference and you're like, aha—

04: Yes, that was better [phonetic].

QUESTION: —that's what I need to read, right? Someone else can (Overlap).

04: Exactly, I'll do that and then I'll click on that paper and go, [phonetic] all right.

QUESTION: Yes, then I'll be, yes, it makes it a lot easier for sure.

04: Right [phonetic].

QUESTION: Next question is: when considering the implications of HAE research on clinical care, is there any particular format of research results that's more influential for you? So I'll give you some examples of formats: abstracts; posters; live conference presentations; academic detailing; UpToDate, something similar; or journal publications.

04: Definitely UpToDate. I like the journal publications. Sometimes like a live kind of [phonetic] recording, but that's not too common.

QUESTION: So a live presentation like online?

**Commented [4]:** Codes (3574-3656)
Pharma rep detailing/MLs

04: Sometimes the drug reps and stuff [unintelligible] speaker kind of stuff more so.

QUESTION: Just curious, do you have a chance to get to national meetings?

04: It's been a while.

QUESTION: It's been a while?

04: It's definitely on the list [phonetic], and every time I think about doing it, something comes up and I have a toddler. So you know, it's been a while, but back in training, we always went to the College and the Academy meetings. It has been a while, but I did have some colleagues go and then they would kind of give us like [unintelligible] air and food allergy and a lot of that kind of stuff, so they would provide feedback on like interesting things that they learned. But I didn't get to go.

**Commented [5]:** Codes (4016-4112)
Professional Conferences

QUESTION: So these are colleagues from your practice who went?

**Commented [6]:** Codes (4358-4607)
Professional Conferences

04: Mixed, so some from the practice, and then just other allergist-immunologists that I'm friends with or that I know in different states and things (Overlap) so then, some of them sent me some interesting articles to review, just keep each other up-to-date.

QUESTION: That was great that they were able to share some of those things with you.

04: Yes.

QUESTION: And I certainly do relate fully to having small children. Mine a[redacted]

04: One day, right?

QUESTION: And it is true: it makes it a lot easier to be able to travel, and even if it's just getting away for a three-day meeting or whatever, right?

04: Yes.

QUESTION: It's complicated when you have little, tiny people in your home, for sure [phonetic].

04: Yes, it's a lot of stuff, yes, [unintelligible].

QUESTION: Yes. What factors are most important to you in interpreting the HAE literature and applying it to clinical care? In other words, are there particular interactions with your colleagues that make it important when you're thinking about the literature, or having particular skills or knowledge when you're going in to look at a paper?

**Commented [7]:** Codes (5538-5845)
Credibility of research

04: I mean, sometimes a conversation with peers and colleagues and things like that, a question might come up or an interesting case where we're like, hmm, I'm not quite sure, then that might prompt me to go into the literature and check some things and look up things for ourselves to better find the answers. That's definitely one route. And then, skills, like what exactly do you mean by skills [phonetic]?

QUESTION: Sometimes people come in to look at literature and they feel like, gosh, I just don't have a good handle on clinical trial design; or I really don't understand enough about statistics or something like that.

(Overlapping Voices)

QUESTION: If those get to be factors with HAE in particular.

04: I mean, I definitely feel that way, too, that sometimes it's like, I don't know if I'm interpreting this correctly or it's a little complicated; yes, I feel like that. I don't know if I have any special skills that help me get through those more than anyone else, but sometimes, it is a little difficult to interpret it; and sometimes, maybe I don't want to go through this daunting paper to find my answer, and that's why I may go to UpToDate or somewhere else where it's like a sentence, right, or a couple sentences to summarize papers and things like that. So I think it's definitely something that influences me.

**Commented [8]:** Codes (6315-6319)
Improve skills

**Commented [9]:** Codes (6319-6393)
Methodology rigor and study design
Improve skills

QUESTION: Sure. Yes, completely understandable, especially you just don't have infinite amounts of time.

(Overlapping Voices)

04: Yes, exactly.

QUESTION: Right? To spend [phonetic] on trying to nail down all of the details, et cetera.

04: Right.

QUESTION: Can you describe any barriers to incorporating research findings in HAE into clinical practice that you have experienced? So some of the barriers that come up for people when they're thinking about translating research findings into practice, some of those are patient-related; some are health care provider-related issues; practice-related barriers; institutional barriers. Just curious about your experience.

04: You mean to take something I've learned from the literature to translate to patient care [phonetic]?

QUESTION: Yes. What do you think makes it hard to kind of take what is considered to be best practice or current evidence and actually implement that in clinical care?

04: I'm trying to think. I mean, sometimes something like the tests we don't have access to; like for type III HAE, I don't really have access to some of those tests that they do. So sometimes, I refer patients out to a bigger institution and academic health center. But I will say in terms of medications, I do feel because I'm in a large practice, like urban environment, we do have a lot of the reps come in, they give us samples, they really walk us through if we want to apply for one of the medications for our patients, like get it approved. So it's not as much of a barrier at our practice; I think it's a perk. But I could see how at other places, if you're in a small or rural area, that would be very difficult to get. I'm trying to think of other things, but I think for the most part, I'm able to do a lot of what the guidelines or the best practice recommendations are, just from where I practice.

QUESTION: Any patient-related issues that you've come up against in that regard?

04: I mean, I don't know it's [phonetic] with any condition, but I've had patients that just aren't very compliant with visits; it's hard to get them to come in to kind of see what's going on. And then, because they're not coming in for a visit, then insurance won't pay for the next set of medications and things like that. But other than that, I don't really have too many patient issues, I don't think.

QUESTION: How about when it comes to insurance approval? You mentioned that sometimes the reps can give you some information about how to make that go a little more smoothly?

04: Yes. So they're very good about like if we need a sample to start someone quickly, we can start them, but then, they have these application forms that they will send to us, and then we send them, fax them back in; and they kind of stay very on top of the process and they'll let us know, okay, yes, this is being reviewed, this is pending, or okay, we need these chart notes actually or these lab results, if we can send them. So they really filter that process to ensure it's efficient, it's fast, as fast as it can be, yes, to get the patients their medications. And then, even depending if it is an injectable medication, which a lot of them are, they have special nurses that they will send out to help teach them how to inject. So they really do streamline and make the process as easy as it can be, so I really appreciate their help.

QUESTION: Yes. I didn't realize that they would actually have a nurse come out and—

04: Yes.

(Overlapping Voices)

QUESTION: —that's pretty cool. I mean, you're in a big allergy practice?

04: Yes.

QUESTION: So you probably have like a whole part of your practice that's devoted to allergy shots?

04: Yes.

QUESTION: So you guys aren't strangers to injecting people with things, but it's great that you've got somebody who could take the—

04: Some of, like Takhzyro, it's a little bit more to it than just injecting it; you have to leave it there for a few minutes and things like that. So I could see how patients can maybe mess that up. So it's not as easy as like a quick shot, done; some of them, it does require a little bit more. So it is nice to just, because again, we're so busy, you know, like sit down and go over [phonetic] every single thing, so it's nice that

**Commented [10]:** Codes (7831-7986)
Testing

**Commented [11]:** Codes (8180-8233)
Pharma rep detailing/MLs
Avail of samples

**Commented [12]:** Codes (8233-8234)
Pharma rep detailing/MLs
Avail of samples

**Commented [13]:** Codes (8234-8355)
Pharma rep detailing/MLs

**Commented [14]:** Codes (8860-9205)
No show/adherence

**Commented [15]:** Codes (9602-9724)
Insurance/Prior authorization

**Commented [16]:** Codes (9872-9949)
QUOTE

that option is available. (Overlap) the comfort of their own home, too, where they're going to end up doing it anyway.

QUESTION: Yes, yes, and technique is really important. It doesn't make sense to use a medication, I mean, the same thing goes for obviously monoclonals for asthma or anything else, it doesn't make sense to use these expensive medications if you're not confident and understand exactly how to do it.

04: Yes. Even with the biologics, like the asthma biologics and all those, we'll do the teaching in-office, but people that just, you know, they don't hold it there long enough, they rip it out, it's like they messed it up, and these are expensive medications. So you want to make sure that they're not messing it up all the time or wasting it, right, like [unintelligible] so it is a big part of teaching [unintelligible] you have to have that time. So even I am not really the one teaching; I have nurses, I have PAs that are really doing that part for me, too, which is great. But it's just nice that they offer it just totally separately [unintelligible].

QUESTION: Yes, didn't realize that, okay. What do you think delays the introduction of evidence-based practices into actual clinical care?

04: Well, again, personally, I don't think we're delaying; I think we try to do it pretty quickly. But again, I could see if it's maybe like a smaller practice or not in a very urban setting, maybe it's just difficult. Maybe it's difficult to obtain the lab test to even diagnose the patients first off; maybe they don't offer the test; maybe they're send-outs and that takes a lot of time to result; or just again not having resources or access to people that can help get them on medications; I can see all of these being barriers to not being able to practice the way the guidelines kind of tell us to. But I just feel fortunate that, I feel like I'm able to do it pretty well where I am at.

**Commented [17]:** Codes (12422-12808)
Testing delays

QUESTION: Roughly how many people do you think you might have in your practice at this point who have HAE or some form of it?

04: Probably [redacted]

QUESTION: Eight, okay. Well, that's a pretty good number, actually.

04: Well, I've [redacted] at, I'd say.

QUESTION: Okay, so about eight patients over the course of about seven years or so.

04: Yes.

QUESTION: It is a rare disease, so it's not allergies, it's not asthma.

04: Yes.

QUESTION: Which, of course, you see tons of.

04: Right. [Unintelligible].

QUESTION: Okay. What's been your experience identifying patients with HAE who would benefit from long-term prophylaxis?

04: So I probably, you know, everyone is different, so it's always a conversation. But usually if the patient is having more like moderate to severe attacks, so you know they're having, and it's just my own numbers, right, I'm not looking at anything specific, but if they're having attacks like monthly or even every other month, I think that's pretty frequent.

If they're having also the severity of their attacks, so if they're having pharyngeal edema and they're having to go to the hospital, if they've been intubated, those are very severe forms, or just very large areas that just swell up, they're painful, like they're not able to go to work or school potentially, I mean, these are all the moderate to severe category. So then, I am definitely bringing up prophylaxis and encouraging it, recommending it to these patients to improve their quality of life. If it's kind of a milder thing like maybe once or twice a year, they're getting an attack, I might start with an on-demand type of therapy and see how it goes.

QUESTION: So you're looking at frequency and severity with patients.

04: And quality of life, which—

(Overlapping Voices)

QUESTION: And quality of life, sure, of course.

04: Yes.

QUESTION: Any things that have helped you to identify patients who might benefit from long-term prophylaxis?

04: Who would benefit from long-term prophylaxis?

QUESTION: Any trouble trying to figure out who might benefit?

04: Yes, I mean, I think those cases where in my mind they seem kind of in-between mild to moderate. They're getting attacks maybe like 3-4 times a year, so it's just kind of hard to say, and maybe it's not bothering them that much, it kind of just happens, I don't know, it's like tough; it's like, should we just put you on a prophylaxis so you don't have to deal with this at all? You don't have to miss work; you don't have to deal with that. Again, it comes down to like what they're looking for, their risk-benefit to take it, but those are kind of, sometimes you wonder which way should you go with them.

QUESTION: Any particular pushback as far as patients go regarding going on long-term?

04: Yes. Some patients just really don't like medications; they don't want to be taking something so frequently even if it is preventative. Some people, they just prefer like, you know what, if I get an attack, I'll just treat it. So yes, you're going to see like a variety of patients with that. And then, the route maybe: one of the ones I like a lot is Takhzyro, I think it works great but it's also a needle that you [unintelligible] frequently; some people may not like that. So yes, it kind of depends.

QUESTION: All right, moving on here: how do you gather and assess information about the impact of HAE on work, school, family life, social life?

04: I think it definitely affects them on their quality of life. I think when they get attacks, obviously, they don't even want to go out in public, they barely won't even come into the office to show me, they're

**Commented [18]:** Codes (13861-14577)
Severity/frequency of attack

**Commented [19]:** Codes (15912-16134)
Few episodes/pref episodic tx

embarrassed. To be honest, they may not be socializing as much because of that, obviously. So it definitely, definitely plays a big role especially when they're uncontrolled.

QUESTION: Are you aware that there are validated tools, questionnaires for assessing health-related quality of life in HAE?

04: I talked about this recently with someone, but no, I've never used them personally. But I was thinking like, okay, I need to start incorporating these.

QUESTION: Yes, and I mean, it can be a challenge, too, right, because, I'm a former pulmonary critical care person, but I did a lot of asthma.

04: Yes.

QUESTION: So it's challenging, I think, people think, well, if you have all these instruments, right, that somehow it will make your practice easier, but there is sort of a limit, too, to how much your practice can use. So you have to be sort of selective about what might use.

04: Right, that's good though [phonetic], right?

QUESTION: Yes, there are apparently questionnaires that you can look at, and there has been an increasing amount of emphasis on quality of life as regards prophylactic therapy. But it is sort of a little bit of a hurdle to get over some of that and incorporate those into practice. Do you guys use other instruments or questionnaires in practice?

04: For HAE?

QUESTION: No, not necessarily, but for other conditions?

04: Yes, we do actually; we use them quite a bit. That's why I was like, oh, you know what, I should really do it for HAE. I think the problem with HAE is that since it's such few patients, we kind of forget about it: every time I see them, I'm like, oh man, I forgot to incorporate that, versus like obviously asthma, allergic rhinitis, and even chronic hives [phonetic] patients, we see them every single day, multiple times a day, so it's already in our templates, actually, in our EHR. So the ACT questionnaire is already there so that I'm able to just go through it. For allergic rhinitis, there is an allergic rhinitis questionnaire. There is also for CSU or chronic spontaneous or chronic idiopathic urticaria, we have a questionnaire. So it's easier to do because it's already in that template.

So we do end up doing them. I mean, again, and you know when it's a really busy practice, sometimes I just glance at the score really quick, or sometimes I won't even look at it until after I'm doing my notes; I'm like, oh man, I should ask about this. So it's like, yes, what is the utility, you know what I mean? [Unintelligible] this sometimes, I don't know.

QUESTION: Yes. It definitely represents a change in practice, that's for sure.

04: Yes.

QUESTION: How do you engage patients in treatment decisions, especially around long-term prophylaxis for HAE? Any challenges that you have found in engaging people in treatment decisions? Anything that you've found that makes it easier to engage patients in that?

**Commented [20]:** Codes (17075-17158)
HRQOL self assessment instruments

**Commented [21]:** Codes (19644-19964)
Patient anxiety/concerns

04: I think when it's like a new diagnosis, it's tough. I think people really want, especially if it's an on-demand treatment, they think they can just take a quick pill, right, because they've been using antihistamines like Zyrtec or something, so they think like, okay, I'll just take a quick pill to prevent the attack. But often, on-demands are like injectables, and so, there is hesitancy with that; they're not too excited to necessarily do that. And then again, most of the other prophylactic ones are also a lot of injectable; I know we have the oral now. But yes, there is some pushback I think just initially with the initial diagnosis because it's a lot of like they're shocked, they're surprised, and I'm telling them, okay, just use this needle whenever you get an attack as soon as you can. So it's not the best feeling.

QUESTION: Okay.

04: Other things are like, okay, do I have to always carry this around? Is it temperature-stable? Does it have to be refrigerated, does it have to be this? Can I fly with it? I travel a lot. There's a lot of questions and hesitancy I think with that.

QUESTION: Just the kind of practical aspects of being able to use it—

04: Yes, (Overlap).

QUESTION: —yes. Okay. Do you have any particular strategies that you use with people who are, as you said, they might be in sort of that shock and dismay, or you said shock and surprise, I think is what you said, sort of in that state and it can be difficult for them to make a decision or engage fully in decision-making with you, anything that you find that's helpful to overcome that?

04: I'm trying to think. Just trying to explain more about their disease, what exactly is happening, why does it happen, and the only way to treat unfortunately is to block this part of the pathway or whatever the mechanism is, and try to just really get them to understand the mechanism of their disease process. But yes, I don't have any really great [unintelligible] talking to them and making them feel a little bit more at ease or confident in knowing about their disease, then they feel confident in using maybe some of the therapies.

QUESTION: So knowledge and confidence—

04: Yes.

QUESTION: —are two critical things. And that may take a while with people, too.

04: Yes, it definitely takes a couple follow-up visits that we need to think about it. I also give them pamphlets if I have them about [phonetic] kind of medications; sometimes the drug reps will leave materials behind. So I'll send them with this: I'll be like, you know what? And I do it with all the biologics, actually, and I'll say, read about it, think about it, let's follow-up; any questions you have, let's go over it. I want you to feel confident in starting this therapy as well.

QUESTION: How do you choose medicines for long-term prevention or reduction of HAE attacks? What are the priorities or things that you are thinking about when you're looking at the treatment options?

04: Sorry, I missed that: when I'm looking at treatment options, what are the—

QUESTION: For prophylaxis for HAE, what are the factors that you're considering?

04: Based on what I'm going to pick?

QUESTION: Yes, or say you have a particular patient, and clearly, there are now options for prophylaxis, so what are the things that you're keyed into when you're thinking about, you know what, I think this is the first thing that I would recommend?

04: It's kind of hard because I don't usually say it necessarily like that. I think lately, I've been recommending the newer options just because they're easier, they're very effective, easier routes of administration, things like that. So I tend to really recommend Takhzyro and the Orladeyo, but they're very different: one's an injection and one's a pill you take every day. So depending on that, I kind of sense like what are they more into? But personally, from my experience, the patients I put on Takhzyro, it's much more effective, so that is my preferred. And I think personally for patients, if they don't mind the needles, I think it's just easier for them to stay compliant if it's not something they have to take every day. But not everyone feels that way, so it's really a discussion with those two primarily.

QUESTION: Okay. Moving on: did you participate in a CME activity on HAE?

04: Yes.

QUESTION: You did, okay. And how did participating in that activity influence the way that you think about translating evidence into clinical care when it comes to HAE?

04: I'm trying to think back to what exactly we [phonetic] went over in it. But I think maybe something that stood out that I don't again really ask about and that is probably like the quality of life issues, asking specifically like, okay, how many days of work do you miss, how many school days do you miss because sometimes surprisingly, I assume none because we're not talking about it, but then you ask them and they're like, oh yes, I had to call out like two or three times. But they're not telling us; it's just what they are doing.

But I think that's important to kind of gain more on quality of life; and then asking same like social events-wise, like have you had to miss out on something, or are there triggers for you that you have to kind of avoid, and then it's affecting you in your daily life and things like that. So I don't feel I've been asking that stuff as much. And again, I was thinking about, well, if there is a questionnaire [unintelligible] using it.

(Overlapping Voices)

QUESTION: Yes, okay. So it sounds like it's quality of life and the need to ask maybe more detailed questions for people.

04: Right, because it could even maybe change our therapies, right, like if someone is more affected by this than I thought, then maybe I will suggest prophylaxis or something like that. So just how that could change our treatment management process [phonetic].

QUESTION: Yes, it can be difficult, I think. Patients have their own concepts about how an illness affects them.

04: Yes.

QUESTION: And some of them, I mean, we've all seen this in asthma and allergy certainly, but where they get kind of used to it?

**Commented [22]:** Codes (23104-23265)
Promoters of translation/ prophylaxis

**Commented [23]:** Codes (24284-24363)
QUOTE

**Commented [24]:** Codes (24363-24585)
CME
QUOTE

04: Yes.

(Overlapping Voices)

QUESTION: I can never go upstairs; I'm always short of breath.

04: Yes, right.

QUESTION: And then, that's normal—

04: Yes.

QUESTION: —and unless you kind of drill down into specifics, you might not get some of that information that, like you said, can make you think differently about their therapy.

04: It's so true, and I think because you and I, we see, or you treated before, but we see and treat so much asthma that we're kind of on to like the little things like that. So it's so easy while we're talking to them to just like throw it in there: so how is it when you walk upstairs; how is it like this, how is that; how's the nighttime [unintelligible]? It's just you rattle it off because we've seen so many people, we've talked to so many people, you kind of know what to ask every day. With HAE, we're not seeing them; I'll see them maybe like a couple times a year, if that. So I don't think I'm as in tune to these little nuances and little kind of things that may be affecting them the way I know inside-out with asthma, I feel like, you know?

QUESTION: Yes. Yes, it's not a part of your daily routine, right?

04: Right. I have to like look at and read everything again when I see this patient. I'm like, oh man—

(Overlapping Voices)

04: —I don't know them as well as the other patients [phonetic].

QUESTION: Of course, yes. So you mentioned clinical guidelines, and clinical guidelines can be one way that research gets translated into clinical practice. What effect might the HAE clinical guidelines have on your practice?

**Commented [25]:** Codes (27309-27680)
Guidelines

04: Just like help us [phonetic] maybe decide when to use prophylaxis, which ones to use, and same with on-demand treatments, like help me with deciding the treatment regimen, I think it's helpful. And then, maybe the monitoring like how many breakthroughs they're having despite being on these treatments, or when to adjust maybe, but probably focus on the treatment stuff.

QUESTION: All right. We're wrapping up here: is there anything else that comes to mind while we're talking that you think it would be good for me to know about HAE or your practice or anything else that you think is important (Overlap)?

04: I was just thinking about how we were just talking about with asthma, how we know so much; I think part of it is there are so many more studies for asthma, obviously. But I remember when I was training, or I don't even know when the study came out, but I remember there was a study saying like how poor perceivers asthmatics are on their dy04nea, that they don't even realize that the level of dyspnea and they're feeling shortness of breath, that that's abnormal. Like you're saying, they just live with it and they think like, okay, this is just how people breathe; they're just poor perceivers of that. So because of that

study and reading about it and realizing that, then I would start to ask more detailed questions to my asthmatics.

So I feel like if there were more research for HAE patients, like pointing out little things like that specific to them, then maybe we would realize like, oh wow, we really need to ask about this, or we didn't realize this. I just don't see as much literature or publications for HAE, which makes sense because it's less common, but that could be helpful.

QUESTION: So it sounds like you would almost like to have a little bit more information about quality of life, impact on people.

04: Yes.

QUESTION: Clearly, it's a really evolving area therapeutically, right?

04: Yes.

QUESTION: There are new treatments; there is new stuff in the pipeline. And it seems like when we're in a cycle like that, a lot of the attention and literature and information gets focused on the treatments, the mechanisms, and that's not inappropriate, right? We want to know—

04: No, totally.

QUESTION: —we need to know all that. We need to know the clinical studies.

04: Right.

QUESTION: But yes, I mean, sometimes the patient experience of things may not get that much attention, and then, how to integrate, what I hear you saying a little bit is sort of like, well, how do I integrate what my patients are telling me, or not telling me, how do I dovetail that with my clinical decisions?

04: Yes, exactly.

QUESTION: Yes.

04: (Overlap) but yes, that's (Overlap).

QUESTION: Yes, I mean, that's kind of the art of medicine, but it's a really important part of making sure that people get the treatment that will make them healthier or feel better.

04: Totally.

QUESTION: Anyway, that's all that I have as far as questions today. Thank you again for taking your time; I know you are enormously busy.

[IRRELEVANT MATERIAL OMITTED]

04: Thank you. I have a quick question actually.

QUESTION: Sure.

04: If your background is pulmonary, how did you get involved with HAE?

QUESTION: So I was in [redacted]. So anyway, long story short, I ended up becoming a [redacted] is clearly not my—

04: Wow.

(Overlapping Voices)

QUESTION: And then, I trained at [redacted]

04: Oh, gosh, yes.

(Overlapping Voices)

QUESTION: Anyway, you can't walk down the hall without running into somebody who is an allergist.

04: Yes.

QUESTION: So I got a lot of my kind of exposure to allergy issues and things that way; same thing with immunology, rheumatology. But that [unintelligible] we tend to end up writing about a lot of different things, so when HAE came up, it was like, yes, yes, I can do that; I can (Overlap). And it's a really interesting disease, so I've enjoyed the opportunity to learn about it.

[IRRELEVANT MATERIAL OMITTED]

QUESTION: Let us know if you have any questions.

04: I will, thank you.

[IRRELEVANT MATERIAL OMITTED]

[END 04 6.14.24.M4A]