

Consensus Coding

After interviews, our team completed five rounds of consensus coding with the transcribed interviews to reach an ultimate consensus of 85%. The resulting codebook contained a total of 89 codes. The descriptions of each code, alongside an example quote, are depicted in the chart below. Codes were then used to guide insight derivations for “How Can We” statements and goal setting. This ensures the prototypes are derived from stakeholders insights directly.

The codebook is outlined via the format below. Please feel free to read our insight derivation section or contact us directly if you have any questions on the specifics of the codebook.

Code	Description	Quote	# of Times Mentioned
CHOICE_I_TP	The participant feels a distant teaming relationship with their trusted provider, as though they are very separated in aspects of their care and may not have shared values or feel connected.	I think one, maybe two if you get lucky -CG_8	1

HOLISTIC UNDERSTANDING

These codes highlight the general environment both currently and in an aspirational manner of both medical care and education. They cover a wide net of topics from clinical exposure and medical bias that contribute to variant care.

Code	Description	Quote	#
ASD_CLINICAL_EXPOSURE	Participant, who is not in a related specialty or is in medical student training, has had an experience working with an ASD patient in a clinical setting	Yeah, I fortunately have had quite a few experiences at Rady's actually with patients with autism. - MP_4 (Emergency Med Specialty)	10
ASD_SPECTRUM	Participant states the existence of the ASD spectrum and its variability.	"I feel like it would be really helpful to learn about all across the spectrum because I realize that there's different, like I guess like some people are able to like function pretty much, you barely even notice or like you don't even notice at all that they have autism." - MS_10	37
BIAS_INFLUENCE	Participant acknowledges the influence of bias and/or stigma around ASD affecting the interaction with ASD people.	Let the patient or whoever's with the patient describe why they're coming in and what their concerns are and what they might think it is. One where like all the options would be laid out. And there wouldn't be a worry of any like preconceived notions so like the patient might not want one option or might not want an option for a certain reason. - MS_6	15
CAREGIVER_INCLUSION	Describes examples of when caregivers are included in the decision-making and accommodation process, or expresses the need to include caregivers in the process.	"It's the family I think of us mostly as a singular team. And I think there are definitely times when I come to what the family needs and the family comes to what I need or what I'm recommending and everyone needs something different." - MP_5	35
CAREGIVER_POSITIVE_EFFECT	Caregiver expresses positive effects in any manner due to being a partner/witness to their loved one's care or lived experience	"I think because I've experienced that bullying, if you wanna call it bullying, it has made me a better advocate for [omitted]." - CG_3	1
CAREGIVER_SECOND_EFFECT	Caregiver expresses mental or physical strain due to being a partner/witness to their loved one's care or lived experience	"But it was, you know. It wasn't, I don't say it was hard. It was just a lot of things to do." - CG_5	35
COMFORT_MECHANISM	Participant describes strategies used to help patient/loved one with ASD feel comfortable in a clinical or social setting. Strategies are completed by caregiver or patient.	"And I think those are the kind of instances where knowing what is appropriate for the child is more helpful ahead of time. But definitely a lot of kids, a lot of parents have had just very poor experiences. Even as simple as their general pediatrician office in getting vitals. Kind of asking ahead of time like how does your child do with vitals?" - MP_5	25

HOLISTIC UNDERSTANDING CONT.

Code	Description	Quote	#
COMMUNITY_ ADVOCATE	Details the use of individuals with Autism being present to advocate for patients with Autism and their families.	“It'd be cool like if somebody with autism could come in and talk to the kids from their perspective.” - CG_6	4
COMMUNITY_ SUPPORT	The caregiver expressed comfort in receiving support from family or community members that have experience with Autism.	“Having her be able to go to her cousin and talk about things like, "Oh, sometimes I get a little sad sometimes when my brother gets a lot of attention," and they're like, "I know," this and that, and they kind of talk to each other, and I found that's a really good form of therapy for both of them. I realize not everyone has that type of system built-in.” - CG_2	6
DEVELOPMENTAL_ EXPERTISE	Participant describes depending on or benefiting from the expertise of a developmental specialist to learn about their care or care of others with Autism.	“But I did choose my pediatrician based kind of on who I thought could help take care of him.” - CG_6	12
DIAGNOSIS_ BENEFIT	Participant describes a benefit to having a diagnosis due to improved socioemotional state, insurance, resource access, etc.	“And so once that was kind of an official diagnosis, then we were able to get her into different therapies” - CG_5	15
DIAGNOSIS_ DIFFICULTY	Details the barriers or difficulties when receiving a diagnosis.	They offer really when they're really young and they can support you with evaluations but a lot of it is done, let's say, through evaluation like clinic like Rady's, and there's a long wait sometimes so people get frustrated because sometimes they have to wait months to take their child to be evaluated and get a diagnosis. And that's a big component of it too when you're just getting started. You don't know what you're doing, you don't know what you're looking for. - CG_9	15

HOLISTIC UNDERSTANDING CONT.

Code	Description	Quote	#
DISCONTENT_AC	Participants cites disappointment/discontent in any content of the academic curriculum or its implementation in medical school.	"And I had been like out loud saying, "how come we don't start this in medical school? Maybe we just start talking about this in high school" and then comes your project and I'm like, hey, that's what I was saying and what somebody's doing it." - MP_2	5
DISINVESTMENT	Participant describes that there is a disinvestment in ASD patient training and treatment.	"So I think from a business perspective, to invest in training for every single staff on something they feel wasn't as common, maybe wasn't something they wanted to do." - MS_1	2
EDUCATION_LACK_HOLISTIC	The interviewee expressed a lack of education on ASD communication and holistic care in medical curriculum.	"We learn about a topic and we learn about an issue, but we're never like how should we act one to fix the issue, but also to work with patients that have this issue. I think understanding how to act and be proactive can be really important. And I feel like sometimes we don't get past like a news article on something." - MS_7	4I
EDUCATION_LACK_TX	The interviewee expressed a lack of education on ASD diagnostics/etiology/tx in general medical curriculum.	"I'm in a professional setting I need to care for this person, how do I most effectively communicate with them and their Guardian or their parents or whoever with. And so having that kind of introduction being like, okay, like this is how the kids usually present. It's, you know, not always the same picture, but just keep in mind, like this is how they can be." - MS_12	II
EMPATHIZE	Participant expresses a desire to understand the experience of a person with ASD.	"I wish that there were more resources available to people with ASD overall, such that it was easier for them to communicate with medical providers and/or get their needs met and/or have their needs met outside of medicine as well, just with more societal support... If that's a possibility for them, something that they want." - MS_9	9

HOLISTIC UNDERSTANDING CONT.

Code	Description	Quote	#
FINANCE	Describes the financial burden of seeking healthcare for ASD patients.	"They let us know that they weren't able to bill our insurance because it was billed under mental health benefits. And it's an \$1,800 assessment. And in order for us to even make the appointment, we needed to pay prepay for the developmental evaluation. And I remember getting off that phone call crying, saying, we can't afford \$1,800 to pay up front." - CG_8	5
INSTRUCTOR_CONFIDENCE	Participant expresses a preference for an instructor who is confident in their abilities and knowledge (to aid in their learning).	"I think the biggest thing too is having the instructor be confident - confident but humble, which is a hard thing to expect of maybe everyone or like, it's a hard thing to control for, but I think that can be, that can really impact how students receive the information and then how willing they are to kind of adhere to it or like consider it." - MS_6	4
INTERDISCIPLINARY_TRAINING	Participant has experience learning about behavioral or general clinical topics with a team of multidisciplinary professionals (i.e. including PT, OT, behavioral therapists)	"So even if it's interdisciplinary and more talk between the specialties and more support... But if there was care coordination. Because I give all of this advice like ABA, IEP, and then I think parents are really overwhelmed and they don't know what to do for the next step. So if they had someone who followed up with them and helps them connect to these resources, that would be really ideal." - MP_6	2
LACK_OF_AWARENESS	Expresses the lack of knowledge in methods to help the individual with ASD for the caregiver community (can include self or others in statement)	"I feel like my understanding of how autism presents is pretty limited." - MS_3	18

HOLISTIC UNDERSTANDING CONT.

Code	Description	Quote	#
LACK_OF_STRUCTURED_LEARNING	Participant describes the medical education of practical clinical skills as being unstructured or disjoined.	"I would say, I mean, I kind of mentioned a little earlier, just I have very little experience with structured learning when it comes to autism spectrum disorder, whether that's from the side of being a doctor and understanding what exactly is going on physiologically, or on the side of social aspects of the best way to interact with patients who have autism spectrum disorder." - MS_1	9
LIMITED_CARE	Participant describes a limitation to accessing services, due to lack of speciality providers, inaccessibility to clinic, insurance coverage, etc.	"Yeah, I mean, I think things like if you don't have that understanding of the unique ways that that child may be thinking, then being able to provide the best service to them isn't going to work very efficiently because they're going to refuse to do something you ask them to do. And then if you're, like they said with some providers where they're like, okay, well we just won't do that today, then you miss out on some of the important pieces that may need to happen in that child's medical care." - CG_4	39
MD_CONFIDENCE	Participant describes confidence that their training and innate skills give them to interact with patients with ASD.	"I am also aware that in a patient on the autism spectrum, you know, they may have issues about you know, I, if they don't, they aren't receptive to me when I approach them. I don't force an interaction, right? Because it can be very agitating. And so then, you know, there's an art form to learning when you transition from addressing the child to addressing the parent. And, and so the one has to learn over time and make a lot of mistakes." - MP_1	5
MISDIAGNOSIS	Describes an initial misdiagnosis or inability to diagnose the patient with Autism.	""And weirdly, he put in his workup like he has like element of autism, but he has a speech delay so it can't be autism. It was like literally that sentence was in there and it was like hmm." - CG_6	3

HOLISTIC UNDERSTANDING CONT.

Code	Description	Quote	#
MUTUAL_BENEFIT	Participant describes certain skills/techniques benefiting patients as a whole, not just ASD population.	"I think just learning that you have to be getting it all the way and learning that you don't have to do this regimented thing, but you're going to get it a certain way would be helpful even as you're going in as a medical student. And I think it doesn't just apply to kids with autism. I think it applies to being a doctor in general. If you can pick up on cues from your patient just by observation, that can be really helpful in informing you your communication style and better informing you about your diagnosis in the future. So I think the skills you learn from kids with autism are just applicable to just being kind of a good doctor and communicator in general." - MP_6	7
NEED_FOR_STRUCTURED_LEARNING_MD	Participant feels that more structured and/or longitudinal curriculum about different patient populations will better prepare MS for the rest of medical school	"I think probably a combination of sort of structured didactics with clinical experience, because I think some of the information can be relayed concretely in... and I think you would want to specifically do that, to sort of emphasize some of these core principles in communication." - MP_9	5
NEED_FOR_TRAINING	Participant explicitly states there is a need for providers/medical students to be trained on the topic of ASD and/or neurodiverse care	"What are the barriers for them and their families to receive care and what is the most adequate way that we can provide that care? So I wish that in the future something like this is implemented." - MS_2	19
NO_DIFFERENCE	The interviewee expressed that they would treat a patient with ASD no differently than they would treat neurotypical patients	"I mean honestly, treating a patient with autism spectrum disorder wouldn't be that much different than how I would treat any human that would walk into the office that I'm working in as of right now." - MS_1	10
NONMEDICAL_EXPERIENCE	Participant has prior professional experience working with children in a non-medical setting who experience neurodiversity	"I worked at a camp for kids with physical disabilities. And some of our campers have like the cross of physical and either being like on the autism spectrum or are developmentally delayed and also a lot of campers who either through physical or mental capacities are non-speaking." - MS_4	7

HOLISTIC UNDERSTANDING CONT.

Code	Description	Quote	#
NT_PERSPECTIVE	Participant as a NT person identifies their perspective on the experience of the ASD community.	"Also, knowing many, or not many, but having some friends who are neurodiverse, and seeing and listening to how they interact with the world, and how different things impact them different from me. I could definitely see that interacting with medical providers would be really stressful, although I haven't interacted with many folks as a medical provider who are neurodiverse." - MS_9	16
PATIENT_INCLUSION	Describes the need to include patients in the communication and clinical aspects of their healthcare; shared-decision making.	"Assume that the patient or the patient is able to speak for themselves. So if they come with a family member, don't just immediately look to the family member and ask them questions, kind of observe what the patient themselves are capable of and what they want and address the patient directly." -MS_4	44
POSITIVE_IMPACT	Positive impact that was stated as an influence during circle activity to improve their relationship with their provider.	"Yeah, not always. Sometimes you get someone that's great and sympathetic and can kind of pick, even if they don't know can pick up, you know, when they come in the room like, oh okay, I think obviously this child is pretty uncomfortable. Let me change gears a little bit." - CG_8	6
PROTOTYPE_DESIGN	Participant discusses strategies for how to best format the structure/length/intensity of educational content for medical knowledge acquisition.	"But maybe pairing this online module with a small group session so that we learn on our own time, but we're expected to actually do that learning, so we show up to the small group sessions prepared to discuss and interact with each other. And maybe the small group session is led by someone who's an expert. Facilitated discussions. So either that or just entirely in person learning with a lecture style, and then small group sessions so that students can interact with each other." - MS_1	10
PROVIDER_CONFIDENCE_ND	Describes the confidence and readiness that formal training of neurodiversity (ND) would or has brought to providers.	"I would say that after my training I felt very confident in the diagnostic and treatment. And I think secondarily, of course, working with people with autism." - MP_5	7

HOLISTIC UNDERSTANDING CONT.

Code	Description	Quote	#
PROVIDER_HOLISTIC_ROLE	Describes the provider role as including the holistic needs of patients.	"And every provider has a nearly infinite amount of things they could be asking patients to do to take up their, you know, their elective time. And we should be respectful to patients and we should think about how what we do integrates into their larger care plan, right. So for example, you know, if you were a gastroenterologist asked to see a patient with autism, and you would normally say, Oh, you need to eat a high fiber diet. You need to be aware that these, this patient may not eat that because of sensory issues. That's just a non starter." - MP_1	18
PROVIDER_PHYS_ROLE	Describes the provider role as being primarily to serve physiological needs of patients.	"Cause I feel like a lot of times in like medicine we really bog down those first 4 things on the list for any type of disease or disorder and it kind of dehumanizes the experience." - MS_4	2
PROVIDER_STRAIN	Describes the mental, physical, or emotional strain of the provider when caring for patients with developmental conditions.	"Well, at every point of medical training, there's so much information being thrown at you that sometimes because you're so tired and you're so overwhelmed by all these things, it's hard to give the important things because it's all important and so it's hard to focus or it's hard to internalize everything that you learn." - MS_3	26
PROVIDER_SUPPORT	Participant expresses the importance of/experience with/comfort from having the support of or a relationship with the medical provider(s)	"Finally, we had a clearer picture of what was going on. It was a relief and I greatly appreciated all the doctors being so caring about [omitted] and trying to really help him. But they were also very supportive of us as parents, and that we appreciated a lot, because it's such a hard thing to see your child go through all of the things that they're going through and having no ability to tell anybody how they're feeling." - CG_2	23
PT_DISCOMFORT	Describes a patient facing discomfort or trauma in the clinic or when seeking treatment.	"So obviously he was like very fearful and would be like trying to pull tubes out and things like that. So, I think if like anybody had explained. Anything to him or like tried different ways of explaining things to him by like showing him videos or something. I think that could have like made a big difference." - CG_1	7
PT_PROVIDER_STRAIN	Describes a strained relationship between patient and provider that negatively affects decision-making or seeking of care.	"It's frustrating for me. I mean, I'm a provider and I mean, I'm not, I wouldn't treat my patients that way after 5 min and say, you know, let's reschedule it." - CG_5	20

HOLISTIC UNDERSTANDING CONT.

Code	Description	Quote	#
RARE_PATIENTS	Participants expresses the perspective that it is not common to interact with the ASD patient population	"Honestly, I would say in the healthcare settings that I've worked in before, I don't think I got formal training because it was rare to see patients with autism spectrum disorder and to interact with them directly in my position." - MS_1	5
RESOURCES	Participant details existing resources for the ASD community and/or material for medical professional to work with the community.	"It's just like there are very few like known resources out there for like what like the life for someone with autism looks like as they transition into adulthood. They really like lose a lot of resources after they sort of age out of school." - MS_8	30
SCHOOL_DEPENDENCY	Details the patient having to seek resources or diagnosis tools within the school setting instead of within the healthcare system.	"We have never gone through that because they've always received services at school. And the services at the school, we were getting decent services and it was enough. It was sufficient." - CG_7	7
SOURCE_BIASES	Explains the source of bias systemically, culturally, and in media.	"I would say communication and social skills, that one is more personal of something that I would love to learn because, again, there are stereotypes, and there's so much online about how people with ASD act, or what they can and can't do. And I think it can be really misleading." - MS_1	7
SPECIALITY_UNRELATED	Participant is interested/involved in a specialty that is not directly related to ASD care.	"Interested in cardiology." - MS_3	5
SPECIALTY_RELATED	Participant is interested/involved in a specialty that is directly related to ASD care	"Well I think I'm interested in psychiatry. So definitely, just kind of interested in understanding this patient population more and then I think just having a better understanding of patients with autism." - MS_6	11
UNDERSTANDING_BIASES	Participant expresses the importance of exposure and breaking down perspectives to eliminate any bias affecting ASD care.	"I think if you showed how patients with autism do normal things and interact, and, you know, have a happy life and do things just as another kid might do. I think that also might de-stigmatized the condition and just make it another chronic medical condition just like diabetes if that's how you want to think about it." - MP_4	7
UNIQUE_NEEDS	Participants expresses that ASD patients require adaptations/acceptance of their specific needs.	"So the way you interact is very individualized. And I think the first piece of it is understanding what a child's abilities and needs and learning styles might be." - MP_5	48

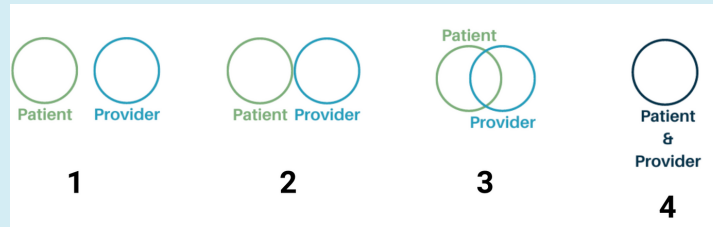
CURRENT AVENUES

This category highlights the current setting of medical education and care ranging from in what avenue patient-provider communication is taught and what tools are currently used by the medical system.

Code	Description	Quote	#
CURRENT_AVENUE_CLINICAL	Current avenue of learning clinical skills is in the clinical years of medical education, i.e. MS _{3/4}	"So if it wasn't until the third and fourth year where you get practical experience in clinical settings where you meet these individuals and you learn some of the barriers to care." - MP_2	15
CURRENT_AVENUE_ESS	Current avenue of learning clinical skills is in equity systems science course i.e. pre-clinical years MS _{1/2}	"And then I think in our Equity system science course is also another place where I think more of the social determinants of health are tried to be weaved into our education." - MS_6	5
CURRENT_AVENUE_POM	Current avenue of learning clinical skills is in practice of medicine course i.e. pre-clinical years MS _{1/2}	"So the practice in medicine, I always describe it to people who are not in medical school as it's where we get to play doctor or play pretend doctor. So, and it's also where a lot of the kind of more humanistic, humanity side of medicine I think is interweaved. You know how to do the patient interview, how to do sensitive topics for patient interviews." - MS_6	20
CURRENT_MD_TOOLS	Names the current operating system or tools used by the healthcare system to screen, diagnosis, treat, or monitor patients with Autism.	I know with [omitted], she has like a gazillion questionnaires that we have to fill out each time, so I just have to remember to have my daughter - like I'll hand her my phone and she'll just do the survey really quick, either at home or in the car in the way. - CG_7	16

CIRCLE ACTIVITY - INITIAL CHOICE

These codes highlight the circle activity, which analyzed the proximity of relationship between patient and provider. The participant selected from the images depicted to the right when prompted separate questions about their relationships with patient or provider. These codes are for the initial choice the interviewee selected.



A key to the abbreviations used are listed below:

TP = trusted provider; UP = untrusted provider; PT = patient; NT = neurotypical; ND = neurodiverse

CODE	DESCRIPTION	QUOTE	#
CHOICE_1_TP	The participant feels a distant teaming relationship with their trusted provider, as though they are very separated in aspects of their care and may not have shared values or feel connected.	I think one, maybe two if you get lucky - CG_8	1
CHOICE_2_TP	The participant feels a moderate teaming relationship with their trusted provider, as though they are working alongside each other and may not have many shared values or feel very connected.	I guess I would say like a one or 2. -MS_12	2
CHOICE_3_TP	The participant feels a close teaming relationship with their trusted provider, as though they feel slight separation working together and have some shared values.	But if they feel like, okay, like, this person is actually listening to me and I feel like I have some say and what I can do, then they're gonna feel like a 3. -MS_12	7
CHOICE_4_TP	The participant feels a very close teaming relationship with their trusted provider, as though they are a singular entity working together with many shared values.	If you just look at it looks ideal to have a 4 so I would say like look where one circle maybe what idealized a patient may say. -MP_2	2
CHOICE_1_UP	The participant feels a distant teaming relationship with an unfamiliar provider, as though they are very separate in aspects of their care and may not have shared values or feel connected.	That's probably more like a one, you feel pretty disconnected. Depends on the provider -CG_4	3
CHOICE_2_UP	The participant feels a moderate teaming relationship with an unfamiliar provider, as though they are working alongside each other and may not have many shared values or feel very connected.	That type of thing so it's kind of a probably more 2. I mean we work closely with them but not so close where we're, I don't know, exchanging that much information, you know throughout the year. -CG_5	2

CIRCLE ACTIVITY - INITIAL CHOICE CONT.

CODE	DESCRIPTION	QUOTE	#
CHOICE_1_PT	The participant feels that a general patient would feel a distant teaming relationship with their trusted provider, as though they are very separated in aspects of their care and may not have shared values or feel connected.	Which would be more towards the left side of the picture. -MS_11	I
CHOICE_2_PT	The participant feels that a general patient would feel a moderate teaming relationship with their trusted provider, as though they are working alongside each other and may not have many shared values or feel very connected.	In regards to their relationship with their provider, their relationship, they would probably choose 2.-MP_3	3
CHOICE_3_PT	The participant feels that a general patient would feel a close teaming relationship with their trusted provider, as though they feel slight separation working together and have some shared values.	Most probably say 3 like, oh I trust my doctor, they want you know to do what's best -MP_8	5
CHOICE_4_PT	The participant feels that a general patient would feel a very close teaming relationship with their trusted provider, as though they are a singular entity working together with many shared values.	So I think she would be over to the right from where I am -MS_11	5
CHOICE_2_NT	The participant feels a moderate teaming relationship with a neurotypical patient, as though they are working alongside each other and may not have many shared values or feel very connected.	I feel like they usually live at like a 2 -MS_10	4
CHOICE_3_NT	The participant feels a close teaming relationship with a neurotypical patient, as though they feel slight separation working together and have some shared values.	I mean it's probably a three probably. I mean there's a lot of shared decision making, but maybe not completely. -MP_5	16
CHOICE_4_NT	The participant feels a very close teaming relationship with a neurotypical patient, as though they are a singular entity working together with many shared values.	A general population... I mean I would think 4. - MS_8	4
CHOICE_1_ND	The participant feels a distant teaming relationship with a neurotypical patient, as though they are very separated in aspects of their care and may not have shared values or feel connected.	Maybe more 1. -MS_10	I
CHOICE_2_ND	The participant feels a moderate teaming relationship with a neurotypical patient, as though they are working alongside each other and may not have many shared values or feel very connected.	I feel like it more realistically operates as 2. -MP_4	II
CHOICE_3_ND	The participant feels a close teaming relationship with a neurotypical patient, as though they feel slight separation working together and have some shared values.	Most of the time we're somewhere at a three. -MP_5	9

CIRCLE ACTIVITY - CHANGE IN RELATIONSHIP

These codes highlight the circle activity, which analyzed the proximity of relationship between patient and provider. After the participant was asked where they believe their current relationship is with a patient or provider, they were then prompted if they would like the relationship to change. The codes below indicate that there was a desired increase with the number being the final relationship proximity level desired. No decrease codes were created as no participant desired a decrease in proximity.

CODE	DESCRIPTION	QUOTE	#
INCREASE_3_PT	The participant desires increase to level 3 teaming relationship with a patient.	I think that you'd want again that 3. -MS_4	2
INCREASE_4_PT	The participant desires an increase to a level 4 teaming relationship with a patient.	I would say where I feel like four is my goal with every type of patient in terms of partnership. -MS_1	3
INCREASE_2_UP	The participant desires an increase to a level 2 teaming relationship with an unfamiliar provider.	I would prefer it to be kind of, I think, a number between a two and a three. -CG_2	1
INCREASE_3_UP	The participant desires an increase to a level 3 teaming relationship with an unfamiliar provider.	I would like to see it closer to that three piece where at least there's some overlap and there's some sense of we're on a team, we're working on this together. -CG_4	3
INCREASE_4_NT	The participant desires an increase to a level 4 teaming relationship with a neurotypical patient.	Ideally, I'd like it to be 4. -MS_4	3
INCREASE_3_ND	The participant desires an increase to a level 3 teaming relationship with a neurodiverse patient.	I think that it would be really cool to get to a place of 3 of people understanding how to make that partnership with people higher on the spectrum -MP_4	3
INCREASE_4_ND	The participant desires an increase to a level 4 teaming relationship with a neurodiverse patient.	I would say it would be the same again, ideally it should be a four. -MS_13	2

CURRICULUM - CONTENT

Theses codes describe desired content for medical students to learn about the ASD community as stated by the stakeholder.

CODE	DESCRIPTION	QUOTE	#
CONTENT_ADULT_TRANSITION	Participant expresses a need or desire for content to teach about adult transition for ASD patients	" It's all, it's like starting over in a way. But it can be very frustrating. This whole process of being 18 and sometimes when I call in, they'll say oh we don't see this paperwork here, can we....and oh there's a lot of lost paperwork. They can't see that we are conservatorships, that we have.... that we're planning on these appointments and that can be very frustrating however their systems are set up. So that can be frustrating. So yeah, it's a whole new game at 18, even for the most experienced parents." -CG_9	13
CONTENT_ADVOCACY	Participant expresses a need or desire for content to teach about advocacy/right for the ASD community.	"I think [Advocacy and Rights] was, yeah, I met, I have a family member who has a disability and I'm really, really passionate about disability rights. Even though I'm an able-bodied person, I think everybody has a role to play in just making sure that like, we are making all of our environments as accessible as possible." -MS_11	8
CONTENT_ASAD	Participant expresses a need or desire for content to teach about ASD in general.	" I guess some basic education around just what autism is. Then I think also some basic you know, and I don't know how much this is part of the curriculum now, but just I think there's a lot of just general communication strategies that are applicable to this community." -MP_9	8
CONTENT_ASAD_VOICES	Participant expressed a need or desire to learn more about personal experiences and autistic voices.	" I would say the things that I wanna learn more about are personal experiences and autistic voices. " -MP_3	2
CONTENT_ASSISTIVE_TECH	Participant expresses a need or desire for content to teach about assistive technology for ASD patients	"I think assistive technologies could be really cool, mostly because I feel like my understanding of managing autism is largely supportive care... I like the idea of being able to provide tools to make patients with ASD more independent and have more autonomy of their own lives. Because I feel like, yeah, it's pretty important." -MS_3	1
CONTENT_BARRIERS_OF_CARE	Participant describes a need or desire to learn about the barriers (financial, social, etc.) that ASD patients face when getting care.	"Yeah, I guess I wish that there were less barriers to care and/or barriers to health systemically and societally so that patients and providers could have more overlap in terms of their health literacy, what's accessible to patients, what is possible in the medical system, what can be paid for, for example." -MS_9	12

CURRICULUM - CONTENT CONT.

CODE	DESCRIPTION	QUOTE	#
CONTENT_CAUSES_GENETICS	Participant expresses a need or desire for content to teach about causes and genetics of ASD.	"think that even in the medical side, we learn about a lot of different conditions and the biology and the development, but I don't think we learn as much about pediatric development from the biologic science part. I think it would be great if that was more integrated into that part of it" -MP_6	2
CONTENT_CO-OCCURRING_CONDITIONS	Participant expresses a need or desire for content to teach about co-occurring conditions for ASD population	"I think that's also on just the medical side to be aware of co-occurring conditions that are common because... I could see the same thing happening with people who are on autism spectrum disorder, especially if there was difficulty communicating or communication problems or sensory processing problems. I could see that a lot of that gets conflated with ASD as opposed to being a separate treatable issue. So being aware of the co-occurring conditions to know what is ASD and what's not, and also what is more common in people with ASD versus what's not." -MS_9	5
CONTENT_COMMUNICATION	Participant expresses a need or desire for content to teach about communication, social skills, and comfort mechanisms for the ASD community.	"But certainly learning about all of what strategies are most effective and communication particularly because social communication can be a challenge. I think that has definitely changed. And it really probably is a direct result of training and then experience of course, because I see a lot." -MP_5	30
CONTENT_EARLY_INTERVENTION	Participant expresses a need or desire for content to teach about early intervention for ASD patient, meaning the diagnostic/early treatment.	" early intervention just because I'm interested in working with kids too and I feel like the early childhood period is, like, really critical and like knowing how to properly work with kids during that time is really important." -MS_10	5
CONTENT_INTERSECTIONALITY	Participant expresses a desire for content to cover intersectionality experienced by the ASD community.	"Intersectionality" -MP_3	1
CONTENT_NEURODIVERSITY	Participant expressed a need or desire to learn more about neurodiversity.	"I feel like understanding maybe like the whole spectrum of it, right? Because like, my limited knowledge of ASD like from what I've understood, is like it can present very differently for different people... there's probably different things that, um, I should be aware of that I should pay attention to." -MS_7	9
CONTENT_PERSONAL_VOICES	Participant expresses a need or desire for content to teach about personal experiences and voices within the ASD community.	"Yeah, like the topics that I would be most interested in are personal voice or personal experiences and autistic voices." MS_10	5

CURRICULUM - CONTENT CONT.

CODE	DESCRIPTION	QUOTE	#
CONTENT_SENSORY	Participant expresses a desire for content to cover how individuals with autism process and sense the world around them. (i.e. sensory processing)	"I think again in a clinical space, there's a lot going on and a lot of sterile and a lot of movement and a lot of shiny things and like just a lot of noises and beeps. Going over how the sensory processing of people with ASD can be really different than our own, but also being able to relate it being like "everyone can experience over-stimulation" and this is just being able to be like "okay this is what this experience could feel like to someone with ASD and like how it can be really frightening and nerve-racking and overwhelming". And if someone lashes out at you or gets upset or is visibly hiding or really scared, that's not something necessarily that you're doing"- MS_4	6
CONTENT_SPECTRUM	Participant expressed a need or desire to learn about Autism as a spectrum	"I think probably that each individual with autism is very unique. And so, that can play out in a lot of different ways. So just whether it's like your treatment plan or you know, daily interaction or your coworker. That really is just such a broad category, and I think that the other thing is just how it's changing and that there is some movement in kind of how we talk about people with autism, how they like to be referred to. That again, like it's just so individual on people's preferences. And so just being conscious and aware of that and especially in like the healthcare setting is probably my biggest takeaway." -MS_6	6
CONTENT_TERMINOLOGY	Participant expresses need for medical students to learn the different technical acronyms and terms used in the field.	"I think I was hearing that like the term Asperger's is no longer being used. I could be wrong on that, but like, people are advocating for it to stop being like a distinct condition and rather just like under the umbrella of ASD. And so I am, yeah, I am wanting to know like, I guess what has changed in the past few years about different definitions and terminologies and what are sense, like what are terms that are, um, I guess like sensitive to patients that I should be mindful to use." -MS_11	1

CURRICULUM - DELIVERY

These codes emphasize the preference in delivery for educational material around patient-provider communication and inclusion.

CODE	DESCRIPTION	QUOTE	#
DELIVERY_ CLINICAL_ SETTING	Participant expresses a need or desire for content to teach about practical experiences with patients in a clinical setting.	"I feel like it's most helpful when you have certain clinical encounters and then you see someone like do it really well, and then like afterwards you like debrief and then you know, and then you're like, oh, okay, like this is, you know, we're like, oh, we could have gone better. I feel like that's like the ideal best way of education in general, where you combine that like practical experience with kind of, like, reflection."- MS_10	7
DELIVERY_ GROUP_ LEARNING _NO	Participant expresses a dislike for small group learning.	" I think a pitfall for a lot of my small groups is just people don't feel comfortable talking. And so I think maybe that you're missing out on like a lot of like discussion and like areas where you could ask questions and maybe enhance understanding, but a lot of people are too scared to maybe like admit what they don't know or. So I think that kind of goes back to like the environment that the facilitator creates" - MS_6	I
DELIVERY_ GROUP_ LEARNING _YES	Participant expresses a preference for small group learning.	"And in a lot of our, we have small group sessions." - MS_6	I3
DELIVERY_ LECTURE_ NO	Expresses a discontent or acknowledges ineffective nature of lectures for teaching communication skills/general ASD knowledge	"I don't think those lectures necessarily instill communication skills as as you know like Some skills can be taught, some don't come naturally to people and so I don't know if those lectures necessarily were targeted toward that objective, but I don't think they would necessarily have a huge role in how I would communicate with somebody." - MP_2	II
DELIVERY_ LECTURE_ YES	Expresses the importance of lecture formatting for learning material on communication/general ASD care.	"Every Friday we have a fellows conference so fellow led educational opportunities and our residents attend. So last week I gave a 1 hour and talk on a whole overview of ADHD." - MP_2	5
DELIVERY_ MIXED_ MODEL	Participant explicitly expresses a preference for mixed model of learning, i.e. including both formal lectures and panels/group discussions	"There is didactical lectures involved too. And I got feedback just from that one that it was very helpful because even though in clinical hands-on experiences you get this and pieces of it, you may not know what you don't know. So if you don't get that full overview. You have gaps in what your experience may be. So I do think it's a combination." - MP_2	9

CURRICULUM - DELIVERY CONT.

CODE	DESCRIPTION	QUOTE	#
DELIVERY_MODULE S_NO	Expresses a discontent or acknowledges ineffective nature of modules for teaching communication skills/general ASD knowledge	"Yeah I don't think medical modules really work well, like the online training and stuff like that, like I think everyone just kind of clicks through them."- MS_10	3
DELIVERY_MODULE S_YES	Expresses an interest or preference for modules for teaching communication skills/general ASD knowledge	"there should be specific modules that should, like within the doctoring class, within our equity and system science course, and especially, for example, within our Mind, brain and behavior course, I think we should be actively discussing like, what are disabilities and how do I, um, how do we like best support our patients who have these different types of disabilities? And each of these different courses, modules on, um, on patients with disabilities could kind of focus on that with a different lens." -MS_11	0
DELIVERY_PT_ DIRECT	Participant wants to learn/learns best through direct interaction or first-hand perspectives from different patient populations	"I do think It the memory holds more. It's like one of those things where you just say it means something if you write it it's something if you write it it's something else like it'll stick better as a core memory of where did I learn that? who did I see? Because as physicians I learned that we hold strong clinical experiences into. This may be a positive negative in bias, but like defining future experiences, figuring out, yes, I saw this somewhere. I have a better sense that I know what I'm treating this time. So I do think that's the piece that makes that learning. Stronger as opposed to the didactics, but the didactics are very important on the side as well." - MP_2	46

ACCOMODATIONS

The codes in this category relate to different accommodations the ASD community currently uses or can use to ease their experience in healthcare systems.

CODE	DESCRIPTION	QUOTE	#
ENVIRONMENT_ADAPTATION	Details adaptation of the environment of the clinic AND spatial relationship to the clinic for ASD patients	“kids like [omitted] little like wires with the balls that you have like snake around just like little activities that would engage her and keep her hands busy and keep her focused on stuff.”- CG_5	7I
PHYSICAL_ADAPTATION	Adapting in-person clinical encounters in a way that addresses physical examination and interactions	“You know, and then trying to keep, or trying not to be anxious so Marin doesn't pick up on any of that. You know what I mean? Like just try to keep everything. Calm and easy.” - CG_5	35
PRIMING_ADAPTATION	Adaptations for priming patients prior to clinical visits.	“when we go to the dentist they deal with a lot of special needs kids there so they do let us come every 3 months just to like say hi and you know, try to get her to sit in the chair” - CG_5	33
TEAM_ADAPTATION	Adaptation involves utilization of the care team, i.e. nursing staff, PA, receptionists, MD, medical students etc.	“And I think it would be really ideal to kind of assign, I guess in a way, like case workers or like social workers I guess or like you know, people who are responsible for certain patients. And like...you know just look at, okay, what appointments do they need to schedule? Like you know, what labs do they need? What accommodations do they have?” - MS_10	13
TIME_ADAPTATION	Adapting clinical encounters in a way that addresses time.	“It would be easy for the patient to make the appointment.” - MS_6	3I

EDUCATION TIMELINE

The codes in this category relate to the preferred exposure to ASD-specific material in medical education. The codes do not demonstrate a singular time-point, but when the material would first be introduced.

CODE	DESCRIPTION	QUOTE	#
ET_CLINICAL	Explicitly states content should be taught within clinical years (MS3/MS4/sub-I)	"I feel like it would be really helpful in rotations, cause like. I don't know, I feel like during rotations like you don't have as much of...sometimes you forget that you're getting an education. You know, and like all the learning that you're doing really is mostly like by yourself and then." - MS_10	4
ET_FELLOWSHIP	Explicitly states content should be taught within fellowship.	"Fellowship is probably where I really, I think gained a much more in depth understanding of autism. And, a lot of that just, I think, came from experience and getting to see that there's such a wide breadth to what autism is and getting exposure to it in different settings: in clinical settings and community settings. And just being a part of a community of providers who work with this population." - MP_9	I
ET_PRE-CLINICAL	Explicitly states content should be taught within preclinical years (MS1/2)	"So like right in the beginning, I think right at the end of your second year before you go off for clinicals will probably matter the most because that's when you're adjusting to an education that very primarily centers around patient education or like you being educated by the patient and the physician." - MS_7	I8
ET_RESIDENCY	Explicitly states content should be taught within residency.	"Residency, I think as many pediatric residency programs are, it was a little bit more inpatient heavy, and so I think a lot of my exposure was in how hospitalization affected these individuals and families." - MP_9	I