

Samudragupta Bora makes a difference from day one

TRANSCRIPT

Samudragupta Bora, Researcher and Associate Professor of Pediatrics

Andy McLean 00:06

Hello and welcome back to Moments in Mind from Pearson Clinical Assessment. Thanks so much for tuning in.

I'm Andy McLean, and in this podcast we meet clinicians, researchers, educators and therapists who are changing lives for the better. We talk about landmark moments in their careers - the tough moments, as well as the breakthroughs - to find out what they've learned about themselves and about others.

I'm delighted to say that today's guest is Samudragupta Bora, who has dedicated his career to understanding what happens to vulnerable babies - those born too soon or with serious heart conditions - and how their early start in life shapes their development for years to come.

As a researcher, Sam focuses on these high-risk infants, specialising in their neurodevelopmental outcomes, work that has taken him everywhere from Australia to Africa and beyond. He's currently Associate Professor of Pediatrics at Case Western Reserve University School of Medicine, and the founding director of a specialist research centre at the University Hospitals Health System in Cleveland, Ohio, in the United States.

Andy McLean

Sam, delighted to have you on the show. Hi!

Samudragupta Bora 01:20

Thank you, Andy. Thanks for having me.

Andy McLean 01:23

Now, Sam, we start each of our episodes with the same question for our guests, and I'm always staggered by the variety of responses that we get to it! My question for you is: what is your earliest childhood memory?

Samudragupta Bora 01:37

One of my earliest memories is learning to ride a bike and being too curious for my own good. I remember thinking, what happens if I let go for a second? And I tried it in the worst possible place - near a main road and a bridge - and I crashed badly. I still remember the shock of it, and I still carry the scar, but I also carry the very valuable lesson: curiosity is powerful, and small decisions can have big consequences. When I look back now, that idea has stayed with me throughout my life.

Andy McLean 02:17

Yes, indeed it has - because that curiosity, I think, has probably helped to inform your career. I know initially you were thinking about being a talk show host, so you should feel pretty at home on the podcast today! But you've ended up taking that curiosity in another direction to become a researcher. So what was it about working in paediatrics and particularly with high-risk babies that drew you to that?

Samudragupta Bora 02:43

I didn't start out knowing I wanted to be a researcher. I just knew I liked asking questions - and that's why I wanted to be a talk show host. The question that kept pulling me forward was: what happens if you can make a difference right at the very start of someone's life? I became drawn to working with infants who face serious challenges early on, because those earliest periods can shape everything that comes after. They're incredibly vulnerable, but they are also remarkably resilient. Over time, I realised research was the way to turn curiosity into impact - to understand what puts children at risk, what helps them recover, and how we can use that knowledge to improve outcomes, not just for one child, but for many families.

Andy McLean 03:43

That's so interesting, Sam, because what you're talking about really is almost the earliest possible intervention that you can have. And "early intervention" is a theme that's run through many of the podcast conversations we've had so far, but we haven't yet spoken to somebody who works in neonatal intensive care units regularly - and you do. For those of us who haven't spent time in those environments, can you paint a picture for us of the people, and what the atmosphere is like in a place like that?

Samudragupta Bora 04:15

A neonatal intensive care unit - or NICU - it's like a sensory overload. There are alarms, monitors, bright lights, staff moving everywhere, and tiny sick babies connected to very complex equipment that can look frightening if you're seeing it for the first time. Now, imagine you are a parent who expected to take a healthy baby home, and instead you're suddenly making very high-stakes decisions in a place you never wanted to be.

Modern NICUs work hard to reduce stress, so we have quieter spaces, softer lighting and more privacy for families - but still, emotionally, it can be exhausting for the families. What I also want people to know is this: it's an environment filled with extraordinary skill and extraordinary compassion. Families are never alone in it.

Andy McLean 05:21

Obviously, a variety of different people with different skills work in those environments, Sam. But if you were to give me a consistent thread - a consistent quality that you see people exude on a regular basis amongst the workforce in those places - what would it be?

Samudragupta Bora 05:38

I think first is the ability to remain calm and thoughtful in high-pressure situations.

Also, no one works in isolation in a NICU - it's really about teamwork. Decisions are shared, and there's a lot of trust across disciplines that really matters.

And finally, there's the continuity of care: the mindset that what happens in the unit, in the NICU, is only part of a much longer story. That last piece is very important to me, and it led to my work in post-discharge follow-up - what happens once the baby is discharged from the NICU. The care doesn't end when a baby leaves the hospital. Its outcomes are really shaped by what happens after: how families are supported, how we monitor their development, and how concerns are identified and addressed.

Andy McLean 06:40

And how do you chart that progress? How do you measure it, define it, and clarify what further interventions will be required on that journey?

Samudragupta Bora 06:53

Most NICUs in the world will have programmes called “Neonatal Follow-Up Programs”, or “High-Risk Infant Follow-Up Programs” - or whatever we call them. Basically, we bring families back at regular intervals after discharge from the NICU, and we assess them across multiple domains: both the child and the family, in terms of maternal mental health, their wellbeing and more.

Visits are more frequent during the earlier phases of life, and then they space out. We use standardised assessments - lots of screening - for cognitive abilities, language development, behaviour, and also other domains like nutrition and physical health. So we try to get a snapshot of the child's life as they're progressing through various milestones. We also look at their progress in a longitudinal manner: how are they tracking over time? The whole purpose of these follow-up programs is to identify risks as early as possible, so we can hopefully provide the required support and targeted intervention to optimise their outcomes.

Andy McLean 08:30

You talked a moment ago there about the role of standardised assessments - which is something I wanted to ask you about today - because I know you were the lead researcher for the Australia and New Zealand edition of the Bayley Scales of Infant and Toddler Development, commonly known as the Bayley-4. What is the Bayley-4 and why is it so important to localise standardised assessments?

Samudragupta Bora 08:55

The Bayley-4 is a standardised developmental assessment for infants and toddlers - often considered the gold standard for evaluating cognition, language, motor skills, social-emotional functioning and adaptive behaviour. And localisation of any test or standardised instrument matters for two reasons.

First, language and culture: even a small wording difference can change how a child understands a task. 'Cookie' versus 'biscuit' - that's a classic example.

Second, norms: many benchmarks are based largely on US samples, but even subtle population differences matter when scores are used to determine services.

As I mentioned earlier, the whole purpose of these follow-up programs is to understand how the child is developing over time - we benchmark them against developmental standards. So if we don't get those standards and benchmarks correct, we won't be able to deliver the best possible care.

Samudragupta Bora 10:30

So in terms of the Bayley-4, the Australia and New Zealand standardisation meant that the content was adapted and local normative data - those benchmarks - were collected, to improve accuracy, interpretability, and to ensure that Australian and New Zealand children receive the most accurate and targeted support they actually need. So it really was about improving that benchmark as well as making it relevant to the local context.

Andy McLean

I love the precision that you're able to extract when you localise in the ways you've just described. That's great, Sam.

I'm very interested in so much of your career, and I hope today we're going to jump around different corners of the globe. We've been to Australia and New Zealand - let's step into the United States for a moment. Tell me about your work in Ohio and elsewhere, and in particular, I'm interested in perhaps a moment of breakthrough that you've experienced in your role as founding director at the institute.

Samudragupta Bora 11:32

So I lead a research centre here in Ohio, and the centre is called the Health Services Research Center. The whole centre is grounded in a very simple idea: research only helps people when it reaches real clinical care. Across the world, researchers generate remarkable findings with enormous potential to improve health. But if we cannot translate those findings into routine clinical practice, then it's not going to deliver on its promise - on its impact. And you'd be surprised - there's actually an entire discipline, an entire science dedicated to closing this gap, often referred to as "Health Services Research [Science]", or "Healthcare Delivery Science": how we apply scientific principles and methods to translate research findings into clinical practice.

In my role as founding director of this specialist research centre, I provide scientific and strategic leadership. I help to identify the right questions to pursue - questions that sit at the intersection of clinical need, our health system, and broader societal priorities. I also spend a lot of time focused on people and building capacity: mentoring faculty, strengthening educational programs, developing new programs, and building state-of-the-art infrastructure needed to do this rigorous, impactful research. Ultimately, my job is really to create the environment - the suitable environment - where we can turn ideas into research, into work that will genuinely improve clinical care.

Andy McLean 13:34

Sam, how does it feel to be the founding director of something? It must presumably mean you've had quite a lot of input and influence over the whole approach?

Samudragupta Bora 13:47

I'd say it's a once-in-a-lifetime opportunity, and it is definitely very rewarding - but it's really very challenging at the same time. You also have to have the ability to think not just about now, but to foresee, to plan for the future.

You need to be responsible: I have a big team of faculty that I'm responsible for. At the same time, I'm also accountable to the communities we serve. So maintaining that balance can sometimes be tough, and in the current environment, there are of course different political priorities, and the funding landscape keeps changing.

So overall, just like any other enterprise, starting something new is challenging. The same goes for a new research centre or a specialist research centre. I feel very fortunate to be part of a larger health system - a very successful academic medical centre, one of the world's most distinguished paediatric medical centres - and that environment really helps. I have wonderful colleagues, I have wonderful leaders, and I have great mentors. You need everyone as part of this job. But yeah, very rewarding, and definitely a once-in-a-lifetime opportunity to build something like this.

Andy McLean 15:24

That sounds fantastic, Sam. After our quick break, we're going to discuss your advice for up-and-coming paediatric clinicians and researchers. I'd like to also take a trip to Africa with you and talk about your work there, and we'll talk about more of the high points and challenges in your career to date.

Stay tuned - we'll be right back.

Promotional message 15:53

When their child struggles, parents struggle too - but clarity changes everything. The right assessment helps families understand what's really going on and ensures each child gets the support they need to truly thrive. Build the skills that turn insight into meaningful action. Earn the badges that mean more. Search "professional learning, Pearson Clinical".

Andy McLean 16:29

Welcome back to the show!

Sam, just before the break, I mentioned your work in Africa. I'm very interested in this - particularly because I was born in Africa, and indeed I was actually a premature baby in Zambia (many, many years ago!). So I have personal experience of this, even if I can't remember it. Tell me a little bit about your work over there and why it resonates so much with you.

Samudragupta Bora 16:52

It's the people and the possibility. It's really a combination of challenge and hope. In many settings that I work across sub-Saharan Africa, resources are limited, but commitment isn't. I have met several clinicians and families who show extraordinary creativity and resilience, and that really keeps me going. You're constantly reminded that progress isn't just about technology - it's about the trust, the relationships, and showing up consistently.

Andy McLean 17:31

So Sam, having worked in the developed world and the developing world, and in so many different countries, you would have encountered parents from all over the world too, and families from all over the world. Is there anything that connects them - something that is perhaps consistent across the board?

Samudragupta Bora 17:49

One aspect that I think is universal is the bond between a parent and a child. That is certainly universal, regardless of wherever in the world you are - we always see that same connection. Our cultures and upbringing may shape how we express worry, or joy, or how we express that love, that parental love. But the underlying bond is the same. The advocacy that a parent will put forward for a child in Africa is the same as the one we see here in Cleveland, Ohio, where I'm sitting now. So I would say it's the parent-child relationship and bond that is universal.

Andy McLean 18:39

What I find fascinating about your work and your world, Sam, is the intersection between very clinical and precise science, and yet these highly emotive moments where love and joy and sorrow all happen as well. It's a fascinating kind of combination, isn't it, in your career?

Samudragupta Bora 19:02

I agree. And I think at the end of the day, the core of my work is really rooted in human values, principles and emotion. When we are talking about children and families, we are really talking about real people - behind every story there is a real family. That is the thread that is consistent in my work. And I completely agree: yes, it is a combination of "art and science".

Andy McLean 19:33

So Sam, the stakes couldn't be higher in some of the environments where you work. When have you felt most daunted in your career?

Samudragupta Bora 19:43

I'll admit there have been more than one instance like that. When you go into places where there are very limited resources but you still want to deliver the highest standards of care, it definitely feels very daunting. But when you come out the other side, it's like a breakthrough moment.

When I see local teams fully "own" the work we started - in my case, the NICU follow-up programs, the post-discharge care - when post-NICU discharge care becomes routine rather than something very special that somebody from somewhere else came in and started; when you see families

coming back to these programs; when the staff involved with these programs teach each other, and it's no longer me teaching what to do; and when these health systems begin to sustain themselves, and you realise that change is real - I think that's where you overcome those daunting moments.

But it always starts with those very self-doubting moments: "can this be done? Will it be done? Can I do it? Am I the right person?"

So, yes, as I said, there are many, many instances like that. I would say probably every project I started began with those kinds of daunting experiences - those moments of self-doubt.

Andy McLean 21:22

So Sam, you've started to talk there a bit about the cycle that you can begin as a researcher, and the lasting impact that you can have beyond your direct involvement. And when I think about your work, another area where that would apply is in the area of mentoring. I know that you work with many of the next generation of clinician-scientists and researchers. What is it about that work that you find so rewarding?

Samudragupta Bora 21:52

In very simple words, mentoring is how I pay it forward. I'm here because people invested in me - my mentors invested in me. They coached me, they challenged me, they opened doors I didn't know existed. So through this whole cycle of mentoring, I can ensure that the next generation of scientists, clinician-scientists, physician-scientists are even better prepared than we were. It's really paying it forward.

Andy McLean 22:26

And in that mentoring work, for those early in their careers, what advice would you have for people who are starting out?

Samudragupta Bora 22:34

I can think of three very key points.

First: choose work that you genuinely care about. It's a long road, and it's really that passion that will keep you going - passion is what sustains you.

Second: find great mentors, and I emphasise mentors - plural. You need more than one mentor. I'm talking about a community of mentors.

And finally: we should all give ourselves permission to evolve. If we find that we don't love something, that's not failure - that's just learning. It's important to recognise what you love doing, and what you don't.

Andy McLean 23:19

Yeah, it's a gradual process - it's almost a process of elimination sometimes, isn't it?

Samudragupta Bora 23:24

Yes, I agree.

Andy McLean 23:26

I wanted to ask you about the future too. What is it that gives you hope and optimism?

Samudragupta Bora 23:32

I'm optimistic about the intersection of technology and healthcare - especially how it can expand access, personalise care, and reach under-served communities. I'm very hopeful also about the next generation. They bring new tools and new ways of thinking, and if we pair that with strong ethics and good evidence, the upside is enormous. I really believe technology can be transformative. It's really about how we can optimise technology through the lens of the next generation to improve the lives of everyone.

Andy McLean 24:18

Wow. So there's a real powerful combination there potentially.

Samudragupta Bora 24:22

Agreed - huge potential.

Andy McLean 24:26

Now that's great. And Sam, let's draw our conversation to a close by imagining you many years from now, sitting on your back deck, retired and fondly looking back on your career. What are the moments in hospitals that you'll remember most, do you think?

Samudragupta Bora 24:44

What will stay with me most are the people - the children and families I met in places where support was limited, where expectations were often low or very low. Working in parts of Africa taught me that meaningful change doesn't come from having the most resources, but from showing up, listening, and staying committed.

When I look back - even now, when I look back - I'm very proud of investing my time and energy in building sustainable systems of care. I guess when I'm retired, I will be proudest of helping build those systems of care: post-NICU discharge follow-up care, in places where many didn't think it was possible or even necessary.

Andy McLean 25:43

What a terrific legacy. Sam, thank you so much for the work that you do, and thank you for the conversation today. It's been warm, it's been fascinating - I've loved getting a window into your world.

Samudragupta Bora 25:56

Thank you, Andy. I really enjoyed the conversation. I appreciate the invitation.

Andy McLean 26:02

Thanks for tuning in to this episode of Moments in Mind, a podcast by Pearson Clinical Assessment.

If you'd like to know more about the Bayley Scales of Infant and Toddler Development, you can find all the details at the Pearson Clinical website.

And we have more episodes of Moments in Mind coming your way soon - so make sure you subscribe on Spotify, Apple Podcasts, YouTube, or indeed wherever you get your podcasts. And while you're there, please leave us a rating or a review. It really helps the show.

And so until next time, thank you again for joining us, and goodbye for now.

Disclaimer message 27:02

Client details and narratives presented in this podcast have been altered or omitted to protect confidentiality and privacy. Any similarities to actual individuals, events or circumstances are entirely coincidental. Each client interaction is unique, and the outcomes or breakthroughs described are specific to the individuals involved. These examples are provided for illustrative purposes only and should not be interpreted as guarantees or promises of similar results for others.