Mapping 25 Years of Vaccination Progress in Nigeria: New High-Resolution Insights

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Transcript

Speaker 1: Welcome back to the Deep Dive. Before we jump in, we need to make something clear right at the top.

Speaker 2: Yes, a necessary disclosure.

Speaker 1: We aren't real people. We are AI-derived personas, and we're generated from source material uploaded by WorldPop.

Speaker 2: And while it might sound like a free-flowing chat, this audio has been carefully edited, checked, and fully validated by the experts at WorldPop.

Speaker 1: So, with that covered, let's get into today's analysis.

Speaker 2: We're looking at a new research preprint led by WorldPop Associate Professor Dr Edson Utazi, that provides a high-resolution spatiotemporal analysis of childhood vaccination in Nigeria from 2000 to 2024.

Speaker 1: And the main takeaway, the big idea here, is that looking at national averages can be really misleading.

Speaker 2: A national chart might look like steady progress, but this study zooms way in.

Speaker 1: How far in are we talking?

Speaker 2: Down to a 1 by 1 kilometre grid, you see a totally different picture. They used a method called Bayesian geostatistical modelling. It's a way of taking existing survey data from the DHS and MICS surveys and using it to build a predictive map for the years in between.

Speaker 1: Filling in the gaps.

Speaker 2: And they were tracking three key things. The first dose of the measles vaccine, MCV1, and the first and third doses of the diphtheria tetanus pertussis vaccine.

Speaker 1: So, when you look at these maps, what's the first thing that hits you?

Speaker 2: There's just this stark, persistent north-south divide.

Speaker 1: That's been there the whole time.

Speaker 2: The whole 24-year period. Southern regions consistently have higher coverage than the North. But the timeline itself is really interesting. It isn't just a straight line.

Speaker 1: The first part of the period from 2000 to about 2015 saw almost no change.

Speaker 2: It was effectively flat, stagnant. But then after 2015, things start to move.

Speaker 1: Right, between 2015 and 2019, you see this marked improvement across the board, with coverage peaking in 2019.

Speaker 2: And you had some real success stories in that period.
States like Jigawa and Yobe showed really strong, sustained progress.

Speaker 1: But that peak in 2019, it didn't hold, did it?

Speaker 2: No. After 2019, you see a slide backwards - a regression to pre-2015 levels in some places.

Speaker 1: Particularly in areas like Kebbi, Sokoto.

Speaker 2: And Zamfara. And it seems clearly linked to external shocks, you know, rising instability, and of course the pandemic.

Speaker 1: And that kind of regression is so dangerous because it creates more of what the study calls zero-dose children.

Speaker 2: Yes, and these are the children who haven't received even a single dose of the diphtheria tetanus pertussis vaccine.

Speaker 1: The number is just staggering. Over 2 million zero-dose children in Nigeria each year.

Speaker 2: It's a huge number. But there was a specific finding from 2024 that really illustrates the impact of insecurity.

Speaker 1: I think I know what you're talking about, the shift between Kano and Borno states.

Speaker 2: Exactly. Kano almost always has the highest number of unvaccinated kids, simply because it has the largest birth cohort.

Speaker 1: More people, more unvaccinated children. Makes sense.

Speaker 2: But in 2024, Borno state actually overtook Kano. It had more zero-dose children, even with a smaller population.

Speaker 1: And that's almost certainly because of the conflict making it so hard to reach people.

Speaker 2: It shows how insecurity can completely upend the public health landscape. It's creating these cold spots.

Speaker 1: Let's define that. A cold spot is what exactly?

Speaker 2: It's a district where the probability of vaccination coverage is 40% or less. So, these are the areas being missed most severely.

Speaker 1: And having data this specific is more than just academic, it's a tactical map.

Speaker 2: It has to be. It lets program managers move beyond these broad national strategies and start targeting the specific subnational areas, those one by 1 by 1 kilometre grids, to find who they're missing.

Speaker 1: So, they can actually reach those last mile populations.

Speaker 2: That's the goal.

Speaker 1: So, the final thought here is that while the slow national trend is generally upward, it's incredibly fragile.

Speaker 2: The regression after 2019 is a warning. The health systems, especially in the north, need to be strengthened so they can withstand the next shock.

Speaker 1: A fascinating, sobering analysis. If you want to see the maps for yourself to read the full preprint, follow the link below.