"We are always asking, 'what's wrong with the neighborhood? What are they doing wrong?' But so few look at what the neighborhoods are really doing right."

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Voices of Health Equity in Chicago
Interview No. 13
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CENTER FOR COMMUNITY HEALTH EQUITY

DePaul University Rush University

Center for Community Health Equity

The Center for Community Health Equity was founded by DePaul University and Rush University in 2015 with the goal of improving community health outcomes and contributing to the elimination of health inequities in Chicago.

To learn more about the center, please visit us at www.healthequitychicago.org

Voices of Health Equity in Chicago

Our *Voices of Health Equity* project collects the stories of people who have made health equity a central concern in their work. We are interviewing academics, clinicians, public health advocates, community organizers, and others to better understand how different disciplines and professions could work together to eliminate avoidable, unnecessary and unfair health disparities.

Wednesday, July 19, 2017
Interview by Sarah Wozniak and Rosio Patino

Background: Dr. Gupta is an Associate Professor of Pediatrics and Medicine at Northwestern University Feinberg School of Medicine and has more than 15 years of experience as a board-certified pediatrician and health researcher. Dr. Gupta is the director of the Science and Outcomes of Allergy and Asthma Research (SOAAR) Program and is a clinical attending at Ann & Robert H. Lurie Children's Hospital of Chicago, where she is actively involved in clinical, epidemiological, and community research. She is nationally recognized for her groundbreaking research in the areas of food allergy and asthma epidemiology, specifically for her research on childhood food allergy prevalence. She has also significantly contributed to academic research surrounding the economic costs of food allergy, pediatric management of food allergy and asthma, decreasing ED visits and hospitalizations, and improving quality of life by implementing community interventions, focusing especially in schools.

Sarah Wozniak: Could you tell us about who you are and what you do?

Ruchi Gupta: Sure. I am a pediatrician and a researcher. After residency I did a research fellowship and obtained a Master's in Public Health. When I started out 12 years ago, my main interest was looking at health equity in asthma, so I moved to Chicago after my training at Harvard in Boston to work with some experts in Chicago who focused on childhood asthma disparities. Although I started out focusing on asthma health equity, I then became involved with food allergy because of a family with two kids living with food allergy who expressed their hopeful desire for more research to be done surrounding the topic. When I looked at the research, I realized there was so little done compared to other conditions like asthma. So I also started working in food allergy to try to understand how many kids have it, what types they have, what can be done to treat the condition, and how we can improve overall clinical care. Thankfully, there have been amazing developments in this research since I started, and there is some exciting research news for my team as we were recently awarded an R01, a grant award from the National Institutes of Health, to look at food allergy disparities by race to try to bridge any gaps that are adversely affecting children in the different populations we'll study. Overall, I have focused primarily on improving asthma and food allergy outcomes research, but broadly being a pediatrician, I am very interested in improving health for all in all areas.

Sarah: Did you always know you wanted to become a pediatrician focusing on these areas or how did you first get involved with health equity?

Ruchi: Very good question. No, of course I didn't always know…and still don't know. Every day I try to think of what I want to do next. You always have to look inside and be self-aware of what is exciting you and what your passion is. I really liked medicine and science, and I really liked pediatrics, though the first time I felt the need to pursue research in the asthma field was when I was doing my residency in Seattle. During residency, my clinic was seeing lot of new immigrants. Many would come in who had asthma, and many developed asthma after moving

here. We would treat them and then they would end up in the ER in the next week or I would see them on the floor in the hospital. I didn't understand why since we have good medications to help treat asthma, why these kids were not being well-managed, missing so many days of school, or ending up in the emergency room in the hospitals. It was very interesting that it was this specific population that tended to be in the hospital more than other more affluent populations that we saw.

It really bothered me because I loved pediatrics, and I loved being a clinician but I wanted to care for every kid, no matter what their racial or economic status. It started making me ask questions like why is this happening and what can I do on a larger scale to have a bigger impact? And that's how I became interested in disparities research. I want to try to make health care fair so we can give everybody the same chance at improving their health. It was really important to me to do this because some of these kids were in the hospital and were missing school which can change their lives and their trajectories if they are not able to manage their asthma properly.

And as a pediatrician, you start asking more questions to patients about these issues and learn they may have difficulty getting their medications, or maybe the doctor's instructions weren't clear to them, or they're feeling apprehensive about taking medications every day when they feel fine for asthma. There are a lot of issues that come into play and while you can try to address them all with each child, you only have 5 or 10 minutes allotted per child, per visit. This really led me both ask and answer these questions on a larger scale with a longer time frame and conduct my research. I wanted to develop tools that can be used by both pediatricians and families to improve their overall care, so that's where it all started for me.

I ended up going to school for my MPH shortly after this. I never imagined I was going to get an MPH, but as I started the coursework I was very interested in it. I moved to Boston and I joined an amazing fellowship program at Boston Children's that focused on health services research. A lot of my colleague were interested in similar topics in health equity and improving disparities so during fellowship I gained the skill set and then moved to Chicago so I could use my training on the ground in a city that is so diverse.

Sarah: Has there been anyone who has influenced your career or has there been a publication that has really pushed you in the work that you do?

Ruchi: For me medical school was a big point where I had this amazing mentor, Dr. Leah Dickstein, who was all about equity. She would say, "In order to break the glass ceiling, we need men of good conscience." So it wasn't all about women power, it was about working together with men to impact equality for all. She taught me a lot about how you frame things, and how you try to engage everyone and not isolate yourself.

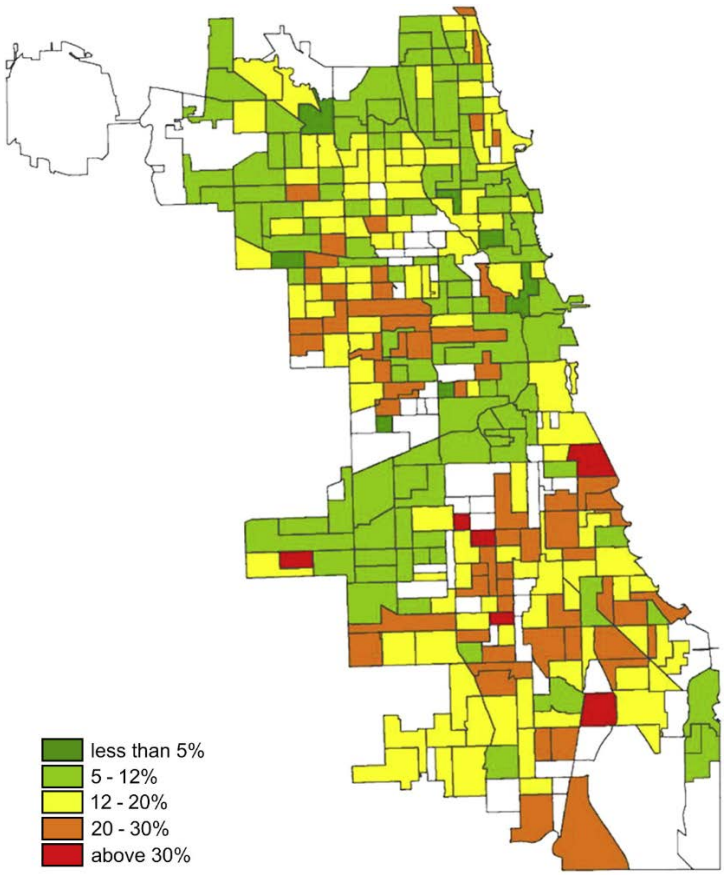
Sarah: Which is important in this field.

Ruchi: Yes, so important in this field. In residency in Seattle, they were known for their outcomes research. There were so many experts and mentors willing to help you learn research skills. And then fellowship in Boston was incredible with so many great mentors. My goal was to go into a field where I can make the biggest impact. I decided to study asthma because it is one of the most common chronic conditions of childhood and because it does impact everyone, all racial and socioeconomic groups. I learned minority populations have a harder time getting proper health care, getting their medications and understanding how to take them. It was the right fit at the time for me. When I started in Chicago studying food allergy, it was the reverse. Typically, you think food allergy impacts higher income, fewer minority children but it's not true and that's what I always wanted to figure out.

Sarah: Moving on to your 2009 article, The Protective Effect of Community Factors on Childhood Asthma, what was your overall goal in publishing that study?

Ruchi: We wanted to look at the geographic variability of asthma in Chicago. We looked at asthma rates by neighborhood and the goal of that first paper was to determine if we could find differences in asthma rates by which neighborhood you lived in (see map 1).

Map 1: Childhood asthma prevalence in Chicago neighborhoods. Source: Gupta et al, 2008.



*Neighborhoods with greater than 15 children from our sample were included in the analysis

That map was really enlightening to me and to many others because you can see areas that almost had a 30 to 40% rate of asthma, and other areas having a 5% rate of asthma. You wonder what is going on? We superimposed race on it, which was also very fascinating, but what lead to that paper was, why? Why are the rates so different even if the neighborhoods are side by side and similar populations? What's going on in these communities?

That's where we wrote a series of papers looking at protective factors, and we wrote one looking at violence -which you mentioned- as a major factor. It was very interesting because I'm sitting here in this office in the middle of downtown Chicago and looking at all this data, but I'm not in these neighborhoods. So all of these studies gave me the idea, ok maybe these are some of the factors that are important. Then the next stage is we need to get out there. So, we started some projects that allowed us to connect with children in communities with very high asthma prevalence and morbidity rates, and were able to collaborate with four schools to find some answers. While working with the students, we asked, "What do you think it is in your neighborhood that is causing these high rates?"

That was a super cool project. I feel like each research project gives you more questions and you have the next phase and the next. Hopefully as you are doing it and people are reading it, they are getting ideas and questions and you are out there in the communities really trying to figure out, what the factors are and how we can intervene?

Sarah: I find it extremely interesting, for all of my last year we were able to pick different projects and we were focusing on asthma that is prevalent in the city of Chicago. I found that a lot of it looked at negative factors associated with asthma, when I saw that this one was one of the first studies that looked at protective factors. How you can use protective factors in conjunction with negative factors to lessen disparities present in asthma?

Ruchi: I think what you said was so key because often times people do tend to focus on the negative factors and we were just talking about this earlier. Someone came in and gave a presentation on food allergies and she was talking about when you ask someone, "Tell me what you think childhood obesity feels and looks like?" Everyone said scared and fearful, but she said in 48 interviews, maybe one person said a positive word. The idea that we always go negative is so interesting. We are always asking, *'what's wrong with the neighborhood? What are they doing wrong?*' But so few look at what the neighborhoods are really doing right.

We can really take some of those positive attributes and reinforce them to make a difference, rather than always focusing on the negative factors. So I really appreciate you saying that. With the schools we've been lucky enough to collaborate with, we begin by asking them "what does community mean to you?" and "what are some of the positive and negative factors that influence your ability to take care of your asthma?" And with this knowledge, we try to shift focus to build on the positive factors that can improve their outcomes and listen for what tends to be the most helpful for the students in their specific community.

One of the biggest things we've noticed is how helpful and positive having a support system is, so that is one thing we try to build upon. Support all starts with education and awareness. If we can get their peers up to speed, and they start to understand what the condition is, how to tell when they're friend might be in distress, and how to intervene- it's a great step in the right direction. Focusing on encouraging one another and reassuring them not be embarrassed for taking their meds properly and normalizing the condition is so important.

That's easier to do, we are going to put that (social support) into these neighborhoods than say, "We are going to cut down the violence." I don't know how much I can contribute to cutting down the violence, but I can definitely build interventions to help communicate your condition and words that you want to hear. So we did that for both asthma and food allergies. Those kids in those neighborhoods developed videos, they were very cool, you have to see them… [see video here]

The students created videos to define what asthma is, identified what the different positive and negative factors were in their communities and lives that affect their asthma, and what could be done in their communities to improve their asthma outcomes. Our hope was for members of the community to learn from these PSA's made by kids in their own communities. We published a manuscript on this work and found that these videos actually improved knowledge of community members.

Sarah: What do you think are the biggest obstacles of dealing with community health in Chicago? Or in your own work that you have encountered?

Ruchi: Now you are asking the hard questions. I think neighborhoods - some are very engaged and some it is very hard to find someone who will collaborate with you. I think a big piece -and we haven't had many of these issues luckily- is trust.

When we work with a community I am thinking, how much can they trust that what I am doing is really in their best interest? I think there is a lot of fear in some communities that in research, we just want to get data about your neighborhood. That's why it's so important to take time to build up the trust within the community, and make sure that everyone has an equal say because they are educating us on what is going on there and how we can help, If we can?

Or they can help us by better understanding their condition. It's a mutual everything, I think typically things have been, I'm the researcher and I'm going to come in and use your data. That is all changing and I think there are big obstacles like funding, and luckily that is changing. There are more resources available for community work, and community research is now becoming important and recognized.

That is really positive. You do things like this project and show the voice and show what the needs are and people hear it and see the benefits of these collaborations and what they can offer and what will come out of it. And hopefully it will be a trickling of more of this type of

stuff. If we can help both researchers and communities understand that we are all on the same page and that we are a team to improve Chicago equity and health in all neighborhoods.

Sarah: Are you optimistic?

Ruchi: Yes, oh yes. I've been here in Chicago for 12 years and I have seen such a change over these 12 years. When I started, I wanted to do community research- there were not so many people who got it. There wasn't a center, a federal group that funded patient centered care or research. Now there is PCORI - a federally funded center focusing on patient centered research. I'm hoping it will become the norm and in 10 years, we will say, "You do what? Basic science? You don't interact with communities?" I think it's going in that direction, not saying that basic science is not important but community research is just as important as community engagement is just as important. There are so many studies that never get translated to the communities. If our research never gets to the people it is meant to impact, then it's no good. I'm not here to do research to put in journals to let it sit on the shelves, we are here to do research that makes a difference in the communities we serve.