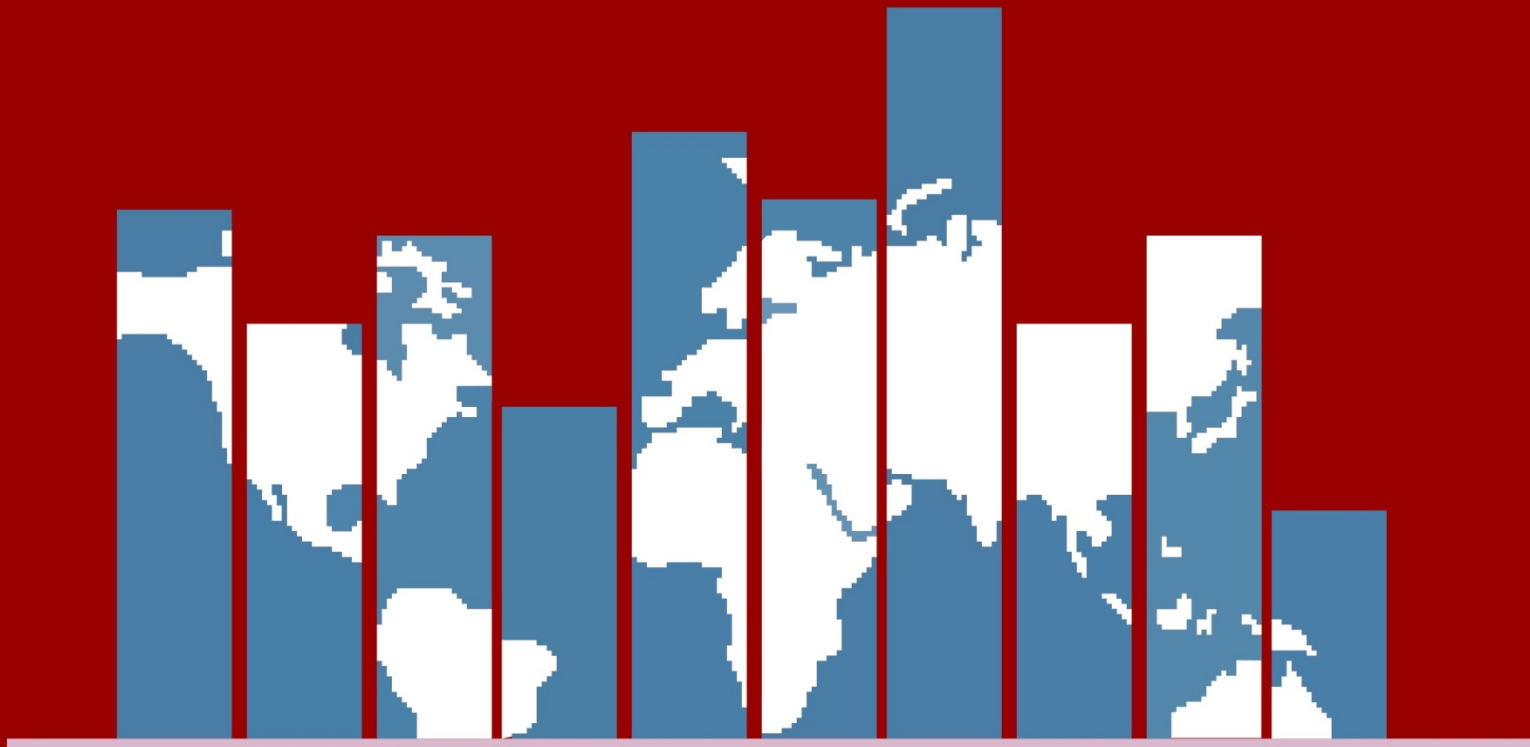# BACKGROUND:
WHY A "*HACKATHON*"?

It started with a conversation with Rob Santos…

- Accelerating "acculturation" of new members to AAPOR and the annual conference

- Helping new members find and utilize all of the qualities and benefits long-time members cherish

- Converting new members into long-time members

- Appealing and enhancing new members' experience at the conference

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The Challenge

Polling Against Polio
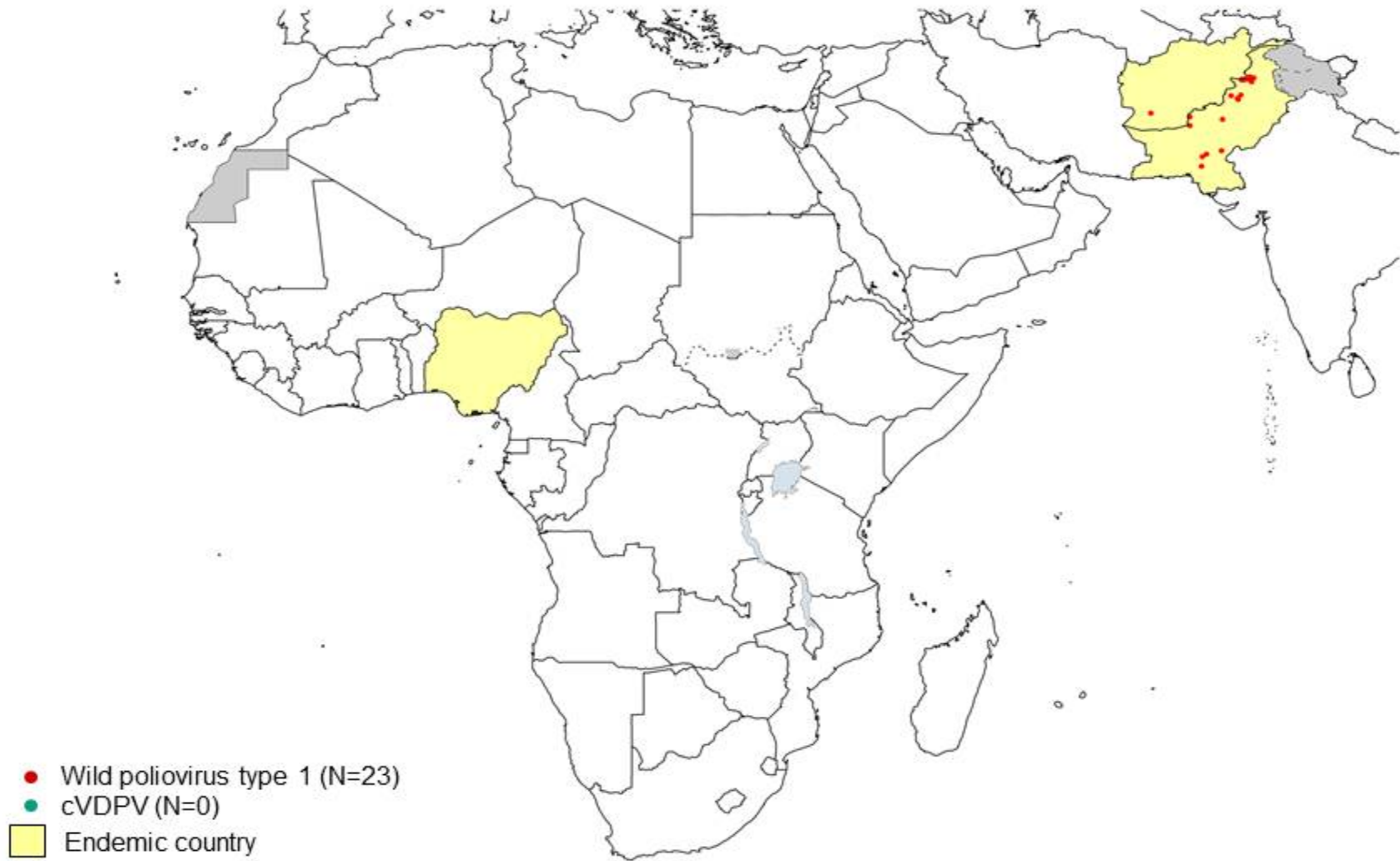
Gillian K. SteelFisher, PhD, MSc

Eradicating Polio: The Global Polio Eradication Initiative

- National governments

- The World Health Organization (WHO)

- Rotary International

- The US Centers for Disease Control and Prevention (CDC)

- The United Nations Children's Fund (UNICEF)

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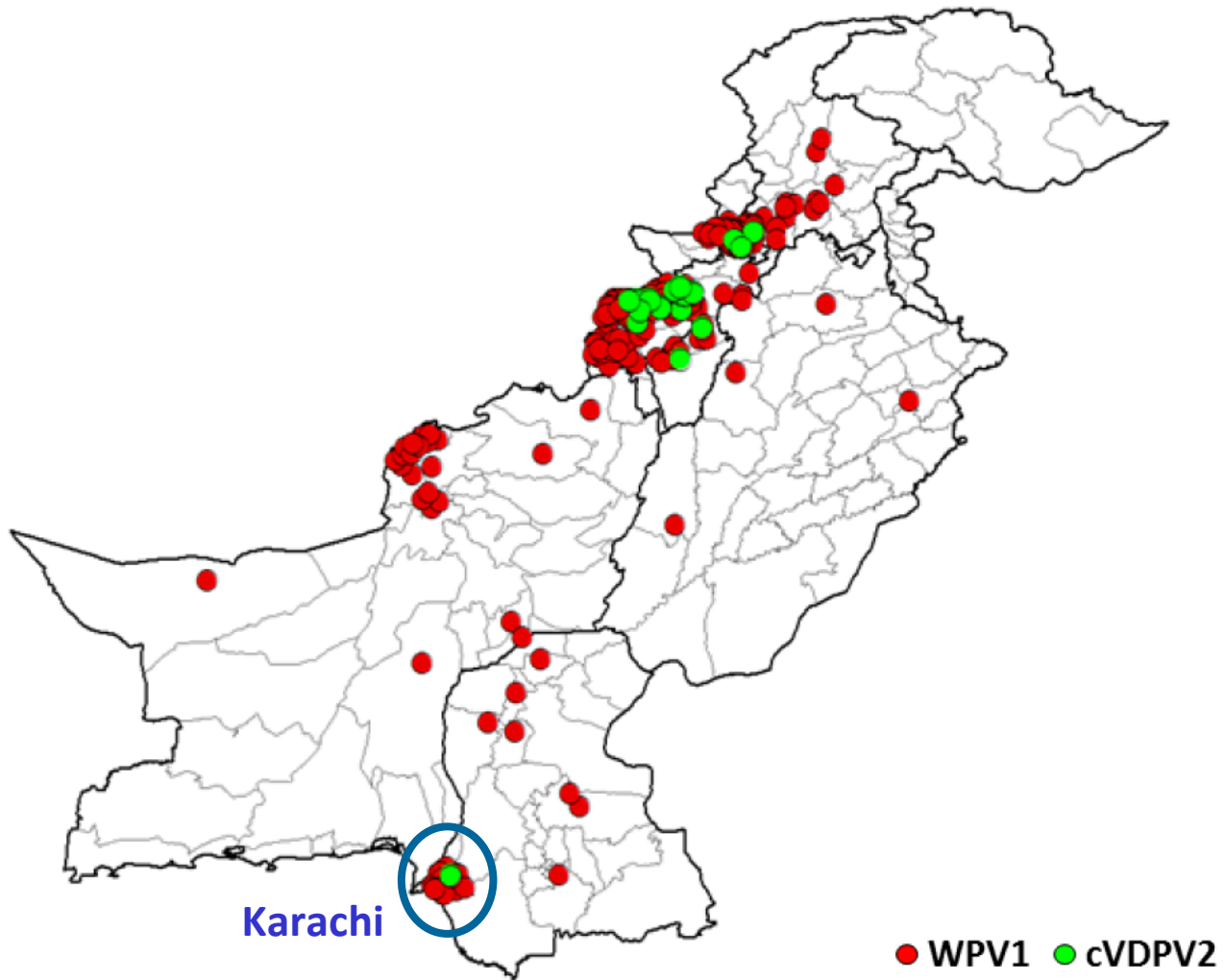
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Polio Cases Worldwide
2015 to May 5

- ● Wild poliovirus type 1 (N=23)
- ● cVDPV (N=0)
- ▢ Endemic country

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Polio Cases In Pakistan
2014

Karachi

● WPV1 ● cVDPV2

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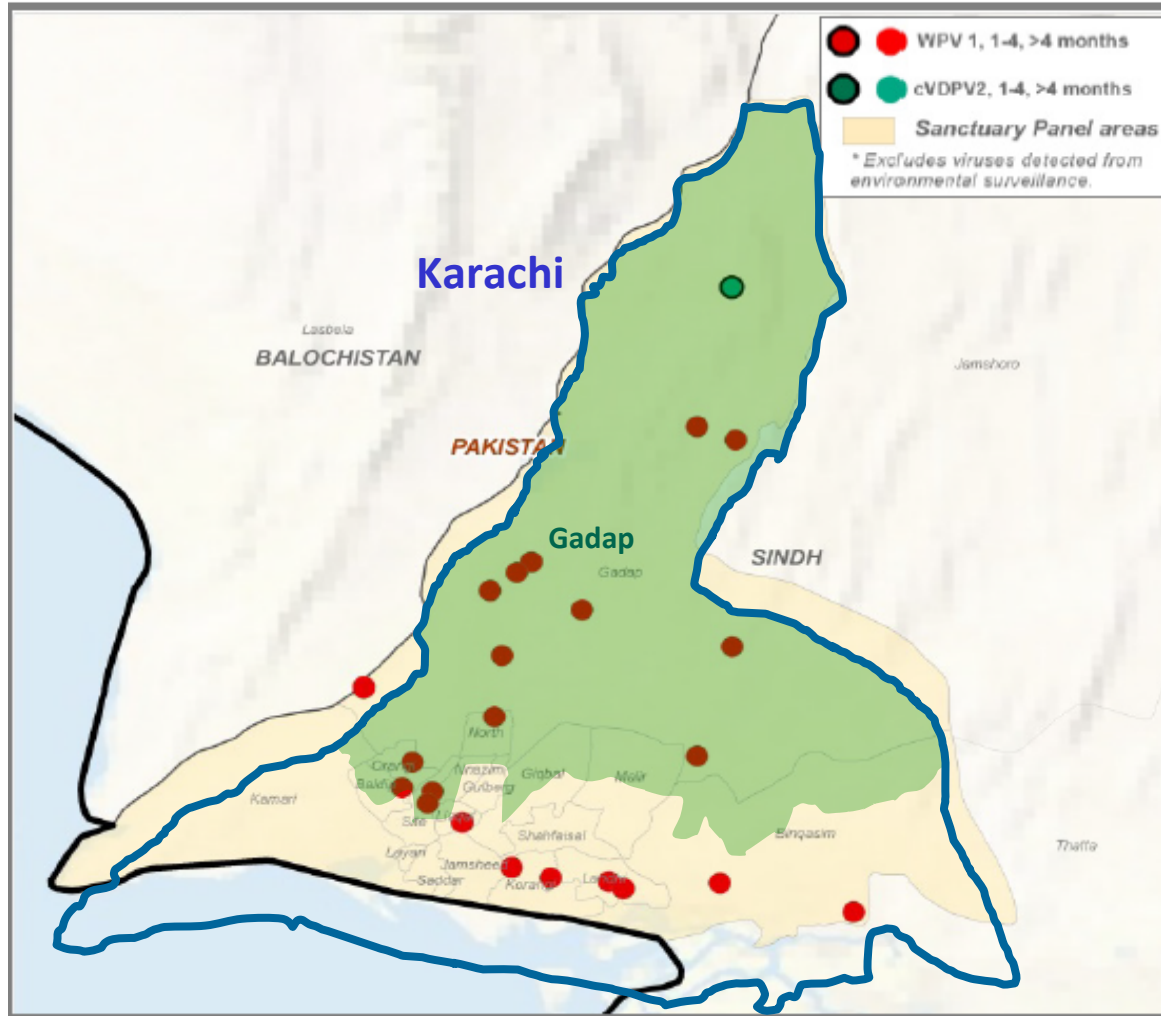
Polio Cases In Karachi, Pakistan
24 Feb 2014 – 24 Feb 2015

In 2014, 10 of 23 polio cases in Karachi came from Gadap

© Global Polio Eradication Initiative

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Welcome To Gadap Town, Karachi!

SIZE & POPULATION

- Largest town (slum) in Karachi – occupies two thirds of the city
- Registered population estimated at 440,000, plus 300,000 unregistered
- 99% Muslim
- Large migrant population
- Large Pashto community

DEVELOPMENT

- Least developed area of Karachi
- Little functional healthcare or education infrastructure
- Most areas lack clean water, electricity, and gas, and travel across town takes hours, despite the fact that Karachi's major gas and water pipelines, electrical lines, and a superhighway run through the town

Oral Polio Vaccine (OPV) Acceptance

- Overall high acceptance

BUT:

- Resistance by religio-political groups

- Vaccinator killings

- Mar 2015 Al Jazeera Article *"Pakistan's polio problem and vaccination danger"*

© WHO/Nasir Mirza

ResearchHack 2.0 Mission

Who does not accept OPV? Why don't they accept it? Is there any point of entry for acceptance?

Things to Consider:

Physical Access and Security

Geopolitics of Data

Response Bias

Social Desirability Bias

Gender Norms

© UNICEF/Mian Khursheed

WHAT'S A "WINNING PROPOSAL"?

Impactful?

- *Does it meet or exceed the goals of the ResearchHack?*
- *Will the results make a difference?*

Innovative?

- *Does it solve the research problem in a new, creative, or never-seen-before way?*

Functional?

- *Can it be implemented in a reasonable timeline and budget?*
- *Can it be performed by the skillset of team or will it require specialized resources?*

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ResearchHack
JUDGING TEAM

Trent Buskirk
MSG

Mick Couper
University of Michigan

Kristen Olson
University of Nebraska - Lincoln

Gillian SteelFisher
Harvard School of Public Health

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FOUNDATION

Polio Hackers

Symone Jackson, Kaiser Family Foundation

Shelli Kashriel, Nielsen

Vera Kurmlavage, Nielsen

Methodology Overview

- Multiple data source approach (four main sources)
  - Random walking sample—households
    - Door to door
  - Snowball based sampling—community
    - Word of mouth within each target population: *Do you know anybody who had their children vaccinated and would be willing to speak with us? Do you know anybody who would be willing to speak with us about their views on polio vaccines?*
  - AFP Documents—Polio patients
  - Field debriefs—vaccinators
  - Incentives
    - we would need to speak with local community members to find out what sort of incentives would be culturally appropriate and well-received by respondents

Data Source 1: Households

- Door-to-door surveys
  - Send sister/brother, husband/wife teams door-to-door using a randomized walking sample
  - Interviewers will have knowledge of the local languages and dialects
  - Males will interview the head of household using demographic questions and other screen screener questions that ask about their general views on vaccines
  - Women will interview the women about their opinions of vaccines
  - Survey questions will include:
    - *Do you vaccinate your children?*
    - *Why or why not?*

Data Source 2: Community

Anti-vaccination Efforts And Campaigns

- Look at past and current campaigns

- What are reasons listed for not vaccinating?

- Who doesn't get vaccines?

- What are campaigns saying about why people shouldn't get vaccinated?

- Propaganda – where are the messages distributed and at what frequency?
    - Leaflets, posters, printed materials, radio stations, community elders/religious leaders (sermons, discussions)

Pro-vaccination efforts

- Community Leaders
    - Sending local orgs to ask people in community settings: markets, railway stations, street theater gatherings, health clinics

- Allows us to gather data from people from different areas—those in areas where most people get vaccinated, those in areas where nobody gets vaccinated
    - Did you vaccinate your children? Why or why not?

Data Source 3: Polio Patients

- Survey administered by AFP or local grassroots organizations fighting polio
- AFP documents cases of paralysis
  - Visit health care center/clinic or contact people listed as polio patients.
- Questions to ask:
  - Have you ever been diagnosed with polio?
  - Have you heard about the vaccine?
  - Have you ever received the polio vaccine or not?
    - *If so, how many times?*
  - Is there anything someone could have told your family that would have changed your family's mind and encouraged them to have you vaccinated?

Data Source 4: Field Debriefs

- Vaccinators - first hand experiences working with the population at large
  - *When you were faced with a resistant patient, did you attempt to change their mind? If so, how?*
  - *What is one piece of advice you would give a vaccinator who is on their first day of the job?*
  - *What are some of the reasons people gave you for not wanting the vaccine administered?*
  - *What is the number one challenge a vaccinator faces and what can be done to address that challenge?*
  - *Were there certain neighborhoods where you experienced more resistance? Why do you think those areas were more resistant?*

Impact & Limitations

Impact

- Our methods will allow us to gather data and information about perspectives from multiple factions or parts of the community.
  - Able to see which areas distribute propaganda, and what that propaganda is saying
  - Research relies on local community members who are already heavily involved in work to eradicate Polio
  - Interviewing polio patients will provide us with a better understanding of the experiences and thought processes of those who have been directly affected
  - Vaccinator feedback –insight regarding challenges they face

Limitations

- Not all of our samples will be random samples: snowball sampling and data collected based on AFP reports
- Security issues: this is a high conflict area. However, our use of traditional paper surveys (rather than technology) should minimize security risks.

Questions?