Catalyzing Health Gains through Global Polio Eradication

An India Trip Report

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Executive Summary

India’s success in eliminating³ polio in March 2014 created momentum, enthusiasm, and resources to tackle some of the country’s other pressing health needs. To capitalize on those valuable developments, the Indian government has been working with international partners to transition public health assets and capabilities developed for global polio eradication—including immunization and communications strategies, human resources, surveillance, and accountability mechanisms—to government programs and other health activities. In the last several years, health officials have used polio program strategies to provide services to hard-to-reach populations, taken on funding of the national polio laboratory network originally funded by the Global Polio Eradication Initiative (GPEI)⁴ and expanded its capabilities to include measles and rubella, and collaborated with polio program partners—including U.S. health agencies, the World Health Organization (WHO), and UNICEF—to raise childhood immunization rates. While India has devoted more than $1 billion of its own funding to polio

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² Jon Andrus is executive vice president of the Sabin Vaccine Institute. Suzi Plasencia is a legislative assistant to Representative Kay Granger (R-TX). William Scheffer is a legislative aide to Senator Jeanne Shaheen (D-NH).

³ “Elimination” of a disease involves removing it from a specific geographical area. “Eradication” denotes permanently reducing to zero the incidence of the disease worldwide.

⁴ The Global Polio Eradication Initiative is an international public-private partnership led by national governments. Core partners include the World Health Organization, UNICEF, Rotary International, the U.S. Centers for Disease Control and Prevention, and the Bill & Melinda Gates Foundation.
eradication over the last decade, it continues to receive significant support from polio program supporters, including nearly $7 million annually from the United States. Yet as eradication draws nearer, international funding for the polio program has begun to taper in many countries, raising questions about the long-term sustainability of polio’s public health boost. In addition, India remains at high risk for polio reimportation based on its population density, poor sanitation systems, and proximity to still polio-endemic Pakistan and Afghanistan. While providing tangible health improvements for India’s children, polio assets also have the potential to contribute significantly to U.S. efforts in global health security in a country that continues to generate one-fifth of the world’s disease burden. The CSIS Global Health Policy Center hosted a five-member delegation to India in late March 2016 to examine the country’s approach to polio program transitions, consider the role the U.S. government should play in the process, and explore the potential for polio assets to contribute to U.S. global health goals beyond polio eradication. The delegation’s observations and analysis led to the following recommendations:

- The U.S. government should continue contributing both resources and technical expertise to India’s polio program at least through global certification of polio eradication, an event now anticipated for late 2019 at the earliest.

- The U.S. government at all levels, and especially the U.S. Mission to India, should continue and intensify its work with the government of India, international organizations, and other development partners beyond those supporting polio eradication to develop a comprehensive, long-term polio transition plan. The plan should, to the extent possible, secure polio assets permanently within the Indian health system rather than have them operate in short-term campaign mode and should expand the use of polio assets to issues beyond polio eradication.

- The Indian polio transition plan should ensure continued progressive financial assumption of polio assets by the Indian government. The U.S. government and other development partners should be prepared to fill in financing gaps at least for the short term to ensure continuation of valuable health tools and to enhance global health security.

- The United States should examine Indian polio assets such as disease surveillance, laboratory capacity, social mobilization networks, and outbreak response capabilities that support U.S. health goals related to measles and rubella elimination, immunization system strengthening, child health, and global health security and consider providing funding for those activities beyond global certification of polio eradication.

- The United States and other development partners should support and encourage continued external monitoring for disease surveillance, data collection,

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6 Author communication with Ellyn Ogden, worldwide polio eradication coordinator, USAID, June 14, 2016, and Tanya Hart, Global Immunization Division, Centers for Disease Control and Prevention, January 22, 2016.
communications, and immunization activities to ensure efficient operations and accountability.

- The government of India should continue and intensify reforms that ensure adequate numbers of properly supported frontline health workers and functional health facilities.

India Embraces Polio Eradication’s Tool Kit

Dressed in a royal purple sari and matching scarf, the petite young woman stood barefoot in the deep layers of dirt surrounding a brick kiln in northern India. She balanced a healthy-looking one-year-old on her hip. She had come from a collection of makeshift tents at the edge of the property, a settlement housing migrant workers who travel to the kiln from poorer areas of the country during the dry season. Whole families work long hours to hand-form and fire clay bricks and are one of the most disadvantaged populations in India.7

On the margins of society and frequently on the move, brick kiln children have been difficult to reach with immunizations and other health services. The GPEI, with its mandate to immunize every child with oral polio vaccine, designated brick kilns—along with construction sites, urban slums, and remote tribal settlements—as high-risk areas that required special attention. India’s ability to successfully vaccinate children in those places was key to its remarkable success in eliminating polio, a feat certified by WHO in March 2014. National and state governments along with international partners now are using the tools initiated by the polio program to raise immunization rates for other childhood diseases. Using polio’s social mobilization and micro-planning techniques, health workers educate parents about the importance of immunizations and work with both them and the broader community to ensure that children receive the life-saving vaccines they require. The woman at the brick kiln was proof the strategy is working. Among her very few possessions was her child’s well-used immunization card, an object she obviously valued as she kept it carefully wrapped in plastic to protect it in her dusty surroundings.

India’s efforts to refocus the polio program’s tools to other immunization and public health activities are an example the GPEI is urging other countries to emulate. As the world moves closer to polio eradication, the initiative will downsize and then eventually disband when eradication is achieved and certified. In order to preserve the knowledge, personnel, infrastructure, and strategies developed through polio eradication, the GPEI is encouraging countries to make an accounting of their polio “assets” and develop plans to ensure those deemed worthy of continuation receive the long-term support they need, either from countries themselves or through development partners. This effort toward polio transition planning is critical to ensuring that activities needed to sustain polio eradication, including surveillance and immunization, are incorporated into all health systems. Further, it is essential to ensuring that immunization and other health activities now supported through polio funding continue to contribute to broader global health improvements. The need for polio program transition planning is urgent and the stakes are high: staff supported by polio

eradication funding makes up the largest source of external technical assistance for immunization and surveillance in low-income countries. The issue is especially important in Africa, since more than 90 percent of WHO immunization staff there currently are supported through polio program funding.

India has long been at the forefront of polio transition efforts. Even before it was certified as polio free, the government of India began working with international polio partners to transition human resources, laboratory capacity, and disease surveillance capabilities to state and national programs. In 2015, India was certified as having eliminated maternal neonatal tetanus, a milestone achievement bolstered with technical assistance from the GPEI-supported National Polio Surveillance Project, and is using polio infrastructure to push toward measles and rubella elimination. UNICEF is negotiating with national and state officials and other development partners to begin funding some of the activities of polio’s Social Mobilization Network (SMNet), which raises vaccine awareness and demand and provides health education in high-risk communities. The Indian government has taken on funding of the WHO-initiated national polio laboratory network, which, in addition to polio, now helps with surveillance activities for measles and rubella. In addition, a large percentage of India’s potential polio cases now are investigated by surveillance officers supported by the government rather than WHO. To enlist development aid beyond that provided through the GPEI, India also has negotiated with Gavi, the Vaccine Alliance, UNICEF, and other international organizations to secure funding for the highly successful National Polio Surveillance Project (NPSP).

To examine India’s polio asset transition efforts, explore the role of the U.S. government in the process, and highlight India’s approach to polio transition as a potential model for other countries facing similar issues, the CSIS Global Health Policy Center sponsored a research delegation to the country in March 2016. In addition to CSIS staff, the group consisted of congressional staff from the offices of Representative Kay Granger (R-TX) and Senator Jeanne Shaheen (D-NH), and Jon Andrus, executive director of the Sabin Vaccine Institute in Washington, D.C. The group met in New Delhi with officials from the Indian Ministry of

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9 Ibid., 56.
12 Author communication with Ranjana Kumar, consultant, WHO/National Polio Surveillance Project, June 10, 2016.
15 Ibid.
16 Ibid.
Health & Family Welfare, WHO, UNICEF, nongovernmental organizations (NGOs), and Rotary International. It then traveled to Lucknow, the capital of Uttar Pradesh, to conduct visits to immunization sites and meet with state health leaders and workers, WHO and UNICEF staff, and religious and other community leaders.

In principal observations, the delegation found that the polio program’s success created momentum and enthusiasm among both the public and Indian government to tackle some of the country’s other pressing health needs. Polio’s tools have been used effectively to increase immunization rates and expand demand for health services in a forward-looking approach other countries should consider adopting. However, dwindling international funding for polio eradication challenges the long-term sustainability of those tools. India still received $34 million from GPEI in 2016 to support polio and immunization-related activities, the sixth-largest amount of any country. While India is a middle-income country, it has an outsized (21 percent) proportion of the world’s disease burden and thus is critical to global health security. Tools and momentum developed through polio eradication offer a unique, time-limited opportunity to foster permanent public health and development improvements that can enhance the health of India’s children and reduce disease worldwide. But careful, deliberate planning is required for this potential to be realized for the long term. The Indian government plays a pivotal role in determining the value of polio assets to its health system and taking on as many as it can to ensure their long-term sustainability. India’s health and development partners, including the U.S. government, should be involved in the process to fill any funding and technical gaps in order to maximize their polio investments and ensure that the global health boost provided by the polio program is not squandered. U.S. government officials should examine how continued support of polio program tools can feed into U.S. health goals related to measles and rubella elimination, immunization system strengthening, child health, and global health security.

U.S. Funding Should Continue through Global Certification

Polio has taken a particular toll on India. In 1988, when the global polio eradication drive began, India reported 24,257 cases. As recently as 2002, it suffered more than 80 percent of the world’s total polio burden. Concerted and innovative approaches through the government of India and its international partners brought the number of wild polio cases to zero by 2012. India faced particular challenges in its elimination quest: a large, highly dense population, poor sanitation and hygiene, and weak health services in poorer areas of the country. Even with its polio success, India continues to face many of the challenges that

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22 Wild polio is a disease that occurs naturally in the environment. Another form of polio, vaccine-derived, can be caused in rare instances by the oral polio vaccine.
made elimination so difficult there. In addition, it shares a long border with Pakistan, one of only two remaining polio-endemic countries. While the annual number of episodic polio vaccination campaigns in the country has been reduced, ensuring continued population immunity to polio will be critical for years to come. To help safeguard its polio-free status, India has intensified its environmental surveillance efforts, which look for poliovirus in sewage and are an essential activity for monitoring for poliovirus in the population. It also has been proactive in introducing inactivated poliovirus vaccine (IPV) into its immunization system. IPV is an injectable polio vaccine that protects against all three polio serotypes and does not carry the risk of vaccine-derived poliovirus, a significant but rare downside of the oral polio vaccine (OPV). All of these activities are resource-intensive and essential to ensuring global polio eradication.

The U.S. government has been a staunch supporter of global polio eradication throughout the effort's 28-year history and has provided critical financial and technical support to India as part of that. Specific activities include supplying polio advisers along with surveillance, laboratory, vaccine purchases, social mobilization, and communications support. U.S. engagement should continue at least through global certification of polio eradication to help India ward against poliovirus reintroduction and to help it convert polio assets to longer-term public health benefit. Not only will this help improve health in India but will ensure the U.S. polio investment is maximized for worldwide disease prevention activities.

The U.S. Government and India’s Polio Transition

The U.S. government has a long history of supporting development and health activities in India (see Table 1). Major health foreign assistance funding categories to India include HIV/AIDS, maternal and child health, family and reproductive health, tuberculosis, and water supply and sanitation (see Table 2). CDC’s Division of Global Health Protection and Global Disease Detection Regional Center is working with India to strengthen disease preparedness and enhance outbreak response. As part of this effort, the United States is helping India strengthen public health epidemiology capacity at the national and state levels and enhance public health laboratory systems and networks. It also is improving health data quality and promoting and collaborating on applied public health research. Through its Global Immunization Division, CDC is assigning secondees to the WHO country and regional offices to provide technical assistance in improving immunization systems. Its objectives in India include maintaining polio-free status, verifying maternal and neonatal tetanus elimination, eliminating measles by 2020, and improving routine immunization coverage.23

The U.S. government also has been a staunch supporter of polio elimination in India. It has provided human resources and technical assistance for laboratory enhancements and surveillance activities that are now expanding to other vaccine-preventable diseases, including Japanese encephalitis, influenza, haemophilus influenzae type b, measles, and

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rubella. Significant funding through both CDC and USAID has supported the SMNet, the NPSP, and other critical polio assets (see Table 3).

Table 1. Planned Annual U.S. Funding to India

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Expenditures (US$ millions)</th>
<th>Total Health Expenditures (US$ millions)</th>
<th>Health Expenditure as % of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>126.6</td>
<td>80.2</td>
<td>63</td>
</tr>
<tr>
<td>2011</td>
<td>122.9</td>
<td>89.3</td>
<td>73</td>
</tr>
<tr>
<td>2012</td>
<td>108.2</td>
<td>84.0</td>
<td>78</td>
</tr>
<tr>
<td>2013</td>
<td>79.7</td>
<td>58.3</td>
<td>73</td>
</tr>
<tr>
<td>2014</td>
<td>103.1</td>
<td>74.0</td>
<td>72</td>
</tr>
<tr>
<td>2015</td>
<td>93.8</td>
<td>65.2</td>
<td>70</td>
</tr>
<tr>
<td>2016</td>
<td>78.7</td>
<td>50.7</td>
<td>64</td>
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<tr>
<td>2017</td>
<td>76.0</td>
<td>49.5</td>
<td>65</td>
</tr>
</tbody>
</table>

Source: http://beta.foreignassistance.gov/explore/country/India.

Table 2. Planned Health Funding in FY 2017 to India, by Category

<table>
<thead>
<tr>
<th>Category</th>
<th>Total Expenditure (US$ millions)</th>
<th>Expenditure as % of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV/AIDS</td>
<td>20.0</td>
<td>40</td>
</tr>
<tr>
<td>Maternal and Child Health</td>
<td>11.5</td>
<td>23</td>
</tr>
<tr>
<td>Family Planning and Reproductive Health</td>
<td>10.0</td>
<td>20</td>
</tr>
<tr>
<td>Tuberculosis</td>
<td>6.0</td>
<td>12</td>
</tr>
<tr>
<td>Water Supply and Sanitation</td>
<td>2.0</td>
<td>4</td>
</tr>
</tbody>
</table>

Source: http://beta.foreignassistance.gov/explore/country/India.

Table 3. 2015 U.S. Polio Funding to India by Funder

<table>
<thead>
<tr>
<th>Funder</th>
<th>Funding Recipients</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDC</td>
<td>National Staff*</td>
<td>$750,000**</td>
</tr>
<tr>
<td>USAID</td>
<td>WHO</td>
<td>$2,965,000</td>
</tr>
<tr>
<td>USAID</td>
<td>UNICEF</td>
<td>$1,385,000</td>
</tr>
<tr>
<td>USAID</td>
<td>CORE Group India</td>
<td>$1,650,000</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>$6,750,000</strong></td>
</tr>
</tbody>
</table>

Source: Author communication with Ellyn Ogden, USAID Worldwide Polio Eradication Coordinator, January 23, 2016, and Tanya Hart, Global Immunization Division, Centers for Disease Control and Prevention, June 24, 2016.

*CDC national staff is seconded through WHO to provide technical assistance to countries.

**CDC also made a one-time contribution of $7 million to India in 2015 to help purchase inactivated polio vaccine.

24 Kayla Laserson, India country director, CDC, “CDC Contribution to the End of Polio in India, and Beyond,” PowerPoint presentation, March 2016.
Given the potential for polio assets to catalyze improvements in the Indian health system, the U.S. mission in India should encourage, support, and participate to the extent possible in the Indian government’s efforts toward polio asset transition. Transition planning should take a full accounting of India’s polio resources and include a variety of stakeholders beyond those involved in polio eradication, such as immunization and child health advocates, to ensure polio assets are used to their fullest potential.

The United States also should look at ways in which India’s polio assets further broader U.S. global health goals. Many of the polio eradication investments can also contribute to U.S. goals related to measles elimination, immunization strengthening, and child health. India also is a major partner in the Global Health Security Agenda (GHSA), a push by the Obama administration to foster greater worldwide capacities to prevent, detect, and respond to infectious disease and biohazards. India is one of 10 countries providing coordination and strategic direction for the GHSA and is a contributing country on action packages related to antimicrobial resistance, biosafety and biosecurity, and immunization. While reducing disease anywhere in the world protects Americans both at home and abroad, given its large disease burden and mobile population, disease control is especially important in India. In one illustration of how disease in India can affect the United States, an Indian woman with a highly infectious and potentially deadly form of tuberculosis traveled to the United States in April 2015, causing an extensive and expensive three-state search for those who may have come into contact with her.

Transitioning Polio Assets to Immunization and Disease Prevention Activities

Indian health officials are keen to use polio assets to bolster other health activities and, in concert with its international partners, have taken specific steps to achieve that goal. Three prominent examples include Mission Indradhanush—an initiative to increase childhood immunization rates focusing on underserved communities; the continuation and expansion to other diseases of the NPSP; and government support for the polio program’s SMNet.

Mission Indradhanush

The polio program spawned renewed effort and resources for reaching disadvantaged populations with childhood vaccines. While improving immunization rates has long been a goal of the Indian government, as of 2013, only 65 percent of children were fully immunized in the first year of life. Starting in 2012, the government intensified efforts to improve its vaccine reach. As part of that venture, in April 2015, the government launched Mission

*Indradhanush* (MI), an ambitious program to raise the proportion of India’s fully immunized children to 90 percent by 2020.\(^{28}\)

MI used polio program data to identify 201 high-focus districts with the largest number of unvaccinated and under-vaccinated children (see Figure 1).\(^{29}\) They include populations living in urban slums with high migration levels, nomads, families working at brick kilns and construction sites, those living in remote areas such as forests or riverine environments, and areas short of regular health workers.

**Figure 1. Map of Mission Indradhanush High Focus Districts—Phase I**

Source: http://pibmumbai.gov.in/English/PDF/E2015_FR16.PDF.

*In total, the Indian Ministry of Health and Family Welfare has identified 201 high-focus districts, with 82 of the districts concentrated in Uttar Pradesh, Bihar, Madhya Pradesh, and Rajasthan.*

\(^{28}\) MI provides immunization against diphtheria, whooping cough, tetanus, polio, tuberculosis, measles, and hepatitis B.

\(^{29}\) Verma, “Monitoring One of the Largest Full Immunization Programmes of the World.”
MI uses other assets and strategies developed through the polio eradication program including:

- Personnel and strategies to immunize underserved and hard-to-reach populations;
- Social mobilization activities through mass media, mothers’ meetings, engaging local leaders (religious, political, medical), and interpersonal communications to increase awareness of the value and availability of vaccines;
- Intensive training of health officials and frontline workers to enhance the quality of immunization services;
- Involvement of district task forces composed of government officials and health officers to ensure accountability and data review on a timely basis so that immunization coverage gaps can be identified and addressed.

MI involves many polio program partners including WHO, UNICEF, the U.S. Agency for International Development (USAID), CDC, and the Bill & Melinda Gates Foundation. For example, WHO deployed more than 225 field medical officers, 900 field monitors, and more than 1,000 external monitors to oversee the operational components of MI, funded through the GPEI and other development partners. They are supplemented by communications-monitoring operations developed by UNICEF and CORE Group Polio Project, a USAID-funded consortium of NGOs. The success of MI’s initial phases resulted in the inclusion of additional high-risk districts in subsequent phases. However, critical technical assistance and other polio partner participation in the project would be curtailed after 2019 without additional funding beyond that provided by the GPEI.

While extremely impressed with India’s effective use of polio assets, the delegation is concerned that some of the assets still are being used in “campaign mode,” that is through episodic surges of personnel and resources targeted only during specific times at targeted populations. While that approach is essential in underserved areas and with particular groups, such as brick kiln workers, the delegation feels greater efforts are needed to incorporate polio assets into fixed health sites to ensure continuous immunization services. While a campaign approach is effective in increasing immunization rates in the short term, it may be unsustainably resource-intensive and does not address on a permanent basis the immunization needs of India’s future generations. The ultimate goal for any country is a solid sustainable immunization system that reaches all eligible children on an ongoing basis and is capable of incorporating new vaccines when they become available. While many parts of India have such a system, it is lacking in some states, especially the poorer regions of Uttar Pradesh and Bihar where health staff and health sites are under-supported. Greater attention needs to focus on how to develop sustainable long-term funding to permanently incorporate polio program tools into India’s standing routine immunization system.

30 Ibid.
31 Ibid. For more about CORE Group, see http://www.coregroup.org/our-technical-work/initiatives/polio.
32 Author communication with Ranjana Kumar, consultant, WHO NPSP, June 10, 2016.
National Polio Surveillance Project

One of the more remarkable institutions to rise out of the global effort to eradicate polio is the NPSP. Established in 1997 by WHO, NPSP helps plan, administer, and oversee polio eradication activities in India. It was critical to identifying which areas and populations in India were most at risk for polio infection and fostering intensified immunization efforts in those areas. NPSP’s excellence in data collection and analysis and disease surveillance is highly valued and can serve as a model for other disease-monitoring activities in India and elsewhere.

In addition to being an essential component of India’s polio elimination drive, NPSP also has served as a de facto public health training institute for the Indian health system, producing since its inception more than 1,000 highly skilled medical officers who have brought their administrative expertise to government posts and health organizations throughout the country.33 NPSP has produced an additional 1,000 administrative and data managers. While hard data were not available to quantify their reach, NPSP-trained medical officers serve in a variety of NGOs around the country. In addition, NPSP-trained personnel have returned to government service as state-level immunization managers in more than 14 states.34 NPSP staff also has aided disease outbreak response in Sierra Leone, Liberia, and Nigeria.35

The government of India recognizes the importance of NPSP and wants to expand its purview to other diseases. Many experts feel such an expansion should be strategically planned and evaluated in order to prevent overstretching the effectiveness and work quality of the institution. Further, additional resources need to be secured for the NPSP since 55 percent of its budget comes through the GPEI, a funding stream that will diminish over time and is scheduled to stop completely after 2019. In terms of the NPSP, the delegation recommends:

- A thorough and comprehensive accounting of the history and impact of the NPSP, including its role in training public health administrators.
- A detailed plan for continuation and expansion of the NPSP to other diseases that ensures the organization is altered slowly enough that its work does not diminish in quality. The plan should spell out how the NPSP will relate to the Indian government. While the government could take on many NPSP functions, a key feature to the successful elimination of polio in India was the external monitoring provided by NPSP personnel. A continued independent assessment of government services will be critical to Indian health system quality assurance.

India’s Social Mobilization Network

Another key component to India’s polio success was the institution of the SMNet. Developed through UNICEF and CORE Group Polio Project, SMNet deploys more than 6,000 women

33 Author communication with Pankaj Bhatnagar, WHO Country Office-India, April 22, 2016.
34 Ibid.
from high-risk communities to talk with parents about their concerns about vaccination and to encourage them to immunize their children. It also holds education sessions with mothers to discuss immunization as well as nutrition and hygiene, diarrhea management, and to encourage exclusive breast-feeding. The SMNet organizes media messages and creates networks of religious and other community leaders to urge vaccination. It is now using the same tools to create demand for routine immunization. An independent assessment of the SMNet released in 2014 found the organization to be effective in reducing polio vaccine refusal rates and reaching underserved communities with health messages and helping them connect with frontline health workers. UNICEF is in negotiations with national and state governments in India to take over the bulk of funding for the SMNet and is working with other development partners, including Gavi, to fill the funding gap. The Indian national government agreed in November 2015 to fund the network until 2018. Future need and funding will be determined by the states.

UNICEF appears to be the farthest along of the international organizations in documenting the reach and effectiveness of its polio resources and in working with the national and state governments to discuss their continuation. It also hired an external consultant, PricewaterhouseCoopers, to map the network and its critical functions and develop technical options for transition of the SMNet. Those options will be useful to UNICEF and government officials as they consider the future of the SMNet.

By engaging people from the most disadvantaged communities to serve as educators and mentors, the SMNet created an important bridge between technical staff working on polio eradication and the communities they were trying to reach. The SMNet is using a similar approach for routine immunization to help expand the workforce seeking to increase vaccination rates and provide community-based communications for other health activities.

Polio Transition Planning Needs a Comprehensive, Long-Term Approach

While India’s quick and effective use of polio assets has been a boon for health activities there, the Indian government’s approach has been more fragmented than perhaps would have been ideal. In laying out a transition planning strategy, the GPEI suggested that countries first make a thorough accounting of polio program assets in their country and determine which ones are essential for ensuring the continuation of needed polio activities (such as surveillance and immunization), which were no longer needed, and which the government wanted to continue either through its own funding or by engaging development partners. Polio transitions in India instead have been done on a more ad hoc basis through negotiations between polio core partners and the national and state government. UNICEF,

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37 Gavi Alliance, “Health Systems Strengthening (HSS) Support, Proposal Form.”
38 Author communication with Nicole Deutsch, chief, Polio Unit, UNICEF India, June 7, 2016.
39 For more on the GPEI’s polio program transition approach, see http://www.polioeradication.org/Resourcelibrary/Resourcesforpolioeradicators.aspx.
for example, has been negotiating transition of the SMNet with both the national and state government. Likewise, WHO has negotiated government funding of polio laboratories with continued WHO oversight. Few of the agreements established have commitments that go beyond 2019, the year when global polio eradication certification currently is expected.

The government has now established a polio transition committee for the NPSP with polio partners such as WHO and UNICEF. It would be useful to develop a more comprehensive approach that considers a broader set of polio assets and expands the range of those involved so that polio’s tools can be applied to more health activities and attract funds beyond those supporting polio eradication. For example, the Ministry of Finance and planning should be included along with government and NGOs supporting child health and global health security to ensure that polio assets are used as widely as possible among all health activities for which they would be useful. In developing a plan, partners should consider seizing this opportunity to strengthen health systems and eliminate measles and rubella. This move would help enhance India’s capacity to respond to emerging infectious disease and promote global health security.

Following the delegation’s trip, consultants funded by the GPEI arrived in India to conduct a comprehensive study of the country’s polio assets and to help devise a longer-term transition plan. This type of support for transition planning is needed in many countries with a large amount of externally funded polio assets.40 Previous CSIS polio transition work in other countries found that while government and international staff involved in polio activities understand the need and value of transition planning, they do not have sufficient time or technical capacities to adequately address the issue.41

Data Collection

Data-collection methods developed for polio drives through the NPSP were much more reliable and comprehensive than those used previously for immunization record keeping. Those methods have been transitioned to the immunization system and are improving information available about the reach of vaccine services. But records often are kept by hand in large paper ledgers and require manual cross-checking with other data collectors, a method that is cumbersome and unnecessarily time consuming. The delegation learned about exciting efforts to optimize IT approaches to collecting field data, such as coverage, thus streamlining and improving quality of coverage data being reported. These efforts should be continued and encouraged.

External Monitoring

While government of India funding for polio assets is essential to its long-term sustainability, there will continue to be a need for monitoring and oversight. A hallmark of the success in

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40 The GPEI’s list of countries in the greatest need of polio transition plans includes: Afghanistan, Pakistan, India, Nigeria, Chad, Democratic Republic of the Congo, Angola, Somalia, Ethiopia, Sudan, South Sudan, Cameroon, Bangladesh, Nepal, Indonesia, and Myanmar.

polio elimination in India was strong monitoring and supportive supervision, quality training, and thorough and timely data collection. Many of these tasks were organized and carried out by Indians through externally funded groups including WHO, UNICEF, and CORE Group. This type of monitoring and data systems enhancements will remain critical to public health improvements for the foreseeable future and should be an important component of any future health programs.

Government of India and Health Infrastructure

The government of India has made great strides in improving health services for its poorest populations through recent reforms to health insurance, maternal and child health, and rural services. The people we met both within and outside the government were smart, dedicated, and determined to make a difference in the health of Indians. Through their efforts, India has seen significant increases in life expectancy and decreases in child and maternal mortality. Nonetheless, India still has a long way to go to reach the government’s goal of providing “universal access to good quality health-care services without anyone having to face financial hardship as a consequence.” According to our interviewees, frontline health workers in India’s poorest states are too few, overwhelmed by the scope of their duties, and inadequately supported by the government. They cited a lower pay scale, fewer benefits, and weaker support structures for government workers than for those of other organizations working in the country. Corruption is widespread in some areas, meaning that money too often does not get where it needs to go. The Indian bureaucracy is too often cumbersome and slow.

The Ministry of Health & Family Welfare acknowledges these issues. The draft National Health Policy 2015 calls for greater expenditures for health care and strengthening and expanding primary care. The plan also calls for improved governance and management of the health sector, which is another often-cited weakness. The draft also calls for development of an implementation plan for the reforms. Concrete, credible progress on weaknesses hampering health service provision is essential for both the health of Indians and the continued faith of development partners that further investments are warranted. If used correctly and sustained for the long term, polio program assets can provide an important catalyst for health advances for both Indians and the world at large. Ultimately, though, the success of those assets will depend on a vibrant, functional Indian health system.

Catalyzing Health Gains through Global Polio Eradication

Mechanisms developed for and supported by global polio eradication programs have improved disease surveillance, accountability, data collection and analysis, outreach and communications, and strategies for reaching the underserved. The government of India is

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43 Ibid., 19.
putting those tools to good use through Mission Indradhanush and other programs but external funding for many of those activities is likely to wane as global eradication nears and health and development partners shift their polio commitments to other priorities. India, its polio partners, and other health stakeholders in the country should continue to look for ways to incorporate existing polio program assets into the health system. Toward that end, the delegation recommends the following:

- The U.S. government should continue contributing both resources and technical expertise to India’s polio program at least through global certification of polio eradication, an event now anticipated for late 2019 at the earliest.

- The U.S. government, and especially the U.S. Mission to India, should continue and intensify its work with the government of India, international organizations, and other development partners beyond those supporting polio eradication to develop a comprehensive, long-term polio transition plan. The plan should, to the extent possible, secure polio assets permanently within the Indian health system rather than having them operate in short-term campaign mode and should expand the use of polio assets to issues beyond polio eradication.

- The Indian polio transition plan should ensure continued progressive financial assumption of polio assets by the Indian government. The U.S. government and other development partners should be prepared to fill in financing gaps at least for the short term to ensure continuation of valuable health tools and to enhance global health security.

- The United States should examine Indian polio assets such as disease surveillance, laboratory capacity, social mobilization networks, and outbreak response capabilities that support U.S. health goals related to measles and rubella elimination, immunization system strengthening, child health, and global health security and consider providing funding for those activities beyond global certification of polio eradication.

- The United States and other development partners should support and encourage continued external monitoring for disease surveillance, data collection, communications, and immunization activities to ensure efficient operations and accountability.

- The government of India should continue and intensify reforms that ensure adequate numbers of properly supported frontline health workers and functional health facilities.

Tools and strategies developed for global polio eradication offer a unique, time-limited opportunity to catalyze improvements to Indian health and global health security. Urgent, concentrated effort is required by the Indian government and its development partners to ensure this opportunity is used to maximum effect. The U.S. government should continue to be a strong partner to India as it develops strategies for a continued successful polio asset transition.
Catalyzing Health Gains through Global Polio Eradication

An India Trip Report

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