Communication for Polio Eradication: Improving the Quality of Communication Programming Through Real-Time Monitoring and Evaluation

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Communication is a critical component in assuring that children are fully immunized and that simultaneous immunity is attained and maintained across large geographic areas for disease eradication and control initiatives. If service delivery is of good quality and outreach to the population is active, effective communication—through advocacy, social mobilization, and program communication (including behavior change activities and interpersonal communication)—will assist in raising awareness, creating and sustaining demand, preventing or dispelling misinformation and doubts, encouraging acceptance of and participation in vaccination services, more rapid reporting of disease cases and outbreaks, and mobilizing financial resources to support immunization efforts. There is evidence of 12% to 20% or more increases in the absolute level of immunization coverage and 33% to 100% increases in relative coverage compared to baselines when communication is included as a key component of immunization strengthening. This article utilizes evidence from Afghanistan, India, Pakistan, and Nigeria to examine how the Global Polio Eradication Initiative has utilized monitoring and evaluation data to focus and improve the quality and impact of communication activities.

Communication efforts are critical to assure that every child completes an immunization series before his or her first birthday as well as to boost simultaneous immunity across large geographic areas for disease eradication and control initiatives. If service delivery is of good quality and outreach to the population is active, effective

communication—through advocacy, social mobilization, and program communication (including behavior change activities and interpersonal communication, or IPC)—will assist in raising awareness, creating and sustaining demand, preventing or dispelling misinformation and doubts, encouraging acceptance of and participation in vaccination services, reporting disease cases and outbreaks more rapidly, and mobilizing financial resources to support immunization efforts (Shimp, 2004). There is evidence of 12% to 20% or more increases in the absolute level of immunization coverage and 33% to 100% increases in relative coverage compared with baselines when communication is included as a key component of immunization strengthening (Rasmuson, 1990).

Polio eradication requires that nearly every child under age 5 receives multiple doses of vaccine, with some doses provided during routine immunization and the rest through supplemental immunization activity (SIA) campaigns. Failure to immunize children results in an immunity gap that enables wild poliovirus (WPV) to circulate, resulting in large human and financial costs. Communication strategies for polio are designed to support increased immunization coverage by identifying missed children, disaggregating reasons for refusals, identifying the most effective channels of information, and engaging effective influencers to overcome resistance. Advocacy efforts aim to keep health workers and governments, including donors, motivated, informed, and funding the initiative (World Health Organization [WHO], 1999; United Nations Children's Fund [UNICEF]/WHO, 2001).

Eradication programs are different from long-term development programs in the sense that they have shorter time frames and focus on quick bursts of action. Traditional knowledge, attitudes, and practices (KAP) studies and other common approaches to measuring and modifying communication strategies have limited use in the fast-paced world of eradication, where one negative media message can undermine an entire campaign, leaving millions of children unimmunized and increasing the costs of eradication by tens of millions of dollars. Real-time data— using a combination of detailed, case-based surveillance, independent monitoring of immunization campaigns, social mapping, and rapid survey techniques—are more effective for guiding eradication communication efforts. The inclusion of communication indicators in postcampaign monitoring and close tracking of media trends is a new and important advancement in eradication and disease control initiatives.

Progress in Polio Eradication

From the late 1980s until approximately 2004, communication mainly played a supporting role in the global Polio Eradication Initiative (PEI). By the end of 2003,

- The number of polio cases had dropped by 99%;
- The number of endemic countries had been reduced from 125 to 6;
- An estimated four million cases of paralysis had been averted;
- More than 600 million children had been immunized, repeatedly, in synchronized campaigns.

From 2004 until the present, however, communication has played an increasingly central role and the PEI has relied on a focused communication strategy that continually monitors and evaluates the polio context, particularly in the remaining endemic countries.[1]

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[1]The countries that have not interrupted WPV transmission and therefore are considered to be polio endemic are Afghanistan, India, Nigeria, and Pakistan.

Using Surveillance Data

Currently, epidemiologic data is published weekly at the country level. The surveillance system for Acute Flaccid Paralysis (AFP), the signal condition for polio, identifies, investigates, and analyzes stool specimens from suspected polio cases. Detailed histories are taken from every AFP case. Spot maps of cases identify high-risk areas and pinpoint the location of ongoing circulation, the movement of the virus geographically over time, and the magnitude of transmission. Genetic sequencing of virus samples determines if the virus is indigenous or an importation. These epidemiologic findings influence communication needs and responses in the short and long term.

Combating Controversy, Mistrust, and the Media

Concerns about vaccine safety have been around since Edward Jenner deliberately infected James Phipps with cowpox in 1796. False rumors about oral polio vaccine (OPV) safety have circulated episodically throughout the PEI, generally resulting in only temporary declines in immunization coverage. For example, in Kenya, Uganda, and Tanzania, rapid action and sound communication plans minimized any serious impact from rumors (UNICEF–Eastern and Southern Africa Regional Office [ESARO], 2003).

2003 was a watershed year, however, for the polio eradication initiative, when a large, well-organized misinformation campaign in several states in northern Nigeria resulted in a boycott of polio immunization campaigns. This led to the spread of the virus to 21 polio-free countries by 2005 and added $500 million to the cost of eradication (Kaufmann & Feldbaum, 2009). Unfounded rumors that the vaccine caused HIV/AIDS and sterility, as well as the absence of effective communication strategies, led to widespread rejection of immunization in parts of west and central Africa and to a lesser degree in India. Communication efforts have been key in addressing the controversy and subsequent mistrust that remains and sporadically reemerges.

At this critical time period, a review of polio communications (Waisbord, 2004) examined the design and implementation of programs for advocacy, social mobilization (SM), and information, education, and communication (IEC) activities for polio eradication. The key findings follow:

- The polio eradication partnership was successful in garnering broad global support. Below the global level, however, advocacy activities had mixed success.
- Most national immunization programs had not mobilized local community organizations to reach the unreached, or to overcome chronic problems with routine immunization (RI) and surveillance.
- Decisions for communication programming generally had not been based on studies of populations' knowledge and attitudes about immunization or on available epidemiologic and social data.
- Developing evidence-based communication plans was related directly to limitations in organizational, technical, and personnel capacity in communication programs.
- The partnership functions better when roles and responsibilities are clear, partners are in regular contact to build trust and facilitate coordination, and all involved are unequivocally committed. The performance of the committees designed to accomplish these things has been highly variable.

- Notwithstanding these limitations, communication programs in support of polio eradication made a number of contributions in terms of building capacity: developing micro plans; organizing SM; carrying out advocacy among local leaders; dealing successfully with rumors and resistance; and identifying hard-to-reach populations. That capacity is not equally distributed across organizations and administrative levels, and the quality of those skills can be improved.

Through 2003 and 2004, the international media approached the failure to eradicate polio solely as refusal by the people of those countries to accept vaccination. Some of the international media focused on the impact of the rumors as a problem of superstition, suspicion, and ignorance. The PEI and the media rarely have discussed the contributing challenges associated with either the perceived aggressive and intrusive nature of polio campaigns or major communication failings on the part of partners (such as the failure from the outset to address the likelihood that many children would have to receive more than the three doses that generally are sufficient in developed countries).

New communication and media challenges were seen in 2005, when a monovalent polio vaccine (a new presentation of the existing vaccine) was introduced into high-risk areas in endemic countries, requiring close contact between the PEI and local media in order to maintain the public trust that the vaccine was safe and effective. Also, in April 2005, Indonesia experienced the reintroduction of polio after a 10-year absence. With no media management plan in place during the initial outbreak response campaigns, the press corps reported on parents' claims that three children had died from receiving the vaccine. In the absence of authoritative and accurate information from government and respected health officials in Indonesia, both health workers and parents questioned the safety of the vaccine. Autopsies performed later definitively proved that the deaths were from other causes, but by then the damage was done and public trust eroded. It took months before training materials, professional associations, and the media converged to provide accurate information.

Advancing Communication Through Ongoing Monitoring and Evaluation

Polio eradication efforts today face some of the greatest communication challenges they have ever encountered. Many of these have received attention in national and global media, but they grow from discussions in homes and villages and amongst political, community, and religious leaders. Marginalized communities where WPV circulates are in dire need of basic services, with polio vaccination conducted whilst other issues are underaddressed. Looking at past events in Indonesia and more recent situations in polio-endemic countries of Nigeria, India, Pakistan, and Afghanistan, the importance of communication for eradicating polio has been realized within the sociocultural, religious, and political contexts. These and other challenges require effective communication action—action that has been successful when applied in a planned and systematic way (The Communication Initiative [The CI], 2008).

A key recommendation from the Waisbord review was to establish a Polio Communications Technical Advisory Group (TAG) to provide objective oversight to the global polio initiative in order to complement the epidemiologic and technical elements of eradication being led by epidemiologists. Based on this recommendation, USAID agreed to sponsor Polio TAG Communication Reviews (Waisbord, 2004).

Over the past 5 years, following the constitution of the first communication TAG in mid-2004, the continuing need for consistent, standardized, simple, and ongoing collection, monitoring, and application of data (both epidemiological and social) to communication programs has been actively promoted. Beginning with the June 2004 TAG Communication Review meeting in Delhi, India, there have been 13 TAG Communication Review meetings held in either South Asia or Africa through December 2009. These meetings are dedicated to examining polio communication efforts, with a focus on region- and state-specific contexts and progress provided by in-country communication and health practitioners. These then are assessed by an external panel of experts in the fields of development communication, and epidemiology, who provide communication strategy recommendations based on evidence presented and data gathered on field visits to endemic states.

To begin with, the TAGs looked for quantitative and qualitative progress based on strategies that are tailored both to small, isolated but hardened populations of resisters and to diverse populations with generalized reluctance, resistance, or apathy to immunization. Successes were seen through signs that the national program collected and used data to guide communication decision making, created and used focused action plans, and made optimal use of communication tools such as mass media, social mobilization, and IPC. In order to convince reluctant parents to vaccinate their children, for example, the reasons for reluctance need to be identified and analyzed. At this phase of the polio eradication process, the TAGs recognized that communication strategies *must* be tailored to epidemiological and social data.

By late 2007, after a series of in-depth reviews in endemic and recently infected countries, common themes emerged from the structured review process. The themes clustered around (a) collection and use of communication and social data; (b) strategic planning and coordination; (c) capacity building and human resources; and (d) media environment. Despite specific recommendations for improvement, progress on recommendations was very uneven among the countries participating in the TAG process. At the request of partner organizations, TAG members were asked to reflect on the reasons for lack of documented progress and determined that the lack of common communication indicators to consistently monitor quality was hindering progress and frustrating implementing partners and donors. Compared with the evidence-based approaches used by polio surveillance and for monitoring campaign quality, monitoring the effectiveness of communication activities lagged behind. As a result, by early 2008, a core set of 15 polio communication indicators (see Table 1) were identified and distributed to develop and monitor effective polio eradication strategies (The CI, 2008). These were to be collected and recorded between each round of polio communication activities and used to make immediate corrections and monitor trends.

This set of communication indicators provided a foundation for communication planners and implementers to establish baselines and monitor trends and outcomes in all endemic countries. Technical advisory groups (TAGs) in the endemic countries echoed the need for better communication data, analysis, and external review. While there was some variation in the indicators chosen, there was, in general, a shift to collecting and using data more effectively. In India, Pakistan, and Afghanistan the implementation of core communication indicators was uneven (with India using them the longest and most intensively). These indicators also were discussed at a meeting in Dakar, Senegal, in April 2008, with promises by attending countries to adopt them (UNICEF, April 2008). In reporting back to the 2008 Africa Task Force

Table 1. Polio communication indicators focused on high-risk areas (HRAs), previous poor coverage, and previous missed areas

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Base Line indicators:
  1. % of HRAs with financial resources in place prior to the round according to the level set in the micro-plan.
  2. % of HRAs with communication strategies, activities, and messaging specifically designed and targeted at "underserved" populations.
  3. % of HRAs with specific communication strategies to increase vaccination of newborns and reduce numbers of low dose children.
  4. % of communication micro-plan in HRAs adjusted to address reasons for missed children.
  5. % of HRAs with social maps that track conversions by reason.
  6. % of areas with poor coverage in previous round targeted for intensive activities in current round.
  7. % of teams in these missed areas from previous round, receiving refresher/IPC training prior to current round.

Knowledge Indicators:
  8. % of households that know about the round beforehand by source of information.
  9. % of households that recall 1, 2, or 3 of 3 key messages.

Operational Indicators:
10. % of HRAs with micro-plan revised and implemented according to the plan.
11. # and % of HRAs with dedicated and trained polio personnel demonstrating effective coordination and analytic capacity.
12. % of vaccinators, supervisors, and monitors proficient in answering campaign FAQs, knowing the date of the next round, and knowing what to do when they don't know an answer.
13. % of non-converted refusal households in prior round visited by an influential person between rounds.

Media Indicators:
14. % of media articles, by tonality.
15. % of news articles with one or more error of polio fact.

Source: The CI (2008).

on Immunization (TFI), however, there was little progress and the region was again tasked with adopting and tracking communication indicators (Africa TFI, 2009). As polio eradication efforts move forward in the face of resistance and refusal and occasional importations into polio-free areas, it is essential for polio communication to respond to the current situation and be able to demonstrate its impact and strategic importance. Meeting the challenges requires a tighter approach to planning, monitoring, and measuring the impact of communication programs.

Most of the data available on communication indicators are collected by independent monitors who visit randomly selected households and do convenience samples of mothers with children in the street during and after SIAs. The monitor's skills and ability to enter the home and talk with the caregiver influence the completeness of the data (WHO/UNICEF/USAID, 2002). Data from independent monitoring forms include specifics on the main sources of information, time and

place of vaccination, and reasons for missed children. These forms are similar across countries and regions, with the more mature programs further disaggregating data. These data are linked with program data, as in the examples from Pakistan in Figures 1 and 2.

In analyzing information sources and responding to programmatic needs, the roles of neighbors and friends, traditional and mainstream media, and traditional and religious institutions have taken on increased importance. These data, as shown in Figure 3, are being tracked at local levels, particularly in the endemic countries and high-risk areas, and used for integrated communication strategies. Improved IPC skills of health workers continue to be cited as an area for strengthening (Chaturvedi, 2008; Rasmuson, 1990). Training modules have been introduced, and increasingly used, to improve the negotiation skills of health workers, making the facility, doorstep, or courtyard interaction more successful and improving coverage (WHO/Center for Disease Control and Prevention [CDC]/UNICEF, 2002). Sources of information are different in urban and rural settings: whereas radio, television, and religious organizations (mosques, churches) and leaders (priests, imams) are effective means of providing information in cities, IPC among the caretaker, local leaders, and health workers is crucial in towns and villages. The media are important to create awareness, but awareness and media messaging are not enough to impact turnout and acceptance for vaccination and can have positive and negative effect (see Figure 4). Interpersonal communication (IPC) and social mobilization need to be conducted to guarantee that caretakers will accept services and bring children to vaccination booths or wait for vaccination teams at home. The costs of each of these approaches vary dramatically. Some information can be imparted through enhanced

% Missed Children due NT, NA, Refusal & Others, Jan-Oct NIDs, 2009, Sindh
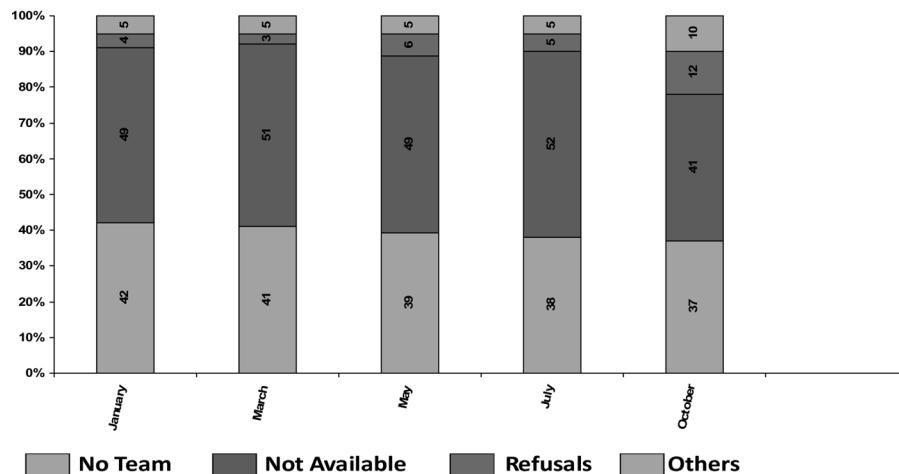
Figure 1. These data were collected in Sindh and presented to the Sindh Communication Review in November 2009. Each of these reasons has a communication component as part of the solution, either through appeals to vaccinators to visit every house and transit site, training of vaccinators in contraindications to vaccination, or education of caregivers about the need to vaccinate sleeping or sick children. The data will allow for more disaggregation, which can offer more detail as needed in high risk areas (UNICEF—Pakistan, 2009).

Trend Analysis of _Missed Children_
From April to August, 2008
Sindh, Pakistan

Source: WHO
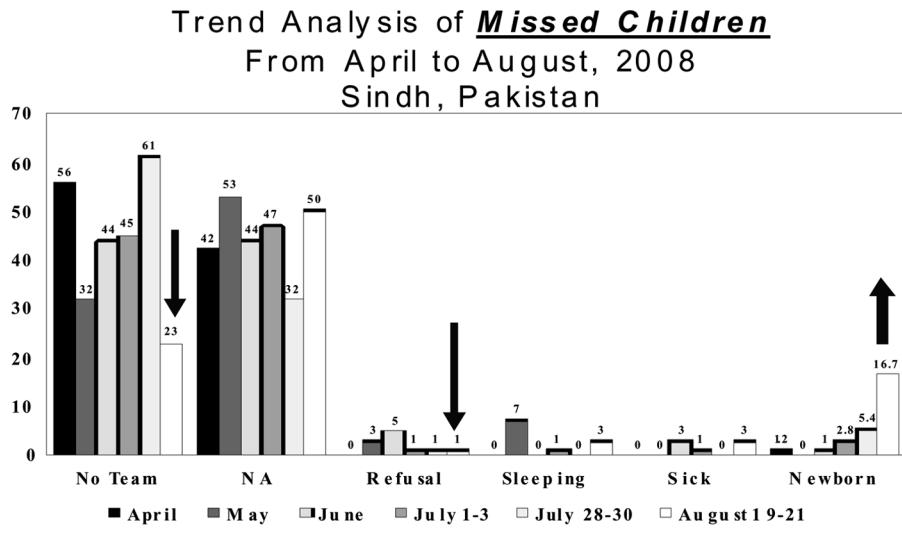
Figure 2. By 2008, these data collected by independent monitors showed a decline in the percentage of houses not visited by a team and refusals, but showed the emergence of missed newborns as a new area of concern. It is important to tease out whether the hiding of sleeping, sick, or newborn children is a sign of hidden resistance or is based on a lack of awareness (UNICEF—Pakistan, 2008).

Sources of Information, March 2007
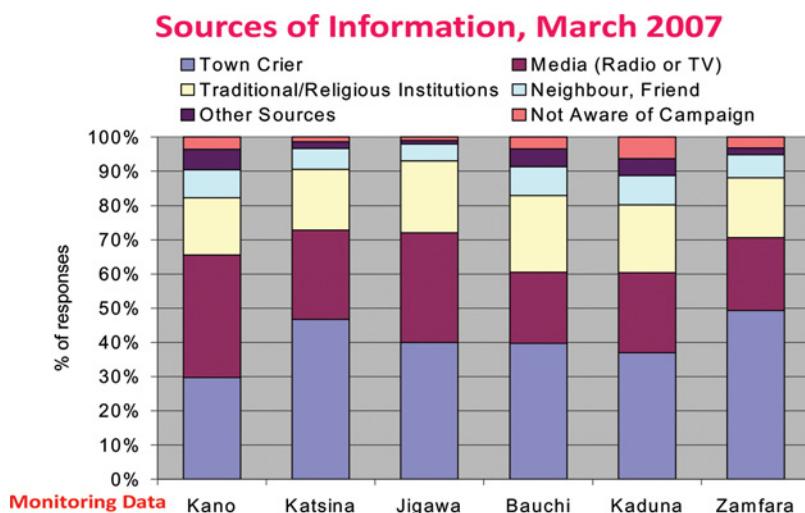
Figure 3. Analyzing the sources of information tells which strategy has the most saturation and where there is room for improvement. Ideally, program managers would want to see increased awareness correlated to areas of increased attention, preparation, and, in some situations, funding (UNICEF—Nigeria, 2007a).
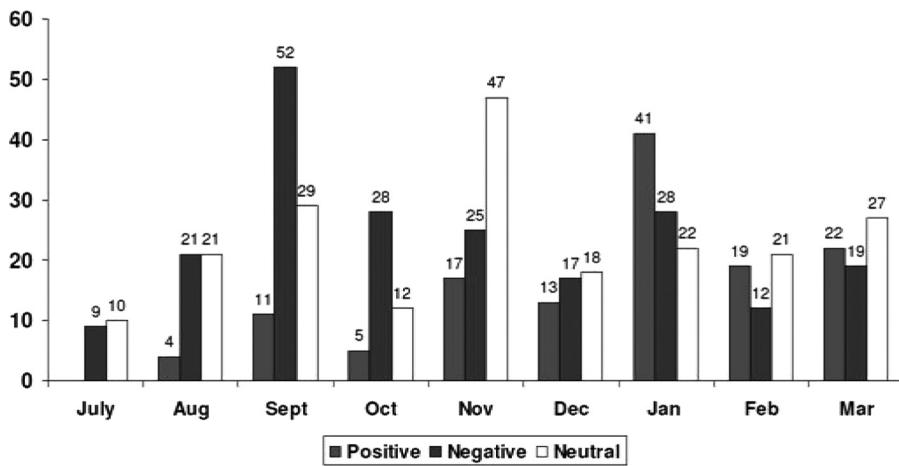
SOURCE: UNICEF

Figure 4. Print media tonality by month: Lucknow, July 2006–March 23, 2007. Monitoring media on a regular basis is critical for managing a positive environment and mitigating effects of negative media (UNICEF—India, 2007).

training, but in other cases eradication efforts may rely on paying for media time, making it even more important to understand what works in a resource-strapped program.

Focusing In: Polio Endemic Country Progress in Polio Communication

Communication coordination and planning at all levels has been increasingly effective in recent years in the national committees (although with important variations across countries). Civil society groups such as Rotary International, the CORE Group of nongovernmental organizations (NGOs) in India, medical and pediatric associations, religious organizations, universities, Scouts, Youth Service Corps, and police, among others, have engaged in dialogue and action for social change in support of increasing coverage, reducing missed children, and earlier reporting of suspected polio cases. Where these groups are established within communities and well organized, they also are involved in Child Health Weeks/Days and other activities beyond polio. In a few countries that have instituted coordinated and well-managed networks of community mobilizers—such as India, Afghanistan, and Nigeria—capacity is growing at the subdistrict level, with these networks being used for other health interventions (Brown, 2006; CORE, 2006).

Regular external monitoring of polio communications continues through periodic national and international communication reviews that have replaced separate communication TAGs. The results and recommendations from these reviews are presented to the National Polio Advisory Group as part of the overall program. Three of the four endemic countries—India, Pakistan, and Afghanistan—conducted reviews in 2008 with India and Pakistan also conducting reviews in 2009. Nigeria's July 2007 review was followed by communication experts visiting the field as monitors, and another review was conducted in 2009. These reviews and visits have documented progress and continued challenges for eradication efforts.

India

Between 2008 and 2009, India has conducted a series of in-depth communication reviews focused on specific challenges, evaluating new initiatives, or both. These reviews have underlined progress, identified weaknesses, and highlighted important lessons. For example, community-level understanding and awareness of polio and eradication efforts is strengthened by working with community mobilisation coordinators (CMCs) and Anganwadi workers (AWWs).[2] Children often are missed due to issues such as inaccessibility (based on political factors, remote locations, or natural disasters—i.e., floods), parents' acceptance of immunization but passivity about having their children immunized every round, seasonal migration to visit relatives or for work, and refusals (UNICEF—India, 2008, 2009).

The lack of community-level infrastructure also can be a challenge; there have been instances where entire communities have refused to vaccinate their children until local authorities promised to provide local infrastructure such as roads, bridges, wells, or health care facilities. In other villages, there was no resistance to polio immunization per se, but there were concerns as to why multiple rounds were required. Whether it is using polio immunization as a lever to get government attention on other issues or raising concerns about the number of times their children were being immunized, communication to increase understanding of the importance of participating in every round and the reasons for multiple rounds is essential to avoiding immunity gaps, increasing the number of children at home during campaigns, and reducing fatigue over time.

In the Patna Region of Bihar, "X" (i.e., unimmunized) households and households remaining X after a revisit are decreasing in areas with CMCs compared with areas revisited by a vaccinator without the time or full-time status to have received the CMC's specialized mobilization training. The percentage of houses with missed children due to refusals is decreasing: 478 Xr (refusal) households generated and 257 remaining after revisiting by a trained mobilizer in April 2008 and 423 Xr (refusal) households generated and 195 remaining in July 2008 after a visit by a trained mobilizer (UNICEF—India, 2008).

In the Kosi River Region of Bihar, CMCs have helped reach communities regularly cut off during floods and identified families living in temporary settlements (basas) as they followed seasonal agricultural work.

Throughout western UP, CMCs systematically register and track pregnant women (PW) and visit homes of PW during the third trimester and before SIAs to check on new births. Interpersonal communication (IPC) and counselling sessions are held regularly with families of PW on all aspects of delivery, neonatal care, and immunisation (UNICEF—India, 2008, 2009).

Pakistan and Afghanistan

Polio communication reviews were held in both Pakistan and Afghanistan in September 2007, with follow-up meetings in Egypt (regional) in February 2008 and June 2009, Afghanistan in July 2008, and Pakistan in September 2008 and 2009. For both

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[2]Community mobilization coordinators (CMCs) are positions within the polio eradication social mobilization network in India, focused within UP and Bihar. Anganwadi workers (AWWs) are health positions functioning through the government-sponsored Integrated Child Development Services system throughout India.

countries, the focus was on strategies for high-risk areas; strategic approaches to communication activities and training; human resource needs; and follow-up to communication activities. Cross-border coordination between Pakistan and Afghanistan is particularly important because of the 1,200 km border between the countries and significant population movement between them, making them a single epidemiological block (Figure 5).

As of February 2008, a number of activities were being implemented to reach nomadic populations:

1. Permanent cross-border vaccination posts have been increased from 2 in 2006 to 11 in Pakistan and 13 in Afghanistan in 2007, resulting in the immunisation of 1.1 million children in 2007.
2. Special vaccination activities outside SIAs have included seasonal vaccination posts offering other antigens such as measles at "choke points," resulting in 16,514 children vaccinated in Balochistan in 2007.
3. Special emphasis on mapping nomadic movements during campaigns and developing special microplans resulted in 0.2 million nomadic children receiving OPV in the October 2007 NIDs in Pakistan and 0.08 million during the summer in Afghanistan.

The impact of this work is reflected in the reduction of polio cases in nomadic populations from 5 in 2006 to 0 in 2007, though, as long as polio virus
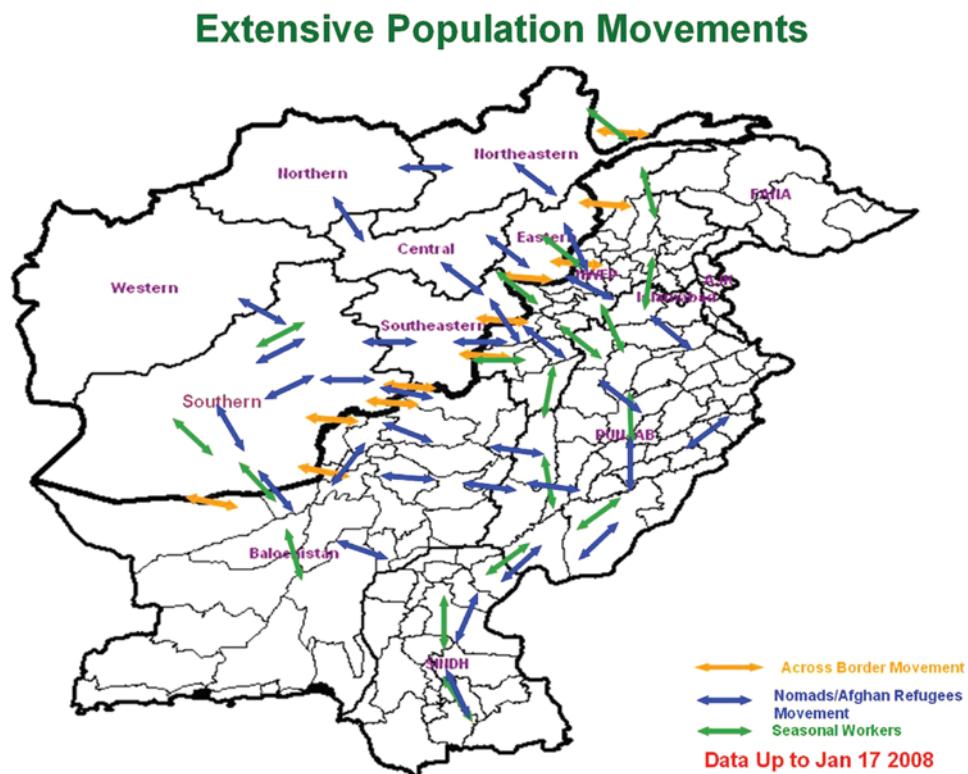
Figure 5. More than 1 million children are immunized at border crossings each year, but many more bypass official borders (Dost, 2008).

continues to circulate in nomadic areas, they continue to be susceptible (Dost, 2008).

Despite progress, significant misconceptions continue regarding vaccination—many with a religious or political origin—and inaccessibility due to political unrest is common. There has been intensive circulation of Fatwas[3] against OPV amongst a population where Fatwas are very influential. Influential religious leaders have the capacity to counter negative Fatwas with positive ones, and when engaged appropriately have become strong supporters of OPV (TAG, 2008). The process of engaging religious leaders in the Northwest Frontier Province and Federally Administered Tribal Areas (NWFP/FATA) in 2007 contributed positively in a number of areas. There was a decrease in refusals for religious reasons, which in turn led to an increase in coverage. Religious refusals fell from 31,101 in August 2007 to 19,154 in October 2007. At the same time as these numbers were going down, the percentage of those who at first refused but later allowed their children to be vaccinated increased from 13% in August to 17% in October. According to a review conducted by WHO in 2009, "chronic hardline refusals" represented only 0.6% of the target population in NWFP/FATA (Tangcharoensathien, Hafeez, Shefner-Rogers, Borel, & Perveen, 2009).

In Afghanistan, a major challenge has been finding ways to directly reach caregivers of children under 5 years old. A survey conducted in July 2008 indicated that female members of the households/communities tend to either credit their source of information as coming from television (for the urban population) or from conversations with women they know in the confines of their family courtyards. Other sources, such as teachers, community leaders, and mullahs, were of lesser significance (UNICEF—Afghanistan, 2008). The assessment points to the importance of IPC strategies that reach women in culturally appropriate ways and recommends that such activities be scaled up, though finding a cost-effective and scalable approach has proven difficult, especially in rural areas (Toole, Simmonds, Coghlan, & Mojadidi, 2009).

Nigeria

Communication reviews in Nigeria were held in June 2007 and March 2009. Between these two reviews, the polio eradication program secured sustained national commitment and expanded intersectoral collaboration. Communities no longer displayed block rejection of vaccination, and they were beginning to address their own challenges at the community level facilitated by increased support from traditional and religious leaders. Unfortunately, wavering political commitment at the state and Local Government Area (LGA) levels, as well as pockets of rejection by households or families, still posed significant challenges.

Positive strides were seen at national level as new leadership and a greater focus on coordination began to emerge. In 2008, however, Nigeria went through a crisis related to poor campaigns and a large immunity gap, resulting in an increase in polio cases from 285 in 2007 to 798 in 2008 before dropping down to 388 in 2009. This impacted not only Nigeria but also many surrounding countries where polio was reintroduced. The 2008 increase resulted in significant international attention, a

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[3]A Fatwa in the Islamic faith is a religious opinion on Islamic law issued by an Islamic scholar.

considerable concern and focus at the national level and perhaps most importantly alarm and action amongst local traditional leaders. This response helped to improve coverage and reduce the number of cases by 2009.

Many of the challenges facing the program in 2007, however, remained in 2009. These included a poorly developed media strategy, virtually no IEC materials, poor IPC training, limited use of communication data, too few skilled communication staff at all levels, and a lack of coordination among national, state, and LGA levels of government. It remains to be seen whether these efforts will be sustainable through 2010, though further strengthening of the communication program will have to be a priority (UNICEF—Nigeria, 2007b, 2009).

Remaining Challenges for Polio Eradication and Communication Efforts

Since the start of the Global Polio Eradication Initiative in 1988, there has been a 99% reduction of polio cases worldwide. In 1988 there were 350,000 cases per year, or approximately 1,000 per day. This has been reduced to 1,595 cases per year, worldwide, in 2009. The trend over the past 5 years has been flat, with 1,655 cases (2008), 1,315 cases (2007), 1,997 cases (2006), and 1,979 cases (2005), reflecting the loss of momentum the program suffered in 2003/2004 as a result of some states in Nigeria ceasing immunization (WHO, 2010). With new goals to stop the transmission of WPV in two endemic countries by 2011 and the introduction of a Type 1 and 3 bivalent vaccine, the global initiative is striving to reach every child through improved vaccine technology, stronger communication, and excellent team performance. There remain four countries that have not yet interrupted indigenous transmission of WPV—Nigeria, India, Afghanistan, and Pakistan; they accounted for 82% of all cases in 2009. Each of these countries has demonstrated successes within their boundaries that provide compelling evidence that polio eradication is technically feasible, but it has been frustratingly hard to achieve the levels of immunisation required for eradication. And while the endemic countries analyze the reasons for missed children and develop locally appropriate solutions, numbers of susceptible children in previously polio-free areas increase.

The years 2008 and 2009 have been difficult for the global polio eradication programme. The number of nonendemic countries with imported polio cases increased from 14 to 19, and the number of cases rose from 148 in 2008 to 348 in 2009. Five countries (Sudan, Chad, Democratic Republic of Congo [DRC], Angola, and Niger) had prolonged transmission (more than 12 months) following importations. Contributing to this situation was the following:

- Suboptimal immunity in key areas of northern India, where despite multiple campaigns achieving high immunization coverage with OPV, WPV1 transmission has not yet been completely stopped.
- Suboptimal campaign quality in Nigeria, parts of Pakistan, and the Southern Region Afghanistan, where coverage has not achieved the levels necessary to interrupt transmission; similarly, suboptimal campaign reach in the five countries that have had prolonged transmission of WPV following importations.
- Security issues limiting access to communities during immunization campaigns in parts of Afghanistan and Pakistan (Advisory Committee on Poliomyelitis Eradication [ACPE], 2008).

In spite of the recent growth in importations, the majority of polio cases still are found among marginalized populations in the endemic countries where those

communities are large, often alienated from both mainstream society and national politics, and distrustful of government services. Geographically isolated areas pose additional challenges, as do areas affected by conflict and natural disasters. Ensuring that OPV is available to these populations presents daunting challenges that communication can help to resolve. One of the main challenges for polio eradication is making the vaccine available to hard-to-reach populations as well as increasing and sustaining public awareness and acceptance through advocacy and communication efforts. In conflict areas, extraordinary efforts are needed to negotiate "Days of Tranquility," or ceasefires, to enable the safe passage of vaccinators.

Combined with this challenge is the need to effectively address the remaining pockets of resistance to the vaccine among some minority communities. Rumors, misconceptions, and resistance are main obstacles that interrupt access and acceptance in polio-endemic countries. In reaching these populations, the PEI confronts both operational (from logistics to vaccine procurement) and communication difficulties.

Communication should be considered from the start within all disease control programs. Particularly in the case of epidemics or disease outbreaks, communication experts should be part of any outbreak investigation and response team. Their role in assessing the media and community environment, rapid mapping of the social and epidemiologic situation, and developing and implementing a communication plan that provides accurate information from respected spokespersons is critical to sustaining public trust in a time of crisis. Building on existing communication networks to disseminate information on effective control measures will be instrumental to finally eradicating polio. Building in a robust system for real-time monitoring and evaluation of communication processes and impact is essential for reaching the most marginal, vulnerable, and overlooked populations. Data generated from these activities can help target human and financial resources where needed, guide message development and nuances, identify effective information sources, and foster closer collaboration among scientists, health workers, communicators, government officials, and civil society. As demonstrated in this article, communication strategies that include real-time monitoring and evaluation are crucial to eradicating polio.

References

Advisory Committee on Poliomyelitis Eradication (ACPE). (2008, November). *Draft conclusions and recommendations of the Advisory Committee on Poliomyelitis Eradication*. Geneva: WHO. Available: http://www.who.int/wer/2009/wer8403.pdf

Africa Task Force on Immunization (TFI). (2009, January). *Recommendations from the 16th Task Force on Immunization Meeting*. Brazzaville, Congo: WHO Africa Regional Office.

Brown, D. (2006, February 13). Africa's polio efforts aiding bird flu fight. *Washington Post*. Available: http://www.comminit.com/en/node/218926/292

Chaturvedi, G. (2008, December). Fear of polio drops overcome. *Deccan Herald*. Available: http://www.comminit.com/en/node/282990/292

The Communication Initiative (The CI). (2008, February). *Towards polio communication indicators: A discussion document*. Victoria, BC, Canada: Author. Available: http://www.comminit.com/en/node/268356/292

CORE, for the United States Agency for International Development. (April 2006). *CORE group partners project FY06 semi-annual narrative report*. Washington, DC: Author.

Dost, A. G. (2008, February). *Afghanistan–Pakistan cross border coordination*. Presented at The Technical Advisory Group on Poliomyelitis Eradication in Afghanistan and Pakistan, Cairo, Egypt. Available: http://www.comminit.com/en/node/269536/292

Kaufmann, J. R., & Feldbaum, H. (2009). Diplomacy and the polio immunization boycott In Northern Nigeria. *Health Affairs*, *28*(4), 1091–1101.

Rasmuson, M. (1990, October). *Sustaining EPI: What can communication do?* The USAID-HEALTHCOM Project. (Originally prepared for The 1990 Global Advisory Group Meeting of the WHO Expanded Programme on Immunization, Cairo, Egypt). Washington, DC: Academy for Educational Development. Available: http://www.path.org/vaccineresources/files/Communication_for_EPI.pdf

Shimp, L. (2004, May). *Strengthening immunization programs: The communication component*. Arlington, VA: Basic Support for Institutionalizing Child Survival Project (BASICS II) for the United States Agency for International Development. Available: http://www.jsi.com/Managed/Docs/Publications/Immunization_Communication_eng.pdf

Tangcharoensathien, V., Hafeez, A., Shefner-Rogers, C., Borel, P., & Perveen, R. (2009, October). *Independent evaluation of major barriers to interrupting poliovirus transmission in Pakistan*. Final report of the independent evaluation team appointed by the Director General of the World Health Organization. Geneva: Author. Available: http://www.polioeradication.org/content/general/Polio_Evaluation_PAK.pdf

Technical Advisory Group (TAG) on Poliomyelitis Eradication in Afghanistan and Pakistan. (2008, February). *Religious leaders as partners in polio eradication NWFP/FATA*. Cairo, Egypt: Author. Available: http://comminit.com/en/node/269402/292

Toole, M., Simmonds, S., Coghlan, B., & Mojadidi, N. (2009, October). *Evaluation of the Global Polio Eradication Initiative: Report on the independent evaluation of the major barriers to interrupting poliovirus transmission in Afghanistan*. Available: http://www.polioeradication.org/content/general/Polio_Evaluation_AFG.pdf

United Nations Children's Fund (UNICEF). (2008, April). *Follow-up consultation on the Task Force on Immunization (TFI) recommendation for communication for the Expanded Programme on Immunization-Polio*. UNICEF—West and Central Africa: Author. Available: http://www.comminit.com/es/node/274821/292

United Nations Children's Fund (UNICEF)—Afghanistan. (2008, July). *Female courtyard strategy for polio communication Eastern Region Afghanistan*. Presentation UNICEF Afghanistan. Available: https://www.comminit.com/en/node/279022/292

United Nations Children's Fund (UNICEF). (2009). *India communication update*, Vol. XVII. New Delhi: Author. Available: http://www.unicef.org/india/India_Communication_Update_January_2009.pdf

United Nations Children's Fund (UNICEF)—Eastern and Southern Africa Regional Office (ESARO). (2003). *Combating antivaccination rumours: Lessons learned from case studies in East Africa*. Nairobi: Author. Available: http://www.path.org/vaccineresources/details.php?i=144

United Nations Children's Fund (UNICEF)—India. (2007). *IEC & Media Engagement*. Presentation to Polio Communication Technical Advisory Group, New Delhi, 2007. Available: http://www.comminit.com/pdf/PolioTAG_Delhi_Mar2007_IEC.pdf

United Nations Children's Fund (UNICEF)—India. (2008). *India Polio Communication Review, Phase 1–2008 and India Communication Review Phase 1–2008: Recommendation Tracking Sheet*. New Delhi: Author. Available: http://www.comminit.com/en/node/279074/292

United Nations Children's Fund (UNICEF)—Nigeria. (2007a, June). *Engaging communities for polio eradication in Nigeria—Review of the National Communication Strategy*. Presentation to the Polio Communication Technical Advisory Group, Abuja, June 2007. Available: http://www.comminit.com/pdf/Nigeria_Strategy_Presentation.ppt

United Nations Children's Fund (UNICEF)—Nigeria. (2007b, June). *Polio communication in Nigeria: Interruption and beyond: Final TAG Recommendations*. Presented at the Technical Advisory Group Meeting on Polio Communication, Abuja, Nigeria, June 2007. Available: http://www.comminit.com/en/node/269773/292

United Nations Children's Fund (UNICEF)—Nigeria. (2009, March). *Report from the Communication Technical Advisory Group: Abuja, Nigeria*. Abuja: Author. Available: http://www.comminit.com/en/node/290851/292

United Nations Children's Fund (UNICEF)—Pakistan. (2008, September). *Sukkur District: Sindh Provincial Communication Review Meeting*, Sindh, Pakistan, September 2008. Available: http://www.comminit.com/files/08%20Sindh%20D2%20Sukkur%20District,%20Sindh%20International%20Communication%20Reviewnopics.ppt

United Nations Children's Fund (UNICEF)—Pakistan. (2009, November). *Sindh polio communication review recommendations, Sindh Polio Communication Review Meeting*, Karachi, Pakistan, November 2009. Available: http://www.comminit.com/files/SindhCommRevReportNov2009final.doc

United Nations Children's Fund (UNICEF)/World Health Organization (WHO). (2001). *Communication handbook for polio eradication and routine EPI*. WHO/AFRO Brazzaville: Author. Available: http://www.unicef.org/cbsc/files/polio.pdf

Waisbord, S. (2004, April). *Assessment of communication programs in support of polio eradication: Global trends and case studies*. Washington, DC: The CHANGE Project, Academy for Educational Development/The Manoff Group. Available: http://pdf.usaid.gov/pdf_docs/PNADC156.pdf

World Health Organization (WHO). (1999, October). *Advocacy: A practical guide with polio eradication as a case study*. Geneva: Author. Available: https://www.who.int/vaccines-documents/DocsPDF99/www9958.pdf

World Health Organization (WHO). (2010). *Wild polio virus case count as at January 26, 2010*. Geneva: Author. Available: http://www.polioeradication.org/content/general/casecount.pdf

World Health Organization (WHO)/Center for Disease Control and Prevention (CDC)/United Nations Children's Fund (UNICEF). (2002). *Training module: Enhancing interpersonal communication*. New York: UNICEF (in collaboration with WHO and CDC). Available: http://www.comminit.com/pdf/UNICEF_polio_IPC_training_module.pdf

World Health Organization (WHO)/United Nations Children's Fund (UNICEF)/USAID with USAID BASICS, and USAID CHANGE Projects. (2002, March). *Communication for polio eradication and routine immunization: Checklists and easy reference guides*. Geneva: WHO (in collaboration with UNICEF, USAID BASICS, USAID Change). Available: http://www.path.org/vaccineresources/details.php?i=146