# Per Diems in Polio Eradication: Perspectives From Community Health Workers and Officials

Nearly all global health initiatives give per diems to community health workers (CHWs) in poor countries for short-term work on disease-specific programs. We interviewed CHWs, supervisors, and high-level officials (n = 95) in 6 study sites across sub-Saharan Africa and South Asia in early 2012 about the per diems given to them by the Global Polio Eradication Initiative. These per diems for CHWs ranged from $1.50 to $2.40 per day.

International officials defended per diems for CHWs with an array of arguments, primarily that they were necessary to defray the expenses that workers incurred during campaigns. But high-level ministry of health officials in many countries were concerned that even small per diems were unsustainable. By contrast, CHWs saw per diems as a wage; the very small size of this wage led many to describe per diems as unjust.

Per diem polio work existed in the larger context of limited and mostly exploitative options for female labor. Taking the perspectives of CHWs seriously would shift the international conversation about per diems toward questions of labor rights and justice in global health pay structures. (*Am J Public Health*. 2017;107:1470–1476. doi:10.2105/AJPH.2017.303886)

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Global health initiatives rely on millions of community health workers (CHWs) for work on programs from HIV/AIDS control to measles elimination. Across the world, these CHWs receive per diems for their work.[1] One analysis found that per diems made up more than 30% of the operational costs of diverse vaccination campaigns from meningitis to yellow fever.[2]

Debates about CHW remuneration have been ongoing for decades. Questions of how best to motivate CHWs,[1,3] the sustainability of their salaries,[4,5] the role of volunteers,[6] and the importance of job advancements are hotly contested.[7,8] Many observers argue that governments and donor agencies have socialized health systems for scarcity,[9] maximizing health outcomes by exploiting vulnerable workers' labor.[10]

The literature informing these debates, however, does not focus on the per diems CHWs receive. Passionate arguments about per diems exist across the academic and gray literature, but these discussions largely draw on the experiences of the authors rather than on research.[11–15] A review of the literature on health worker remuneration in low-income settings notes that empirical work on per diems is lacking.[16] The small body of research that exists focuses on per diems for higher-ranking health workers such as doctors and nurses.[17–19]

Considering that most CHWs in resource-poor settings across the world receive per diems from several global health initiatives, and considering that these per diems can make up a substantial portion of CHWs' remuneration overall,[20] this topic deserves attention. We have described interviews with CHWs, supervisors, and high-level officials across sub-Saharan Africa and South Asia about the per diems given by the Global Polio Eradication Initiative (GPEI).

Per diems were originally conceptualized within the GPEI as supplemental money for costs incurred during vaccination campaign work. Yet because these per diems were given to CHWs in the context of unreliable employment, poverty, and gender inequality, they took on additional meanings beyond "lunch money." Discourses about the small per diems given by the GPEI were contradictory and varied across levels of the program. CHWs frequently framed per diems in terms of labor and justice and experienced low per diems as an exploitative labor practice.

## PER DIEMS IN GLOBAL POLIO ERADICATION

In 1980, Brazil held mass vaccination campaigns that would become the model for the GPEI. To carry out these campaigns, which dramatically lowered the number of polio cases in the country, the government relied both on health staff and on volunteers.[21–23]

Following Brazil's successes, polio-endemic countries across the Americas adopted polio vaccination campaigns. Most were heavily staffed by volunteers, notably by well-to-do Rotarians. Some of these volunteers received small per diems to defray the cost of transportation and lunch.[22,23]

With the adoption of polio eradication as a global goal in 1988, this model was expanded worldwide. By the late 1990s, every polio-endemic country in the world was implementing polio vaccination campaigns; in most places workers went door-to-door. The human resource requirements for this effort,

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*This article was accepted April 29, 2017.*
*doi: 10.2105/AJPH.2017.303886*

TABLE 1—Community Health Worker Programs in Sub-Saharan Africa and South Asia: 2012

| Study District | Regional DTP3 Coverage Before Study | Regional Antenatal Care Coverage Before Study | CHW Program | Gender | CHW Entry Requirements | CHW Training | Polio per Diem | No. Polio per Diem Days in 1 Year | Regular (Nonpolio) Pay Structure | Regular (Nonpolio) Salary |
|---|---|---|---|---|---|---|---|---|---|---|
| Purba Champaran, Bihar, India | 46% (2006 DHS) | 34% (2006 DHS) | ASHA | All women | Married, literate | 23 d program plus on-the-job training | $1.50 | 66 | Volunteer with pay for specific tasks | Generally $15–$30/mo; payments months to years in arrears |
| Nizamabad, Andhra Pradesh, India | 61% (2006 DHS) | 96% (2006 DHS) | ASHA | All women | Married, literate | 23 d program plus on-the-job training | $1.50 | 6 | Volunteer with pay for specific tasks | Generally $15–$30/mo |
| Rautahat, Nepal | 91% (2006 DHS) | 76% (2006 DHS) | FCHV | All women | Married with children | 18 d program plus refreshers | $2.40 | 8 | Volunteer with pay for specific tasks | Generally $10–$20/mo |
| SITE [Sindh Industrial and Trading Estate] Town, Karachi, Pakistan | 48% (2007 DHS) | 71% (2007 DHS) | LHW | All women | Eighth grade education, aged 18 y or older | 3 mo program plus on-the-job training | $2.40 | 55 | Salary | About $100/mo; payments months in arrears |
| South Omo, Southern Nations, Nationalities and Peoples' Region, Ethiopia | 38% (2011 DHS) | 42% (2011 DHS) | HEW | All women | Tenth grade education, speaks local language | 1 y program | $1.90 | 12 | Salary | About $100/mo |
| Rubavu, Rwanda | 80% (2008 DHS) | 93% (2008 DHS) | CHW | Women and men | Sixth grade education | On-the-job training only | $1.60 | 3 | Performance-based financing | Amount varied; shared with community cooperative |

*Note.* ASHA = accredited social health activist; CHW = community health worker; DHS = demographic and health surveys; FCHV = female community health volunteer; HEW = health extension worker; LHW = lady health worker. Per diems are given in US dollars in the exchange rate at the time of the study. The number of paid per diem days per year are for 2011, the year just before field research.

which continues today, were and are enormous—on the order of 10 million workers globally.[24] This number includes staff (usually called "volunteers") hired on a short-term basis for polio campaigns as well as a majority of the world's CHWs, who receive per diems from the GPEI for polio campaign work.

The label "per diem" has been used for a disparate array of payments across the varied organizations involved in the GPEI. We have focused on a single type: payments for CHWs working on campaigns.

## METHODS

We collected data as part of a study on the impact of polio eradication activities on health systems, conducted across South Asia and sub-Saharan Africa in early 2012.[25] We selected study districts to represent a wide range of cultural, political, and institutional contexts.

In each study district, we interviewed 5 to 10 district-level health officials, 30 ground-level health workers, and 5 parents of children targeted by polio campaigns. We also interviewed 5 to 10 national-level policymakers in each country with a study district. These interviews followed a standardized protocol and included questions specifically focused on per diems.[26] Using NVivo 9,[27] we coded interview responses describing specific aspects of the health system.

We searched for material coded for polio per diems. To focus on CHWs, we excluded material discussing per diems for other types of worker. We further restricted our analysis to the CHW cadres for which we had extensive interview data discussing per diems (Table 1; for more information

on pay structures and job responsibilities for these CHW cadres, see Appendix A, available in a supplement to the online version of this article at http://www.ajph.org). Our final sample included data from 95 interviews discussing 5 types of CHW in 6 research sites:

1. South Omo, Southern Nations, Nationalities, and Peoples' Region, Ethiopia: health extension workers.
2. Rubavu, Rwanda: CHWs.
3. SITE [Sindh Industrial and Trading Estate] Town, Karachi, Pakistan: lady health workers.
4. Rautahat, Nepal: female community health volunteers.
5. Parba Champaran, Bihar, India, and Nizamabad, Andhra Pradesh, India: accredited social health activists (ASHAs).

Our analysis is a snapshot in these specific districts at a single point in time. It does not necessarily represent the situation in 2017. The general approach to CHW per diems globally has not changed, but there have been some context-specific developments, like a doubling of the per diem in Pakistan after workers were targeted with lethal violence. Further, conditions in 1 district do not reflect those in a certain country as a whole. But an analysis reaching across these diverse study sites has the power to reveal global trends.

## RESULTS

As polio campaigns were scaled up globally in the late 1990s, international officials conceptualized the small per diem given to ground-level staff as "lunch box money."[28] In 2005, GPEI leadership wrote that per diems were allowances for "personal costs" resulting from campaign work. They explained that they had "a standing policy to provide, wherever possible, a per diem sufficient to cover the costs of local transport, food, and other items incurred by vaccinators and supervisors."[24(p270)]

The size of CHW per diems, generally between $1 and $3 per day, reflects this conceptualization (Table 1). In our study areas, this amount was generally sufficient to defray the costs of campaign work, such as local bus fare, small snacks or cold drinks, and a modest amount of cell phone time. Per diems for CHWs were considerably smaller than were those for higher-ranked health workers, reflecting and reinforcing CHWs' lower social status.

### International Officials on Per Diems

Many officials working for nongovernmental organizations, the United Nations Children's Fund, and the World Health Organization (WHO) at the national level in our study countries defended polio per diems as, although perhaps too small, necessary to incentivize workers. For example, a nongovernmental organization official in Nepal affiliated with Rotary said:

> Most of the work is carried out by female community health volunteers; she is there from morning to evening, and she must have some food to eat, for transportation she must go to the field, money only for that. No additional money. [I was] talking to an FCHV [female community health volunteer], she rightly said the money she received is very small, that it is smaller than what a laborer earns in a day.

A WHO official in Ethiopia said:

> I think it's justifiable to pay them [CHWs], you know. The reason is, most of the campaigns are conducted during weekends. . . . It is an overtime payment.

These officials defended per diems as supplemental to government salaries. Their defenses reflected an awareness that per diems were a contentious issue. Many acknowledged that field staff often saw per diems differently and said that per diems were perhaps too small.

Some lower-level officials said they emphasized the supplemental nature of per diems to their staff. A district-level official in Nizamabad, Andhra Pradesh, India, said:

> We tell them that this is not wages for services rendered, rather it is a convenience allowance. They are working in the field from morning to evening. They may need some drinking water or cold drinks or snacks. We give them the incentive to cover these expenses. We tell them to be committed as a citizen of India. That motivates them. The money that we are giving to them is not sufficient for the work they do.

Although officially conceptualized as supplemental money, at the international level there were multiple and evolving conceptualizations of per diems. In recent years major policy documents from the GPEI and its independent monitoring board have emphasized the need for timely delivery of "vaccinator pay," tacitly acknowledging that per diems function as pay for many ground-level staff.[29–31]

### Ministries of Health on Sustainability

Although international officials defended per diems as necessary, high-level ministry of health officials in several study countries, particularly Nepal and Ethiopia, expressed concerns that they were unsustainable. These officials worried that polio per diems were creating broader expectations for CHW pay that they could not meet with limited government budgets.

A ministry of health official in Ethiopia explained:

> It's really difficult for me because sitting here at the federal level. . . . You want to build your system and make it strong, so that whatever gains you make can be, you know, sustainable. . . .
>
> If you are thinking that you can motivate people by simply providing per diem, especially to these frontline health workers . . . it will be weakening the health system. Because if the country cannot afford to provide that per diem, then what is the next step?

This official voiced concerns that frontline health staff would begin to expect per diems for other tasks in addition to polio campaign work. These concerns were echoed by a ministry of health official in Nepal:

> Certainly during the polio campaign the health workers in the districts are motivated because they are getting certain incentives . . . but now . . . it is difficult to manage other health programs without incentives. Because we started campaigns with incentives, now they look only for incentives.

The Ethiopian Ministry of Health tried to limit what an official described as the "unnecessary harms" of per diems on the health system by eliminating per diems unless workers were traveling outside normal working hours. However, because this step was unpopular among CHWs, the local

government in our study district was providing per diems anyway.

## Governments and Donors

Both international and government officials' stances on per diems were tied to issues of funding for CHW remuneration more generally. Although polio per diems were in most cases internationally funded, regular CHW payments usually came from government budgets.

An Ethiopian official who had worked in both government and United Nations positions described regular, non–per diem salary funding for health extension workers:

> Salary payment is totally the responsibility of the government. I think even the [international] partners don't like to be involved in this, because . . . they would have to continue to support the salaries. So the minimum requirement of the government expected by partners is to pay—at least—for salaries [of health workers]. And even the government . . . would not be interested [in donors paying health worker salaries], because they feel if they improve the salary of these people by using other partners, you can imagine the implication for other civil servants.

There were a number of reasons, then, the Ethiopian government was funding health extension worker salaries. Because of the short funding cycles of most donor agencies, this approach seemed more reliable in the long term. It avoided discrepancies in pay across donor-funded and government-funded positions. And it allowed government officials to maintain autonomy and control over their staff.

Although the details of financing for nonpolio CHW payments varied in different study districts, these underlying issues were usually present. When government officials expressed concerns about polio per diems, it was often because they feared that CHWs would become dissatisfied with even smaller government-funded payments. International officials' assertion that per diems were reimbursements—not wages—was likely in part a rhetorical response to these concerns.

## Community Health Workers on Per Diems

All CHWs in this study worked on and were paid for polio campaigns; the number of polio campaign days the year before our fieldwork ranged from 3 to 66 (Table 1). Across the CHW programs in the study, CHWs saw polio per diems as a wage, not an allowance for incidental expenses.

In addition to per diems, all the CHWs in the sample received wages or incentives for their work more generally through a variety of payment structures (Table 1). Two programs had salaries: workers in Pakistan's and Ethiopia's all-female CHW programs received approximately $100 each month.

In India and Nepal, the CHWs included in our study were officially volunteers but received incentives for carrying out tasks like providing immunizations and accompanying mothers to health facilities to give birth. In India, ASHAs made on average $15 to $30 a month; in Nepal, female community health volunteers made a bit less from incentives.[20] CHWs in both of these programs tend to focus on activities for which they receive incentives.[7,32,33]

Whatever their regular pay structure, CHWs across the study sites saw the polio per diem as a wage for polio work, folding discussions about the polio per diem into discussions of their pay generally. While discussing polio per diems, for example, an ASHA in Nizamabad, Andhra Pradesh, India, explained, "ASHAs depend on the honorarium. We don't do any other work."

Similarly, in South Omo, Southern Nations, Nationalities, and Peoples' Region, Ethiopia, several health extension workers said that the Ethiopian government's decision to cut per diem payments led to conflicts with local officials. One said, "The money given as per diem has decreased and we are quarreling in this matter with the *woreda* [district]. The work is demanding." These health extension workers, like other CHWs in our sample, framed their complaints in terms of fair pay for work, not in terms of supplemental costs or overtime.

In 2 of the study sites, SITE Town, Karachi, Pakistan, and Parba Champaran, Bihar, India, regular wages were months to years in arrears. In these areas, which had many polio campaign days, polio per diems formed an important supplemental wage for many CHWs. Late per diems caused anxiety and stress. A female health supervisor in Karachi explained that female health workers relied on per diem payments to feed their families:

> They are pressed by their needs. . . . If they do not receive their [per diem] payments on time they get confused and scared that the same delay will happen in the future.

There was 1 exception to the pattern of CHWs conceptualizing per diems as a wage. Some (but not all) CHWs in Rubavu, Rwanda, echoed higher-level officials in framing the per diem as an allowance for supplemental costs—the only CHWs in the study to do so. A CHW in Rubavu explained that the per diem "influences nothing as it is only for transport or phone minutes . . . You understand that one thousand [$1.20] daily is not going to change anyone's life."

There are several reasons CHWs in Rubavu, Rwanda, might be the exception to the global trend of seeing per diems as a wage. They spent the least amount of time on polio campaigns of any CHWs in our sample. They were the only CHW program in the sample that included men. And their regular pay was delivered through a well-liked program. Under the performance-based financing system, CHWs in Rwanda received a cash incentive split between a community collective and the CHWs themselves. The better their performance, the larger the cash incentive. One CHW explained that in their collective, "we bought goats and we distributed more than 180 goats of RWF 25,000 [$32] each. You see that this activity is meaningful."

In the study district with very few polio campaign days per year and a popular regular salary structure, then, not all CHWs saw polio per diems as pay. But in the other districts in our study, CHWs saw per diems as pay for work done. In many cases, they relied on this pay to help support their families.

## Questions of Justice

Polio per diems were small: CHWs noted time and again, often with sharp annoyance, that they were well below local rates for day labor. Across the study sites, the going rate for unskilled

labor was more than twice the polio per diem.

*Fewer campaign days: "The motivating factor is not the small per diem."* In study districts with fewer than 2 weeks of campaign days a year, CHWs noted that the small per diems did not reflect either the amount or the quality of their work. A female community health volunteer from Nepal observed, "We have much work to do, and we are doing it. . . . The per diem is low and needs to increase. But it is not in our hands."

Even in Rubavu, Rwanda, where per diems were not universally considered wages, many CHWs still felt they were too small. "There is no incentive in polio eradication," a Rwandan CHW said, laughing. "But there should be; we work hard!"

CHWs in these study districts reiterated that they worked on polio campaigns because of their commitment to child health, affirming the value of their time, labor, and dedication in the face of a wage that did not seem to value them. An ASHA in Nizamabad, Andhra Pradesh, India, said, "We work if money is given or not. We are working with the objective of reaching everybody."

A health extension worker in South Omo, Southern Nations, Nationalities, and Peoples' Region, Ethiopia, expressed similar sentiments:

> The per diem is too small and does not balance with the demanding nature of the campaign. . . . The motivating factor is not the small per diem, but the desire to eradicate the disease from the country. Whether paid or not it won't affect our commitment to do the job.

In study districts with few campaign days per year, CHWs responded to a wage that was too low by affirming their commitment to their neighbors' health.

*Many campaign days: "This is injustice."* The situation was different in Parba Champaran, Bihar, India, and SITE Town, Karachi, Pakistan. In these districts, there were unreliable salaries and many campaign days. CHWs in these areas relied on polio per diems when their regular salaries went unpaid. Per diems' small size made them angry and de-motivated them. Late payments exacerbated this anger.

Many of the ASHAs in Parba Champaran, Bihar, India, were refusing to work on polio campaigns. "There is no benefit for ASHAs," one explained angrily. Another complained:

> Our pay is over a year late. How will we manage? We only got [the polio per diem] two or three times. After that, nothing. . . . It feels like we're donating our time to the government.

Workers in Karachi, Pakistan, were also angry. A female health supervisor said:

> Our workers do not get paid enough. . . . It is our workers who go door to door and talk to families and administer the polio drops. Their payments are also often delayed. This is injustice. How are we expected to keep our workers motivated?

In areas with many campaigns, CHWs did not reiterate their commitment to the health of their neighbors. Rather, they experienced small and delayed per diems as injustice.

### The Social Costs of Women's Work

All of the CHWs in our sample except those in Rwanda were women. The GPEI prefers female workers in parts of the world where women may most easily enter strangers' houses to vaccinate children.

Female CHWs across our study sites described social costs specific to polio work, which required that they go door-to-door to vaccinate children. Such work violated social ideals of women as modest, homebound, and geographically restricted.[34–37] It was also difficult for female CHWs to fulfill their duties at home during polio campaign days. The violation of these social norms was a source of stress for many CHWs across our study districts but was particularly acute in Parba Champaran, Bihar, and SITE Town, Karachi, Pakistan.

An ASHA in Parba Champaran, Bihar, explained, "I left polio work because it isn't possible for women to travel to such far off places." A lady health worker in SITE Town, Karachi, Pakistan, said that in a conservative community she worked in, "We have a fear of working in the area because women are not allowed to walk outside alone, and if we do go outside alone in the area, then a man will come after us."

Most of these women cited increased pay as a solution to these problems. They explained that more money would make managing competing responsibilities easier. Another ASHA in Parba Champaran, Bihar, explained:

> Look, I have kids. If I stay home, I make their food, I do their hair, I get them ready, I send them to school. . . . Now, with money, if I had a monthly salary, I could hire someone to help. . . . [To the female interviewer] You get a salary, right? . . . And that's how you work, that's how someone is taking care of your kids right now.

Polio work was at once an opportunity—to make a bit of extra money and to assist in the goal of eradicating a disease—and a risk. The social costs for women weighed heavily against the benefits of vaccinating children. Our interviewees suggested that higher wages would mitigate, but not eliminate, the social costs of their work.

## DISCUSSION

Across the study districts, CHWs repeatedly compared the per diem to higher local rates for day wage labor. But the reality for most of the female CHWs we interviewed was that this wage was unattainable, reserved for men who could occupy the social space of manual labor. Although they did not frame their comments in these terms, using the day wage labor rate as a marker was a statement by female interviewees that their work on polio campaigns was indeed labor and that their labor should be worth as much as a man's.

In South Omo, Southern Nations, Nationalities, and Peoples' Region, Ethiopia, and in Rubavu, Rwanda, rural women often work as petty traders or are employed by more affluent farmers. However, in the South Asian districts in this study, most employed lower- and middle-class women work in their own homes, doing piecework or food preparation labor that depends on male middlemen. The cultural models that discourage female work outside the home feed into labor exploitation, making it possible for employers to keep women at rates of pay below those of agricultural labor.[38–40]

In this light, the per diem functions very differently than it was intended, as an

exploitative wage for women who have few other options in their local labor markets. Per diems across the study areas were higher for those who supervised CHWs during polio campaigns—people who were mostly men.

What mattered to CHWs was not what their payments were called but how much those payments would buy for their families. For international officials, by contrast, the purchasing power of the per diem, although a consideration, was often less pressing than its label. Underlying international officials' defenses of per diems was an awareness that intensive polio campaigns would be difficult to sustain without paying ground-level staff. Framing payments as per diems may have been in part a move to sidestep issues of long-term funding, equity, and government control.

Taking CHW perspectives seriously would shift the international conversation about per diems toward questions of labor rights. Because CHW per diems function as pay, they should be labeled and treated as pay. This will necessarily raise questions of whether they ought to be a living wage.

We are not advocating a shift in the conceptualization of per diems for workers at all levels; they function very differently for higher-level staff. For international consultants and foreign academics with substantial salaries, generous per diems allow comfortable travel along with pocket money. For government officials and local academics, they may provide an essential supplement to government wages. But the very small per diems given to CHWs function differently.

Treating CHW per diems as pay would raise issues of sustainability, equity, and control over health staff remuneration. However, because CHWs experience per diems as a wage, these issues are already present, although not always addressed. Because issues of CHW compensation cut across multiple vertical programs and primary health care, discussions on this topic could open the door to comprehensive policies for fair and consistent CHW pay. This would be a small step toward a more just global health system. AJPH

## CONTRIBUTORS

S. Closser and A. Rosenthal drafted the article, with feedback from all authors. S. Closser, A. Rosenthal, J. Justice, and K. Maes designed the study. S. Closser, J. Justice, K. Maes, H. B. Amaha, R. Gopinath, P. Omidian, and L. Nyirazinyoye conducted fieldwork and advised on analysis of data collected from their field sites. S. Closser, M. Sultan, and S. Banerji analyzed the data.


## ACKNOWLEDGMENTS

The larger study from which these data are drawn was supported by the Bill and Melinda Gates Foundation ([BMGF] contract 20333).

We are grateful to the technical steering committee assembled by the BMGF for advising on and facilitating the study. In addition, the ministries of health in our study countries and the staff of the BMGF and the World Health Organization (WHO) provided valuable assistance in carrying out fieldwork. We thank our research teams in each study site for their work and our study participants for their generosity. Kelly Cox, Adam Koon, Vanessa Neergheeen, Aftab Pasha, Shiva Subedi, Pauley Tedoff, and Emma Varley conducted interviews and coded interview transcripts that were used in preparing this article. We are grateful for their significant intellectual contributions.

**Note.** The BMGF and the WHO bear no responsibility for our analysis.


## HUMAN PARTICIPANT PROTECTION

This project was approved by the Middlebury College institutional review board, the Nepal Health Research Council, and the Rwanda National Ethics Committee.

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