Provider Absence Surveys in Education and Health

A guidance note

Halsey Rogers (HDNED) and Margaret Koziol (HDNCE)

THE WORLD BANK, HUMAN DEVELOPMENT NETWORK
1818 H STREET, NW WASHINGTON, DC 20433

Produced by Office of the Chief Economist, Human Development Network
Table of Contents

Acknowledgements 4

Introduction 5

Literature Review: Why Measure Provider Absence, and What Have We Learned? 6

Methodology: Key Features of the Direct-Observation Model 12

Logistics and Implementation: Choices to Make 18

Dissemination and Advocacy: What They Imply for Study Design 23

Using the Data to Generate Evidence 24

Using the Evidence to Improve Service Delivery 28

List of Online Resources 30

References 30
Acknowledgements

This note was prepared under the auspices of the HD Chief Economist’s Office. The authors are very grateful to Ariel Fiszbein for his guidance throughout the preparation of this note, and to Nazmul Chaudhury, Jerry La Forgia, Truman Packard, and Salman Zaidi for taking the time to provide detailed comments and suggestions on an earlier draft, as well as Karthik Muralidharan for sharing terms of reference and other essentials for conducting these studies.
Introduction

This note provides guidance on how to carry out surveys of provider attendance and absence in the education and health sectors. It is meant to serve as a starting point for Bank staff and research teams interested in measuring absence of teachers and medical providers, for example, to inform research on service delivery or to serve as an indicator of project or program performance. Provider absence, or absenteeism, surveys are a means of gathering data on an important, measurable aspect of the quality of service delivery: whether providers (for example, teachers, doctors, or nurses) are available at the service provision facility (such as a school or clinic) at times when they should ordinarily be on duty.1

Absence surveys are a focused example of the more general class of facility surveys, which aim to measure and understand the performance of schools and clinics. [See Amin and Chaudhury (2008) for an excellent overview of methodologies for different types of surveys.] An absence survey will often be carried out as a component of a broader quantitative service delivery survey, sometimes as part of a public expenditure tracking survey.2 [See Koziol and Tolmie (2010) for guidance on how to conduct a public expenditure tracking survey.] An absence survey may also be carried out as part of the monitoring framework within a project, for example, by the World Bank or by civil society.

As an example, Figure 1 offers a cross-country snapshot of absence rates in the health sector, based on studies using roughly comparable methodologies. Although such comparisons can be very useful, there is a dearth of reliable, comparable information about absence, particularly in the health sector. By applying a standardized methodology to the problem of absence, researchers can build cross-country and cross-context benchmarks, while also illuminating the possible causes of absence and its implications for policy.

---

1 In this note, we use the term “absence” rather than “absenteeism” because it is less laden with value judgments. “Absenteeism” can imply willful absence from work, whereas “absence” is a more neutral term. While many providers in high-absence locations do appear to be willfully absent, it is important not to prejudge this conclusion even before gathering data.

2 Box 5 includes a discussion on the different uses of public expenditure tracking surveys versus absence surveys.
Literature review: Why measure provider absence, and what have we learned?

High levels of provider absence are both an indicator of general shortcomings in accountability within the education or health system (World Bank 2003) and, it appears, also a direct cause of poorer outcomes (Miller, Murnane and Willett 2007; Duflo, Hanna and Ryan 2008). But careful study of the causes and effects of absence depends on accurate measurement of the extent and the factors associated with absence. Only in recent years have surveys attempted to gather reliable absence data in developing countries, rather than relying solely on questionable administrative records of attendance. The World Bank has been a pioneer in the study of absence and its implications in the health and education sectors. A study based on visits to a representative national sample of health centers in Bangladesh in 2002 showed how important direct measurement of attendance is, when it found that 74 percent of doctors posted to the most remote rural clinics were absent at any given time (Chaudhury and Hammer 2004). That study helped develop the methodology of carrying out unannounced visits, to ensure that the enumerators observed “typical” behavior of service providers.

Other studies, carried out by both non-Bank and Bank researchers, began to use this direct-observation method of monitoring at about the

---

3 Administrative records can be easily manipulated and therefore do not serve as a reliable source for absence data at least in settings with weak governance.

4 An enumerator is someone who administers a survey.
same time (Glewwe, Ilias and Kremer 2003; World Bank 2004; Das et al. 2007). More recently, developing country-based civil society organizations and think tanks have taken up the methodology and applied it to smaller-scale studies. In each case, the methodology used was designed with the same goal: to measure absence accurately and thereby improve service delivery. However, the scope and size of the studies have varied based on funding, capacity of the research agents, and ability to conduct repeated unannounced visits.

Monitoring provider effort through this approach was brought more into the mainstream of the World Bank’s governance work in the health and education sectors by a major multi-country research project on teacher and doctor absence in 2002-03, carried out as background research for the *World Development Report 2004: Making Services Work for Poor People* (World Bank 2003). A team of World Bank staff, academic researchers, and survey institutes designed and carried out surprise visits to representative samples of primary schools and primary health care clinics in six countries, with a focus on measuring absence and understanding its foundations. The findings were eye-opening to many people: absence rates averaged 19 percent among teachers and 35 percent among medical workers in the six countries, and were far higher still in some Indian states (Kremer et al. 2005; Chaudhury et al. 2006; Muralidharan et al. 2011).

Higher absence was closely correlated with poor incentives and weak accountability. If a school had not been inspected recently, teachers were more likely to be absent; head teachers, who have no supervisors at the school level, were also absent more often. Conversely, if a school had better infrastructure or was closer to a paved road, which could increase the non-financial incentives for regular attendance, teachers were more likely to be present. In the clinics, doctors, including medical officers in charge, were more likely to be absent than other health workers. They also were more likely to be involved in other money-making enterprises such as a private practice—suggesting that they had an incentive to be absent and little fear of being held accountable. By contrast, higher salaries were not associated with better attendance. Perhaps this should not be surprising: salaries of teachers and medical providers are typically based on education and seniority, not on performance, and hence provide little incentive for attendance.

---

5 Especially by the Human Development Network (HDN) and the Poverty Reduction and Economic Management Network (PREM)
Box 1—Examples of Absence Studies Carried Out by Civil Society Organizations (CSOs)

The **Center for the Implementation of Public Policies Promoting Equity and Growth** (CIPPEC) conducted a study of class time lost in Buenos Aires schools due to teacher absence and school closures. Absence and closure data were collected for June and October, two school months without vacations or exams, in 31 schools in two Buenos Aires school districts. CIPPEC found that absence and school closures cost the average school 5.5 days of class time per month. They also found that schools in the poorer district lost 40 percent more class time due to absence and closures than schools in the wealthier district. By calculating the monthly value of the class hours students should receive if schools were open each day and teachers were present, CIPPEC found students in the poor district were denied an average of AR$1,165 a month in effective educational resources, compared with AR$693 in the wealthier district.

The **Institute for Policy Analysis and Research** (IPAR) investigated the frequency and causes of absence of public-sector health care workers in Kenya. IPAR researchers suspected that a substantial proportion of this money was being wasted because of high absence, but found few systematic studies of the cost of, or reasons for, absence. Researchers examined absence rates at 40 health facilities in Machakos, a mixed urban-rural district in Kenya’s Eastern province, and found that absence is indeed widespread, averaging 25 percent. It also found that absence was higher among more skilled workers, such as doctors and pharmacists, who can presumably earn much more in the private sector. Researchers estimated that these absences cost the government KES 6,659,832, or about $85,000, a month.

The **Center for Democratic Development** (CDD) in Ghana collected data on teacher absenteeism in 30 schools in three districts, finding that 47 percent of teachers in the sampled schools were absent at least once in the single week during which unannounced visits were conducted. CDD identified some important possible contributors to teacher absence, such as the need to travel long distances to receive paychecks and attend training workshops run by the Ghana Education Service. It also isolated factors that seem to be correlated with lower absence, such as a staff common room, proximity to a bus station and a health clinic, and an active parent-teacher association—all of which can increase the incentives for, and lower the costs of, more regular attendance.

The results of the multi-country study showed the power of careful measurement inspired by real-world problems. By allowing benchmarking across countries and across states in India (where the most intensive data-
gathering took place), the project highlighted the problem of provider motivation in a way that resonated widely. The findings were not only published in academic journals, but also influenced policy dialogue, public opinion, and operational work in the countries studied. Well over 100 newspaper and magazine articles cited the studies and absence estimates—including international publications such as the Financial Times, Economist, and New York Times, and many publications in countries studied, such as the Times of India, Business Standard (India), Jakarta Post, and All Africa. Most of these articles cited absence rates as evidence for the need for reform of education and health systems. The education policy debate is beginning to reflect the increased attention to the issue: the World Bank’s South Asia regional department reported in 2007 that “estimates of teacher absenteeism in India . . . have contributed to a shift in the focus of India’s major primary education program towards improved education quality.” Some examples of the World Bank’s contribution to the absence evidence base are included in Box 3.

Since those initial studies, provider absence rates have become widely accepted as an observable measure of staff motivation. Moreover, the methodology advocated by researchers—direct observation of absence during unannounced visits to service delivery facilities—is now widely used by the World Bank and is being used increasingly by civil society organizations. Box 1 includes a snapshot of some work conducted by civil society to date. This trend is stronger in the education sector, although there is at least one large-scale study currently measuring absence in the health sector in India. Three early examples of World Bank analytical work that used this methodology are education-sector studies in Ecuador (Rogers et al. 2004), Mongolia (World Bank 2006), and Lao PDR (Benveniste, Marshall and Santibañez 2007; World Bank 2008). With the increasing attention to governance reform in health and education, independently measured absence rates are now also being incorporated as project monitoring indicators (as in the case of the BERMUTU teacher-upgrading project in Indonesia, which is examined in more detail in Box 2).

World Bank staff working on country-specific issues have also moved beyond just monitoring to launch innovative experiments aimed at reducing absence and improving provider motivation and performance (Muralidharam and Sundararaman 2009). The Bank has also moved to using indicators

---

6 Especially by the Human Development Network (HDN) at the Poverty Reduction and Economic Management Network (PREM)
Box 2—Absence Rates as Project Monitoring Indicators: The BERMUTU Project in Indonesia

The multi-country 2002-03 study conducted by World Bank and academic researchers (Chaudhury et al. 2006) found that Indonesian teachers were absent at the relatively high rate of 19 percent. In response to concerns about teacher performance and skills, the Indonesian Parliament passed a law in late 2005 requiring higher teacher qualifications and doubling salaries for certified teachers. Using data gathered through a multi-year evaluation of the effects of the salary increases and other reforms, the BERMUTU project will use trends in absence rates as one indicator of success in improving teacher effort. The World Bank’s Better Education through Reformed Management and Universal Teacher Upgrading (BERMUTU) project aims to help the government improve the skills and classroom performance of Indonesia’s 2.7 million teachers as the law is implemented. Under BERMUTU, the Government of Indonesia has set out to improve teacher incentives through better performance appraisal and performance-based progression and promotion.

such as absence in its macro-level operational work. As World Bank staff in the regional departments and network anchors⁷ wrestle with how to apply the Actionable Governance Indicators⁸ to their sector, staff absence rates tend to be one of the first measures they propose. Three examples within the World Bank are the recent proposals for governance indicators in health (Lewis and Pettersson 2009; Savedoff 2009) and in human development broadly (Fiszbein, Ringold and Rogers 2009). Absence is also one of the core indicators adopted in the multi-country governance measurement effort being launched by the African Economic Research Consortium, with the assistance of the Bank’s Africa region staff (Bold et al. 2010).

Other organizations also see the usefulness of absence surveys. Civil society organizations focused on increasing government transparency, de-

⁸ Actionable Governance Indicators are indicators that provide evidence on the characteristics and functioning of particular elements or sub-elements of 1) political accountability; 2) checks and balances; 3) civil society, media, and private sector interface with politics and public administration; 4) decentralization and local participation; and 5) public sector management.
creasing corruption, and improving service delivery in health and education have moved toward advocacy based on more rigorous evidence. As part of this shift, organizations like Global Integrity are working with the World Bank to develop standardized tools for gathering data on governance indicators, including absence levels in the health and education sectors. Additionally, and through donor support, civil society organizations are building their own capacity to conduct both absence research and carry out public expenditure tracking surveys (Koziol and Tolmie 2010).

Box 3—Uses of Evidence on Provider Absence from the World Bank

In Andhra Pradesh, India, dialogue with the state education secretary about the results of the multi-country absence study led directly to his support for a multi-year, 500-school randomized controlled trial aimed at finding ways of improving teacher performance and accelerating student learning. These trials have allowed a unique opportunity to gather rigorous evidence on the effectiveness of various school-quality interventions, including performance-based incentives for teachers, block grants to schools, and provision of para-teachers.

In Bangladesh, press coverage of the results from a World Bank study results induced the director-general for health to make a highly publicized surprise visit to a public hospital to investigate absenteeism—and then transfer the truant doctors to less desirable posts.

Of course, reducing absence rates requires more than a one-time media flurry, or even a careful multiyear evaluation of promising interventions. Motivating change will likely require sustained efforts on the policy front, as well as pressure from facility users and receptive champions within government. But it is hard to imagine a solution that does not require first mapping out the landscape of provider absence carefully, as in the AP and Bangladesh cases.

Measuring attendance is not an analytically sophisticated idea. Indeed, one reason it has caught on is that it is so easily interpretable, including by the citizens that it directly affects. While there is debate over whether 4 percent or 8 percent is a reasonable baseline level for absence, nobody argues that a health sector is working right when 40 or even 25 percent of doctors are absent. In cases where provider absence is suspected to be part of the service delivery problem, teams can get considerable mileage from measuring the problem carefully and in ways that allow it to be compared with international benchmarks. The next section describes how to do this.
Methodology: Key features of the direct-observation model

As noted above, what differentiates the absence-survey approach from traditional analyses of provider attendance is that it does not rely on administrative records. Instead, it uses unannounced visits to facilities and direct observation of provider attendance. The use of unannounced visits is essential in measuring provider absence. While it is also possible to estimate teacher and medical-provider absence using data from official attendance records, these often offer a less accurate and credible picture of absence. Attendance records are often misleading, whether because head teachers, school administrators, health clinic supervisors, or doctors may have an incentive to falsify records, or because records are poorly kept. Absence estimates should therefore generally be based on actual verification of a service provider’s presence at a facility rather than on administrative records, unless comparison of the two has shown that the attendance logs are consistently reliable.

Each of these elements is important for getting accurate and comparable estimates of provider absence and for allowing benchmarking of results against studies like those listed above. Though the size and scope of this type of study can vary depending upon the implementing agency or organization, several standard features of the model are important for reliability and comparability:

1. Select a random sample of facilities: If the goal of the survey is to give an accurate picture of provider absence in a country, region, or district, it is important to select a representative random sample of facilities and providers. If an absence study is conducted in a middle- to high-income country, the research team should be able to secure comprehensive lists of public health and education facilities to use as a sampling frame. Even in lower-income countries, it is sometimes possible to obtain comprehensive lists, though it is important to verify that they are up to date. Most often, the research team will need to send someone to a district or regional office to request lists; once lists have been secured, the team will need to go through them to be sure they are accurate, timely, and useful.\(^9\)

Depending on the size and scope of a study, a research team may choose: a) a simple random sample, in the case where the study population is relatively ho-

\(^9\) In cases where reliable facility lists are not available at all, the survey team may need to randomly sample villages or towns and then, once they reach each community, randomly sample from among the facilities they find there.
mogeneous and the sample is large relative to the population size; b) a stratified sample, when it is important that facilities with heterogeneous characteristics be proportionally represented within a sample; or c) a multistage sample, when the population is large relative to the sample size. The multi-country World Bank survey sampled on a probability-proportionate-to-population sampling (PPS) basis, after stratifying by region and by rural or urban location. To reduce costs, the sample was clustered at the district level: ten districts were randomly selected on a PPS basis in each country or state, and then schools and clinics were randomly sampled within each of these districts. That strategy reduced the number of districts that the survey team would have to travel to, allowing increased sample size for a given cost. The Center for Democratic Development, a civil society organization in Ghana, also used PPS cluster sampling for their absence study in the education sector, though on a smaller and more targeted scale than the World Bank researchers (CDD-Ghana 2008).

2. Make unannounced visits to facilities: To get an accurate picture of absence rates, the absence surveys have to be made during surprise visits (a closer look at the surprise nature of these visits is included in Box 4), and preferably at random times during the facility’s operating hours. Providers and facility directors often have an incentive to systematically underreport absence rates, especially in countries where low levels of accountability fuel high absence rates. And indeed, in such cases, formal attendance recording systems (such as logbooks) tend to report absence rates that are considerably lower than those measured during such surprise visits. If absence-survey visits are scheduled, then the facility director may make a special effort to have all providers in the facility that day, raising the attendance rate artificially.

**Box 4—Can unannounced visits truly be a surprise?**

This is a hard question to answer, as there does not appear to be any systematic research that tries to assess the surprise factor. It is possible that, if survey teams are moving around a district visiting health clinics, then doctors or nurses may become aware of the survey. As Internet penetration and SMS technology continue to spread in developing countries, so may the risk of forewarning. In some cases, high absence rates are enough of a norm that behavior may not change even when providers know that they could be monitored. In other cases, probably the best that can be achieved is to make it hard to guess which school in a district will be visited on any given day. Since the team will always visit only a sample of facilities, this should be possible, especially if enumerators introduce a random element into the order in which they visit the facilities.
3. Directly observe presence or absence of providers: Another element of the standardized procedure is direct observation of providers. In theory, enumerators could simply record absence from the log books they find in the facilities, if the concern about accuracy is that facility-level attendance data does not make it into the administrative records in the system. But in practice, it is likely to be important for the enumerators to directly monitor providers’ attendance, because log books may not be accurate. At a minimum, researchers will wish to do enough direct observation to verify the accuracy of log book or administrative records. Direct observation requires searching through the facility for each provider who is supposed to be on duty at the time of the visit.

If the health clinic or school is large, then enumerators are likely to obtain the most accurate picture of absence if they measure attendance soon after arriving at the facility. If they move slowly through the school or clinic, measuring attendance and then interviewing each provider in turn, then absent providers could conceivably be warned by the director and arrive in time to be interviewed, which would lead to them being incorrectly recorded as being present. In many of the studies cited here, such as the multi-country study and the study conducted by the civil society organization IDPMS in three districts of India’s Karnataka State, health

---

**Box 5—Public Expenditure Tracking Surveys (PETS) vs. Absence Surveys**

The surprise nature of the visits from enumerators differentiates absence surveys from ordinary PETS surveys. With PETS, forewarning can be an advantage, because it allows facility directors to assemble the financial information that the enumerators will need to collect. As a result, when absence surveys are combined with PETS, the two approaches can sometimes conflict. One possible resolution is to make two visits to each facility. During the first visit, which would be unannounced, the enumerators could measure absence accurately and inform the facility director that they will be returning sometime in the next few weeks to discuss finances. That way, the second visit can be expected but unscheduled, and the survey can meet both PETS and absence-survey goals. Second-visit absence rates are likely to be measured reasonably accurately, and with enough variation in survey timing, data analysts can control for any “second-visit forewarning effect” statistically. For more information on public expenditure tracking surveys, including guidance on how to conduct such a study, refer to *Using Public Expenditure Tracking Surveys to Monitor Projects and Small-Scale Programs* (Koziol and Tolmie 2010).
care providers were counted as being absent if they were missing from the facility at the time of the initial search by the enumerators, even if they subsequently appeared in time to be interviewed.

4. Collect data on other characteristics of facilities and providers: Given that enumerators are visiting the facility anyway, it will usually make sense for them to take the opportunity to gather other information about the facility and the providers. Travel to the facility entails substantial fixed costs in time and money, and the marginal cost of gathering additional information, in addition to measuring attendance, is likely to be low. Even though the primary purpose of these surveys is to measure absence rates, the researchers will be able to provide more insights to policymakers if they also measure and assess working conditions, infrastructure, community involvement, facility-level incentives for staff, facility usage, management practices, and other potential causes and consequences of provider effort levels. This information can also be helpful when conducting the final data analysis and determining correlates of absence. As discussed in Box 6, qualitative perceptions surveys and focus groups can deepen the richness of quantitative results.

Box 6—Using Focus Groups and Perception Surveys

Focus groups are a form of qualitative research in which small groups of people are asked questions regarding their perceptions, ideas, and beliefs about a certain program, service, idea or concept. Focus groups allow researchers to study groups in a more natural setting than that found during one-on-one interactions, and are often combined with participant observation. Qualitative methods such as these often serve as a low-cost and effective complement to quantitative evidence acquired through surveys. Focus groups can help research teams get at the sources of absence and pinpoint other potential impediments to good service delivery—especially when the groups are targeted towards different types of providers. It is highly unlikely that doctors will have the same ideas as patients when discussing aspects of health service delivery.

Perceptions surveys are another means of eliciting the views of health workers or educators, including views of the behavior and performance of other service providers. For example, in the health context, a perception survey might be used to look at how support staff such as nurses or pharmacists perceive the services provided by physicians (or their attendance). These types of tools can also more closely examine how beneficiaries perceive the quality of service delivery received, although it is important to take into account information asymmetries and subjective factors that may influence perceptions.
5. Calculate absence rates based on overall (not just “unjustified”) absence: To calculate absence in a way that is comparable with the earlier studies conducted by the World Bank and also by civil society organizations, it is important to count all absence, not just absences that are reported by a facility director as being unjustified. Unjustified absences do matter of course, and if the researcher has a credible way of measuring them, they merit separate analysis. Doing this analysis is particularly important where governments may reject a study that fails to differentiate between excused and unexcused absences. The frequency and reason for unexcused absence, in this case, could be a separate analysis used to tease out any patterns suggesting collusion with superiors or poor governance and human resource management. Additionally, in some cases, researchers may be faced with determining what the role of the individual present at a given facility actually is, an issue briefly discussed in Box 7.

Box 7—When the Wrong Providers Are Present

While direct-observation absence surveys allow for accurate estimation of the absence rates of providers who have been assigned to a facility, there is a risk that they will not accurately portray a typical user’s access to providers. In the case of health facilities, someone other than the officially assigned provider may be sitting in the clinic and treating patients. Preliminary data from ongoing research in India, for example, suggests a high rate of presence of unassigned providers. Government-run clinics in India are supposed to be staffed by doctors with officially recognized qualifications. But when standardized patients made unannounced visits to government-run clinics in rural Madhya Pradesh, they were twice as likely to encounter a provider with no medical qualifications than a provider with any medical training. Thus, researchers may also want to document who is sitting in clinics, in addition to who is not.

Nevertheless, there is value in starting with the estimates of overall absence, for three reasons. First, there is no guarantee that the director’s report on reasons for a particular provider’s absence is accurate: if there are incentives to minimize absence in official records, there may also be incentives to portray unjustified absences as having been approved. Second, the impact of absence on service delivery is likely to depend on overall absence rates, not just unjustified absence. If two teachers fail to turn up as scheduled at a three-teacher school, the immediate effect on the students will be the same.
whether the missing teachers are away for training or are simply absent without leave. Finally, from a practical perspective, the multi-country study and several others cited above measured overall absences, so in order to benchmark results against those international examples, and to deepen the research base, it is important to calculate the overall absence rate. A discussion of direct observation is included in Box 8.

**Box 8—Direct Observation: Absence-Only versus In-Depth Activity Monitoring**

In the case of absence studies, direct observation can be conducted in one of two ways: (1) the individuals conducting the surveys can move quickly through the sampled facilities to confirm provider attendance or absence, but not to try to record providers’ activities in any detail; or (2) after recording attendance during a circuit of the facility—an important first step, if the absence rates are to be comparable—the enumerators can take the time to do an in-depth observations of providers in action. This type of in-depth observation study is often used to assess provider knowledge and quality.

Both types of direct observation allow researchers to take a statistical snapshot of service providers in their normal day-to-day circumstances. An advantage of the second, more in-depth observation methods is that it gives deeper insights into behavior of providers, and also of users. During these in-depth observation studies, it is common for a passive observer to watch and record interactions between service providers (such as doctors or other clinic staff) and service users (or patients). An observation can be completely open to interpretation by the trained enumerator/observer, or it can be structured, with the enumerator making notations based on a prescribed taxonomy. Data captured through this type of research can be both subjective, in that it takes into account the individual doing the data recording, as well as objective, particularly when observations are concretely categorized.

One challenge in using this type of research tool to observe provider activity is the so-called “Hawthorne Effect”: individuals who are aware that they are being observed may behave differently than they would typically behave. Though the Hawthorne Effect is not likely to play a role in the standard absence survey (assuming providers are not forewarned), it can come into play when researchers are also using the direct-observation method to examine interactions between service providers and users through direct observation. In many cases, the Hawthorne Effect subsides over the course of the observation, as the enumerator’s presence becomes less foreign to the individuals being studied.
Even when all of these steps are followed, the value of the resulting absence statistics depends heavily on the quality of survey implementation. World Bank colleagues report cases in which government ministries have attempted to adopt this methodology without the necessary prerequisites for survey quality. A methodology that looks good on paper, but lacks quality controls and does not ensure that enumerators have sufficient independence from political pressures, will likely yield absence estimates as misleading as those derived from central attendance records or facility logbook entries.

**Logistics and Implementation: Choices to make**

While these core features of the absence-survey model have been picked up in most of the studies, researchers both inside and outside the World Bank interested in conducting an absence study need to make some core choices related to how the survey will be structured and how it will be carried out. Particularly important is that although some standardization is useful for purposes of comparison, surveys need to be tailored to fit the policy context and the available budget. Each country context is different, no two budgets are alike, and organizational and research capacity varies. All these variables should be taken into account.

**Who should carry out the survey?** Options include the government, an NGO, a for-profit survey firm, a non-profit research organization, or another outside actor. If the government’s statistical agency implements the survey, it may be able to draw on its experience in this field, and the line ministries may be more likely to trust that the survey is designed to aid them rather than spotlighting their flaws. At the same time, observers may question the independence of a survey carried out by a government agency and the validity of the results. If instead, a civil society organization or another outside organization implements it, the study team may operate with more independence and may have the direct ear of service users, but the organization may lack the administrative capacity and geographical reach to implement a large survey.⁴ (For a discussion of these issues, see Amin and Chaudhury 2008; Fiszbein, Ringold and Rogers 2009.) Those

---

⁴ The Transparency and Accountability Program (TAP), a cooperative program of the World Bank and the NGO Results for Development, has recently sponsored absenteeism-focused surveys of schools and clinics in seven countries, all carried out by civil society organizations. Several of those surveys are highlighted throughout this note.
commissioning a survey should weigh carefully the strengths and weaknesses of different survey implementation agencies, because the wrong choice can be costly. If estimated absence rates are based on an appropriate methodology but are very inaccurately measured, the survey is likely to do more damage than good.

Box 9—Challenges that Civil Society Organizations Face in Conducting Absence Surveys

Due to their position as grassroots advocacy groups, civil society organizations that want to conduct absence or other research studies have certain advantages, as discussed above, but they also face unique challenges. One such challenge is resistance from policy makers and government officials, who may fear the study’s results and be concerned about how the advocacy group will present results to the general public.

The Center for the Implementation of Public Policies Promoting Equity and Growth (CIPPEC), an independent think tank in Argentina, has approached this challenge by working closely with government counterparts and providing policymakers a first glance at study results prior to making them public. Though the organization has a policy to disclose results—both positive and negative—it has fostered a constructive relationship with officials by preventing them from being caught off guard by research results.

Another strategy to overcome this challenge has been employed by the Centre for Budget and Policy Studies in India. CBPS engages with government counterparts through trainings and capacity building, the goal of which is to equip policymakers with the skills to interpret study results while simultaneously raising the profile of the organization.

How large should the sample be? Choosing the right sample size is crucial in any survey, but power calculations and budget should not be the only considerations driving that decision. The research team will also need to decide what the survey is designed to achieve. If it aims to come up with a single national estimate of average absence rates, which could then be compared with those of other countries, the sample can be smaller. In the multi-country study, for example, researchers found that about 100 to 150 facilities per country, with two visits per facility, was a large enough sample size to allow calculation of a reasonably precise national figure. But if the goal is instead to allow comparison of provinces or states within the country, the sample will
need to be much larger, so that each sub-national unit has a sample large enough for precise estimates. Civil society organizations that are new to this type of survey and have limited capacity may be well advised to keep the sample smaller and geographically focused, for example by focusing on a single district. While it is important to avoid reducing the precision of the estimates too much by reducing sample, it also makes sense to keep the survey manageable, especially early on. Moreover, by narrowly targeting the research, a civil society organization can strategically focus its dissemination and advocacy work on a particular area or region of interest.

**Should all the providers be interviewed?** Another important choice is whether to take the time to interview each of the providers in the sample facilities. To analyze the possible causes of absence, it is useful to collect data on individual potential correlates of providers. Administrative records should usually be able to provide data on several important correlates: age, gender, experience, rank, position, salary, and tenure at the facility. However, interviews may be necessary to collect other potentially important correlates, such as the provider’s place of origin, place of residence, commuting distance, family size and characteristics, outside employment, and satisfaction with the position and salary level. This is valuable information, and it can be collected relatively quickly in small facilities of two or three providers. But in larger or busier schools and clinics, adding an interview module can add hours to the time needed to survey the facility, which can potentially add days to the length of the overall survey (depending on travel times needed to other facilities) and thereby increase the cost. A possible compromise is to interview a randomly selected sub-sample of the providers and base provider-level analysis on that sub-sample; this is often the choice made by civil society organizations, which also lack the scale to interview every provider at each sampled facility.

**Should enumerators make multiple visits or a single visit to each facility?** In the multi-country absence study (Chaudhury et al. 2006), enumerators made at least two visits to each facility, with three visits each in India. IDPMS India conducted four unannounced visits during its study (Sadananda and Bhat 2010), while IPAR Kenya conducted two during the same workday, both of which yielded very similar results despite the obvious fear of forewarning following the first visit of the day. Making multiple visits has at least two advantages. First, a second visit allows enumerators to interview at least some of the providers who were absent during the first visit, increasing the completeness of provider data. Especially given that principals and medical officers in charge are absent at high
rates, it can be difficult to get good provider information from anyone else if the provider is absent. Increasing the number of visits further, beyond two visits, obviously improves the accuracy of information further, and a study such as Das et al. (2007) clearly benefits from being able to visit the same facility ten times over the course of an academic year. Still, there are obviously budgetary tradeoffs, and the marginal benefit of each added visit is lower from the perspective of catching additional providers. Consider a country with a 25 percent absence rate. If all providers have an equal probability of being absent, a team that makes two visits will miss the chance to interview only about 6 percent of the providers (0.25 * 0.25 = 0.0625); with three visits, the non-interviewed share falls to 1.5 percent. Purely from the interviewing perspective, it is unlikely to be worth visiting a facility more than three times in a short period.

A second advantage is that multiple visits yield information about the distribution of absences that cannot reliably be obtained through a single visit. Consider again the case of a jurisdiction with an underlying 25 percent average absence rate. For policymakers and communities to address the problem, it is important to know what pattern generates that average rate. Do all providers have an equal 25 percent probability of being absent on any given day? Or are one-quarter of providers absent all the time? If it’s the latter, then the problem could be addressed by cracking down on the minority of teachers who shirk constantly; but if absence is widespread, there is likely a wider accountability problem to be dealt with. By observing the distribution of absences across providers, researchers can assess which of these stories is more likely. Roughly speaking, if all providers have the same underlying probability of absence, then the distribution of absences across providers during three visits to the facility should not differ too much from the predicted distribution: 1.5% (=0.25^3) should theoretically be absent during all three visits, 14.1% (=3\[3*([.25^2]*(1-.25))\]) should be absent during two of the three visits, and so on. But if the actual distribution differs significantly from that predicted distribution, this suggests that absence is more concentrated among certain teachers than others and that further investigation of who those teachers are is warranted.

The downside, of course, is that multiple visits add cost to the survey. To some extent, data collected during repeat visits may be thought of as increasing the sample size of the survey, but because of correlations of errors

11 Though such longer-term studies can be challenging for a civil society organization to conduct, by scaling down the size and targeting a smaller area, a CSO can also collect more longitudinal absence data.
across visits within facilities, increasing power will be costlier with repeat visits than with visits to more facilities. So the research team will have to decide what is most important: getting a precise estimate of absence levels, perhaps with the goal of raising public awareness and increasing pressure for action, or getting better information about correlates and concentration of absence for different providers.

Should the survey search for ghosts? In the multi-country study, the enumerators tried to locate only providers who were listed at the facility level as being on the staff roster and on a work schedule that listed them as being on duty. This is not the only possible approach. The survey team could instead rely on central records for the list of staff assigned to the facility, and then try to track down all of those staff. This more expansive approach would allow the survey team to try to calculate the rate of “ghost providers”—those who are on central staff rosters and who are drawing a salary, but who are either not listed at the facility level or can never be found at work in the facility. In one of the earliest examples of this type of survey (World Bank 2001), survey teams include both a ghost-tracking component and an absence-measurement component (although the absence measurement was based in part on provider self-reports, rather than just direct observation). Though this type of research has not been explicitly conducted by a civil society organization, the problem of ghost providers has been documented in the context of both absence and public expenditure tracking studies conducted by civil society organizations. In its 2008 public expenditure tracking survey, IDPMS India notes that though there are doctors listed on roll-sheets, it is unclear whether they actually practice medicine or just exist on the payroll (IDPMS 2008). IPAR, in Kenya, raised similar questions in both its PETS and absence work (IPAR 2008, 2010).

Both the standard absence survey and the search for ghost providers tackle valid concerns, but it may be cleanest to examine them separately. This can be done by first calculating the level of ghost providers as the rate at which staff from the central records cannot be located on the roster at the facility level (subject to the caveat that records on transfers may be incomplete), then calculating the absence rate based only on the attendance of those providers who are on the facility roster and work schedule. For benchmarking against other studies, it will be important not to exaggerate the absence-rate denominator by including ghost providers who do not even appear on the facility roster.
Should the survey include private schools in the sample? A final question for survey design and implementation concerns whether to limit the study to the public sector. In most cases, provider absence surveys have included only government schools and clinics in the survey. But in some settings, where the budget allows it, there may be advantages to including a representative sample of private facilities. Comparisons between public and private facilities can shed light on whether high rates of absence are pervasive in an economy, or whether they are particularly severe in government schools and clinics. (See Kremer and others 2005 for an example in the Indian education sector.) Under this approach, the private-sector comparators can be used to infer what private employers regard as the highest acceptable baseline rate of absence.

To add private facilities to the study, research teams will need to address some additional challenges. First, governments will be even less likely to have reliable lists of private facilities than of public ones, so study teams that want to include those facilities may have to carry out private-facility sampling at the community level. For example, each time enumerators visit a government school, they can compile a list of private schools in the same village or neighborhood (based on inquiries in that community) and then visit schools sampled randomly from that list. Second, in private facilities it may be more difficult to obtain permission to monitor attendance. This approach may therefore be easiest in a setting where facilities are small enough that enumerators can observe the teachers or medical providers without being intrusive.

Dissemination and Advocacy: What They Imply for Study Design

While conducting research built around these core elements is conceptually straightforward, disseminating the results and advocating for change can be challenging, for World Bank researchers as well as for grassroots civil society organizations. Especially in cases where an absence survey is conducted as a one-off monitoring effort, dissemination and advocacy based on the results may not receive enough focus. One way of promoting the use of this type of evidence in policymaking is to incorporate dissemination and advocacy strategies into the study design from the outset. While this type of strategy will vary depending on who is implementing the study, there are some good practices that are worth considering:
• **Identify target audiences before undertaking the absence study.** By identifying target audiences during the study design phase, research teams will be able to focus the study design towards targeted groups, secure buy-in from stakeholders, and do the groundwork necessary to make potential audiences more receptive to the findings and recommendations when they come out.

• **Establish what type of impact this research should have on target audiences.** It is important to specify in advance its advocacy goals, including the desired long-term impacts of the results on specific policies and programs. Thus prepared, the team is less likely to allow the availability of communications tools like brochures and press releases to drive the dissemination, because it can use its advocacy goals to guide the design of the dissemination strategy.

• **Develop a dissemination and advocacy strategy before the data gathering begins.** In addition to identifying a target audience, research teams can also benefit from outlining their research dissemination and advocacy strategy before the research begins. This is particularly true when thinking about the timing of releasing research results. By defining the dissemination and outreach strategy early on, a research team can move to results dissemination and implementation immediately following analysis completion.

**Using the Data to Generate Evidence**

The spectrum of data analysis techniques that can be used to exploit absence-survey data is broad, ranging from simple tabulations and pair-wise correlations to regression analysis and Kuznets curves measuring divergence in indicators across different geographical areas. In this section, we describe briefly the three major types of data analysis most commonly carried out as part of absence studies.

**1. Basic Statistical Evidence on Absence Levels**

Presentation of the basic statistical evidence on mean levels of absence is the simplest but perhaps most effective way to use the data from absence surveys. Assuming they are based on a well-designed sample framework, valid survey instrument, and careful data collection, there is power in the basic statistics on absence: they are easily interpretable but more credible
than anecdotal evidence as a basis for policy. Basic comparisons across countries or within a country (across regions or across time) can be complemented by a narrative describing what these findings imply, and should serve as the foundation for deeper correlational analysis.

Comparison of means across countries: Comparing simple mean absence rates with those available from past studies can help provide researchers with useful benchmarks for their own findings. Figure 2 compares absence rates from education-sector surveys conducted or supported by the World Bank.

**Figure 2: Provider Absence Rate in Education (%)**

![Figure 2: Provider Absence Rate in Education (%)](image)

Figure 2 based on World Bank 2008, Benveniste et al. 2007, Chaudhury et al. 2006, Das et al. 2007, Gauthier 2006, and Filmer 2004. In most cases, absence rate refers to teachers in public primary schools only. However, in Cambodia and Lao PDR, the rates are for lower secondary school, and in Mongolia, the sample covers both primary and secondary.

Comparison of means within countries: Another effective way of presenting statistical evidence is through within-country comparisons. For example, figure 3 shows state-level teacher absence rates in India based on the World Bank’s 2003 multi-country study (Kremer et al. 2005).

2. Analysis of Correlates (Bivariate and Multivariate)

Correlational analysis takes data a step further: it allows researchers to examine nonrandom relationships between two different variables. In the
case of absence, examples could include calculating the correlation between absence rates and gender or commuting distance of the provider. Correlations take descriptive statistics to the next level, and provide deeper insight into potential sources of absence; they can enrich policy discussions and attempt to begin to answer the “why?” questions at the heart of the problem.

Simple bivariate correlations and comparisons of means for different categories of providers and facilities—male versus female, for example, or urban versus rural—can be an illuminating way to start the correlational analyses. But service delivery is a complex process, and there is never just one cause to the problem of absence. To tease out the potential contributions of different factors, it is important to carry out multivariate regression analysis that incorporates the institutional, policy, facility, and individual level characteristics that contribute to absence:

- **Institutional information** answer questions about the broad context for service delivery: How does the education or health sector operate? How is hiring and firing done? Are health or education facilities public or private? Are the private facilities regulated by some national standards and laws? To the extent that these institutional features vary across facilities, they can be incorporated into the multivariate analysis.
A guidance note

Table 1: Distribution Table from World Bank Multi-country Study 2003

Distribution of absences among providers

<table>
<thead>
<tr>
<th></th>
<th>Percentage of providers who were absent this many times in 2 visits (3 visits in India)</th>
<th>For comparison: Expected distribution if all providers had equal absence probability</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td><strong>Teachers</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bangladesh</td>
<td>73.4</td>
<td>23.5</td>
</tr>
<tr>
<td>Ecuador</td>
<td>82.8</td>
<td>6.9</td>
</tr>
<tr>
<td>India</td>
<td>49.1</td>
<td>32.7</td>
</tr>
<tr>
<td>Indonesia</td>
<td>67.7</td>
<td>27.5</td>
</tr>
<tr>
<td>Peru</td>
<td>81.0</td>
<td>17.3</td>
</tr>
<tr>
<td>Uganda</td>
<td>63.0</td>
<td>29.6</td>
</tr>
<tr>
<td><strong>Medical workers</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>India</td>
<td>35.7</td>
<td>31.9</td>
</tr>
<tr>
<td>Indonesia</td>
<td>46.1</td>
<td>41.0</td>
</tr>
<tr>
<td>Peru</td>
<td>56.4</td>
<td>33.5</td>
</tr>
<tr>
<td>Uganda</td>
<td>52.0</td>
<td>38.0</td>
</tr>
</tbody>
</table>

Notes: (1) The left side of this table gives the distribution of absences observed for each type of provider in each country. (2) The right side of the table provides, for comparison, the distribution that would be expected if all providers in a country had an identical underlying absence rate equal to the average observed for that country. Source: Chaudhury et al. 2006.
• *Facility-level data* capture the characteristics of either health clinics or schools. These data can be collected by enumerators during their visits to these facilities.

• *Individual data* are demographic characteristics of both the service providers and beneficiaries. These data can be collected both through primary surveys, such as household surveys, and through secondary sources, such as administrative data.

3. Absence Distribution Tables

Distribution tables can be helpful in understanding whether absence is concentrated among a small number of providers, keeping in mind the frequency and the timing of visits. The multi-country study conducted by the World Bank used a distribution table (Table 1) to illustrate that absences seemed to be fairly spread out, as would be expected with an underlying distribution where each provider’s probability of being absent was the same (with the exception of Ecuador).

Using the Evidence to Improve Service Delivery

How can the results of absence surveys be used? In at least four ways, each of which is ultimately aimed at improving the quality of service delivery and our understanding of it:

• **To draw media and policy attention to service-delivery problems:** As noted above, one advantage of provider absence surveys is that it is not difficult to find an audience for the results, at least in the high-absence countries. Every policymaker, every journalist, and nearly every citizen has attended school and received medical care at some point, and so those groups understand viscerally what it means if there is a 25 to 40 percent chance that a teacher or doctor will be absent on any given day. So with some effort at dissemination, the basic findings are likely to be picked up by the news media, and also may provide an opening for policy dialogue. The best case for this has probably been India, as described in the introductory section above. One key to the media and policy attention in India (in addition to the high absence rates the survey found) was likely the size of the sample, which allowed state-level estimates and allowed people to benchmark their state’s perfor-
formance against other states’. Another key was probably the energetic promotion of the findings by some of the authors in their frequent interaction with policy audiences in that country.

• To better understand possible causes of service-delivery problems: Though true casual effects are difficult to parse out using only an absence study, it is possible to gain a better sense of why failures in service delivery exist in particular contexts. For example, perhaps absence is less likely at health facilities that are well stocked with medicines, have toilets and other basic amenities. Alternatively, absence rates may be higher at schools where few managerial, peer, or other monitoring mechanisms exist. By taking a closer look at basic correlates, researchers can begin to discern whether absence in a particularly country is highly localized or affects the entire nation. Furthermore, these types of results can fuel expanded policy dialogue at both the national and local level.

• To assess effects of reforms and innovations in service delivery: Beyond drawing attention to the issue of provider absence and spurring action to remedy it, the absence rates can be used to assess proposed policy responses. By correlating data on teacher, school, community, and program characteristics with absence, researchers can identify approaches that are associated with better attendance and are promising candidates for further exploration. The surveys can also serve as a baseline for progress. If survey teams repeat the absence survey within a few years, in the wake of policy or program changes designed to improve provider motivation and support, the results can be used to gauge the effect of those changes. When researchers recently resurveyed an Indonesian primary school sample in 2008, they found that absence rates had declined significantly since 2002-03, perhaps because of the major changes in teacher compensation policies or consolidation of decentralization during that period (Artha et al. 2008). But regular monitoring can also be carried out in the context of an ongoing experimental investigation, as in the case of Andhra Pradesh primary schools in recent years (Muralidharan and Sundararaman 2009), to see how effective an innovation is at improving effort.

• To audit and improve administrative data on attendance: One possible new direction is to work with governments to use absence surveys as audit mechanisms that not only reveal the extent of the problem, but also improve formal attendance reporting systems. After all, the admin-
Administrative apparatus in any education or health system collects extensive data on attendance; the problem is that these data are often not reliable. If ad hoc provider absence surveys could be used to make the formal administrative systems credible, rather than simply bypassing them, they could have an impressive multiplier effect. They could serve as audit mechanisms, as long as consequences resulted from surveys that showed substantial discrepancies between administrative records and actual attendance. A relatively small increment in funding could thereby yield a large increase in the amount of data available.

Thus the results of absence surveys can serve the interests of three different groups of end users—the broader public and media; the education and health researchers and policy makers and entrepreneurs; and the education managers and technocrats.

**List of Online Resources**

The following resources are available online:

- Sample Terms of Reference for Survey Firm
- Example Survey Firm Contract

Sample survey instruments:
- 2003 All-India Health Questionnaire
- 2003 All-India Education Questionnaire

Papers and notes based on absence surveys
- Living Standard Measurement Survey Community Module

**References**


Provider absence, or absenteeism, surveys are a means of gathering data on an important, measurable aspect of the quality of service delivery: whether providers (for example, teachers, doctors, or nurses) are available at the service provision facility (such as a school or clinic) at times when they should ordinarily be on duty.

This short guidance provides advice on how to carry out surveys of provider attendance and absence in the education and health sectors. It is meant to serve as starting point for teams interested in measuring absence of teachers and medical providers, for example to inform research on service delivery or to serve as an indicator of project or program performance.