



# HNP Brief #1

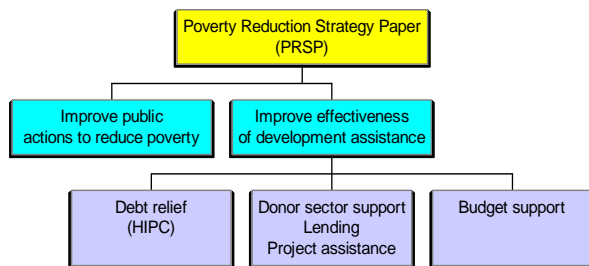
## PRSPs, Immunization Targets, and Equity: Focus on Africa

February 2005

### Introduction

The Poverty Reduction Strategy (PRS) Initiative (Figure 1), introduced in 1999 by the IMF and the World Bank, aims to improve the public actions of low-income countries to reduce poverty and to make aid more effective in achieving this goal (World Bank, 2004). The Poverty Reduction Strategy Paper (PRSP) that each country completes provides the development framework for these poverty-reducing actions, for continued access to assistance from the Bank and the Fund, and for harmonization of aid among external partners. Multi-lateral and bi-lateral agencies provide aid for poverty reduction through various modalities, including debt relief, sector-specific assistance, and budget support.

Figure 1. The Poverty Reduction Strategy Initiative



As of June 2004, 19 of the 20 final PRSPs for countries in Africa included immunization as an indicator of progress toward poverty reduction in the social sector. This brief examines some short-term consequences for African programs of this movement of immunization to the center of macro-economic discussions about debt relief and poverty reduction, through a summary of some initial experiences gathered, in an opportunistic manner, from a non-scientific sample of African countries. Some initial themes and apprehensions that have emerged from these first experiences are presented.

Following this discussion, the scope of the brief broadens to a consideration of options for improving equity in immunization, the implications of which may be relevant not only to debt relief but also to the full range of development assistance modalities. Through both these narrow and broad perspectives, the brief intends to capture most of the salient issues concerning equity in immunization. This document can serve as a background for a continuing dialogue between government officials

and their development partners that, hopefully, could lead to a consensus on some key decisions and specific actions to be taken to reduce inequities in immunization.

### Debt relief and immunization: some initial experiences

The transformation of immunization coverage from an important objective of the health sector alone, to one of several conditionalities for debt relief, appears to have had some short-term political, financial and programmatic consequences for immunization programs in some African countries that participate in the Heavily Indebted Poor Countries (HIPC) Initiative.

#### • Political

Debt cancellation in African countries is significant, from fiscal, social, and political perspectives. Consequently, policy-makers have a clear interest in ensuring that HIPC decision and completion points are met in a timely fashion. It is not surprising therefore, that increasing immunization coverage would become a national political obligation in some places. In these settings, policy-makers often hold multiple public sector agencies and development partners accountable for achieving the immunization target specified in the PRSP.

In Mauritania, for example, the Ministry of Economic and Foreign Affairs assumed a highly visible and dynamic role in monitoring progress toward the achievement of the government's stated commitment to achieve 70% coverage for the third dose of the combination Diphtheria-Tetanus-Pertussis (DTP3) vaccine by 2002. The Prime Minister followed progress closely. Any ambiguity or reticence that had characterized donors' commitment to the immunization program prior to the 2000 decision point virtually disappeared once the government assumed leadership on this matter. This broad consensus on the need to achieve the stated target became the driving force behind an official and highly visible re-launch of the immunization program in 2001, which had been languishing for the previous four years.

#### • Financial

Although it is difficult to confirm debt relief's share in the overall expenditures for immunization, there are examples where more spending on immunization from HIPC has followed the political commitment to increase coverage.

In Cameroon, the MOH reported that approximately \$1.5 million of HIPC resources in 2002 and \$1 million in 2003 were spent on vaccines, cold chain equipment, motorcycles and vaccination cards. In Mauritania, as of June 2002, the MOH reported spending approximately \$1 million in HIPC funds on vaccines, consumables, and cold chain equipment. The MOH estimated that approximately 90-95% of the government's investment budget for immunization, which was used primarily to purchase vehicles and cold chain equipment, was being supported with HIPC resources. Although expenditure information was not available for Senegal, the MOH reported having received an allocation of approximately \$5.4 million in 2001 to support immunization.

Increased HIPC financing for immunization has been both an instrumental and symbolic boost for some national programs. Its conversion into greater liquidity at peripheral levels of the health system appears to have been a key factor in helping to improve performance in some countries. Both Mauritania and Cameroon have been successful in channeling some portion of these new resources directly to lower levels of the health system. As a result, program managers in both countries have reported increased staff confidence in the program at all administrative levels, and greater motivation among health staff at the point of service delivery.

In Mauritania, the channeling of resources directly to the regions was reported to have been a key factor in raising the systemic low morale that had come to characterize the program between 1997 and 2000, and to improving the provision of services. MOH officials in Cameroon report that the additional HIPC financing sent directly to provinces for distribution to districts, when combined with money from the Global Alliance for Vaccines and Immunization (GAVI), helped Cameroon resurrect a moribund program. Although difficult to confirm, managers from these countries believe that this increased liquidity has contributed to improved coverage rates. According to the most recent WHO/UNICEF estimates of immunization coverage based on all available evidence (WHO/UNICEF, 2004), DTP3 coverage in Mauritania increased from 40% in 2000 to 61% in 2001, to 83% in 2002. Following an extended period of stagnation (1997-2001), DTP3 coverage in Cameroon increased from 53% in 2000, to 63% in 2002 to 73% in 2003.

Immunization program managers have welcomed this new stream of funding. In some cases, however, the actual amount of resources received has been less than that requested, and the money does not always arrive in a timely manner. In Senegal, the MOH's HIPC receipts for health in 2001 represented about 45% of what was originally requested, and the funds were not actually received until the 4<sup>th</sup> quarter of 2002. Delays such as this have forced some immunization program managers to look to other sources of financing, usually external, to

support the recurrent cost items critical to the day-to-day operations of the program, such as training and supervision. For example, in Cameroon, where securing HIPC resources for immunization has been a slow and complicated process, the MOH used GAVI funds to set up a local contracting scheme with districts. Districts received a cash transfer in exchange for an explicit commitment to achieve certain coverage targets.

- **Programmatic**

Increased political interest and investment in immunization stimulated by debt relief have also affected the manner in which immunization services are delivered, at least in the short-term, in some countries. In Mauritania, there was intense political pressure on program managers to achieve stated targets, sometimes at all cost, and with few restrictions. Whatever the MOH deemed necessary to achieve the coverage objective quickly was more or less sanctioned by higher authorities.

Consequently, a campaign mentality materialized, and outreach and mobile strategies were intensified in all regions during 2001 and 2002, greatly facilitated by procurement of additional vehicles with HIPC funds. Regions were instructed to reduce the dropout rate at the expense of vaccine wastage. Ad hoc "Multi-Antigen Vaccination Days", which were special services offered above and beyond those provided through the routine program or through the periodic disease-specific campaigns, were organized and conducted in selected areas. In Nouakchott alone, which relies primarily on fixed sites, 10 such special days were organized in 2002. What the medium- and long-term impact of this experience will be on the routine service provision strategy and consumer demand is a question that preoccupies immunization program staff. In Cameroon, where an initiative to improve the delivery of immunization services had begun immediately following an external review of the program in 1999 and before the availability of HIPC resources, the arrival of new funding had a far less dramatic effect on service delivery in the short-term.

### **Some initial apprehensions**

As more African countries approach or reach their HIPC completion points, important questions are being raised about this experience, as well as the medium- and long-term implications for national immunization programs.

#### Country perspectives

Some MOH officials are worried that the resurgence of political commitment to immunization may be fragile and recent coverage gains artificial. There is also uneasiness that the renewed motivation among health workers may be difficult to sustain if continuous training, supervision, and material support for delivering immunization services

cannot be institutionalized. Some have even compared this period of accelerated activity to the final days of the Universal Childhood Immunization (UCI) initiative of the 1980s, when political mobilization was used to marshal human, material and financial resources to achieve ambitious coverage targets by 1990. Apprehensions then about the sustainability of such crisis-style efforts are today the preoccupations of countries such as Mauritania, which reached its completion point in 2002, and Cameroon, whose completion point may not be until 2006.

In Mauritania, the government's expressed desire to use the march towards the completion point as a platform for rebuilding its routine immunization program has been delayed by several factors. Chief among them were the severe drought conditions experienced in 2003, the turbulence associated with the nationwide measles campaign (which began in late 2003, and concluded in June of 2004), and the preparations for a combined national immunization coverage survey and impact evaluation of the measles campaign in 2004. The government's recent delay in reimbursing UNICEF for the purchase of vaccines, although now resolved, has become a source of anxiety about the future.

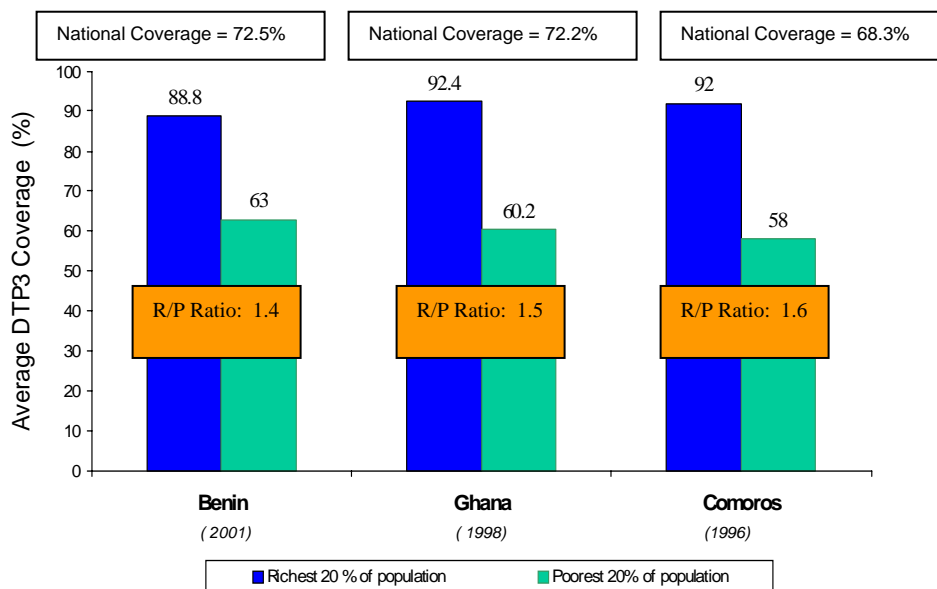
How to sustain and further improve recent progress in vaccination in Cameroon was the central theme of an April 2003 national seminar. Despite recent gains in coverage, the MOH has acknowledged that many

threats to sustaining this success remain. The most prominent difficulties continue to be insufficient skills in immunization program management, deficiencies in the cold chain and in transport logistics for outreach strategies, poor injection safety technique, inadequate demand creation, and uncertain future financing. Cameroon and Mauritania are both in the process of preparing and/or revising their immunization financial sustainability plans, which will help managers address, in a comprehensive way, their concerns about finding adequate resources to sustain their programs.

### External perspectives

Analysts are increasingly acknowledging that population-based coverage rates, which are included in most of the final PRSPs, may have their limits as a sensitive measure of poverty reduction. These aggregate indicators can mask chronic inequalities among different groups in society, even at fairly high levels of coverage. Mauritania and Cameroon, for example, both set 70% coverage of children under 1 with the DTP3 vaccine as their target to be achieved by the HIPC completion point. Household coverage survey data from other African countries where 70% or near 70% coverage for DTP3 has been achieved, such as Benin (72.5%, 2001), Ghana (72.2%, 1998), and Comoros (68.3%, 1996), suggest that inequalities may persist at these coverage levels (Figure 2). The rich-poor ratios for Benin, Ghana, and Comoros were 1.4, 1.5, and 1.6, respectively.

Fig 2. DTP3 Coverage by Wealth Quintile, Richest vs. Poorest: Benin, Ghana, Comoros

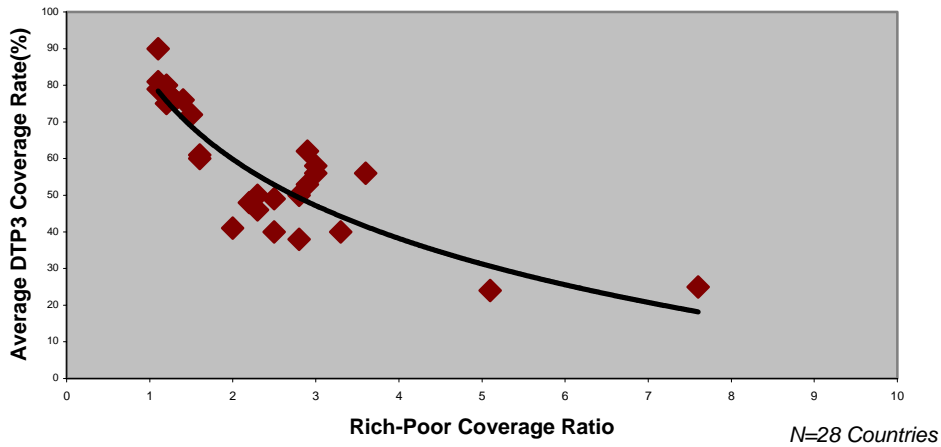


Source: Demographic and Health Survey (DHS)

Figure 3 shows the inverse relationship between coverage and inequity (i.e., the higher the national coverage, the lower the inequities). It suggests that

countries that can achieve a minimum of 80% coverage can reduce their rich-poor ratios to the range of 1.1 to 1.3.

**Fig 3. Relationship between national DTP3 coverage rates and Rich-Poor Coverage Ratio**

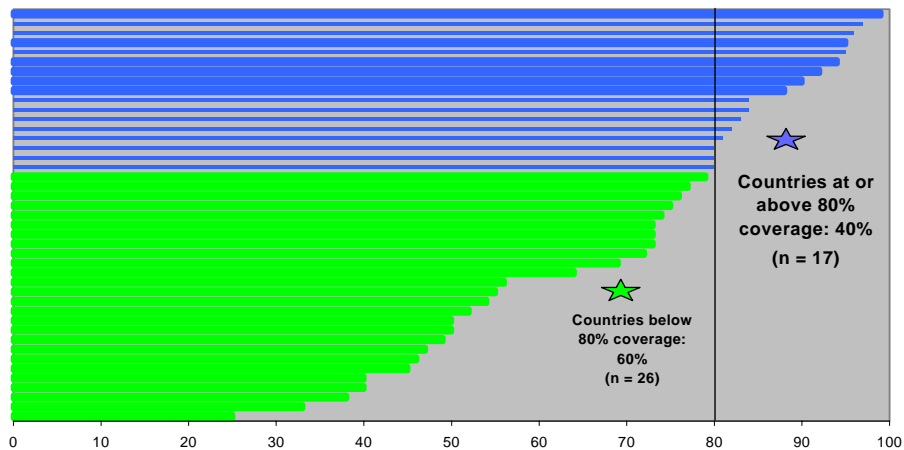


Note: Y axis: overall coverage, X axis: coverage ratio between richest and poorest quintile  
**Source: Demographic and Health Survey (DHS)**

Although activities that succeed in increasing national coverage to 80% or more may be considered equity-enhancing, this goal may be beyond the reach of many African countries, at least in the immediate future, for several reasons.

First, many countries still have a long road to travel to achieve 80% coverage of the target population. WHO/UNICEF estimates from 43 African countries indicate that only 40% (n=17) had reached 80% or higher coverage in 2003 (Figure 4).

**Fig 4. DTP3 Coverage in 43 African countries, 2003**

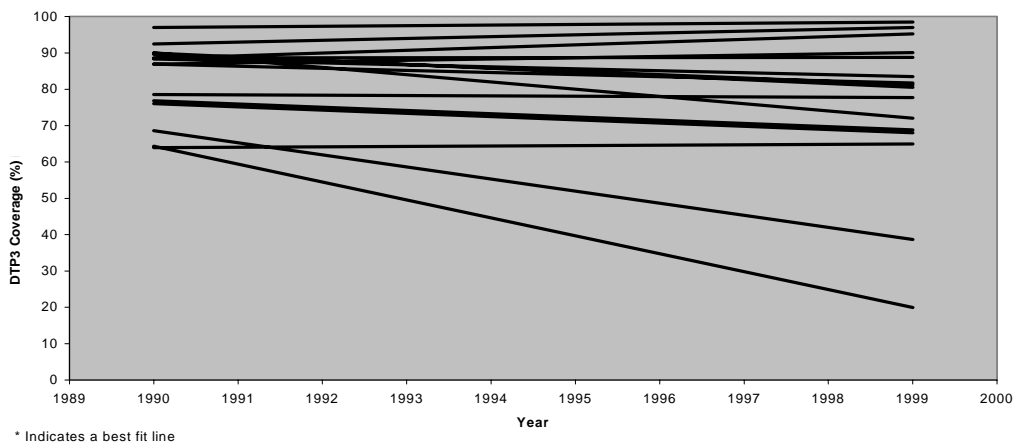


Source: WHO/UNICEF Best Estimates, 2004

Second, past experience suggests that despite intensive efforts to increase coverage, it is not easy to achieve and sustain ambitious goals. The push during the 1980s to achieve universal childhood immunization (UCI) by 1990 has been heralded as a global public health success story; in Sub-Saharan Africa, however, the initiative was only partially successful (UNICEF, 1996). According to the

most recent WHO/UNICEF estimates, in 1990 only 16 of 44 Sub-Saharan African countries (36%) had achieved at least 80% coverage of children under 1 year of age with DTP3. The rate for measles was slightly less (33%). Of these 16 countries, only some were able to maintain or increase DTP3 coverage during the 1990s (Figure 5).

**Fig 5. Linear Trend Curves\* for 16 Sub-Saharan African Countries Achieving UCI Goal (min. 80% coverage) in 1990**

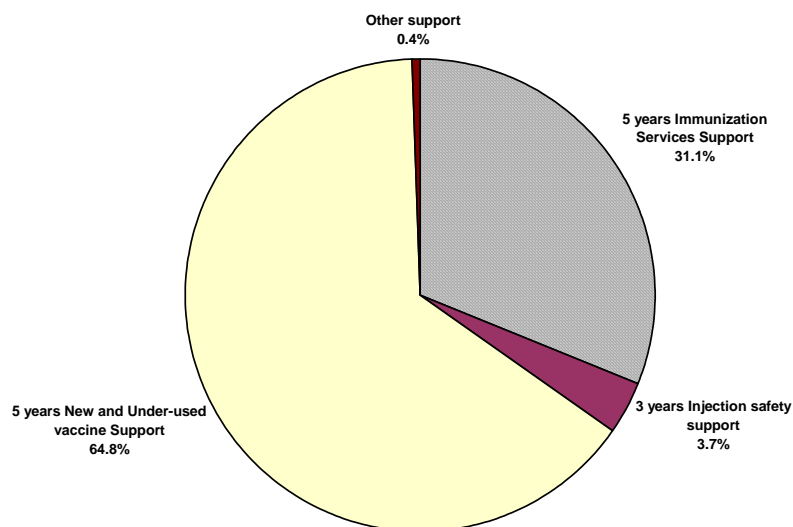


**Source: WHO/UNICEF Best Estimates, 2004**

Third, substantial external resources to support immunization programs often favor aspects other than routine services (Figure 6). GAVI's estimated five-year commitment to 39 African countries as of July 2004 was

\$US 720 million, approximately 31.1% of which has been committed to strengthening immunization services, and another 3.7% to supporting injection safety activities.

**Fig 6. Allocation of GAVI's Estimated Five-Year Commitment of US\$720 million to 39 African Countries (As of July 2004)**



**Source: GAVI Website ([http://www.vaccinealliance.org/Support\\_to\\_Country/Country\\_Status/index.php](http://www.vaccinealliance.org/Support_to_Country/Country_Status/index.php))**

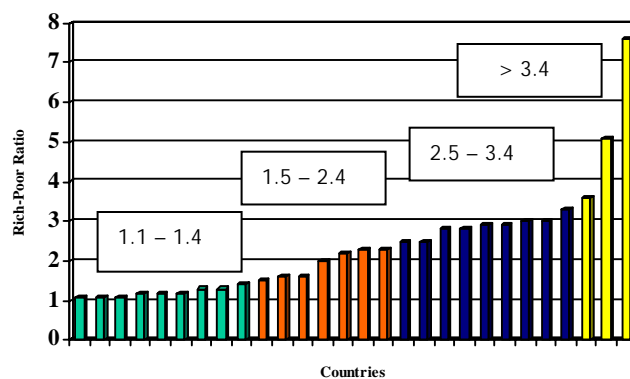
Fourth, many countries continue to face difficult program-specific and health system-wide barriers to further improving coverage. In Mauritania, for example, immunization officials acknowledge that many of the operational problems that plagued the routine program prior to the recent recovery have yet to be addressed on the required scale, and that the program suffers from inadequate management of its financing. Most countries, regardless of their level of performance, face problems of unpredictable financing at the lowest levels of the health system, and serious manpower constraints,

including inadequate numbers of staff, poor distribution of existing staff, and under-productivity.

### Options for the future

The most recent available data suggest that across Africa, the richest segments of society benefit most from immunization (Figure 7). What is to become of poor, disadvantaged, and marginalized segments of society during this pursuit of ever-higher national coverage?

Figure 7. DTP3 Rich-Poor Ratios in 28 African Countries



Source: DHS, The World Bank

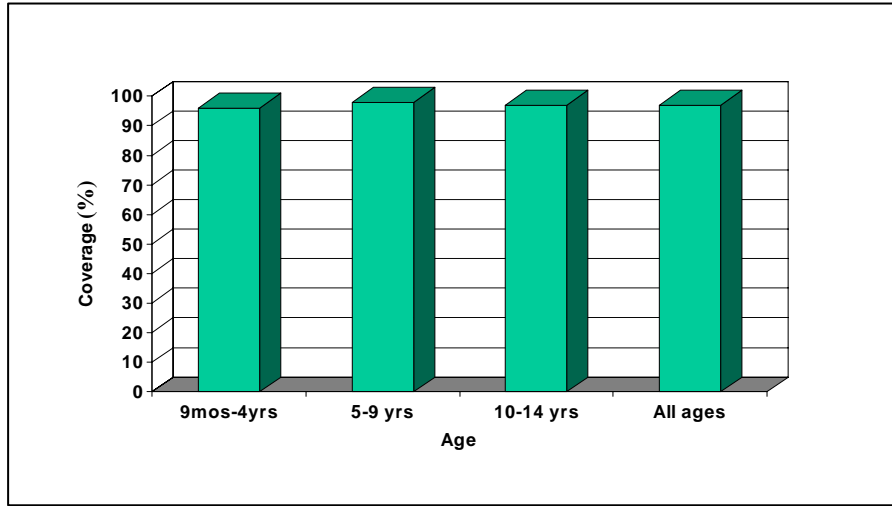
The empirical evidence on effective interventions to improve equity is limited, but there are some promising options and opportunities beginning to emerge. In theory, *setting, measuring, and monitoring coverage targets stratified* by socio-cultural, economic, gender, and/or geographic groups have the potential to change behavior and improve equity. Few, if any, African countries have chosen to follow this path. For example, there are no disaggregated or group-specific immunization targets in any of the final PRSPs. Opponents of stratification claim that it is too complex, technically difficult to implement, expensive, and politically sensitive. They also have pointed to a lack of demand from countries for such measures, and a lack of a consensus within the global immunization community on this approach.

*Lowering the financial barriers* to immunization, in theory, might also improve equity. For example, Burkina Faso

made immunization less expensive for everyone by abandoning the practice (prevalent prior to 2001) of parents' having to purchase injection material, and instead offer vaccines free (Eichler, 2001). Another promising strategy for immunization—extending *cash transfers* to families contingent upon their participation in health promoting activities—has not yet found fertile ground outside of Latin America and a few Asian countries.

Large-scale, intensive, time-limited, disease-targeted *campaigns* have been shown to be pro-poor because of the large numbers of children they have reached (Figure 8). Questions continue to be raised, however, about the opportunity costs associated with these campaigns as well as their sustainability.

**Fig 8. Burkina Faso Measles Campaign (2001) Coverage Survey Results, By Age**



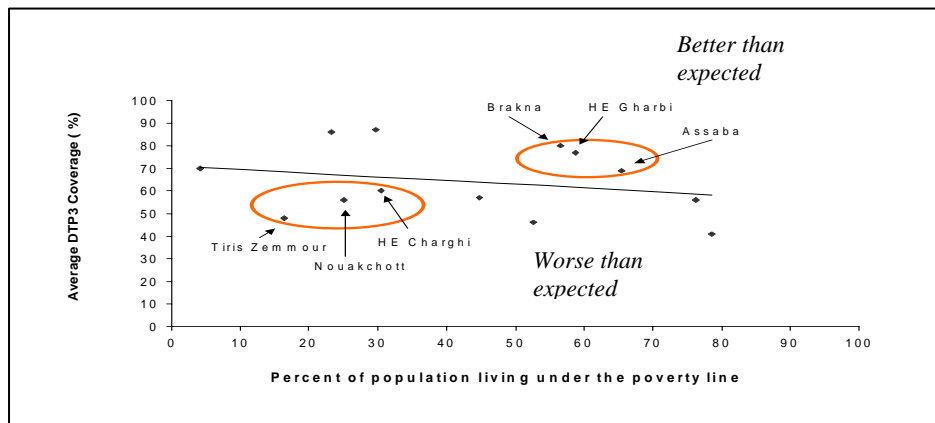
Source: Measles Initiative (ARC, CDC, UNF, UNICEF, WHO)

Increasing the availability of *human and material resources in facilities that serve a predominately poor population*, as well as improving the *technical quality* of these services, could also enhance equity. Recent policy in Mauritania and Cameroon to provide, with debt relief funds, a form of hardship pay to health providers willing to work in under-served areas could have a positive impact on immunization services. *Performance-based schemes*, which have been successful in Rwanda, could be used to target hard to reach children. Experiences from industrialized countries in extending immunization services to “hard-to-reach” and “at-risk” populations have not been widely debated for their potential relevance elsewhere, adapted, or tried on a large scale in African countries (Briss et al., 2000).

A preoccupation with achieving high levels of universal coverage may unintentionally divert attention from

important experiences occurring at sub-national level that, if further investigated, might provide additional insight that could benefit the underserved. For example, data from a public expenditure review in Mauritania were used to rank each of thirteen provinces according to the percentage of the population living under the poverty line. An examination of immunization coverage, by province, revealed certain outliers from the expected relationship between poverty and coverage (Figure 9). That is, there were certain provinces that performed better than expected (i.e., high coverage in high poverty areas) and others that performed worse (i.e., low coverage in low poverty areas). An exploration of the underlying factors that explain the unexpected successes and failures might provide information that could be used to raise all provinces to an equally high standard of pro-poor performance.

**Fig 9. Relationship between DTP3 coverage and poverty status in Mauritania**

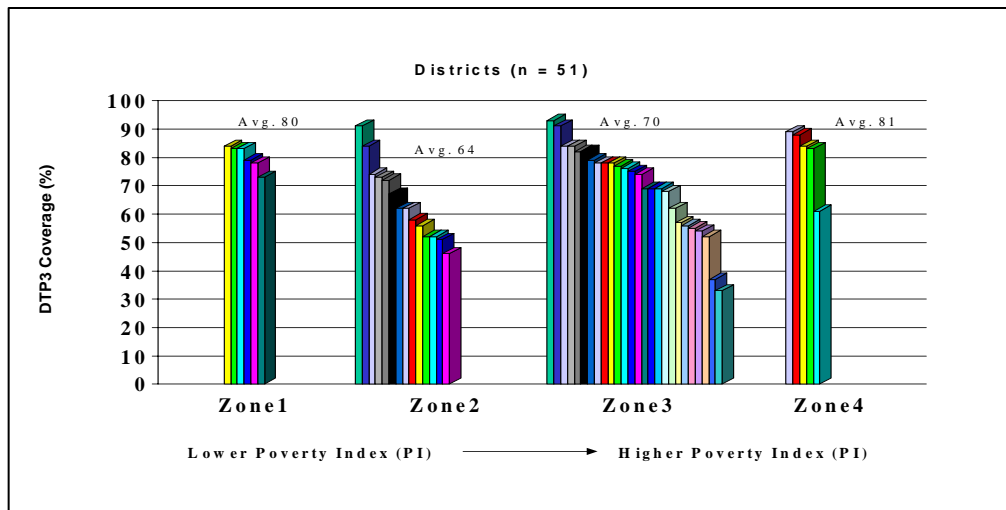


Source: 2001 Official Country Estimates

Similarly, in Burkina Faso, an analysis of immunization coverage stratified by “poverty zone” revealed considerable within-zone variation in coverage, as well as some interesting between-zone patterns (Figure 10). For example, average coverage in the highest poverty zone was 1 percentage point better than the lowest poverty

zone, and 16.7 percentage points and 11 percentage points better than the average coverage in zones 2 and 3, respectively. Such findings suggest a rich set of explanatory hypotheses that should be investigated for both the benefit of Burkina Faso and other countries in the region.

Fig 10. DTP3 Coverage by Poverty Zone: Burkina Faso



Source: 2003 Household Coverage Survey/ Card Only

## Future challenges

As we look ahead, there are some key challenges that Bank task managers and the global immunization community should address.

**First**, how can we ensure accountability for achieving greater equity in immunization?

If inequalities are not measured, and progress in reducing them not monitored, it seems unlikely that there will be substantive progress or resource flows in the direction of equity-enhancing work. Consequently, at a minimum, there needs to be agreement on what should be measured and how and when progress should be monitored. Resources will be necessary to do this job correctly.

**Second**, how can we translate concerns about immunization inequalities into systematic action at country and global levels?

**Strategically**, the debate is often whether countries should opt for strong implementation of a universal coverage approach, or attempt to target the poor effectively, either directly or indirectly, through existing programs and other public health services. As Victora and colleagues have

pointed out for child health activities more generally, both strategies have strengths and weaknesses, and both need to be considered in light of the local epidemiological situation, as well as different health system opportunities and constraints (Victora et al., 2003) (Table 1). In practice, a mix of strategies will be required considering the current state of immunization inequalities in Africa.

**Operationally**, much more empirical work is needed to identify interventions that are effective in improving equity, regardless of the overarching strategy adopted. Formative research that investigates and tries to explain performance that deviates from “the expected” can also contribute to our understanding of what works in practice. At present, there is far too little work in either of these areas.

**Third**, how can we address the relatively low demand expressed by countries in the region for equity promoting research or concerted action?

A systematic, thoughtful set of guidelines that could be used to help countries reflect upon these inequalities, consider the political and technocratic implications of trying to address them, and develop an action plan for overcoming them might raise awareness and stimulate interest and demand for more concrete efforts.

**Table 1: Situations in which targeting or universal coverage might be appropriate**

Targeting (individual or geographic)	Universal coverage
Children in need are easy to identify	High-risk groups are hard to identify
Disease or situation has a patchy distribution in the population (e.g., micronutrient deficiency, disease due to confined risk behaviors)	Intervention is needed by every child (e.g., attended deliveries, vaccinations)
Intervention only protects those who receive it	Intervention has spill-over effect (e.g., vaccines, mosquito nets)
Public sector has wide amount of control over intervention (e.g., Vitamin A capsules)	Intervention is widely available in private sector (e.g., mosquito nets, antibiotics)
Spontaneous demand for the intervention is low (e.g., vaccines at least in some populations)	Spontaneous demand is high (e.g., antenatal care)
Administration system must be well developed to target effectively	Administration system must be able to reach the whole population
Government health services are unable to cover the whole population	Government health services are widely accessible

Source: Victora et al., 2003

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