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Peru

Recurso Programmatic AAA – Phase IV

Improving Health Outcomes by Strengthening Users' Entitlements and Reinforcing Public Sector Management

February 4, 2011

Human Development Sector Management Unit
Andean Country Management Unit
Latin America and the Caribbean Region



Document of the World Bank

ABBREVIATIONS AND ACRONYMS

AETA	Extraordinary Allowance for Welfare Assignments (<i>Asignaciones Extraordinarias por Trabajo Asistencial</i>)
AUS	Universal Health Insurance (<i>Aseguramiento Universal de Salud</i>)
CAR	Results Based Management Agreements (<i>Convenios de Administración por Resultados</i>)
CAS	Labor Service Contract (<i>Contrato Administrativos de Servicios</i>)
CCT	Conditional Cash Transfer Program
CDI	Centro de Desarrollo Industrial
CELADE	Latin American Demographic Center
CENAN	National Center for Food and Nutrition (<i>Centro Nacional de Alimentación y Nutrición</i>)
CIES	Economic and Social Research Consortium (<i>Consortio de Investigación Económica y Social</i>)
CLAS	Local Health Administration Committees (<i>Comités Locales de Administración de Salud</i>)
CNS	National Health Accounts (<i>Cuentas Nacionales de Salud</i>)
CRED	Child Growth and Development Control (<i>Control de Crecimiento y Desarrollo</i>)
DALY	Disability-adjusted life years
DGSP	General Health Directorate (<i>Dirección General de Salud de las Personas</i>)
DIREMID	The office of the DIRESA charged with medicine procurement
DIRESA	Regional Health Directorate (<i>Dirección Regional de Salud</i>)
DNPP	National Public Budget Directorate (<i>Dirección Nacional de Presupuesto Público</i>)
ENAH0	National Household Survey (<i>Encuesta Nacional de Hogares</i>)
ENDES	National Demography and Health Survey (<i>Encuesta Nacional de Demografía y Salud Familiar</i>)
EPS	Private Health Providers (<i>Entidad Prestadora de Salud</i>)
EsSalud	Social Security Health Insurance
FON	Birth and Newborn Services (<i>Funciones Obstétricas y Neonatales</i>)
GDP	Gross Domestic Product
GOP	Government of Peru
IB	Institutional birth
INEI	National Institute of Statistics (<i>Instituto Nacional de Estadística e Informática</i>)
Juntos	Conditional Cash Transfer Program Operating in Poor Rural Areas
LAC	Latin American and Caribbean Region
MCS	<i>Municipios y Comunidades Saludables</i>
MEF	Ministry of Economy and Finance (<i>Ministerio de Economía y Finanzas</i>)
MINSA	Ministry of Health (<i>Ministerio de Salud</i>)
NHS	National Health System
PAC	Shared Administration Program (<i>Programa de Administración Compartida</i>)
PEAS	Basic Health Insurance Plan (<i>Plan Esencial de Aseguramiento en Salud</i>)
PETS	Public Expenditure Tracking Survey
PIT	Institutional Programs (<i>Programa Institucional</i>)
PpR	Results Based Budget (<i>Presupuesto por Resultados</i>)
PRAES	<i>Promoviendo Alianzas Estratégicas</i> (USAID project)
PRODEM	Demographic Projections
PRONAA	National Food Assistance Program (<i>Programa Nacional de Asistencia Alimentaria</i>)
PSL	Local Health Planning Exercises
RECURSO	Accountability for Results in the Social Sectors
RA	Results Agreement (<i>Acuerdos de Gestión</i>)
SBPT	Basic Health for All (<i>Salud Básica Para Todos</i>)
SEPS	Superintendent for Private Health Providers (<i>Superintendencia de Entidades Prestadoras de Salud</i>)
SERUMS	Rural and Peripheral Urban Health Service (<i>Servicio Rural y Urbano Marginal de Salud</i>)
SIGA	Integral Administrative Management System (<i>Sistema Integral de Gestión Administrativa</i>)
SIS	Integrated Health Insurance (<i>Seguro Integral de Salud</i>)
SISFOH	Household targeting system for urban areas
SISMED	Integrated System of Medicine and Medical Inputs Supply (<i>Sistema Integrados de Suministros de Medicamentos e Insumos Médicos</i>)
SMI	Insurance Program for Mother and Children (<i>Seguro Materno Infantil</i>)
SNIP	National Public Investment System (<i>Sistema Nacional de Inversión Pública</i>)
UE	Executing Units (<i>Unidades Ejecutoras</i>)
USAID	United States Agency for International Development
WDR	World Development Report
WHO	World Health Organization

Vice President: Pamela Cox
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Sector Director: Keith Hansen
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1 OVERVIEW

1. This report - which is a product of the World Bank's RECURSO program¹ - reviews Peru's recent advances in health sector policy and performance and discusses upcoming challenges. Using the "accountability triangle" approach developed in the 2004 World Development Report (WDR 2004), it focuses on strengthening the accountability of health providers to users to leverage improved service quality and outcomes. The report builds on the health chapter of the initial RECURSO report, developing and updating the analysis to take account of the changes in policy and performance in the Peru health sector in the period 2005-2010.²

2. The study focuses on two broad sets of reforms, implemented in recent years, that are relevant to this agenda: those that aim to strengthen *users' rights and entitlements* to good quality health services and thus to stimulate demand; and those that aim to strengthen *public* sector management for delivering results in the health sector (budgetary planning, accountability and incentives). It asks whether institutional arrangements and incentives are adequate to achieve the desired levels of health coverage and quality for all Peruvians. It analyzes interactions between health entitlements, financing and service delivery in the poorest regions of Peru, identifies bottlenecks and conflicting policies and recommends options to improve synergies between the elements of the system.

3. The analysis draws on the conceptual framework developed in the LAC regional study, *Achieving Effective Social Protection for All in Latin America and the Caribbean – From Right to Reality*,³ which highlights the organizational fragmentation and inequity in subsidy allocation of many health systems in the LAC region. Peru is a stellar example of such problems. The regional study proposes three broad areas of reform to address these problems. First, it suggests moving towards common entitlements (service packages of a given quality) across health sub-systems. Second, it argues for strengthening the transparency and targeting of subsidies, so universal coverage can be achieved at an affordable fiscal cost, without distorting the incentives of service providers, households and employers. Third, it proposes to strengthen incentives for quality and efficiency by separating health financing from service production and reducing the vertical dependence between financing agents and their provider networks.

4. Improving health outcomes is a central goal of Peru's Garcia administration, which took office in 2006. The goal of reducing peri-natal and maternal mortality rates ranks high among the Government's strategic priorities. These indicators improved in the first half of the 2000s but

¹ RECURSO is a multi-year program of analytical and advisory activity of The World Bank that focuses on strengthening accountability and results in the social sectors. The programmatic title is derived from the Spanish acronym: *Rendimiento de Cuentas para los Resultados Sociales*. RECURSO began in 2005. The present phase IV of RECURSO, which focuses on health, was undertaken between September 2008 and June 2010.

² Lenz, R and B. Alvarado, "Pro Poor Policies in the Peruvian Health Sector," in: *A new Social Contract for Peru*, World Bank, 2006 Chapter 4, pp 107-152.

³ Ribe, Robalino and Walker, 2010.

then stabilized, well above rates reported by comparable LAC countries.⁴ The strategy to renew the impetus is focused on increasing the coverage of good quality institutional births (IBs). IBs are a critical determinant of maternal and peri-natal mortality and morbidity and are a tracer indicator for the quality of mother and child health services, in general. For this reason, the Government chose IB coverage as a key operational standard for the primary and secondary health system. IB coverage nationwide increased in the first half of the 2000s, but the trend slowed after 2005, with rural coverage still under 50 percent, urban coverage around 90 percent and overall coverage at 70 percent. The Government aims to increase rural IB coverage to 70 percent, and overall coverage to around 85 percent, by 2011.

5. This goal has been pursued in the context of a complex set of policy and legal changes which have sought to improve the functioning and effectiveness of Peru's health sector. Some are specific to the health sector, and others form part of broader reform initiatives of the Peruvian state. As mentioned above, they can be divided into two broad groups. The first group of reforms has sought to improve outcomes by strengthening the rights and entitlements of users. This corresponds to the so-called "short route to accountability" in the "accountability triangle" framework (WDR 2004). It highlights the importance of giving the users of public services direct traction in their dealings with service providers. In the case of Peru's health sector, this includes the development of new approaches to health insurance and financing, for example, through insurance contracts to guarantee the content and quality of users' entitlements to health services and other initiatives to strengthen the effective demand for health. The second group of reforms has sought to improve outcomes through reforms to public sector management and accountability arrangements. This corresponds to the "long route to accountability" (WDR 2004). The "long route" highlights actions to improve the quality of the political relationship between users and the budgetary authorities, through better electoral processes, a stronger voice for civil society and the institutionalization of participatory processes in the budget cycle. It also proposes strengthening the regulatory or contractual relationship between the budgetary authorities and service providers.

6. The strengthening of users' rights and entitlements was given an important impetus through the creation in 2002 of the Integral Health Insurance program, (*Seguro Integral de Salud, SIS*). SIS is a targeted system of pooled financing (funded from general taxation) for users of the government-operated national health system (NHS). SIS membership provides qualified poor households with a waiver for out of pocket fees for the use of the service. The rules of the program codify entitlements to services, contingent on health states – something that was missing before. SIS coverage eliminated out-of-pocket co-payments for poor users and thereby improved their effective entitlement to services from the NHS. The SIS reform also sought to address productivity problems in the public system by linking budget transfers to the production of services. It functions as a separate, earmarked budgetary channel for variable costs in the NHS. SIS coverage and expenditure has undergone a rapid expansion in the last three years, with the budget doubling to NS./440 million and coverage reaching over 10 million people (about 36

⁴ In 2004, Peru's infant mortality rate (at 23 per 1000 live births) was almost exactly the same as the LAC regional average. But peri-natal mortality stood at 16 per 1,000 live births, compared with the LAC average of 34.4; and maternal mortality was estimated at 164 per 10,000 live births, against the LAC average of 85. Lenz R and B Alvarado, 2006, table 4.4, page 118.

percent of the population). SIS has also developed a small semi contributory window, which has the potential to develop into a semi-subsidized financing option for informal sector workers who are not poor enough to get the full subsidy. At the same time, the statutory contributory social insurance program for health, *EsSalud* has steadily increased its coverage, and now reaches about 20 percent of the population. As a result of these two trends, the proportion of the Peruvian population without health insurance has been reduced.⁵

7. Health entitlements and health financing in the public and social security sectors will be further affected by the 2009 legislation of the Universal Health Insurance (*Aseguramiento Universal en Salud*, AUS) law, which seeks to establish a common set of conditions that must be covered by all health financing and insuring agents. This list is called the Basic Health Insurance Plan (*Plan Esencial de Aseguramiento en Salud*, PEAS). The AUS reform has important potential budgetary consequences since the projected costs of the PEAS are estimated at more than three times the present level of funding for the NHS system channeled through SIS. Another initiative aiming to strengthen the exercise of entitlements to health services is the CCT program, *Juntos*, which was established in 2005. *Juntos* aims to stimulate the take-up of basic health services by around 440,000 households in the 638 poorest rural districts, by making health centre attendance a condition for receiving a cash transfer of NS./100 a month – a species of negative tariff – and is also likely to have an income effect on health demand.⁶

8. The second broad group of reforms in Peru's health systems has focused on improving public sector management and accountability arrangements, to strengthen the supply and quality of services. As mentioned above, these have included efforts to decentralize health systems to regional or local level; and efforts to improve public sector management through the creation of incentives at individual or group level and through improved protocols for planning, budgeting and monitoring outcomes and for personnel management.

9. Two separate initiatives have sought to shift control to a lower level of the system. In the 1990s, the Local Health Administration Committee (*Comité Local de Administración de Salud*, CLAS) model was established to put health facilities in remote areas under community control. The CLAS model gave local communities direct control over the hiring and supervision of staff and of other resources. The CLAS were constituted as private non-profit health agencies, which could receive budgetary transfers and hire staff outside the norms of the public sector. However, the CLAS initiative was undermined by a 2005 legislative decree which "officialized" the

⁵ Uninsured people can still use a health post or hospital but the full cost is not prepaid and pooled, so the household has limited protection against the financial shock from ill health. By law all Peruvians are entitled to use the NHS, but those who are not SIS affiliates must pay the out of pocket tariff established by the hospital or regional health directorate whose service they use, and sometimes they must purchase the necessary medicines. The NHS tariffs are subsidized, normally reflecting only variable costs, and charges can be waived based on needs even where the client is not a SIS affiliate, but this is an *ad hoc* arrangement which does not guarantee access.

⁶ Initially, *Juntos* also channeled additional resources to the Ministry and the regional DIRESAs, in an effort to reinforce the supply side. For a summary of the original design of the *Juntos* program, see Tesliuc C. and I. Walker, "Protección Social en Perú," World Bank, 2007, pp 43-44. Recent studies of the program include: Aramburú, C., "Informe Compilatorio: El Programa *Juntos* Resultados y Retos," 2009; Vakis, R. and E. Perova, "Welfare Impacts of the *Juntos* Program in Peru; Evidence of a non experimental evaluation", World Bank, 2009; Arróspide, M. "Informe Final. *Presupuesto Público Evaluado: Programa Nacional de Apoyo Directo a los más Pobres Juntos* (Documentación y Análisis de los Procesos)," Presidencia del Consejo de Ministros, 2009.

employment contracts of CLAS doctors, turning them into “*nombrados*,” that is, civil servants, who are not effectively subject to the authority of the health post manager.⁷ Nevertheless, in 2007 a law was passed to institutionalize the CLAS model and over 30 percent of primary health facilities are still administered by a CLAS.

10. The eclipse of the CLAS model was related to the implementation of an alternative vision for sector decentralization, linked to the political process of regionalization. Although the regionalization process in Peru lost momentum, following the failure to carry out referenda on the creation of “super regions,” nevertheless, direct elections for regional presidents led to a gradual increase in their political authority. The mid 2000s saw the transfer of a large proportion of health and education sector expenditure to the regions. Most of the NHS system (apart from metropolitan Lima and Callao) was moved from the direct control of the Health Ministry (*Ministerio de Salud*, MINSA) to the health directorates of regional governments (*Direcciones Regionales de Salud*, DIRESAS). The reform provides for funding to flow directly from MEF to the regions, which has further undermined the role of MINSA in the administration of the health budget. The regions are now the biggest single health budget holder in the public sector. This was coupled with efforts to establish an accountability framework between the national and regional levels of government, through Results Agreements (*Acuerdos de Gestión*). The institutional clarity of the political relationship between the regional authorities and the users is an advantage of this model, compared with the CLAS model, which depends on a more ad-hoc set of governance norms and can face difficulties in renewing the mandate of the local committees. The disadvantage is that the regions are relatively large, so that it is difficult for local communities to have much purchase in the decision making process. Although regional governments’ role was initially limited to the administration of a payroll, over which they had little or no discretion, the formal assignation of responsibility has given rise to a growing de-facto role of the regions in health sector leadership.

11. Another set of initiatives has sought to improve public sector performance through the development of a performance-based budgeting system. This started in 2002 with results-based administration contracts (*Convenios de Administración por Resultados*, CARs) and was followed in 2007 by the development of the new performance budgeting system (*Presupuesto por Resultados*, PpR). Under the Garcia administration, the Government of Peru has intensified work on public sector performance management through the PpR system, aiming to improve outcomes in health and other sectors. The PpR system has established a set of logic models linking high level strategic development outcomes (such as maternal and peri-natal mortality, the nutritional state of children and early grade learning outcomes) to the relevant outputs of public programs. Programs have been grouped according to the strategic goals to which they contribute. The budgeting process has been reformed to require the stipulation of developmentally-relevant physical outputs linked to each line-item, and targets have been set for improving the production and quality of outputs of those services. Among the most important outputs identified in the health sector are IBs and nutrition monitoring and counseling sessions (CREDS). Studies and evaluations have been carried out to determine the effectiveness of key programs and to identify

⁷ Lenz and Alvarado, 2006, page 127. For a more recent review of the CLAS, see: Díaz, R., “*Estado de situación y perspectivas de la Cogestión en salud en el Perú*,” 2010, prepared as a background paper for this study.

bottlenecks that are hindering advances and additional resources have begun to be appropriated for critical interventions.

12. A final set of reforms has sought to improve staffing and staff management in the health system. The report summarizes evidence that staff shortages are a critical element constraining performance, especially in rural areas. The slow growth of staffing has been due, in part, to the difficulty of finding a contractual model that strikes an appropriate balance between the rights of the employees and the system's reasonable needs for managerial control and flexibility. As is well known, the traditional form of public sector employment relationship – in Peru, as elsewhere across the LAC region - is weighted towards the rights of the employee and is somewhat light on effective regulation of staff performance. Earlier policy responses included the CLAS model (discussed above). Another response was MEF's effort to ring-fence budget expansions for non-staff expenditures. However, this distorts resource allocations and can lead to inefficiency and / or gaming and to a loss of transparency in budgeting. For instance, although there was a presumption that DIRESAs should not budget the funds received from SIS for staff expenditure, the de facto use of SIS resources for staffing – disguised as non personal services contracts – became widespread.

13. Peru has recently created a new contracting mode (CAS) which provides basic labor rights and protections for health system contract staff without creating full civil servant status and without tying the DIRESA to an open-ended budget commitment. This strategy has allowed health regions to move away from the non-transparent hiring of staff under “non-personal services” contracts, which entailed no social protection or labor rights. This has been coupled with an effort to diagnose deficits in staffing and strengthen staff allocations in strategic health centers that have maternity functions (*Funciones Obstétricas y Neonatales*, FON). At the same time MINSA is working to expand the size and scope of the program of social service for graduating physicians and medical professionals (SERUMs) by creating stronger financial and professional incentives to young medical professionals to participate in this program. Many remote health systems depend heavily on SERUMs. However there is still enormous horizontal inequity in hiring arrangements which is likely to undermine the effectiveness of personnel management until it is resolved.

14. The purpose of this report is to detail the advances achieved with this complex reform process, to present evidence on the results attained to date, and to identify options for future policy initiatives. The report is organized as follows: Chapter 2 sets the scene, with a review of demographic and epidemiological trends and the projected impact of demographic change on the pattern of burden of disease and health sector demand. Chapter 3 reviews the institutional organization of financing and service delivery in the Peruvian health system. It then traces the advance of reform initiatives implemented over the last decade, discussing the successes and setbacks of each initiative, and reflects on the overall coherence of the reform strategy. The discussion of reforms is divided into two broad blocks: those concerned with enhancing rights and entitlements of users (the demand side) and those concerned with the efficiency and effectiveness of health service production (the supply side). Chapter 4 presents an in-depth case study of the interaction of these initiatives with the strategic goal of increasing the coverage of institutional births. This Chapter draws on extensive analysis of household datasets, especially ENDES, on the findings of a new INEI survey of health centers and hospitals which provide birthing services, on administrative data, and on the findings of qualitative research carried out

with the support of the Bank. Chapter 5 concludes with a synthesis of the recommendations of the study, organized along the thematic axes that were identified in paragraph 5 above, as follows:

(a) *Rights and entitlements*. This section argues for strengthening individual user rights to a service of adequate quality - the so-called “short route to accountability” – through insurance contracts and the dissemination of clearer standards for users’ entitlements. It discusses ways to approach the fiscal cost of the PEAS under the AUS reform – suggesting that it can be dealt with, in part, by expanding the semi subsidized window of SIS and in part, by calibrating the roll out of explicit guarantees against the availability of funding. It argues for tighter targeting of fully-subsidized coverage by SIS, which could be achieved by using the SISFOH household targeting system to determine eligibility in urban areas. For households not qualified for fully subsidized cover, the option of semi-subsidized cover from SIS should be used more energetically, to ensure access and financial protection while mobilizing user contributions to ameliorate the fiscal stress associated with the unification of health insurance mandates. Finally, it argues for introducing a per-capita element into the financing of health posts by the SIS, in order to provide incentives for the effective management of the epidemiological priorities of health networks.

(b) *Public sector management reform*. This section discusses next steps in the development of “long route to accountability” – that is, the quality of the political nexus between voters/users, communities and the political/budgetary authorities; contractual and regulatory controls over service operators; and incentives for service operators and other users of public funds. It covers three sets of issues, as follows:

(i) Decentralization: Upcoming challenges for the decentralization process include the need to strengthen the role of MINSA as rector of the system; to reinforce regional planning and management capacity; to develop a stronger role for the health networks by de-concentrating the Diresas; and to reinforce local participation in health systems at the level of micro-networks. This raises the need to define a *modus vivendi* between regional health authorities (Diresas) and community based health agencies (CLAS), based on a clear management model. There is also a need to clarify the role for municipalities in health, both as the voice of the local community and as a provider of services in some areas.

(ii) Staffing and labor management: The first challenge in this area is to define and address the considerable gap in staffing of the NHS system, compared what is needed to ensure adequate services. Good advances have been made, but considerable additional budget commitment is still needed in this area. Peru also needs to develop a more uniform system of labor contracts and incentives which will allow managers to control staff performance and the assignment of staff to priority sectors while also providing acceptable rights and motivation for employees. Like many countries, in response to overly protective and inflexible standard public sector labor contracts, Peru has experimented with hiring arrangements (non personal services contracts) which effectively eliminate employee rights and social protection, leading to horizontal inequity, the loss of motivation and instability. It is not clear whether this problem been fully resolved by the new intermediate variant, the CAS contract. Meanwhile, many health workers in the communal CLAS system are still on very low wages. Finally, there is still scope to do more with the SERUM system which sends graduating health professionals to work in poor and remote areas.

(iii) Performance budgeting: There is still ample scope to strengthen performance budgeting in Peru's health system. The system has established a coherent set of strategic goals and has started to mobilize funding towards key interventions that will support those goals (such as CRED consultations and Institutional Births). This reform has enhanced the availability of performance information to planners and policy makers, but the quality of the information is still uneven and there is a need to further strengthen its use for budget planning and management purposes. There is also a growing tension between the relatively centralized Peruvian budget system and the decentralizing dynamics of the public sector reform process, which is giving regional governments a progressively more important role in the provision of services. In this setting, the use of ring-fencing to protect prioritized health budget line items is a second-best alternative to the strengthening managerial discretion in MINSA and the regions. It may lead to gaming in the budget process and could sap efficiency in resource allocation. One option is for the financing system to move towards capita payments to health regions or networks, made against performance on appropriately chosen performance indicators. This could be linked to strategic tracers such as: coverage of PI and CREDs (in rural areas). In urban areas, additional tracers related to the management of chronic illness and public health problems such as alcoholism could be added. The challenge is to ensure adequate budgets and financial flows for the health production function (staff, physical facilities, equipment and medicines) while providing incentives to effectiveness and helping managers in the system to focus on the strategic goals of the system and use performance information to improve the functioning of the system. In doing so, it will be critical to move towards a "fiscal decentralization with accountability" model. Peru needs to strike an adequate balance between the delegation of authority to exercise fiscal discretion in pursuit of the system's objectives and the accountability of managers for the results they generate. It also needs to progressively strengthen the use of planning and budget management tools, such as SIGA, to a lower level in the system.

2 DEMOGRAPHIC AND EPIDEMIOLOGICAL CHALLENGES FOR HEALTH IN PERU⁸

15. This Chapter sets the scene for the rest of the study by reviewing the principal demographic trends and epidemiological challenges facing Peru. Drawing on demographic data, epidemiological statistics and the results of a recent burden of disease study, it shows how urbanization and the demographic transition are interacting to change the epidemiological profile of Peru and pose new challenges for the health system. However it also underlines that the old challenges of strengthening basic services for mothers and children have not yet been resolved. So the health system needs to look forward and backward at the same time. This means reinforcing strategies focused on pregnancy, childbirth and peri-natal health and on nutritional outcomes in the first two years of life, while at the same time developing cost-effective strategies to contain and treat chronic illnesses, such as tumors, cardiovascular disorders and diabetes, and to address behavioral epidemics, such as alcoholism, traffic accidents and violence.

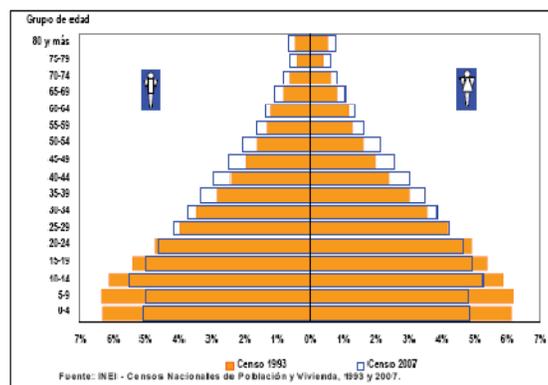
⁸ This chapter is based on a background report prepared by Betty Alvarado.

2.1 The demographic transition and urbanization

16. Like other countries in the LAC region, Peru is undergoing a demographic transition. According to the 2007 census, the population is now just over 28 million. During the inter-censal period 1993-2007, it grew at 1.6 percent a year, down from 2.0 percent in the previous inter-censal period (1981-1993) and 2.8 percent in 1961-1972.

17. The demographic transformation is reflected, first and foremost, in a shift in the age structure of the population. Figure 1 compares the population structure in 1993 and 2007. Back in 1981 (not shown), the population pyramid had a wide base and then rapidly narrowed, reflecting the high birth rates and high child mortality rates, and a narrow apex, which reflected a short life expectancy for most Peruvians. By 1993, reduced infant mortality had produced a vertical lower section of the pyramid wall. By 2007, the base cohort of children under 10 was narrower than the bulging cohort of children aged 10-14, reflecting a decline in birth rates coupled with a further decline in child mortality. The apex was wider, reflecting a larger population of older adults, due to increased life expectancy. Overall, the population over 65 years old rose from 5 percent in 1993 to 6.5 percent of the total in 2007 – while the share which is younger than 15 fell from 42 percent in 1981 to 31 percent in 2007. A further increase in the relative weight of seniors is inevitable in coming years, as the present bulge in adults of working age feeds through into a bulge in seniors, leading to a shift in the proportion of the dependent population who are seniors, as opposed to children.

Figure 1: Peru's population pyramids from the 1993 and 2007 censuses

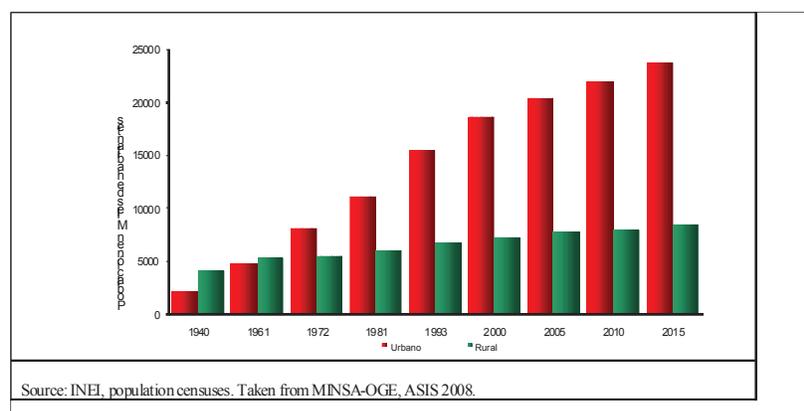


18. This pyramid represents the population average; the population living in poverty continues to have higher fecundity, higher levels of infant and adult mortality and shorter life expectancy from any specific age, and a population pyramid which is closer to the national averages of the past. Peru's average birthrate is 20.7 (per 1,000); however, population growth is higher in poor regions. The poorest 50 percent of the population concentrates 60 percent of births (MINSa, OGE 2009). Huancavelica, the poorest region, has an average of 30 births, twice that of Callao or Moquegua. The sharp differences in the rural and urban population pyramids reflect this contrast (Figure 1 in the Annex).

19. The spatial distribution of the population has also undergone a transformation, creating further challenges and opportunities for social sector policy makers. As well as growing more slowly, the population has become increasingly urbanized. Urban growth was driven by internal migration to areas such as Lima / Callao and to intermediate cities, to take advantage of better

housing and public services and greater economic opportunities. The ratio of the urban to the rural population is now 3:1 (75 percent urban and 25 percent rural). The whole of the population growth is concentrated in urban areas. Net rural population growth is zero, due to outmigration offsetting the higher vegetative growth, which persists in rural areas. The urban population is growing at 2 percent a year, but this is due mainly to migration. Urbanization has contributed to the reduction of the overall population growth rate, because urban women have greater economic and educational opportunities, which raise the opportunity cost of their time and lowers desired family sizes. As a result, urban fecundity is much lower than rural fecundity. From a regional perspective, the coastal plain continues to grow in relative importance (reaching 55 percent of the total in 2007, up from 28 percent in 1940 and 46 percent in 1972), as does the Amazon interior (now 14 percent) while the Andean mountain region (Sierra) has declined to 32 percent of the total (from 65 percent in 1940, and 44 percent in 1972). Lima's predominance continues to grow, with the metropolitan area now accounting for over 30 percent of the national population.

Figure 2: Urban and rural population growth, 1940-2015



2.2 Mortality, morbidity and the epidemiological transition

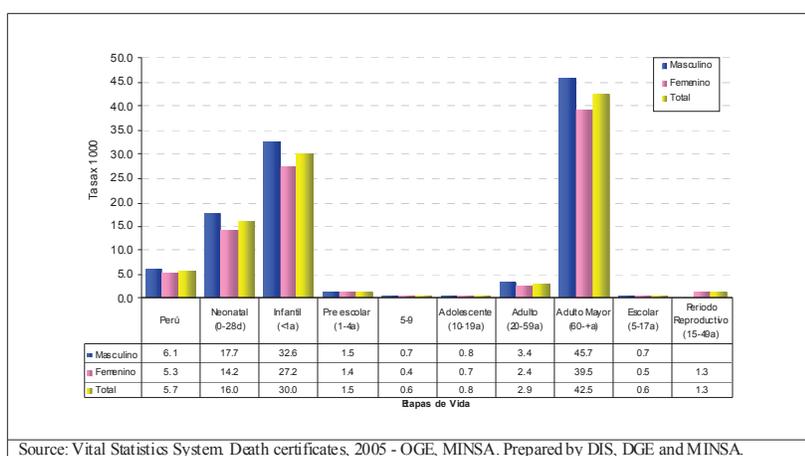
20. In Peru, as elsewhere in LAC, the changes in the structure of the population are leading, inevitably, to changes in the pattern of demand on health and social protection services. Although the transformation is at an early stage, it is important to plan now for these future needs to avoid unnecessary failures to meet the coming demands. Key areas to address include the shifting epidemiological patterns linked to urbanization and the health care needs of the ageing population.

2.2.1 Mortality

21. The mortality rate declined from 21.6 per thousand in 1950-1955 to 6.2 per thousand in 2000-2005. There are large gaps between the rich and the poor, reflecting the still-enormous gradients in poverty and access to health care that divide Peruvian society. The mortality rate for quintile I (poorest) is double that of quintile V (wealthiest). The poorest half of the population accounted for 60 percent of all deaths in 2000-2005. Mortality is mainly concentrated in older adulthood and early childhood (Figure 3). There are large geographical disparities, reflecting the spatial distribution of poverty. In 2005, the average age of death in Peru was 56; but in Lima, it was 63, while in Madre of Dios, half of the population died before reaching 40 years of age (See Figure 2 in the Annex). One recent achievement has been the rapid reduction of infant mortality,

from 43 deaths per 1,000 live births in 2000 to 27 per 1,000 live births in 2004-2006 (Table 1 in the Annex). However, peri-natal mortality has declined more slowly (from 23 in 2000 to 19 in 2008), reflecting the still-high incidence of non-institutional births and the poor quality of birthing services in many health centers. Once again, there are marked regional and socio-economic disparities. In 2000-2005, the poorest 50 percent of the population accounted for nearly 70 percent of the infant deaths. Puno, Huancavelica, Apurímac, Cusco, Ucayali and Ayacucho recorded the highest rates (MINSA DGE 2009). Maternal mortality linked to complications of pregnancy, childbirth or the postpartum is also a continuing challenge. The maternal mortality rate (MMR) stands at 164 deaths for every 100,000 live births. The departments with the highest MMRs include Puno, Ayacucho, Huánuco, Cajamarca, Cusco, Amazonas and Apurímac (MINSA DGE 2009).

Figure 3: Total mortality rate, by age and gender, 2005



22. Maternal and peri-natal mortality are closely related to the coverage of institutional births (IBs) and to capacity of health care facilities to adequately attend childbirth. By 2005, 70 percent of births were IBs (that is, they took place in a certified health post, attended by a certified health professional). However, this varied between over 90 percent in urban areas and under 50 percent in rural areas; falling as low as 25 percent in some regions. The quality of service in rural IBs tends to be lower than that of urban clinics, where the probability of being seen by a doctor is three times greater (61 versus 20 percent). There are also strong correlations between service quality and the socio-economic characteristics of women. A highly-educated woman is eight times more likely to be seen by a physician than one with no education (INEI ENDES *Continua* 2004-2006). There is also concern that the increase of IB coverage may have faltered since 2008 (MEF 2009b:71). Chapter 3 explores this issue in greater detail.

2.2.2 The epidemiological transition

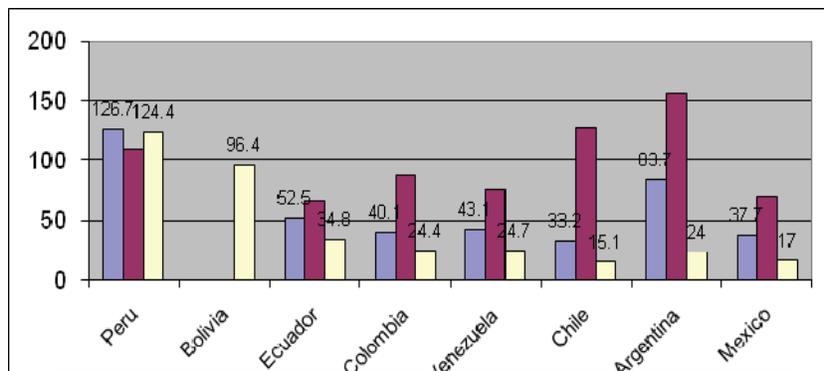
23. Janus-like, Peru stands at an intermediate point in the epidemiological transition, with one foot in the past and one foot in the future. Demographic change and economic growth have been accompanied by a shift in the causes of morbidity and mortality, away from preventable communicable diseases associated with poverty, towards chronic illnesses, associated with more affluent urban life styles and growing longevity. But this transition is incomplete: preventable communicable diseases and chronic conditions both figure among the leading causes of illness

and death. Figure 4 highlights that Peru has a relatively high mortality rate in communicable diseases, cancers and TB compared with other LAC countries; it is outstripped only by the very high cancer rates in Chile and Argentina.

24. Peru still has a considerable burden of preventable disease among young children, including respiratory disorders, intestinal infections, malnutrition and retarded growth, septicemias and skin diseases (See Table 2 in the Annex). The principal causes of death among women of reproductive age (15 to 49 years) include respiratory infections, pregnancy, birth and the postpartum period, tuberculosis, accidents, and cancers (Figure 5). The contribution of behavioral conditions such as alcoholism, accidents and violence has also grown markedly. This is linked to urbanization, relative affluence and the expansion of vehicle density. Traffic accidents (often linked to alcohol consumption and the use, with impunity, of unsafe vehicles) are now a common cause of death.

25. This emerging pattern of mortality (and the associated morbidities) poses challenges for different dimensions of the health system. On the one hand, there is a continuing need to strengthen maternal and infant health and nutrition services and to tackle the tuberculosis epidemic with effective management strategies. On the other hand the health system needs to develop cost-effective strategies to prevent, identify and treat chronic illnesses such as cancer and diabetes, and needs to address the public health dimensions of traffic management, alcoholism and violence.

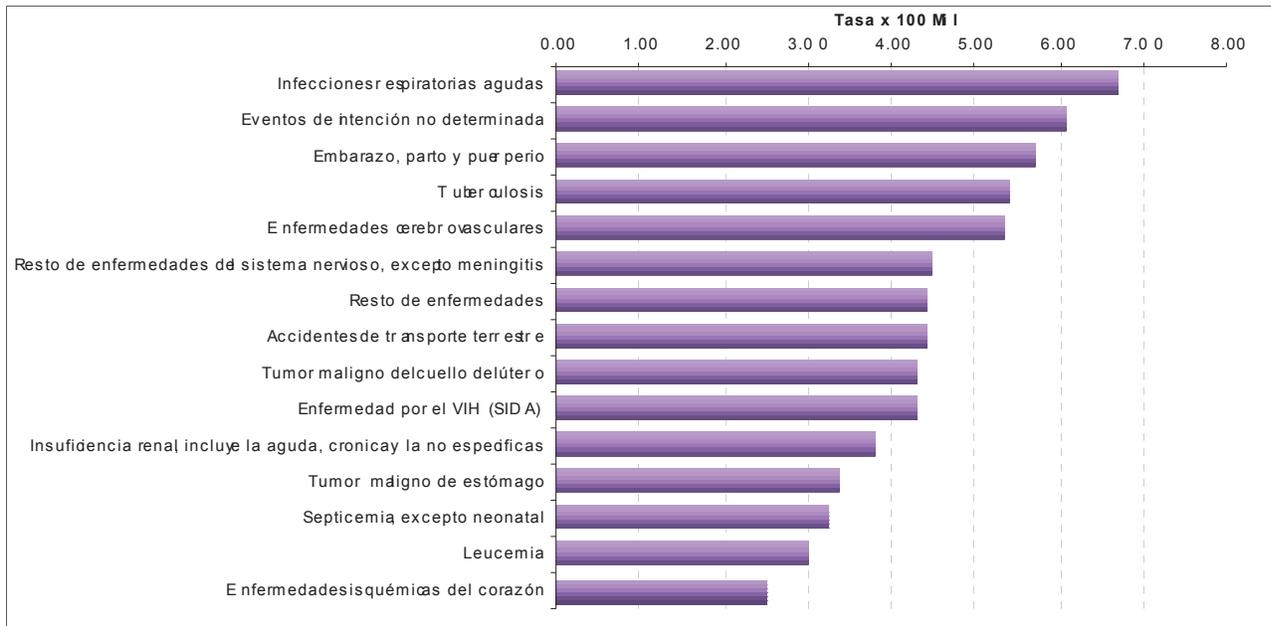
Figure 4: Death rates per 100,000 inhabitants in LAC from communicable diseases, cancers and tuberculosis, 2003-2005



Source: Based on information from WHO (2009).

Note: The first bar for each country is communicable diseases, the second is cancer and the third is TB.

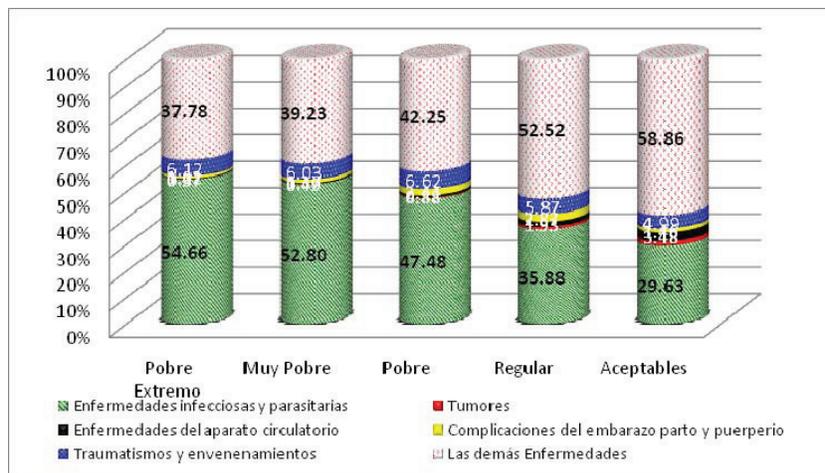
Figure 5: Leading causes of death among women of reproductive age, 15 to 49 years, 2005



Source: Based on information from MINSA - OGE, ASIS 2008.

26. Like the distribution of mortality, the distribution of morbidity reflects Peru's socio-economic divisions. The poor suffer more infectious and parasitic diseases due to poor sanitation and environmental health, while circulatory diseases and tumors more prevalent among the less poor. The greater burden of complications in pregnancy among the moderate poor, compared to the extreme poor, probably reflects better registration due to higher use of health care facilities (Figure 6; further information appears in Table 3 in the Annex).

Figure 6: Causes of morbidity, by poverty segments, 2005

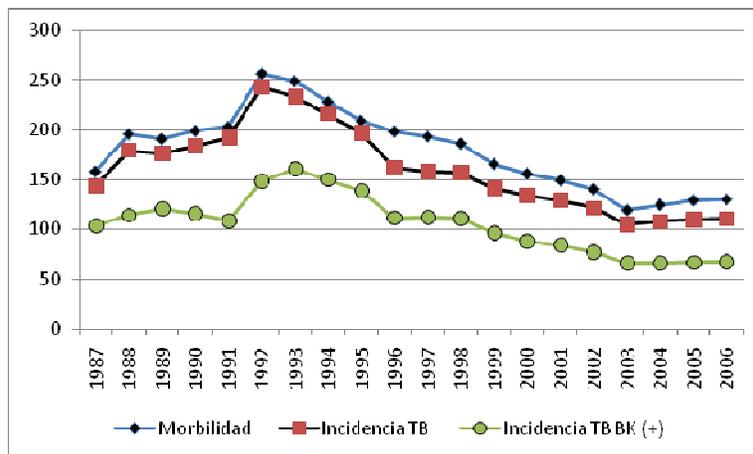


Source: OGEI, MINSA. HIS 2005. Prepared by DEIS, DGE, MINSA.

2.2.3 TB

27. Peru is on the WHO list of countries with high tuberculosis (TB) incidence. TB is an infectious chronic illness, whose transmission is linked to urban environmental health and behavioral problems, often linked with other morbidities such as HIV and venereal disorders. TB prevention requires effective vaccination, its epidemiological control requires an aggressive screening diagnostic effort, and its successful treatment requires the rigorous application of drug protocols. In 2007, 29,393 new cases were registered, 60 percent of them in Lima and 916 TB deaths were reported (Quevedo and Salas 2009). Seven departments have TB rates above the national average: Lima, including Callao, Madre of Dios, Tacna, Loreto, Ucayali and Ica. Considerable headway was made reducing TB incidence between 1992-2003, but since then the trend has flattened (Figure 7). This reflects a policy failure. Undiagnosed cases of multidrug resistant tuberculosis doubled between 2001 and 2003, due to reduced screening and diagnostic activities by MINSA's "vertical" TB program. In addition, and a large percentage of identified cases went untreated. Since 2004 the prevalence of co-morbid TB-HIV has grown. Until 2005, there was only one laboratory that could diagnose cases of extreme resistance. Additional laboratories have now been established in Lima and the provinces, with support from the Global Fund to Fight AIDS, Tuberculosis and Malaria, (Correa, Ruiz and Solís, 2009).

Figure 7: Epidemiological situation of tuberculosis in Peru, 1987-2006

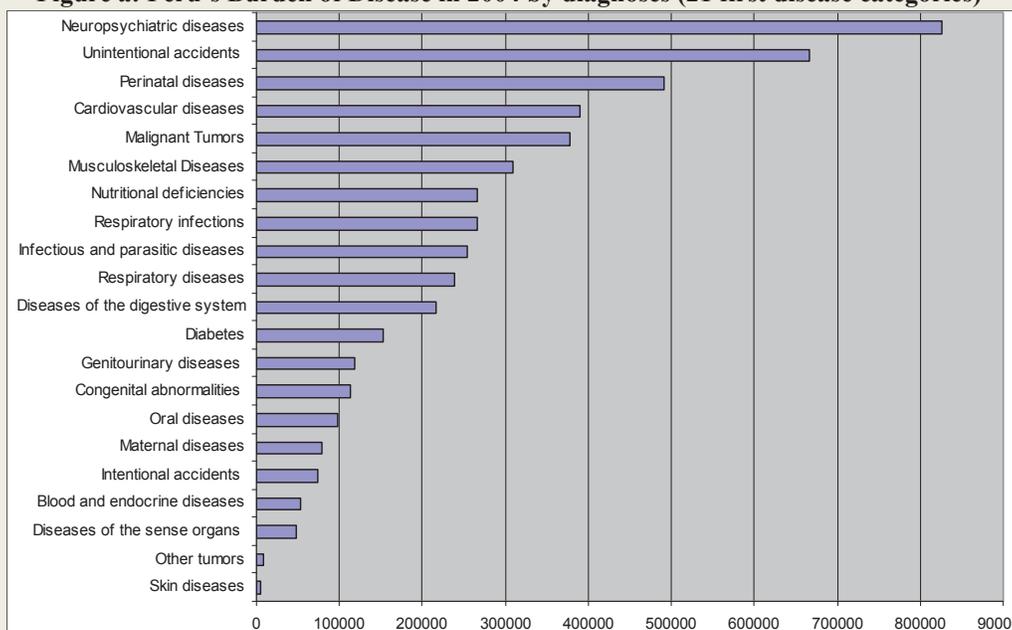


Source: MINSA, Tuberculosis Control Program. DGSP, OGEI.

Box 1: Population ageing and the burden of disease in Peru⁹

Demographic projections can be combined with data on the age-specific pattern of burden of disease (BoD) to project future trends. The results of the analysis highlight the likelihood of a radical shift in pattern of demand for health services in Peru.¹⁰ In 2004, non communicable diseases already carried the highest burden of disease in Peru (causing the loss of 107 disability-adjusted life years, DALYs per 1000 people), followed by communicable disease (49 DALYs) and lesions (27 DALYs) (Velasquez, 2008, 47). In terms of diagnoses, neuropsychiatric diseases were the leading contributor to the BoD, followed by accidents, prenatal disease, cardiovascular disease and tumors (Figure a). The BoD varies considerably in size and structure across age groups. Children under 5 and the over sixties each lost over 400 DALYs per 1000 population. In contrast the 5 to 14 age group lost only 50 DALYs per 1000 (Figure b). In Peru as elsewhere, the prevalence of non communicable chronic diseases tends to be much higher among older adults (Figure c).

Figure a: Peru's Burden of Disease in 2004 by diagnoses (21 first disease categories)

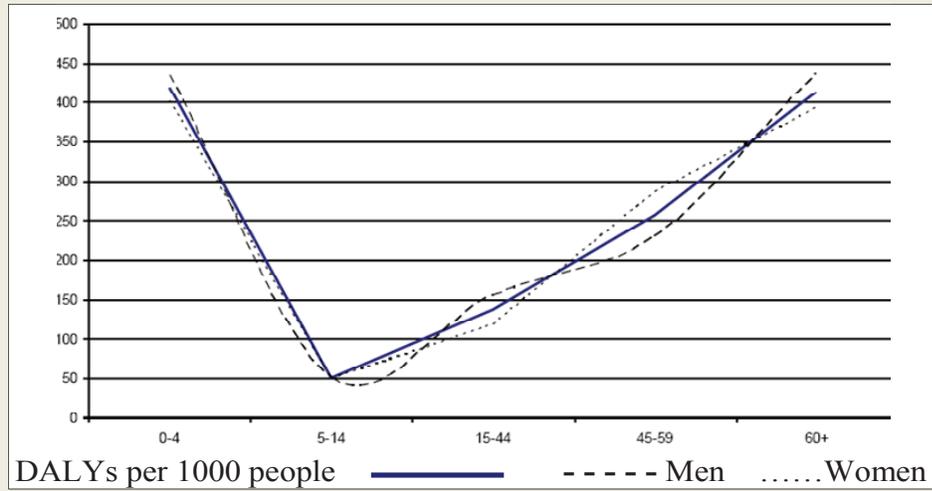


Source: Velasquez (2008).

⁹ This box is based on a background paper prepared by Caroline Charpentier.

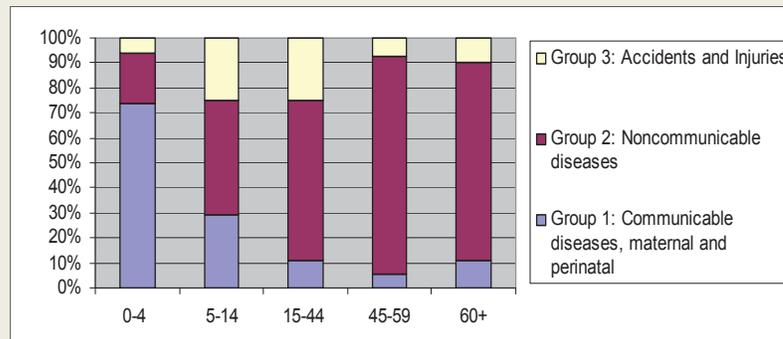
¹⁰ We calculated the burden of disease per person in 2004 and multiplied it by the expected total population by age group in the following years. The analysis assumes that the age-specific BoD will remain stable through time. It draws on a burden of disease study elaborated by PRAES and published by MINSA (Velasquez 2008). “*La carga de enfermedad y lesiones en el Peru, mortalidad, incidencias, prevalencias, duración de la enfermedad, discapacidad y años de vida saludables perdidos*”, USAID, PRAES, Lima”. The study standardizes the BoD using Disability-Adjusted Life Years (DALYs). We use demographic projections from the 2002 National Institute of Statistics report, based on projections prepared by the Latin American Demographic Center CELADE, with the support of the PRODEM (DEMOgraphic PROjections) software developed by CELADE.

Figure b: DALYs lost by gender and age groups, 2004



Source: Velasquez (2008)

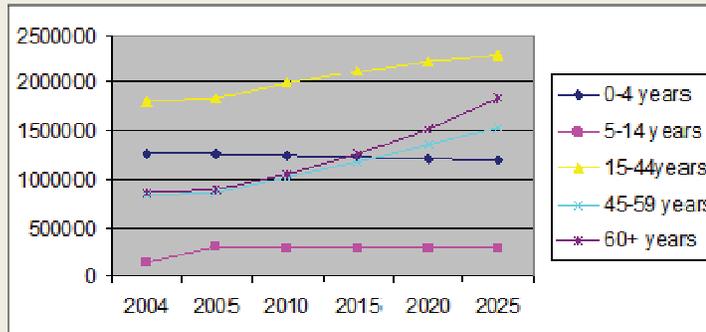
Figure c: Burden of disease by disease groups and age groups (%), 2004



Source: Velasquez (2008, 52).

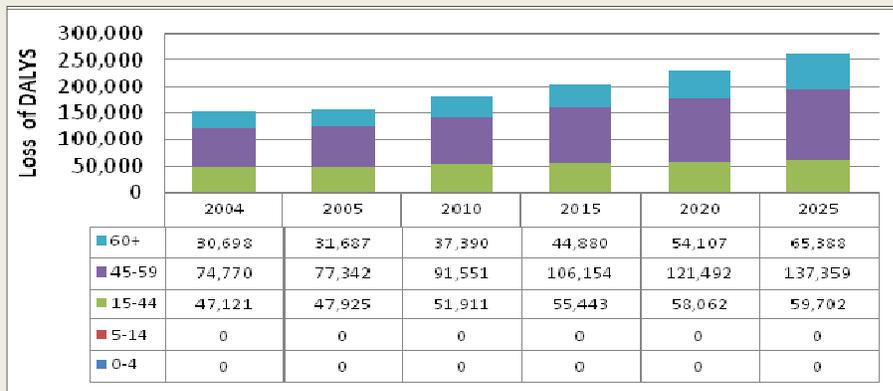
Between 2004 and 2025, due to population ageing, the contribution of elderly people (over 60) to the BoD in Peru is projected to increase by 112 percent (from 860,000 to 1.8 million DALYs lost per year). The BoD of those aged 45 to 59 will increase by 83 percent (from 830,000 to 1.5 million). The BoD for those aged 15 to 44 years is expected to double, from 144,000 to 284,000. Meanwhile, the contribution of children under 4 to the BoD is projected to fall, from 1.3 million DALYs in 2004 to 1.2 million in 2025. Figure d shows the projected BoD by age group for the period 2004-2025. The increase in illnesses of people over 60 is the most striking feature of the graph. In 2015, old-age illness will overtake illnesses of children under five.¹¹ Finally, Figure e illustrates to projected contribution of diabetes to this process. The BoD from diabetes is projected to increase by two thirds, with the increase entirely concentrated among people aged 45 or more.

Figure d: Projected loss of DALYs by age group, 2004-2025



Source: Authors' elaboration based on Velasquez (2008) and INEI (2002).

Figure e: Projected loss of DALYs due to Diabetes in Peru, 2004 to 2025



Source: Based on Velasquez (2008). Elaboration: Authors.

¹¹ This graph presents the burden of disease in absolute terms and not per 1000 people. Therefore, 15-44 years olds' burden of disease appears to be the highest because they represent the biggest share of the population.

3 THE REFORM OF HEALTH INSTITUTIONS AND FINANCING IN PERU: RECENT ADVANCES AND PENDING CHALLENGES¹²

28. This Chapter reviews the advance of health reform initiatives in Peru. It starts with an overview of the organization and financing of the health system and recent trends in public spending. It then reviews and discusses lessons learned from two broad areas of reforms implemented over the last decade.

29. The first broad reform area relates to efforts to strengthen and rationalize the *rights and entitlements of health service users*. This corresponds to the so-called “short route to accountability” in the “accountability triangle” framework (WDR 2004), which focuses on the importance of giving the users direct traction in their dealings with service providers. Peru has pursued this agenda through the strengthening of insurance arrangements within the public (NHS) sector, to guarantee the content and quality of users’ entitlements to health services, through the Integral Health Insurance (*Seguro Integral de Salud*, SIS) system, created in 2001. The effective demand for health and nutrition services in poor rural communities has been further reinforced by the conditional cash transfer program, *Juntos*. Beyond the public sector, insurance has also been strengthened through the expansion of contributory social health insurance system, *EsSalud*, and through an ambitious reform to harmonize the mandates of all insurance systems under the Universal Health Insurance (*Aseguramiento Universal de Salud*, AUS) law.

30. The second broad reform area relates to *public sector management and accountability arrangements* for health service producers. This corresponds to the “long route to accountability” (WDR 2004). It includes actions to improve the quality of the political relationship between users and the budgetary authorities, through better electoral processes, a stronger voice for civil society and the institutionalization of participatory processes in the budget cycle. It also covers efforts to strengthen the regulatory or contractual relationship between budget authorities and service providers. Recent actions to strengthen the “long route” in Peru’s health sector include the decentralization of service provision (to regional governments or community-based entities), which “shortens” the distance between the users and the relevant authorities. They also include initiatives to reinforce the contractual or regulatory relationship between the budgetary authorities and service providers, such as the development of incentives, the performance budgeting system and efforts to improve the administration of personnel

3.1 System organization

31. The Peruvian health system is composed of public and private service providers, each with a vertically integrated set of financing and service provision arrangements. There are three main public sector systems.¹³

- A national health service (NHS) system, which is operated by the Ministry of Health (MINSA) and by the health regions (DIRESAs) linked to regional governments. In the

¹² This chapter is based on a background paper prepared by Betty Alvarado and draws on papers on performance budgeting prepared by Katie Mark and on the CLAS model, prepared by Ricardo Diaz.

¹³ The organizational chart for this model appears in Annex Figure 3 and Figure 4.

provinces of Lima and Callao the regional governments operate the services directly (without a DIRESA). In metropolitan Lima, MINSA still operates health services directly. The system is regulated by MINSA and financed by MEF from general taxation revenues. The NHS is open to all Peruvians, but mainly serves those who have no access to other systems.

- A contributory social security system (*EsSalud*), for formal sector workers, which is financed by a nine percent payroll tax levied on employers. *EsSalud* operates its own network of hospitals and clinics. *EsSalud* affiliates can choose a private provider (EPS) for basic provision, in which case 25 percent of their contributions are channeled to the EPS.
- The health insurance systems of the Armed Forces and the National Police Force.

32. In addition there is a private sector made up of insurance companies and health care service providers, as well as non-profit institutions, medical and health professionals and providers of traditional medicine. In some areas of the country- most notably metropolitan Lima – municipalities are also starting to provide health services directly, through “solidarity hospitals” but little systematic documentation is yet available on their role.

33. Like many health systems in the LAC region, the Peruvian health system can be characterized as fragmented and segmented (Ribe, Robalino and Walker, 2010 and Londoño, 1997). Despite some attempts at coordination in corporate procurement of medicines, the systems still operate in an autonomous and uncoordinated manner. There is little horizontal integration between the sub-systems, either in the definition of mandates (the package of insured health conditions or services) or in the production of services. Each sub-system operates independently, with its own rules and its own network of providers, serving a different population.

34. This report focuses primarily on the NHS system, which provides coverage for most users in quintiles I and II (the poorest), and also reviews some aspects of the *EsSalud* system. MINSA is the national regulatory authority for health, and directly operates NHS services (including all tertiary level hospitals, whole of the system in the Lima and Callao health regions, and national vertical programs).¹⁴ The Integral Health Insurance (SIS) is a targeted financing window for the NHS, which was established in 2002. It reimburses hospitals and health regions for the variable cost of services to individuals covered by the SIS. Its beneficiaries are not required to pay user fees in MINSA facilities. The SIS budget is separate from that of MINSA, but SIS reports to the Minister of Health.

35. As a result of the decentralization process, since 2004 regional governments have assumed a growing role in health service provision. The regional health directorates, DIRESAS, operate basic health networks nationwide (outside Lima and Callao), including responsibility for personnel management, administration of goods and services and decentralized investments.

36. *EsSalud* has its own network of hospitals and clinics but also uses private health providers (EPS), supervised by the Superintendent for Private Health Providers (SEPS). Similarly, the National Police Force and the Armed Forces have their own facilities. Table 1 details the number of facilities by sub-sector. It underscores the predominance of the MINSA

¹⁴ The Lima and Callao systems were in the process of being municipalized in 2010.

and the regions as the country's leading provider of basic health care services. However it also underscores the importance of *EsSalud* and private providers in the hospital sector.

3.2 Health financing

37. The 2005 National Health Accounts (*Cuentas Nacionales de Salud*, CNS 2005) found that roughly a third of health expenditure (31 percent) originates from general taxation funds (the national budget), while employers contribute 34 percent of the total (mainly through a compulsory 12 percent payroll tax to finance *EsSalud*).¹⁵ Households account for 34 percent of spending. Small additional amounts come from external and internal donors. On the supply side, notwithstanding the predominance of the NHS system (noted above) in the number of health care facilities, the cost of services provided by each the three main types of provider is similar. MINSA facilities account for 28 percent of the value of services, *EsSalud* for 27 percent and private for-profit services, 24 percent (including 3 percent for the private suppliers to *EsSalud*). A further 14 percent of health spending in Peru is paid directly to pharmacies and medicine suppliers (CNS 2005).

Table 1: Health care facilities by level, sector and sub-sector

INSTITUTION	HOSPITAL/ INSTITUTE	HEALTH CENTER	HEALTH POSTS	TOTAL	PERCENT - AGE
NHS (Ministry of Health / Regions)	129	1339	5829	7297	85.5
<i>EsSalud</i>	78	252	0	330	3.9
Police Force	5	77	198	280	3.3
Armed Forces	16	44	0	60	0.7
Private	208	356	0	564	6.6
TOTAL	436	2068	6027	8531	100

Source: Health Human Resource Observatory, based on information from DGGDRH - MINSA - 2009 / *ESSALUD* – Dec. 2008, SANIDAD DE PNP/FFAA/CLÍNICAS PRIVADAS: *Boletín de la Oficina General de Estadística e Informática*. Volume 5-2005.

38. The National Health Accounts (*Cuentas Nacionales de Salud*, CNS) show that between 1995 and 2005, Peru significantly reduced out of pocket spending and correspondingly increased pooled, prepaid funding for health.¹⁶ In 1995, out of pocket expenditures were 46 percent of the total, and pooled funding was 54 percent. By 2005, the share of pooling rose to 68 percent, while out of pocket expenditures fell to 32 percent. The growing weight of pooled expenditures reflects the increased public financing of the NHS (the budgets of MINSA, SIS, and the health regions) and the increased activity of *EsSalud* and the EPS (See Table 4 in Annex).

39. The CNS report underlines that even insured Peruvians can face significant out of pocket expenses when they have a health problem: "...more than two-thirds of the population with health insurance end up paying (something) out-of-pocket for medical consultations and medicines" (CNS:46). Ninety five percent of health expenditures financed directly by households

¹⁵ The CNS exercise draws on household survey data from ENAHO and ENDES and administrative sources.

¹⁶ Pooled prepaid funding is the sum of budget funding to the NHS system, employers' contributions to *EsSalud*, and household contributions to private insurance.

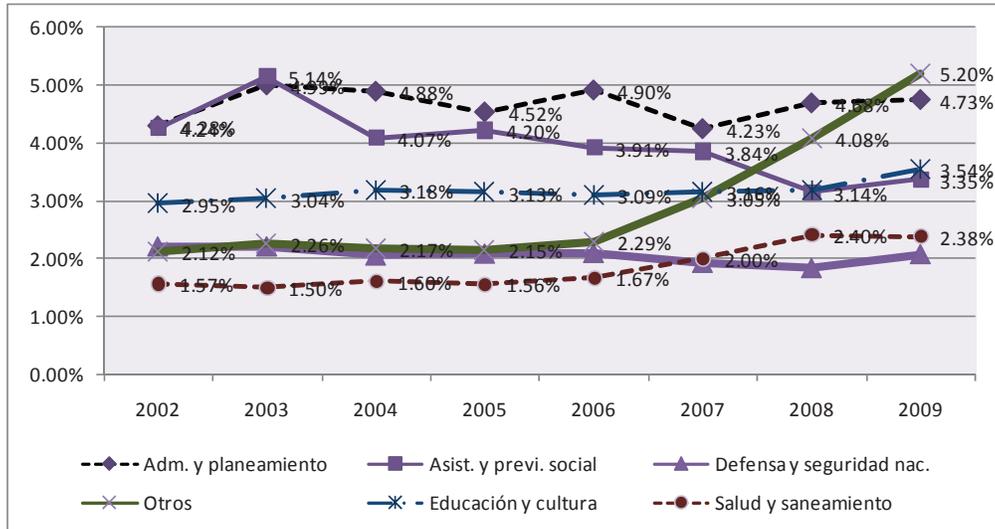
are out of pocket. This is divided between 40 percent for medicines, 43 percent for private health care providers and 12 percent paid in user fees to the NHS system. Only five percent of households' expenditures go to pay for insurance. Coverage through pooled, prepaid funds is generally higher for wealthier than for poor families, due to the concentration of *EsSalud* cover among the upper income quintiles. However, it is likely that the expansion of the SIS since 2005 has reduced out of pocket spending among poorer families.

40. Since the 2005 CNS exercise was completed, Peru has further reinforced its efforts to mobilize financing and increase the pooling of health costs through the taxation system. After remaining stable at around 1.5 percent of GDP for several years, between 2006 and 2008 public spending on health rose sharply, to 2.4 percent of GDP and then stayed at that level in 2009. During this period, health spending was the fastest growing element of the national budget, apart from "others" (Figure 8).

41. Increased funding for the regions, for MINSA and for SIS has played a part in this trend (Figure 9). Following the transfer of many functions from MINSA to the regions, including the transfer of a large proportion of the system's staff, the regions' budget has been the fastest-growing part of health spending in Peru.¹⁷ Since 2003, the regions' budgets have more than tripled in real terms, and the SIS budget has doubled, while the MINSA budget has risen by about 50 percent. The regions are now the single biggest budget holder for health in the public sector. A major component of the expansion was investment spending by regional governments – especially in new hospitals – often financed from fiscal transfers linked to natural resources exploitation (the *Canon Minero*). However, there has been little analysis of the ongoing implications of this investment for the health system's budget. There is now a need to program the resulting current expenditures to fund staff, goods and services. The very sharp increase in health spending in 2009 and 2010 (which took place in the context of a fiscal expansion to offset the impact on GDP of the global economic downturn) is especially noteworthy. Nevertheless, Peru's public spending on health remains relatively low, compared with other Latin American countries (Figure 10).

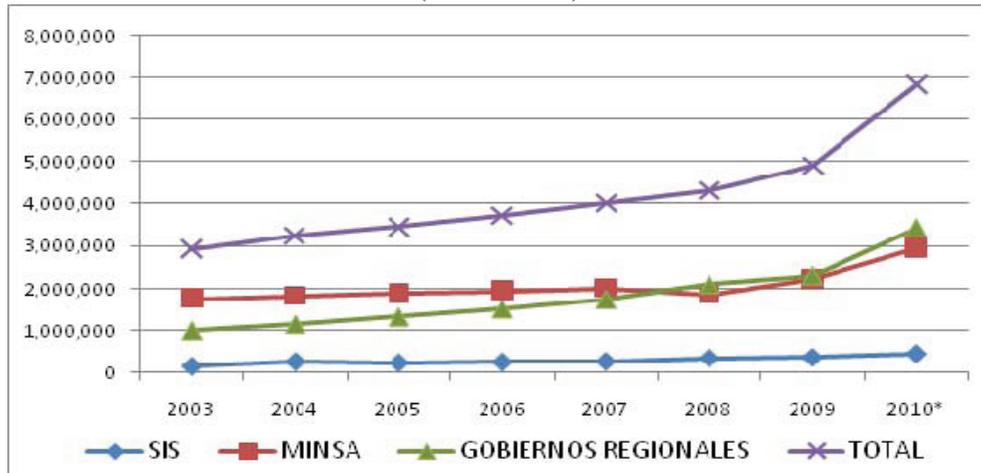
¹⁷ MINSA remains responsible for the operation of the Lima and Callao health system, all tertiary hospitals, medicine procurement, vertical programs such as TB control and vaccination distribution, and regulatory functions.

Figure 8: Peru's national budget by principal categories, as a percentage of GDP



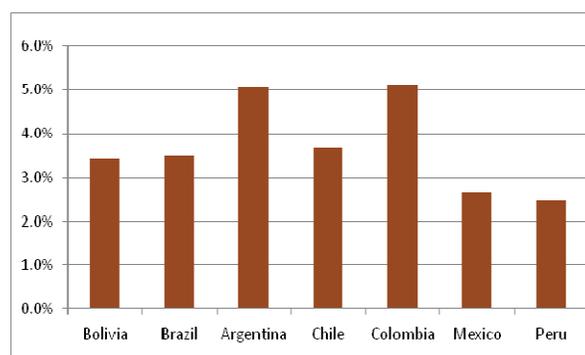
Source: Based on information from MEF, SIAF, various years, and BCRP, various years.
 Note: Health and sanitation spending in this figure does not include social security (*EsSalud*).

Figure 9: SIS, MINSA & regional health budgets, thousands of millions of constant soles (Base: 2001)



Source: Based on information from MEF, SIAF, several years, and deflated using the IPC.
 Note: * 2010 data are for programmed spending (*Presupuesto Inicial Modificado*, PIM) while other years are for executed spending. For details see Table 5 in the Annex.

Figure 10: Public expenditure on Health as % of GDP, Peru compared with Latin America, 2007



Source: World Development Indicators 2009.

3.3 The short route to accountability: strengthening users' effective rights through health insurance and demand side incentives

42. Like many countries in LAC, Peru's health system has historically limited user rights to the members of contributory health insurance schemes, such as *EsSalud* and private insurance schemes. The uninsured population used a second-class NHS system, which provided for universal access through a separate network of providers, but did not specify users' entitlements. The generally lower service quality in the NHS network ensured that users with access to the contributory systems would prefer to use them. However, this differentiated system resulted in a two class system, which provides very different levels of entitlement and service quality for the (mainly urban) non poor and the (mainly rural) poor. Within the NHS system, user fees were introduced to complement limited budget resources.¹⁸ As a result, the NHS system provided limited financial protection for the impact of health problems. Even when consultation fees were waived, the poor could often not afford to buy medicines that the system was unable to provide. This differentiated set of service entitlements was reflected in the parallel differentiation of health outcomes, as documented in Chapter 1. Further problems arose when the rapid growth of the urban population led to the creation of a broad tier of informal sector workers who were not covered by *EsSalud*, but were not extremely poor, and had higher expectations for quality and scope of services from the NHS system. This generated pressure to improve the quality of services in the NHS system in urban areas, threatening to further undermine the available budget for rural services.

43. In response to such pressures, over the past decade Peru has been working to improve the quality of the NHS system by better defining the rights and entitlements of the users and establishing mechanisms to guarantee the necessary funding. In 2001 it created the Integral Health Insurance (*Seguro Integral de Salud*, SIS) system, which guarantees access to the NHS system for qualified poor households. SIS households do not pay user fees. The health provider is paid a tariff by SIS, which is calibrated to cover the variable cost of the service. This system constitutes a significant fillip to the effective rights of poor users of the NHS system. It also

¹⁸ In some cases price signals were used to rationalize the pattern of demand within the NHS network (e.g., by charging more for ambulatory consultations in hospitals).

constitutes a mechanism to stimulate increased production in health systems that were often underutilized, partly due to the lack of available funding for the variable cost component of the service. SIS' targeting system aims to limit the program to poor households. Others must continue to pay user fees for medical services and medicines. SIS is now Peru's largest social program, covering over 1/3 of the population. The SIS reform has been complemented by the creation of the targeted CCT program, *Juntos*, which uses conditionality to promote increased take-up of health and nutrition services by the rural poor. *Juntos* and SIS are coordinated in the context of the Government's flagship nutrition program, CRECER.

44. In parallel, *EsSalud* has reformed its financing rules to focus on payroll taxes for employers. The 9 percent payroll tax which funds the program must now be paid entirely by employers, in the hope that this will strengthen workers' incentive to ask their employer to enroll them.¹⁹ Over the last decade *EsSalud* coverage has increased considerably, from 15 percent to 20 percent of the population, according to household survey data. Finally, in an effort to tackle the differentiation of mandates (that is, the packages of services to which insurees are entitled, contingent on health states), Peru has passed a Universal Health Insurance (*Aseguramiento Universal de Salud*, AUS) law. AUS requires all insurers to guarantee the same minimum package of benefits (called the Essential Plan for Health Insurance, *Plan Esencial de Aseguramiento en Salud*, PEAS). The law also calls for semi-subsidized options to be developed for intermediate households, who have some capacity to contribute but cannot reasonably afford the full cost of their health insurance. The following paragraphs review these developments in greater detail.

3.3.1 Overview of health insurance coverage

45. In 2009, health insurance cover in Peru reached 61 percent, while 39 percent of the population had no insurance (public or private), according to ENAHO household survey data (Figure 11). The main insurers are SIS (37 percent of the population) and *EsSalud* (20 percent). The last five years have witnessed a significant reduction in the proportion of poor households without health insurance cover (Source: ENAHO 2009).

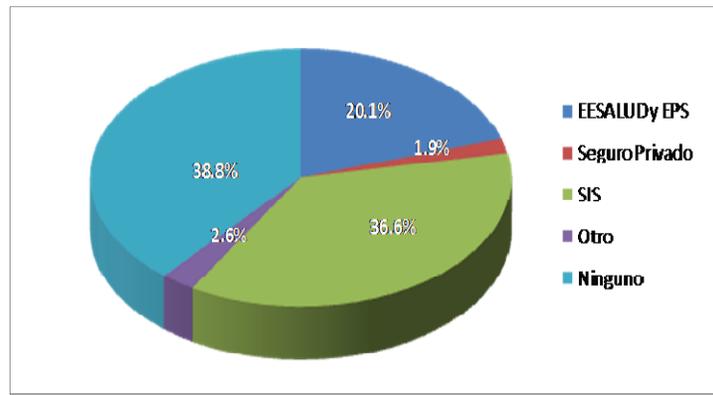
46.

47. Figure 12 compares the structure of coverage by quintile, in 2003 and 2008. Coverage in quintile I rose from 29 percent in 2003, to 37 percent in 2008. Coverage in quintile II rose from 36 percent to 55 percent. This reflects the expansion of the SIS. Whereas just 27 percent of quintile I was covered by the SIS in 2003, by 2008, coverage had risen to 53 percent. A similar trend can be seen in quintile II.

¹⁹ The incidence of payroll taxes on workers' remuneration depends on the degree of pass-through to wages, which in turn depends on labor market conditions. In general, employers can be expected to factor in the cost of such taxes in their hiring decisions, so that an increase in a payroll tax will either reduce the nominal wage offered or (if nominal wages are inelastic downwards due to labor legislation) it will reduce employment demand. To the extent that the adjustment is made through employment demand, infra marginal workers will not pay the full cost of the tax. For workers who are already hired, with an established nominal wage, but whose employer has not yet enrolled them in the *EsSalud*, this rule change will give them a clear incentive to push their employer to enroll them, but may also raise the likelihood of dismissal for workers whose wages are close to their marginal revenue product.

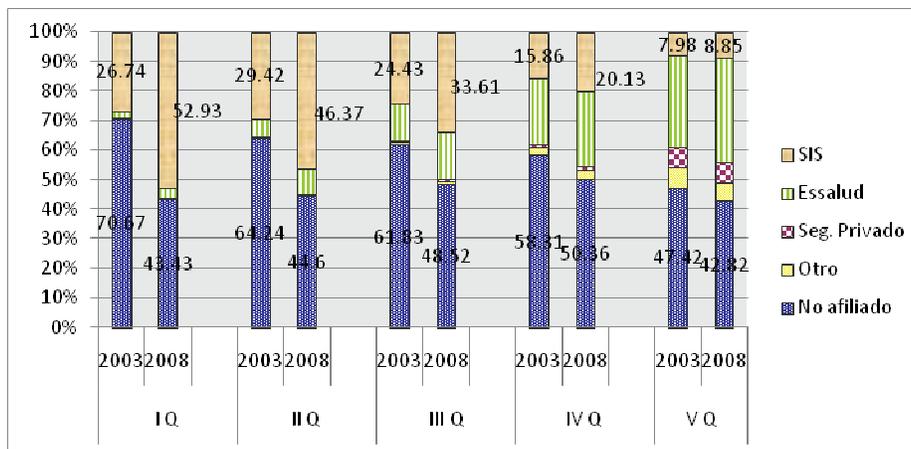
48. The same Figure also shows how the recent expansion of SIS has weakened its targeting, through the growth of inclusion errors. By 2008, 20 percent of households in quintile IV were covered by SIS, up from 16 percent five years earlier. In the same period SIS coverage in quintile III rose from 24 to 34 percent. Nevertheless, the continued socio-economic segmentation of the health sector is evident, with SIS concentrated at the bottom of the income distribution (quintiles I, II and III), *EsSalud* in the middle and top of the distribution (quintiles III, IV and V), and private insurance entirely in the top quintile (Figure 13). As will be discussed below, the AUS law aims to establish parameters to standardize plans across providers and to ensure greater equity in access to health.

Figure 11: Health insurance coverage at household level by type of insurance, 2009



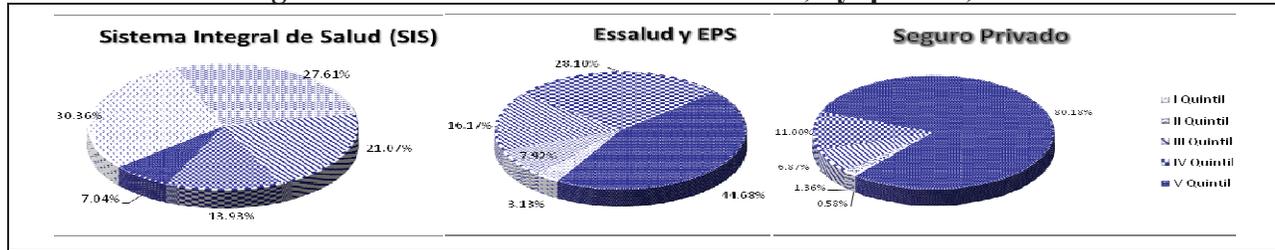
Source: ENAHO 2009.

Figure 12: Structure of insurance by quintile, 2003 and 2008



Source: Prepared based on information from INEI, ENAHO, 2003 and 2008.

Figure 13: Health insurance beneficiaries, by quintile, 2008



Source: Based on information from INEI, ENAHO, 2008.

3.3.2 Integral health insurance plan (SIS)

49. SIS was established in 2001²⁰ as a decentralized public agency of MINSA, to protect Peruvians who do not have other health insurance. It was created by merging existing health insurance programs for mothers and children (*Seguro Materno Infantil*, SMI) and school students (*Seguro Escola*). The initial emphasis was on mother and child protection services (Table 6 in the Annex). SIS allows qualified households to use the NHS system for free: user fees are waived and medicines are provided. The costs are financed from the general budget.

50. SIS targeting policy has been broadened since 2006 to include all people living in poverty and extreme poverty and other citizens without health insurance, including their parents and children; there are no age limits. The rationale is that the health insurance system should cover all citizens. As a result, SIS coverage now reaches over 10 million people (Table 2). However, as noted above, this process has threatened to undermine the tightness of the program's targeting. SIS still uses its own instrument for targeting purposes (FESE) and has not yet adopted the SISFOH instrument promoted by the Ministry of Economy and Finance. Both instruments have a similar approach to measuring structural poverty through asset proxies, but SIS has argued that SISFOH (which was created in 2007) needs to be updated and revised before it could replace FESE. The National Congress has legislated to create ad-hoc mandates on SIS to incorporate categories of beneficiaries, such as all employees of small or microenterprises, which may include many non-poor households (DS N° 024-2009-PRODUCE).²¹

51. As well as expanding the insured population, SIS has also reformulated its benefit plan, expanding its list of prioritized interventions (*Listado Priorizado de Intervenciones en Salud*, LPIS).²² Interventions are divided into: preventive, treatment and rehabilitation (see Table 6 in

²⁰ The SIS was created through Law N° 27657. Annual reports in Spanish are available at www.sis.gob.pe.

²¹ Another example is inclusion is the incorporation of members of "implementing groups," civil associations of 100 community residents that develop community investment projects. The process for generating, developing, evaluating and monitoring the investment generated had still not been defined as of August 2009. Nevertheless, the incorporation of executive members of the groups to the SIS, at no cost, was approved through Supreme Decree 014-2009-SA of August 20, 2009.

²² Supreme Decree 004-2007-SA, March 17, 2007. Ministerial Resolution 316-2007/MINSA approves the technical health standards for the implementation of the LPIS, in the framework of universal health coverage.

the Annex). The LPIS will be replaced when the Basic Health Insurance Plan (PEAS) established in the AUS goes into effect.²³ The AUS is discussed below.

52. In an effort to limit the coverage of the fully-subsidized benefit, a semi-subsidized SIS window was launched in 2007. This is open to those without health insurance who have an income of less than S/.700 (with a higher cut off for exit, set at S/.1,000).²⁴ There is no age limit.²⁵ The individual premium is S/.10 and the family premium is S/.30 per month. These amounts are relatively low, when compared with the minimum contribution to *EsSalud* (set at 9 percent of the minimum wage, which amounts to about S/.50 per month per person). But they are relatively high, when compared with the average budget allocation for the fully subsidized SIS users, which is presently S/.50 per year. So the semi subsidized window represents a favorable option for SIS (since it generates more than double the income per insured person that comes from MEF) and it is also an attractive alternative for informal sector workers (since it costs less than half what *EsSalud*'s minimum quota would be). However, thus far only about 62,000 people are inscribed in the semi subsidized option, which is about 0.5 percent of all SIS beneficiaries, and there was a decline of 10 percent between 2007 and 2008. This most likely reflects the limited success, to date, of SIS' efforts to limit access of non-poor families to the fully subsidized option. So long as lax targeting rules facilitate getting free access, it will be difficult to promote the semi-subsidized option.

53. Administrative data from SIS confirm that there has been a steady rise in the number of individuals receiving NHS services with SIS financing, from 5 million in 2004 to 7 million in 2008, and also confirm that the demographic scope of coverage has broadened to include adolescents and all adults (not just pregnant women). The total number of consultations doubled between 2004 and 2008. There are also indications that the quality of the service has improved. The average number of consultations per person rose from 2.6 in 2004 to 4.0 in 2008, and the program cost per person attended more than doubled, in real terms, between 2004 and 2008 (Table 2).

²³ The PEAS list was made available for consultation on the MINSA website for eight days beginning on June 17, 2009. According to conversations with SIS officers on October 12, new versions of the PEAS now exist.

²⁴ The minimum wage in Peru presently stands at S/.550.

²⁵ http://www.sis.gob.pe/a_produ_gratu.html.

Table 2: SIS coverage, production, unit costs and budget transfers, 2003 to 2008

	2003 ¹	2004 ²	2005 ²	2006 ²	2007	2008
Insured/beneficiaries ³	7,571,302	9,188,828	11,026,607	10,389,190	6,983,157	10,358,793
Users attended - Total		5,057,546	4,293,420	4,620,552	5,486,731	6,960,358
0-4 yrs. of age		2,293,998	1,823,644	1,925,079	1,947,284	2,010,253
5-9		1,906,175	1,751,622	1,950,753	982,689	1,003,515
10-19					1,343,482	1,480,736
>19		857,373	718,154	744,720	1,213,276	2,465,854
Pregnant women		828,165	714,538	710,487	711,175	785,856
Total consultations	18,603,827	13,068,769	14,915,217	17,430,217	21,537,406	27,615,099
Consultations per user		2.58	3.47	3.77	3.93	3.97
Production value (S. nom.)	275,709,570	147,065,739	220,283,187	266,458,536	300,254,743	411,255,050
Production value (S. real) ³	265,010,444	136,603,462	201,599,730	241,116,094	261,429,871	335,749,111
Cost/consultation, (S. real)	14.2	10.5	13.5	13.8	12.1	12.2
Cost/ beneficiary, (S.real)	35.0	14.9	18.3	23.2	37.4	32.4
Total budget (S. nominal)	207,294,102	280,366,257	251,053,416	266 481 036	283,366,532	419,586,451
Notes: 1. No data is available information on users for 2003. 2. For these years, children aged 5-9 years and 10-19 years are grouped. 3. The dip in this series in 2007 is due to a statistical change. Until 2006, the concept of <i>afiliados</i> [affiliates] was used, which were divided into plans by age group or health priorities, such as pregnant women. Beginning in 2007, the concept of beneficiary was used and the different plans were eliminated. In addition, the database was updated, and duplications due to registration in two plans were eliminated, which produced a statistical decline of approximately 30 percent in users from 2006 to 2007. 4. Using the RPI as a deflator. Base year: 2001.						
Source: Based on information from <i>Memorias SIS</i> , several years.						

54. There was a sharp increase in SIS beneficiaries between 2007 and 2008, by almost 50 percent. This coincides with the efforts of the CRECER nutrition strategy, of which SIS forms part, to promote health and nutrition services in poor communities. CRECER highlights nutritional counseling and promotion services for children under five. The *Juntos* CCT program, which is also part of CRECER, makes participation in monitoring and counseling a requisite for receiving a cash transfer of S/.100 per month. As well as generating demand-side incentives, in 2006-7-8 the *Juntos* Program also channeled additional budget resources to SIS (of S/.7.3 million, S/.15.4 million and S/.7.1 million, respectively).

Budget flows and supplier incentives in SIS

55. SIS acts as insurer for households that are covered by the program, providing finance and helping to guarantee service access. However, it has different characteristics from a standard insurance program, due to the way its budget is controlled and how it fits into the public sector. The first point to note is that SIS does not pay the whole cost of the service – its tariff is calibrated to cover the variable cost element. Direct budget transfers from MEF to the MINSA and to health regions pay for other elements of the cost of services.

56. Second, SIS is not an insurance fund in the classic sense. Rather, it is a budgetary channel funding to the NHS system. It is not treated like an insurer by MEF, since the amount of the budget transfer to SIS is not calculated on an actuarial basis, taking account of the size and

characteristics of the insured population, and the probability and cost of insured events. Rather, the budget is set annually, on an ad-hoc basis and (as seen above, in Table 2) the amount of the transfer per insured person has varied considerably. Because it is not a fund in the financial sense, SIS cannot absorb actuarial risk arising from variance between projected and actual costs. The SIS budget for any given year is fixed. If the flow of bills from the health system to SIS surpasses the budget (which it normally does) the difference must be managed by rejecting bills and/or by accumulating unpaid accounts. Since the system is regulated by delaying or denying payment to the DIRESAs, it is difficult to escape the conclusion that it is the DIRESAs who are carrying the actuarial risk and – thus - acting as the insurer.

57. The rules governing the use of SIS funds by the DIRESAs (or, where appropriate, by local health administration committees, CLASs) further underline the point that SIS is not an insurer in the classic sense. In a normal health insurance arrangement, a health provider who receives a payment for insured services can use the money as they see fit (since the service was already provided). But DIRESAs must present a proposal for the use of SIS funds, which is subject to approval by the budgetary authorities. As a result, SIS funds are budgeted twice: first as a transfer from MEF to SIS, and second as a source of funds within the budget of each DIRESA. This amounts to a complex set of “belt and braces” budgetary controls, generating transactions costs that undermine the program’s impact.

58. This is the product of trying to achieve multiple policy goals with a single instrument. SIS was originally motivated, in part, by a desire increase funding for non staff expenditures, due to a perception that the budget was inefficiently skewed towards staff costs. As a result, there is an implicit presumption against SIS funds being spent on staff.²⁶ Reimbursements from SIS to the DIRESAs have replacement and management components.²⁷ The replacement component, normally used to buy medicines, medical procedures and supplies, is predominant. These funds are normally sent to the DIREMID (the office of the DIRESA charged with medicine procurement). The management component should be used to “improve infrastructure and/or for procurement of medical equipment...and other goods and services that guarantee care and quality health service.”²⁸

59. A predictable result of these arrangements is long delays in SIS payments to DIRESAs and health networks. The scenario is especially complicated outside Metropolitan Lima, because of the involvement of the regions. There are delays in obtaining authorization from the Ministry of the Economy and Finance (MEF) for the budgetary decisions of the DIRESAs. The regional governments must also approve DIRESAs’ use of SIS funds, and money deposited in DIRESA accounts cannot be utilized until final approval is granted. Then there are further delays before

²⁶ However, we have not been able to find any specific regulation impeding the hiring of personnel with SIS funds. The nearest was Art. 14, Ministerial Resolution 422-2007/MINSA which specifies that “using the resources transferred from the SIS on bags of foodstuffs, uniforms or other expenses to benefit personnel that provide services in the institution is prohibited.”

²⁷ Ministerial Resolution No. 422-2007/MINSA.

²⁸ Funds are allocated for health care facilities for two areas: for medicines, which go directly to the administration of the SISMED network; and for minor administrative expenses associated with the SIS, which is erroneously also referred to as SIS Petty Cash. Those funds are very limited and are received in cash.

the DIRESAs transfer of resources to the networks. As a result, health networks typically encounter long delays in reimbursement (three months or more).²⁹

60. Another predictable result of the complex set of constraints is a matching set of efforts to evade the ring fencing, which in turn adds further transactions costs. Evaluations of health projects by the national system for public sector investment planning, SNIP revealed that personnel were often paid with SIS funds. Similarly, budget execution data from SIAF for the nine months to September 2009 report that 18 percent of SIS funds were spent for staff under Service Administration Contracts (CAS) while 38 percent was spent on vaccines, materials, medical supplies and other operational and service costs.³⁰ Another widely commented problem is that DIRESAs use SIS funds to cover expenses in their regional headquarters, instead of channeling them to the health networks whose production is being paid for.

61. A pressing problem for SIS is that the model of reimbursement of individual services generates a huge volume of transactions, which is beyond the capacity of its outdated and administrative and computer systems.³¹ The result has been temporary collapses in transaction processing, which led in 2009 to SIS using estimations based on past periods, in lieu of real time calculations. This was particularly worrying given the important role played by SIS data for the monitoring of health sector performance by the performance budgeting (PpR) system.

62. The problems discussed in the foregoing paragraphs are widely understood by health specialists in the Peruvian public sector, and reform options have begun to be discussed. One option –used elsewhere in LAC - is to shift away from the reimbursement of individual services, towards a system of per-capita payments between MEF and SIS, and between SIS and the DIRESAs. During 2008, with support from the Government of Belgium, SIS experimented with a per capita approach through a pilot in the East Lima networks and three highland departments.³² The networks had to meet agreed performance goals in return for transfers. This model is similar to the *Plan Nacer* model, which is supported by a World Bank project in Argentina. One clear advantage of this approach is that it facilitates a shift in emphasis, away from the “bean counting” of treatment for morbidities, towards the strategic management of the epidemiological state of communities. Unfortunately, the pilot was disrupted by long delays in the availability of funding, but the ex post evaluation from the Belgian Cooperation was positive (Box 2).

²⁹ According to information from officials of the MINSA’s Planning and Budget Directorate, the creation of a special account in the implementing agencies is being considered so that the deposits of reimbursements arrive more quickly, without the need to receive the regions’ authorization for use.

³⁰ 2009 was the first year that budget execution data were reported in a way that allowed this to be seen.

³¹ SIS has only 13 servers (many of them outmoded) and 17 staff (9 permanent and 7 on contract) to manage a system that processes 30 million transactions annually and covers over 12 million insured people. A systems audit conducted in 2009 assigned scores of 16 percent or less for each of 11 critical functions evaluated.

³² Financed by Belgian cooperation funds.

Box 2: The pilot program for per-capita payments in SIS

In 2008 the Belgian Government financed a pilot of per capita transfers of SIS funding in three regions. The transfer was set at S/.50 per person/year, which is equal to the average SIS budget nationwide. Funding contracts were signed with DIRESAs of Andahuaylas, Abancay, Ayacucho and Cajamarca. They specified a list of guaranteed services and of monitoring indicators for coverage, targeting and institutional births, which coincided with those of the performance budgeting (PpR) system. The model included an initial advance payment, with subsequent payments to be based on monitored performance. Andahuaylas and Abancay DIRESAs received the advance but unfortunately, budgetary delays linked to the requirement for national counterpart funds held up subsequent payments. One weakness of the pilot was the lack of specification on how the payments should be transferred from the DIRESAs to health networks, which undermined the incentive system. In addition, the process for regional government authorization for the use of the funds was badly defined. Given the delays in funding flows and the absence of a rigorously defined control group, it is difficult to measure the impact. Nevertheless, the evaluation by the Belgian cooperation agency* was broadly positive, suggesting that this type of financing might offer a viable approach for SIS in the future.

* Annual coaching report, 2008. Extension of the sector financial support program, 2009.

3.3.3 Universal Health Insurance law (AUS)

63. In response to the fragmentation and segmentation of the health sector, and with the strong support of MINSA, in 2009 the legislature approved a new law on universal health insurance (*Aseguramiento Universal en Salud*, AUS). This law will have important effects on health entitlements and financing in the public and social security sectors. AUS seeks to establish a common set of conditions that must be covered by all health financing and insuring agents. This list is called the Basic Health Insurance Plan (*Plan Esencial de Aseguramiento en Salud*, PEAS).³³

64. The philosophy underlying the AUS is that the whole population should enjoy the right to a minimum package of lifelong good quality, timely health care, regardless of their economic circumstances.³⁴ This implies establishing a shared minimum mandate for the NHS, *EsSalud* and private systems. However it does not mean that all the systems should be identical: *EsSalud* and private insurers would be expected to go beyond the minimum mandate. It also implies being prepared to finance access to the minimum package for those households that cannot afford to pay, through public subsidy. Key characteristics of AUS include the following:

- AUS applies to all health insurers in the public and private sectors³⁵ and explicitly includes SIS.
- PEAS covers preventive-promotional, curative and rehabilitative treatment.
- A regulatory agency is created to ensure that all insurers offer the PEAS.
- The SIS maintains its subsidized and semi-contributory schemes.
- The law stipulates that the state must progressively increase funding for the subsidized and semi-contributive schemes.

³³ <ftp://ftp2.minsa.gob.pe/aus/archivos/PEAS.pdf>.

³⁴ Law 29344, <ftp://ftp2.minsa.gob.pe/aus/archivos/normatividad/Ley29344.pdf>.

³⁵ SIS, *EsSalud*, Armed Forces, National Police Force, EPS, private insurance, self-insurance, health fund and other insurance modalities.

- The law creates a special fund to cover high-cost diseases for the subsidized and semi-contributive systems.

65. PEAS specifies a list of insurable conditions which must be covered by all health insurers, whether they be public, private or mixed. In the case of the SIS, PEAS will substitute its LPIS plan. PEAS was designed based on a burden of disease study and took account of cost-effectiveness considerations to help identify the diagnoses which should be included.³⁶ As a result, PEAS is more focused than LPIS, whose list of allowable therapies might correspond to up to 33 percent of the catalogue of possible diagnoses, compared with just 10 percent for PEAS. Since the technical basis for PEAS is different from LPIS, it is difficult to be certain of the precise cost implications for SIS.³⁷ Nevertheless, the available analysis suggests that PEAS will be more expensive. A study commissioned by SIS highlights the inclusion in PEAS of diagnoses for tumors, blood diseases, endocrine disorders and mental conditions, all of which require high-cost, specialized care and do not correspond to any treatment in the LPIS (Table 3).

³⁶ Table 2 in the Annex presents a detailed analysis of the findings of the burden of disease study for the period 2004.

³⁷ The PEAS plan is defined in terms of diagnosed insurable conditions (states of health) which require treatments or interventions, while the LPIS is organized by treatments. This makes it difficult to compare the LPIS with the PEAS.

Table 3: Comparison of treatment interventions of the List of Health Interventions (LPIS) and the Basic Health Insurance Plan (PEAS), May 2009

Chapter	Sub-category	Code	LPIS		PEAS		N° of coinciding treatments
			N°	%	N°	%	
I	Specific infectious and parasitic diseases (a00-b99)	776	741	95.5	246	31.7	246
Ii	Tumors (cancer) (c00-d48)	452	0	0.0	31	6.9	0
Iii	Diseases of the blood and of hematopoietic organs (d50-d89)	164	0	0.0	1	0.6	0
Iv	Endocrine, nutritional and metabolic disorders (e00-e90)	359	0	0.0	8	2.2	0
V	Mental and behavioral disorders (f00-f09)	299	0	0.0	23	7.7	0
Vi	Diseases of the nervous system (g00-g99)	331	15	5	10	3	0
Vii	Diseases of the eye and associated systems (h00-h59)	212	16	8	9	4	7
Viii	Diseases of the ear and mastoid processes (h60- h95)	163	8	4.9	4	2.5	0
Ix	Diseases of the circulatory system (i00-i99)	384	0	0.0	16	4.2	0
X	Diseases of the respiratory system (j10-j99)	231	71	30.7	26	11.3	4
Xi	Diseases of the digestive system (k00-k93)	378	145	38.4	18	4.8	8
Xii	Skin and subcutaneous tissue diseases (l00-l99)	338	29	8.6	12	3.6	12
Xiii	Diseases of the osteomuscular system and connective tissue (m00-m99)	544	13	2.4	48	8.8	0
Xiv	Diseases of genitourinary system (n00-n99)	442	49	11.1	41	9.3	14
Xv	Pregnancy, birth and the postpartum period (o 00-o 99)	427	427	100.0	92	21.5	92
Xvi	Specific infections during the peri-natal period (p00-p96)	335	335	100.0	66	19.7	66
Xvii	Congenital malformations, deformities and chromosome disorders (q00-q99)	624	556	89.1	35	5.6	35
Xviii	Abnormal symptoms, signs and findings, clinical and laboratory, not included in other sections, (r00-r99)	276	0	0.0	6	2.2	0
Xix	Trauma, poisoning and others due to external causes (s00-t98)	1278	208	16.3	90	7.0	15
Total		8013	2613	32.6	782	9.8	499

Source: SIS, 2009.

66. As a result, the AUS reform is likely to have important budgetary consequences. The projected costs of the PEAS, as stated in the motivation for the AUS law, were estimated at 140 percent more than the present level of funding for SIS (S/.120 per head compared with S/.50, PRAES 2007). To cover this cost for 100 percent of an estimated target population of 12.6 million people³⁸ would imply tripling the SIS budget from the present (2010) level of S/.464 million to S/.1,500 million. However, the PEAS will not only affect the variable costs of the NHS that are funded through SIS. It also has important implications for the capacity requirements of the NHS system in terms of staff and equipment which are financed through the health regions and MINSA. Including these elements, the full cost of PEAS was estimated at S/.340 per capita. If the subsidized element of PEAS were to aim to cover all poor people (around 45 percent of the population), this would imply an annual cost of around S/.4,300 million, which is roughly 53 percent of total funding for the NHS system channeled through MINSA, health regions and SIS in 2010.

67. Concerns in MEF about the budgetary implications of such large expenditures have delayed the roll out of the PEAS. A pilot program was scheduled to begin in 2009 in Apurimac, Huancavelica, Ayacucho and in parts of La Libertad, Lambayeque, Piura (lower Piura) and San

³⁸ This was the projected beneficiary population as stated in the motivation for the AUS law, which is 45 percent of the population and corresponds broadly to poor and extremely poor people.

Martín, at a costing of S/.140 million, but it was delayed. MINSA had estimated that an additional 572 physicians³⁹ and 324 nurses would be needed in the pilot intervention zones to comply with PEAS mandate (Nuñez, 2009). However, during 2010 important steps were taken towards meeting the costs of implementing the AUS. In August of that year, an Executive Decree was issued to increase the SIS budget by NS.44 million, to help cover the cost of AUS (*Decreto de Urgencia* No 048-2010). At the same time, discussions were underway in MINSA to explore the possibility of restricting the initial roll out of PEAS to a more limited set of explicit guarantees in priority regions and populations.

3.3.4 *Juntos*: reinforcing demand for basic health & nutrition services using conditional cash transfers

68. As well as reinforcing effective rights to health services through the SIS and AUS reforms in health insurance, Peru has worked to promote the take-up of health services through demand-side stimuli. This has been done, primarily, through the *Juntos* CCT program, which began work in 2005. *Juntos* pays S/.100 monthly to mothers in extremely poor households with a child under 14 years and/or to pregnant women, who meet their co-responsibilities under the program. The program aims to create incentives for the population to demand good quality public services in health: preventive health and comprehensive care of pregnant women; and in nutrition: checkups for children aged from birth to 5 years to ensure their comprehensive health and nutrition care. It also has conditions related to basic education take up. *Juntos* is focused in 638 of Peru's poorest districts; within those districts, eligible households are chosen using a proxy means test administered by INEI. As of December 2009, there were 450,110 beneficiary households.

69. *Juntos* works in coordination with the CRECER nutrition strategy and with the SIS health insurance program. Among the issues being addressed by the program during 2010 were the need to update the beneficiary register to improve the flow of beneficiaries into and out of the program; the need to reform the benefit calculation, to create incentives for each child, rather than for the family as a whole; and the need to strengthen *Juntos*' institutional integration with other relevant programs such as SIS, the health regions and education services.

70. In the absence of a rigorous impact evaluation, evidence on *Juntos*' impacts is partial and mixed. A quasi-experimental evaluation carried out by the World Bank, using available household survey data (Perova and Vakis, 2009) found a positive overall impact on the take up of health care services. Among program participants, participation in health controls of children under five years rose by 37 percentage points; the likelihood they would seek professional medical attention when ill rose by 22 percentage points; and vaccination coverage rose by seven percentage points. Women of reproductive age increased their use of health care services for illnesses, immunizations, access to contraceptives and participation in family planning and purchased more nutritionally-rich foods. In general, impacts are stronger among women who have participated in the program longer.

71. A study by the Economic and Social Research Consortium (CIES) in Apurímac, Huancavelica and Huánuco found that pre- and post-natal checkups had increased among *Juntos*

³⁹All specialties and levels of care.

beneficiaries, as had institutional births (Díaz et al. 2009). This suggests that the income effect of the program, plus the increased contact of women with the health system, have combined to improve demand for institutional births, even though the latter was not an explicit condition of the program.⁴⁰ This study underlined the positive role played by SIS in covering health care costs for *Juntos*' beneficiaries. But it found no program impact on participation in nutritional monitoring and mixed results in nutrition outcomes. It concluded that a deficient supply of health and nutrition services was a limiting factor for the demand effects of the program to produce better outcomes. Supply side limitations in the health sector – especially the lack of adequately trained human resources - were also underlined as a limiting factor for *Juntos*' impact by Alcázar (2009).

3.4 The long route to accountability: improving public sector management and accountability arrangements

72. The uneven impact to date of the *Juntos* program on health and nutrition outcomes in the poorest districts serves to underline the point that improving health outcomes in Peru requires supply side, as well as demand side, interventions. The policies of increased funding, stronger users' rights and demand stimuli, analyzed in the previous section, will be of little avail if the health system fails to use resources well and the supply of services remains deficient. This section reviews advances in the “supply side agenda”. It focuses on reforms in public sector management and accountability arrangements, which aim to improve the efficiency and effectiveness with which resources are transformed into services. This corresponds to the “long route to accountability”, in the framework outlined in the 2004 WDR.

73. Peru's health sector has a history of regulatory failure, associated with the “capture” of resources by different actors (such as employees, or groups of relatively privileged users),⁴¹ with weak incentives and inadequate regulatory control for health posts, hospitals; and with budget misallocation (such as relative shortages of staff, medicines or investment). Efficiency gains can improve outcomes for any given amount of budget; and unless inefficiencies are resolved, they will dilute the impact of additional funding.

74. The section focuses on three sets of reform efforts that have sought to address efficiency and effectiveness issues in the Peruvian health system in recent years: (a) *Decentralization*: the CLAS initiative to place local health networks under community control; and the subsequent decentralization of health systems to regional government control; (b) *Performance budgeting*: reforms led by MEF to create incentives for improved performance and to build performance criteria into the budgeting process through protocols for planning, budgeting and monitoring outcomes, and (c) *Human resources*: efforts to strengthen human resource management and assign sufficient staff to meet service quality goals.

3.4.1 Decentralization

75. In health, as in other sectors, the centralization of the Peruvian state has been an obstacle to ensuring the responsiveness of public programs to local challenges and opportunities. In recent

⁴⁰ Perova and Vakis (2009) found no evidence of *Juntos* program impacts on the take up of institutional births.

⁴¹ The problems of “capture” by providers at the expense of the interests of clients were highlighted in the first study produce by the RECUSO AAA (Cotlear, 2005).

years, two separate initiatives have sought to shift control to a lower level of the health system. In the 1990s, the Local Health Administration Committee (*Comité Local de Administración de Salud, CLAS*) model was established to put health facilities in remote areas under community control. The CLAS model gave local communities direct control over the hiring and supervision of staff and of other resources. The CLAS model played a central role in strategies to improve primary health performance up to 2004, when it was undermined by the “officialization” of CLAS doctors’ contracts. However, the CLAS still operate a third of Peru’s primary health facilities, and their role was codified by a new law on co-management and citizen participation in health, passed in 2007.

76. The eclipse of the CLAS model was related to the implementation of an alternative vision for sector decentralization, linked to the political process of regionalization, which in 2004 transferred the control of health regions (DIREAS) and their staff – outside of Lima and Callao - to regional governments. Since then, there has been an uneasy tension between MEF, regional DIREAS and CLAS, as the three actors have attempted to clarify roles and maneuvered for position in the new institutional setting. In the context of the new reforms to health insurance under the AUS law, which were described in the previous section, the potential now exists for engendering a positive synergy between regional authorities and local health committees, as agents of a process focused on transforming health entitlements and outcomes for the poorest Peruvians. The following sections explore in greater detail the challenges and opportunities linked to these two dimensions of decentralization.

3.4.1.1 CLAS⁴²

77. The CLAS system was established in 1994 through the Shared Administration Program (*Programa de Administración Compartida, PAC*), as a way to improve health outcomes by involving communities in the management of primary care. This was linked to the expansion of the health network, which was supported by the Basic Health for All (*Salud Básica Para Todos, SBPT*) project. They were constituted as non-profit agencies, which could and hire staff using private sector norms. CLAS are governed by a committee of six elected community members, together with the head of the health post. The CLAS are financed by budget transfers to their bank accounts and are free to administer locally-generated income (from co-payments). The CLAS model gave local communities direct control over the hiring and supervision of staff and of other resources. This was an alternative to hiring medical staff on permanent civil service contracts, which experience suggested might be likely to “migrate” to other places.

78. By 2005, the CLAS model had expanded to cover 2,155 health posts, about a third of MINSA primary health facilities. In 2004 there were over 6,000 staff working in CLAS, of whom 941 were doctors. Studies reported positive findings about the impact of the CLAS model on health post performance. For instance Altobelli and Sovero (2006) showed that the CLAS were more cost-effective than other health posts. They attributed this, in part, to the role of the participatory local health plans (*Planes de Salud Local, PSL*), which are prepared annually by the CLAS, in guiding decisions about resource allocation.

⁴² This section is based on a background paper for RECURSO 4 prepared by Ricardo Díaz Romero.

79. As sometimes happened with similar initiatives in basic health and education systems across the LAC region, instead of concentrating on efficiency gains, the program increasingly used economies in staff remuneration and social protection rights to generate savings. Although this helped to reduce fiscal costs, it also produced a predictable reaction from the staff, who lobbied for a change of status. This resulted in 2004 in a law to “officialize” the posts of CLAS doctors – that is, to give them permanent civil service contracts. By 2005 there were only 151 doctors under direct hire by a CLAS; but there were still 2,400 nurses and 2,700 technical staff on contract to a CLAS. A further sign of the loss of interest in the CLAS model by the MINSA was that in 2003, the technical assistance unit that supported the CLAS was closed. Another problem – identified by Altobelli and Sovero - was that CLAS governance arrangements were *ad-hoc*, with no clear way of renewing the mandate of the committee; this led in some cases to reports of corruption.

80. After 2004 the emphasis of reform efforts shifted towards decentralization of health regions from MINSA to the regional governments, whose presidents are now directly elected (see next section). In some cases there is a manifest tension between the new regional health authorities and the CLAS, due to competition over resources and disputes about the level of authority of the DIRESAs *vis-a-vis* the CLAS. In San Martin the DIRESA has taken over direct administration of health posts previously run by a CLAS. In Lambayeque the DIRESA has declared its intention to develop an “alternative model” to the CLAS.

81. The CLAS model has moved out of the health sector reform spotlight, but it has remained an important component of Peru’s primary health system and has the potential to play an important role in future reforms. Although no new CLASs have been established since 2002, there are still 2,152 health centers, 33 percent of primary facilities in Peru, administered by 765 CLAS associations.⁴³ In three regions (Tacna, Arequipa, and Moquegua) all primary health facilities are under a CLAS, and another 7 regions have more than half their primary facilities under a CLAS (Loreto, Lambayeque, Tumbes, Cajamarca II, Piura I, Madre de Dios and Jaen).

82. There is no rigorous comparative statistical evidence about the performance of the CLAS model in recent years. In the absence of a dedicated technical assistance unit, since 2004 the flow of performance information has dried up. However, there is evidence that many CLASs continue to perform well. The local health planning exercises (PSL) carried out by the CLAS remain superior to anything done in the traditional system. A qualitative appraisal was undertaken of a small sample of CLAS-administered health facilities in Lima, Arequipa, Piura and San Martin in 2009, supported by the World Bank. The evaluation found that the CLASs had well-organized information about health outcomes and about program coverage for immunizations and nutritional counseling, and they reported positive and credible performance trends for 2005-2009. Some CLASs have a high level of sophistication, for instance, the Laura Caller CLAS in Lima uses advanced quality monitoring software to track users’ opinions on their medical treatment, on the time it took for them to be treated and on the cleanliness and general condition of the facility. An evaluation of three CLAS health centers in the *Los Olivos* district of Lima showed a positive trend in service production between 2008 and 2009, which was stronger than

⁴³ MINSA, 2008. *Co-gestión y Participación Ciudadana para el primer nivel de atención en los establecimientos de salud del Ministerio de Salud y de las Regiones.*

that of other health posts in the area. Indicators for control of pregnancy and nutrition monitoring also compared well with those of neighboring health posts, which were not run by a CLAS.

83. Further evidence that the model remains “alive and kicking” is to be had from the persistent success of CLAS-administered health posts in the annual quality prizes administered by the *Centro de Desarrollo Industrial*, CDI.⁴⁴ CLAS centers figured among the winners in every year from 2005-2008, often for initiatives to reduce the exclusion of indigenous families. In 2005 the *Jepelacio* CLAS from San Martin won the prize for a project on culturally sensitive birthing services; in 2006 Nazarenas CLAS from Ayacucho won, for a project on communicating in indigenous languages; in 2007 *Pueblo Libre* CLAS in Ancash won, for a project on promoting institutional births to reduce maternal mortality (which reduced its maternal death rate from 72 to 17 deaths per 1,000 live births in 2 years); and in 2008 *Acomayo* CLAS from Huánuco won, for a project to improve services for elderly people.

84. There have been important recent developments in the legal and administrative norms that govern the CLASs. In 2007, the Peruvian Congress approved the law on co-management and citizen participation (*Ley de Cogestión y participación ciudadana, Ley 29124*) which seeks to institutionalize the model. Under the new law, there is potential for the CLAS to play an enhanced role in the management of health sector resources. Under Peru’s fiscal administration system, budget transfers within the public sector must go to public authorities that are certified by MEF as Executing Units (*Unidades Ejecutoras*, UEs). In the health sector, in most regions, the DIRESAs are the lowest level of UE. However, the relatively large size of most DIRESAs limits the likely effectiveness of performance-based financing arrangements at that level.

85. The new AUS law proposes a model in which quality guarantees and prompt service are critical indicators. This could be reinforced by a model of funding for health networks, linked to their performance on quality guarantees, along the lines of the *Plan Nacer* model in Argentina. The CLAS would be legally able to receive such funds, and there is a relatively high density of CLAS in the health regions slated for the AUS pilot. There are already precedents in Peru for insurance funds to flow directly to the CLAS. In Ancash, at the request of the DIRESA and with the approval of MEF, the SIS transfers its reimbursements directly to the CLAS, in an effort to speed the flow of funds. The CLASs’ local health planning exercises (PSL) would provide a good basis for a results-based agreement between the CLAS and the DIRESAs, with shared responsibilities between the two entities.

86. Without doubt, any strategy for redefining the role of the CLASs will need to clarify their relationship with the regional DIRESAs, under which they now operate. Another challenge is to complete the implementing legislation for the new co-management law. One issue that remains controversial is that the new law limits the number of health facilities that can be administered by a single CLAS to a maximum of five. The idea is to ensure a scale of operation that is consistent with real community control. However some CLASs administer more than five posts and it might be inefficient to break them up. Another issue is that the CLASs will require renewed technical assistance if they are to play an enhanced role in a new performance management

⁴⁴ The CDI is associated with the National Society of Industry, *Sociedad Nacional de Industrias* (SNI).

model in primary health. Improving governance, to ensure that the local committees are frequently renewed and operated in a transparent fashion, is another important challenge.

87. Finally, if the CLAS model is to be a permanent fixture of health administration in Peru, there is a pressing need to address the issue of staff remuneration. The budget for funding CLAS staff payments has been frozen for over a decade. In 2009 an average CLAS-hired doctor earned S/.1,374, as against S/.2,600 for a doctor with an official post (“*nombrado*”); a CLAS nurse earned S/.568 compared with S/.1,112 for a “*nombrado*”; and technical staff in the CLAS earned S/.500, compared with S/.700 for a “*nombrado*”. Such differentials are difficult to justify and inevitably lead to high turnover of staff, undermining service quality, so they are not sustainable. The scale of these gaps suggests that Peru has allowed the CLAS model to degenerate into a tool to get cheap labor for health services. The challenge is to refocus the model on its potential for engaging regional health authorities together with local health networks and their staff and communities in adequately-funded strategies improving efficiency, effectiveness and health outcomes, through participatory planning, well-designed accountability arrangements and stronger budgetary incentives.

3.4.1.2 Regionalization and performance agreements

88. The regionalization process in Peru lost momentum after 2003, following the failure to carry out referenda on the creation of “super regions.” Nevertheless, the introduction of direct elections for regional presidents has led to an increase in their political authority. The year 2004 saw start of a process to transfer of a large proportion of health and education sector expenditure – including staffing - to the regions. The transfer of functions in health was completed in December 2008.⁴⁵ Most of the NHS system (apart from metropolitan Lima and Callao) has been moved from the direct control of the Health Ministry (*Ministerio de Salud*, MINSA) to the health directorates of regional governments (*Direcciones Regionales de Salud*, DIRESAs).

89. The reform provides for funding to flow directly from MEF to the regions, which has undermined the role of MINSA in the administration of the health budget. Although regional governments’ role was initially limited to the administration of a payroll, over which they had little or no discretion, and MINSA retained a strong role in managing the DIRESAs, the formal assignation of responsibility has given rise to a growing *de-facto* role of the regions in health sector leadership. In mid 2010 DIRESAs were undergoing reorganization to strengthen the role of the regional government’s health authorities. The regions are now the biggest single health budget holder in the public sector. The institutional clarity of the political relationship between the regional authorities and the users is an advantage of this model, compared with the community control model.⁴⁶ The disadvantage is that the regions are relatively large, so that it is difficult for local communities to have much purchase in the decision making process. In an effort to correct this, the ongoing reorganization of the DIRESAs is also expected to de-concentrate the health provision role to health networks, which will open an opportunity to incorporate the CLASs into the reformed system.

⁴⁵ 16 functions and 125 powers have been transferred.

⁴⁶ As mentioned above, the CLAS model (pending the implementation of the 2007 co-management law) has a more ad-hoc set of governance norms and can face difficulties in renewing the mandate of the local committees, in ensuring transparency and avoiding corruption.

90. The regionalization process has been coupled with efforts to establish an accountability framework between the national and regional levels of government. Prior to decentralization, from 1999 onwards MINSA had signed management agreements with the regions and hospitals, as part of an effort to “de-concentrate” administrative control within MINSA. They were signed with 34 DIRESAs in 2002, but included neither incentives nor penalties and there is no evidence of their effects.

91. In the context of decentralization, the mechanism of management agreements between the different levels of government was proposed by the Secretariat for Decentralization. The idea was to support the consolidation of a sub-national sector management role and to provide a framework for technical assistance and coaching activities. In the health sector, this was concretized in the idea of Results Agreements (RAs) (*Acuerdos de Gestión*) between MINSA and the DIRESAs, which were signed in 2004 and 2005. However it has proved difficult to give them teeth and in 2006-2009 little further progress was made with this mode.

92. The RAs are signed between MINSA and the regional government. They include performance indicators related to the strategic health sector programs of the performance budget (PpR) system (nutrition and maternal-newborn programs). In addition, each region chose a third performance area, according to its epidemiological priorities. Targets for the next three years were negotiated between the MINSA’s General Health Directorate (DGSP) and the DIRESAs. On the premise that the target indicators of the strategic programs could be attained using existing budget allocations, no fresh resources were attached. This was in line with the general approach of the PpR methodology in its first phase (see below). In short, the RAs are technical assistance agreements without economic incentives.

93. In the absence of economic or budgetary incentives, the negotiation of the RAs has proved to be a protracted process. The regions had a widespread – and not unreasonable - belief that the PpR targets were unattainable with existing resource endowments. Even where there might be a willingness to reallocate resources,⁴⁷ the DIRESAs inherited inflexible budgets which were comprised of ongoing commitments – mainly to staff – which had to be honored. There was little “headroom” in the budget for discretionary assignments. This issue is further discussed in the following section on performance budgeting (Results based management agreements (CARs)). It was early 2010 before all the RAs were ready for signature by the Minister of Health. At the time of this writing, June 2010, only the agreements for the 9 regions covered by the Government’s flagship “*PAAR Salud*” health investment program had been signed. It may not be coincidental that the regions who were receiving fresh resources from *PAAR Salud* were the most ready to sign. However, in the meantime, important advances have been made in improving the coherence between the RAs and the budget negotiation process and an intergovernmental committee on health management (*Comité Intergubernamental de Gestión de Salud*) has been established in an effort to improve the coordination between agents.

⁴⁷ Interviewed during the preparation of this report, the Health Director of Arequipa commented that the only way the region could have achieved the proposed targets for the PpR system’s strategic priorities would be to cut other activities that are equally important for the region.

3.4.2 Performance budgeting⁴⁸

94. In parallel with the decentralization process, Peru has sought to improve public sector performance through better budgetary incentives systems. This started with results-based administration contracts (*Convenios de Administración por Resultados*, CARs) and was followed by the development of the performance budgeting system (*Presupuesto por Resultados*, PpR). This section reviews how these developments in budget administration and performance management have played out in Peru's health sector. It summarizes the achievements to date, identifies limitations and flags upcoming challenges for the advancement of PIB in Peru.

95. CARs were promoted by the Ministry of Economy and Finance (MEF) in a pilot initiative in the early 2000s. From 2006 onwards, under the Garcia administration, the Government of Peru has intensified work on public sector performance management through a new PpR system, aiming to improve outcomes in health and other sectors.⁴⁹

96. The PpR system has established a set of logic models linking high level strategic development outcomes (such as maternal and peri-natal mortality, the nutritional state of children and early grade learning outcomes) to the relevant outputs of the public budget. Outputs have been grouped according to the developmental results and strategic goals that they contribute to. The budgeting process has been reformed in an effort to require the stipulation of developmentally-relevant physical outputs linked to each line-item, and targets have been set for improving the production and quality of outputs of those services and the associated high-level developmental outcomes. Among the most important outputs identified in the health sector are IBs and nutrition monitoring and counseling sessions (CREDS). Studies and evaluations have been carried out to determine the effectiveness of key programs and to identify bottlenecks that are hindering advances and additional resources have begun to be appropriated for critical interventions.

3.4.2.1 Results based management agreements (CARs) and Budgetary Support Agreements (CAPs)

97. Since 2002 MEF has worked to develop results-based management agreements (CARs) between the National Public Budget Directorate (DNPP) and "public entities"⁵⁰ of the national and regional governments. In the health sector, MEF signed agreements with health care providers at the level of the implementing unit. The indicators and targets were directly negotiated with providers, with limited participation of MINSA.⁵¹ The first generation of such agreements established monetary incentives (bonuses) to the staff whose work units met targets in performance agreements (*acuerdos de gestion*). By 2006, the CAR pilot covered 129 health facilities nationwide.⁵² However, the model was undermined by the erosion of incentives to staff (from 1/6 of salaries in 2002 to 1/48 in 2006). This reflected skepticism in MEF about

⁴⁸ This section draws on background papers prepared by Katie Mark and Betty Alvarado.

⁴⁹ Directive Resolution 052-2008-EF/76.01 ; Directive 008-2008- EF/76.01 in www.mef.gob.pe/PPR.

⁵⁰ No mention is made of a 'budget section' or implementing unit.

⁵¹ As discussed above, from 1999 onwards MINSA signed management agreements with the regions and hospitals; these are separate from those promoted by MEF discussed in this section.

⁵² For a discussion of the CAR model and its results in the health sector, see Arguedas, C. et al: "*Gestión por resultados: porque es importante contra con un buen sistema de incentivos?*" Goberna. Consultant report for MEF and the World Bank, November 2007.

information asymmetries leading to gaming in the setting of targets that were too easy to reach. An effort was then made to develop incentives to organizations, rather than individuals. Box 3 summarizes the main characteristics of the agreements signed in 2006. Finally there were agreements which did not stipulate any incentives. After 2006, no more of these agreements were signed.

98. During 2007-2009 MEF worked to incorporate the system of performance agreements into the new Results Based Budget (PpR) system which was introduced in 2008 (see next section). Initially it suggested the signing of “results based management agreements” by the strategic programs of the PpR system, not linked to additional funding or specific incentives. Then in 2010, the Budget Directorate began the signing of Budgetary Support Agreements (*Convenios de Apoyo Presupuestario*, CAPs) (Directiva No 002-2010-EF/76.01). Under these agreements, executing units commit to improvements in their operational management and to attaining specific targets in return for increased budgets for service delivery. To date such agreements have been signed by the Regional Governments of Ayacucho, Apurimac and Huancavelica, each related to the nutritional strategic program of the PpR system (*Programa Articulado Nutricional*).

Box 3: Characteristics of results-based management agreements signed with the National Public Budget Directorate, 2006

Purpose and specific objective	Signed with hospitals and health institutes to improving performance	
Signatories	Signed by the MINSA, the director of the hospital or institution and the director of the MEF's DNPP.	Endorsed by the president of the regional government and the regional planning, budget and land preparation director, the director of health, the director of the implementing unit and the hospital director.
Coverage	<u>Hospitals, central level:</u> Chancay; Daniel Alcides Carrión; Huaura Oyón; National Cayetano Heredia; Rezola de Cañete; San José del Callao; Instituto Nacional de Oftalmología.	<u>Hospitals, regional level:</u> Antonio Caldas Dominguez - Pomabamba, Huarney, Eleazar Guzmán Barrón - Nuevo Chimbote, La Caleta - Chimbote, Regional of Ica, San Ignacio of Casma, San José of Chinchá, San Juan of Dios-Caraz, Santa María del Socorro - Ica, Santo Domingo of Huari, Víctor Ramos Guardia – Huaraz.
Indicators of compliance	Percentage of new beneficiaries registered Percentage of complaints attended Percentage of compliance with programmed operations Percentage of trained personnel Development of procedural manuals Development of hospital fee schedule based on costs Waiting time (consultations, obstetrics, emergency, etc.) Percentage of satisfied users (consultations, obstetrics, emergency, etc.).	Waiting time (consultations, obstetrics, emergency, etc.). Percentage of satisfied users (consultations, obstetrics, emergency, etc.). Percentage of canceled surgical interventions. Accreditation of health promoters schools. Ensuring the health of the excluded population through health campaigns. Adaptation and implementation of internal auditing and quality improvement. Check-ups of infants under one year Increase in laboratory exams. Reduction of administrative expenses. Decrease in intra-hospital infections. Prescription of generic medicines Percentage of trained staff.
Linkage of principal-agent	MEF (DNPP) acts as the principal, public entities as agents. Limited role of the MINSA	
Incentives	The agreements for hospitals established a productivity bonus as an incentive. The amount of the productivity bonus should not exceed 25 percent of the payroll of January. Bonuses were financed through savings achieved in operating costs in 2006. The agreements for national hospitals included as an incentive a productivity bonus plus a grant (S/. 500,000) for the procurement of goods and equipment. In addition, it allocated S/. 50,000 for the General Health Directorate and the General Planning and Budget Office, to be used for monitoring the indicators agreed upon.	
Evaluation	The <i>Contraloría General de la República</i> , through the Management and Risk Control Office, receives quarterly reports on advances.	
Penalties	Not established	
Advances	In 2007 the agreement was superseded by the results-based budget strategy.	
Source: Alvarado and Morón, 2008.		

3.4.2.2 The results based budget (PpR) system

99. MEF established the results-based budget (PpR) for five strategic pilot programs in 2008,⁵³ expanding to nine in 2009 and 15 in 2010. The system uses several instruments: strategic programming, rapid assessments, monitoring indicators, impact evaluations and integrated management systems. The model's main initial focus was on improving budget programming in order to generate better outcomes from existing resource flows, and on developing instruments for rapid assessment of programs. More recently, budget allocations have started gradually to

⁵³ Health, nutrition, education, identity and infrastructure.

respond to the analysis of the PpR system (for example, through the CAP agreements, discussed in the previous section). This section reviews the development of the system and makes recommendations for future strengthening.

100. The PpR system in Peru is based on a causal model of the link from public spending to development outcomes.⁵⁴ The methodology identifies outcome variables, which are located within a logical framework. This facilitates the budgeting of cross-cutting areas. In the health sector, the high level goals are to reduce maternal and infant mortality and improve children's growth outcomes, so maternal-newborn and nutrition interventions are prioritized. Considerable effort has been invested in generating reliable data on those outcomes at regional level, through the expansion in the sample size and content of the ENDES household survey. With the aim of aligning the efforts of relevant budget holding entities to improve the targeted outcomes, the PpR system has created a common budget structure for each of the strategic programs, which applies to all the institutions involved in the production of services (including national, regional and district level entities).

101. Box 4 outlines a framework for analyzing the goals and success factors for performance budgeting systems. The following paragraphs then use the framework to evaluate advances in the health sector in Peru. The analysis concludes that Peru has advanced well with the definition and monitoring of high level strategic development outcomes (such as nutritional states of children and maternal and peri-natal mortality rates) and with linking them to service outputs of the public sector (such as nutritional counseling and monitoring services and the provision of good quality institutional birth services), and is beginning to reallocate budget to make the planned output changes feasible.

102. Looking ahead, upcoming challenges include the need to better define the responsibilities and accountabilities of the actors and institutions that deliver the services in the complex public health system. Although there have been positive advances, there is still diffuse responsibility for outputs which are co-funded across multiple agencies, with some double counting of results. Another problem is that the administrative data systems used to track the outputs remain weak. Too much reliance is still placed on the information system of the SIS health insurance program, which is severely stressed and has partial coverage, and on household survey data that cannot be linked to administrative units and which thus have limited usefulness for accountability purposes. The analysis of factors hindering the improvement in the quality and quality of the outputs of public programs is also at an early stage. Understanding the functional links from the outputs to the outcomes remains work in progress and there is plenty of scope to take better advantage of locally generated information about the opportunities and constraints of health systems.

103. Finally, in the context of the decentralization process, there is a need to reform the budget system as a whole, to progressively shift the locus of decisions on how to improve outputs and outcomes to a lower level. The PpR model (in the health sector as elsewhere) has been grafted on top of a relatively centralized traditional budget system. The health sector budget is riddled with ring fences and ad-hoc fixes, which have accumulated over the years, as the result of efforts to

⁵⁴ http://www.mef.gob.pe/DNPP/PpR/instructivos_formatos_MPFp.php.

channel funding towards national priority goals, but which impose inflexibility and inefficiency and sometimes create incentives for gaming. The budget system as a whole now needs to evolve, to progressively transfer accountability and discretion to lower levels of the system, linked to appropriate incentives systems, and to ensure that funding flows are plausibly sufficient to achieve the negotiated targets. The PpR system can contribute to this process, by helping to evidence the inefficiencies and poor results that have resulted from past budgeting practices and by providing a clear basis for the budget negotiation process to link the provision of additional funding to performance.

Box 4: Critical success factors in performance budgeting systems

An effective performance budgeting system needs to operate in the context of a high-level inter-sectoral planning process (normally controlled by the Cabinet of Ministers or the Ministry of the Presidency) which:

- Identifies the *high level outcomes* sought by the public sector and track and publicize their trends.
- Sets and publicizes targets for *outputs of public sector programs*, which are consistent with the high level goals, based on available information about causal chains and points of departure.

In this context, the budget system needs to:

- Assign budgets that are *plausibly sufficient* to meet the stated output goals, taking into account potential for efficiency gains and for re-assignment of resources towards priority outputs.
- Establish *clear accountability* of public sector managers for the outputs they are responsible for (including, where appropriate, *incentives and penalties*) and allow discretion in the use of resources to achieve them.
- Measure and report *performance of line agencies and operating units* in achieving the agreed output goals, and make this performance information public.
- Use *performance information* to inform managerial decisions to improve service outcomes.
- Continue to allocate / reallocate resources in *future periods* based on cost and outcome information.

International experience suggests that critical factors for the effectiveness of performance budgeting include:

- The participation of implementing agencies, such as line ministries, regions and program managers in identifying outcomes and selecting indicators.
- The quality of the outcome and output data.
- Whether targets are realistic.
- The flexibility of line agencies to adjust resources using results information to optimize outcomes.
- The ability of managers to use performance information.
- The existence of appropriate incentives for actors in the system – especially, the likelihood that future budget allocations will be sensitive to performance criteria.

Source: K. Mark. Review of advances and challenges in implementing budgeting for results in the social sectors in Peru. The Urban Institute, 2010. (Background paper commissioned for this report).

Overview of the PpR system in health

104. To understand the effectiveness of PpR it is important to see how results information is used in budgeting: how are past or proposed results factored into decisions in preparing the budget? At what point in the budgeting process are they considered? Are data on past performance and future targets used in the initial allocation of funding to each strategic program? Or is a pre-set funding amount used in calculating the target amounts?

105. Budgeting for the PpR strategic programs in Peru is carried out as an integral part of the budget cycle, but is informed by more detailed information than is typically available to decision makers and budgetary negotiators. The budget cycle begins with MEF's marco-economic analysis which determines the total budgetary envelope. Budget ceilings are then assigned to each major budget holder, such as ministries, (called "*pliegos*"), based on the estimated level of committed (inertial) expenditure across the system. In the next step, MEF assigns the available

incremental resources (“budgetary headroom”, which is the difference between the expenditure ceiling and inertial expenditure), based on national priorities. In the past there was little information about results and costs to guide these decisions. The development of the PpR system has progressively improved the quality of such information for the strategic sectors and has thus facilitated the incorporation of results-based criteria in the assignment of incremental budget. The *Budget Rationale* that accompanies the budget law explains the budget amounts assigned to each strategic program, including baselines and targets for key indicators. Box 5 details how the PpR system is embedded within the budget process.

Box 5: The mechanics of performance budgeting in Peru

The Ministry of Economics and Finance (MEF) begins budget preparation by determining the total budget envelope including amounts available for current and capital budgets. The budget office (*Dirección Nacional del Presupuesto Público (DNPP)*) determines sector amounts for each budget unit. The budget office then prepares packets for each budget unit (*pliego*) requesting that a budget be prepared by a deadline approximately 6 weeks later. The formal notification to each budget unit provides budget amounts, including line items for staff, pensions, goods and services (under current budget) and grants and transfers (under capital budget). The budget format requires that indicators and physical targets be provided in the budget request. The budget requests are then prepared independently by each budget unit. For example, the packets sent to MINSA, the health regions, and SIS are sent by different departments within the MEF. Unfortunately, the turnaround time is not sufficient to allow budget units to consult with each other during preparation of the budget request, even though they are working on the same strategic program.

The PpR strategic programs provide detailed additional information which can be found on the MEF website. Form C401 asks for the physical targets (*metas físicas*) for each outcome and output indicator, including actual values (number and percent) for past three years, and estimated and target values for the current and following year. The projected values are to be provided with breakouts by urban-rural and income quartile. Form C409 requires funds broken out by source for each of the Outputs. For instance, a budget request for Outcome Indicator (*Finalidad*) 043724, Children with basic competence upon completion of cycle II (“*Niñas y niños con competencias básicas al concluir el II ciclo*”) must include broken-out allocation figures for each of a series of outputs such as education materials, individual studies, and training for teachers.

Together these provide an impressive amount of performance information – both actual performance and future targets – linked to funding requests. MEF then compiles the budgets and prepares a justification for Congress. The individual ministers appear before Congress to justify the formal budget request, but results information does not figure in these hearings. Congress has the authority to change the allocation but usually does not.

Source: K. Mark, The Urban Institute. Review of advances and challenges for implementing budgeting for results in the social sectors in Peru. Background paper prepared for this report. 2010.

The roles of national and local actors in PpR

106. In lieu of strong planning, analysis and evaluation capacities elsewhere in the system, the PpR system in Peru aims to coordinate organizations that belong to different budget sections and contribute different inputs to the targeted outcomes. In this respect, it can be seen as an effort to impose greater coherence on the vertically fragmented budget system that has arisen from the decentralization process. For example, the MINSA, the regions and the SIS all co-finance efforts to reduce maternal mortality by promoting institutional births. MINSA finances the procurement of basic medicines, the regions procure complementary supplies and medicines, human resources and investments, and SIS reimburses variable costs. There is also a possibility of municipal financing of operational and capital costs.

107. Clearly, this complex set of complementary roles requires coordination. The goal is that decisions about additional funding should be based on information about results, products, and

service provision or outcome gaps at national and regional level, aiming to improve the equity of resource allocation, conditional on needs. However, this is still work in progress. Until 2010, separate offices within the MEF budget directorate handled the budget allocations for MINSA and SIS (*Presupuesto Nacional*) and the health regions (*Presupuesto Subnacional*), with little coordination. This resulted, for example, in inconsistencies and double-counting in the programming of institutional births among the different agents. However, MEF has advanced with the identification and elimination of this type of duplication and improving coordination in the budget process. In 2010 the structure of the Budget Directorate was reformed. Two new directorates - called Thematic Budget and Territorial Budget - were established to improve the coordination of budget formulation across budget holders with related responsibilities.

108. In the first phase of the PpR system, MEF was perceived by many in the health sector to be taking on sector planning functions, leading to problems with “ownership” in the implementing agencies at sector and regional level. This impression was linked in part to the weakness of Peru’s national planning framework⁵⁵ and in part to the weakening of MINSA’s role as health sector leader due to decentralization and the creation of de-concentrated budget units, such as SIS. Some critics in the regions regarded the PpR system as an effort to limit the transfer of fiscal control to the regional authorities (USAID, 2009: 43, 51 and 71). The fact that the health sector was a “guinea pig” for the development of the PpR system further reinforced the impression that MEF’s role in the sector was being reinforced.

109. However, during 2009-2010 MEF has worked to strengthen the involvement of the regions in the health sector budget negotiation process. It has declared its intention to leave the thematic content of budget decisions to the sector and the health regions, while concentrating on providing a framework of budgetary methodologies to systematize the process and on stipulating high-level criteria – agreed with the sector - about priorities that need to be addressed nationwide (such as peri-natal and maternal mortality and nutrition). In this setting MEF officials report that health establishments are playing a growing role in the budget process, which traditionally did not get down below Budget Executing Units (such as Health Regions or Hospitals). Without doubt there is much potential to better-exploit the rich local information sets generated by the CLAS entities for budgeting purposes.

110. One constraint for performance management in the health sector is the prevalence of shared aggregate responsibility across agencies for outcomes that depend on complex inputs. The PpR system is working to clarify what specific agencies are responsible for, in order to strengthen the accountability for results of agencies and managers. But the weakness of intermediate-level management entities in the health sector is an obstacle to establishing effective performance-based management. A recent public expenditure tracking survey (PETS) (Alvarado 2008) in Lima highlighted the limited authority of health facility directors, who are ultimately responsible for achieving many of the results.

Use of performance information in the budget process

111. The *Budget Rationale* for 2010 lays out the baseline, target, trend, and actual data for the outcomes and intermediate outcomes, and outputs. But the budget documents do not always

⁵⁵ The recent creation of CEPLAN is an effort to overcome this, but it remains work in progress.

manage to convey what money is being used for what purposes, and the format makes it hard to follow the logic of the use of a performance review to allocate resources. The presentation is broken into three separate parts that go across all of the Strategic Programs, before proceeding to the next step. So to understand the performance and the associated budgetary allocations for any one program requires piecing together data and analysis from several different disconnected sections.⁵⁶

112. At first, in spite of the often demanding programming exercises,⁵⁷ budget ceilings allowed little or no “headroom” to allocate additional resources to strategically important expenditures. Programming exercises might have demonstrated that more resources were needed to reach targets for improved outcomes; however, the budget could not be adjusted to cover the cost. This led to frustration and to questioning about the meaningfulness of the exercise by many in the health sector. However, it appears that budget allocations are now beginning to respond to results information generated by the PpR system, albeit in a limited fashion. The 2010 *Budget Rationale*⁵⁸ shows evidence in at least one case that the final budget allocations are related to performance. Specifically, the 2010 budget increases the allocations in the nutrition strategic program for the outputs “children protected by complete vaccination” and for “children with complete CRED” by 150 percent and 331 percent, respectively, in response to with stated underperformance in those areas. In 2010, the development of Budgetary Support Agreements associated with nutrition goals in three regions (discussed above) is further evidence that the PpR system is moving towards linking resource assignment to the information generated by the budgeting process, which will improve the likelihood that the effort will seem worthwhile to the officials who need to provide the data.

113. Within the nutrition program, however, the linkage is still not made very clear. The budget allocation links the increased funding to the specific “physical targets” (i.e., the number of children), but does not connect either the funding or the physical targets with actual performance for the current or past years in the official performance indicators. In fact, it is not possible to link the performance figures with the targets – how does the percent of children with complete vaccinations in 2009 (56.3 percent) relate to the target for that year of approximately 5 million children? Was the target reached? There is no way to answer this question, based on the information presented.

Linking Costs to Outputs

114. A considerable effort is made in the Peru PpR methodology to link budget expenditures to the specific outputs that contribute to the key outcomes sought. MEF uses the SIGA budget analysis tool to underpin this analysis. In each case, as reported in the *Budget Rationale*, the indicator target and the outlay are listed for each budget unit – e.g., Ministry, region, or SIS.

⁵⁶ For example, to get a full sense of the budget allocation for the Nutrition Strategic Program (which appears to get the most detailed treatment) it would be necessary to review pages 70, 72, 74-77 (for performance data), 80, 84-85, 98-99 (for budget allocations), and 102-104 (for physical targets and funding by output).

⁵⁷ The PpR system requires additional information to be generated during the budget process. MEF has limited the number of expenditure chains for which information must be provided for the PpR process by shifting the emphasis from each expenditure item to focus on the products of the expenditure. However, the requirements of the traditional budget process remain in place.

⁵⁸ *Budget Rationale*, 2010, p. 104.

Table 4 provides an example for the formulation of the budget linked to nutritional monitoring and counseling (CRED).

Table 4: Reporting budget allocations by health output target and budgetary agent in the PpR system

		MINSA	SIS	Regional Governments
Children with complete CRED monitoring, according to age (<i>Niños con CRED completo según edad</i>)	Physical target	218,339	2,665,424	953,455
	Millions of soles	4.3	5.2	11.1

Source: MEF Budget proposal, 2010.

115. As can be seen in the table, the methodology chosen by MEF focuses on population level outcomes, such as the proportion of children in the population with a full protocol of CRED nutrition consultations. This reflects an understandable desire to focus the attention of system managers on the outcomes they are supposed to attain. However this approach also has drawbacks. The most important problem is that the relationship between the actual service produced (a CRED consultation) and the outcome (a demographic proportion) is not transparent, and may also be unstable (if the distribution of consultations per child changes). In fact, since the PpR system was set up, Peru has changed the norm for “complete CRED”, increasing it from 7 to 13 consultations in the first year of life. As a result, the proportion of children that are classed as complete has declined, to around 10 percent of the population.

116. A related difficulty is that focusing on the proportion of children in the upper tail of the distribution sends the wrong signal. It encourages to managers to focus on children with 10, 11 or 12 consultations, in order to get them to sufficiency at 13, and not to focus on children with very low numbers of consultations, who would be very difficult to get to sufficiency, but whose marginal benefit from the service is likely to be higher. All efforts to increase the production and quality of CRED services which do not result in more fully covered children will not be recognized by the system.

117. The second problem is one of transparency. Administrative data cannot plausibly report the tracked indicator credibly. They would only be able to report the number of consultations per child that visits a health center, and even that would require reliable individual identification of children in the database. Theoretically, that information is available in the SIS database, but SIS covers only a proportion of the population. It is also supposedly available in the SIEN database, operated by the nutrition institute, CENAN, but there are doubts about the quality of the identification data in that system (children may be registered as two different people in two different visits). Instead, MEF uses an algorithm combining the number of CRED services produced and household survey data to estimate the proportion that are adequately covered, and the algorithm is not published.

118. The third problem with this approach is that the relationship between the cost of services produced (which should be a linear function of the number of consultations) and the reported outcome (children fully covered) will be unstable, unless the distribution of consultations per child is unchanging. In addition, the cost estimates using in the budget process are not always complete – sometimes they reflect marginal costs for consumables (excluding staff costs) and not either full marginal or average costs. The result is that the relationship of costs of service production to the reported outcome is fuzzy.

119. The problem of unit cost estimation would already be difficult, even if the system focused on the production of the service instead of the population outcome, due to the complex production functions for health services such as CRED consultations and institutional births. Initially the PpR system produced instructions provided for preparation of the results-based budget⁵⁹ that required the determination of unit costs for each output, calculating both direct and indirect costs, and using pro rata costs of share inputs (such as personnel). However, determining unit costs for each output or outcome can be very tricky; most budget systems in the OECD (including Chile) no longer attempt to do this. Such cost calculations require detailed accounting which is likely to be beyond the capacity of administrators in Peru's health systems. To be accurate, the calculation should include fixed and variable costs and the cost will not necessarily be a smooth function of service production; on the contrary, it can have sharp discontinuities. There is also a problem with standardizing costs for units such as vaccines, which are not necessarily homogenous in different settings. To calculate the staff cost of different activities, careful record-keeping is needed to assign hours worked to different outputs. Such considerations led observers in Peru to comment that – in systems which combine vectors of inputs to produce vectors of outputs - it is difficult to link costs to single output indicators.⁶⁰ This was compounded by the lack of systematization of budget data. If regions use different cost codes for expenditures related to the same program, it is hard for MEF to consolidate. There is also a danger that if a cost accounting system is initially established in a piecemeal way, there may be a temptation to simplify the cost-output relationship by skipping inputs or over- or under-counting outputs or outcomes. This can lead to problems at a later stage, when the approach is universalized.

120. As a result of such considerations, the PpR system has changed tack and now imputes direct and indirect costs in each cost center. The problem with this alternative approach is that it is inevitably based on parameters which may vary from the real costs faced on the ground in a specific place and means that another element of the system is based on algorithms generated by technical staff in MEF rather than on real data from the field.

Independent evaluations

121. As part of the PpR system, MEF commissions independent evaluations of programs.⁶¹ These studies, which use the logical framework design of the PpR system,⁶² evaluate the design, implementation and results of an activity or project or group. The programs with available information to date are *Juntos*, the PRONAA Integral Nutrition Program and the Highway

⁵⁹ *Guía Metodológica para la Programación Presupuestaria Estratégica*, pp. 74-82.

⁶⁰ Personal communication, Federico Arnillas, of the *Mesa de Concertación para la Reducción de Pobreza*, an NGO which has been involved in monitoring the PpR system.

⁶¹ Also known as rapid assessments or reviews. Evaluations also include planned impact evaluations <http://www.mef.gob.pe/DNPP/results-based budget/evaluacion.php>.

⁶² Similar to those applied in Chile and with questions similar to the PART Performance Assessment Rating Tool used by the U.S. government <http://www.whitehouse.gov/omb/expectmore/partquestions.html>. It is also similar to the Seoul, Korea model, which was inspired by the PART Performance Assessment Rating. Presentation by John M. Kim. Results-based management seminar organized by the IDB and the Municipality of Metropolitan Lima, August 20-21, 2009, Lima. The Seoul strategy develops a results system through strategic planning in each organization. Programs that do not perform well face budget cuts.

Conservation Project.⁶³ MEF has also promoted institutional evaluations. Evaluation results identify weaknesses and strengths in different areas, including organization, processes and logistics, as well as thematic areas of program design. In the PRONAA and *Juntos* programs, bottlenecks associated with the health sector were identified. MEF initially experienced difficulty in ensuring appropriation of the findings by sector agencies, but three “commitment matrixes” have now been signed. Nevertheless, ensuring adequate utilization of evaluation findings for budget decisions and during the rest of the budget cycle remains a central challenge.

Information and monitoring systems

122. Performance budgeting supposes the use of monitoring information to track the targets established during the planning stage. Peru still faces big challenges to improve the use of administrative information generated in the health sector⁶⁴ and strengthen the consistency between administrative registers and in household surveys, as well as the standardization indicators. MEF has tended to focus on the SIS data system, combined with ENDES household survey data. This is understandable, because information systems in MINSA and the regions are in poor shape. A recent evaluation⁶⁵ (March 2009) reported that definitions of indicators and production of information were satisfactory, but administration of the data use of information for decision-making were all substandard, and there are no backup databases. However, similar problems also exist in the SIS information system which is widely used in the PpR system. For these reasons a heavy reliance is placed on the ENDES survey, which is a high quality exercise carried out by the national statistical institute, INEI. However, there is a need to do more to triangulate⁶⁶ the results with administrative registers, which are critical to making accountability work at the level of individual health facilities. There is also scope to combine the administrative registers of different agencies for performance monitoring purposes for example, Arróspide (2009:9) combined information from the *Juntos* CCT program in San Jerónimo, Andahuaylas with SIS administrative data and showed that only one of every six *Juntos* beneficiaries had complied with the condition of growth and development checkups for children under age three.

Conclusion

123. After three short years, a large proportion of the national budget and of the health sector budget is now at some stage of using a “budgeting for results” approach. Many staff and officials in line ministries and in the regions are familiar with PpR, and many are optimistic about its potential. These are major achievements. However, the PpR budget requests do not yet normally feed into changed resource allocations. Participants find this frustrating. The programs cut across different agencies at the national and regional level, but there is insufficient time to plan collaboratively across budget units working on related outputs. Training has focused more on preparing budget forms than on analyzing or using the performance information, and has been mainly limited to staff in budgeting functions and not expanded to program managers or leaders.

⁶³ <http://www.mef.gob.pe/DNPP/results-based budget/evaluacion.php>.

⁶⁴ Known as “administrative.”

⁶⁵ The Measure Company, a USAID contractor, was responsible for the evaluation. An evaluation workshop was held in 2009 with key informants, including system users and information system administrators. An instrument was used to rate a series of attributes of the information system.

⁶⁶ Triangulation is a method for identifying the quality of information. It uses two measurement tools that can produce different results or trends for the same variable.

124. Many of those interviewed for this review complained that they had insufficient managerial flexibility to use the performance data to improve services. Some of the elements of inflexibility include:

- rigid divisions between funding for operational and investment expenses
- limitations on staffing through the rigidity of civil service regulations
- earmarked funds make it harder to adjust service levels

125. As a result, performance data are not yet being used to their full potential for resource allocation, to improve accountability, to strengthen transparency, or to improve services. Overall, the success of the PpR effort in the first few years is strongest in promoting understanding the basic principles, establishing the causal relationships through logic models and identifying indicators. The areas that most need to be strengthened are improving transparency and using performance measurement to improve services.

126. Looking ahead, there are many opportunities to strengthen the system. First, PpR should be “branded” to line ministries, regions, and other implementing agencies as a tool to aid the Government – at each level – in better allocating resources and in improving services, rather than an instrument of central control that makes their lives more complicated. This implies working out what roles the different levels of government should play and making sure they have the right information to play them. It means, for example, that high level planning and resource allocation decisions should be located at an appropriate level in the Government. Once these are defined, MEF’s performance budget system should then focus on key outcome indicators, which are needed for making high-level budget allocation decisions. At present, the detail too often obscures the big picture.

127. Lower down the system, implementing agencies should use a broader range of performance data. Many of these could be collected and used without the involvement of MEF. This could be supported by strengthening the capacity of local managers and budget officers to use the SIGA budget planning tool, which is available for use at sub national level, but whose use still remains limited outside of MEF. Some headway has been made on this issue during 2010. MEF is piloting a System for Management of Inputs and Outputs (*Sistema de Gestión de Insumos y Productos*, SIP-PpR), which builds on the SIGA (*Sistema Integrado de Gestión Administrativa*) to apply programming methodologies at the level of Budget Executing Units and below. The goal is to improve information about the inputs needed, linked to production function analysis, and to strengthen the operational planning of service delivery. In the first stage the SIP-PpR is being rolled out in the strategic programs for nutrition and maternal and neonatal health in 150 health sector executing units, responsible for 6,652 health establishments.

128. In the context of such sophisticated efforts to upgrade local planning, it would be advisable to organize regular “How are we doing?” sessions in which managers discuss performance reports and identify necessary policy changes. The formats for presenting results data and targets need to be easy to use and the connection between performance and budget allocations needs to be clear. Possible ideas for strengthening the motivation of health sector managers to participate in the system include non-monetary incentives, such as recognition awards for exceeding performance targets, and increased flexibility in adjusting budgets and implementation in response to results being measured. Finally, it is also critical to continue to improve collaboration among budget units working on shared outcomes. One approach might be

to carry out a joint planning process well ahead of the budget cycle for the upcoming budget year.

3.4.2.3 Staffing and staff management

129. This section reviews supply side reforms to improve staffing and staff management in the health system. The first part analyzes the efforts to improve the sufficiency of staffing and staff distribution in the health system. The second part reviews efforts to reform contractual models in order to facilitate staff management and performance. Chapter 3 then reviews the sufficiency of staffing in FON centers, as part of its analysis of constraints to improving performance on institutional births.

130. Early approaches to health sector reform in Peru took a “partial equilibrium” approach, which implicitly supposed that the level of staffing was not a binding constraint. It was expected that a combination of additional funding for medicines, plus improved incentives for staff, would be capable of generating transformed outcomes at a modest fiscal cost. This approach supposed that the availability of staff and equipment was sufficient, but they were underutilized, due to budget and incentives problems. Specifically, there was a lack of budget for medicines and a lack of incentives to staff to work harder. This led to the reforms which created the CLAS and the SIS, and the CARs, all discussed above.

131. However, the situation is now changed. Following a long period of constraints on new hiring, coupled with the emergence of more demanding staffing standards, staff shortage has emerged as a binding constraint in many health systems, especially in rural areas. This, in turn, makes it imperative both to assign more resources to improve the staffing level of the health system and to address human resources management issues as part of the “supply side” agenda in health. But the emphasis has moved away from efforts to create special regimes, which are often characterized by horizontal inequity, and face sustainability problems. Instead, Peru is focusing more on promoting transparency and fairness in remuneration and workloads –but this is work in progress, and much remains to be done.

132. The first priority is to generate data on staff distribution and productivity that will allow planners to identify surpluses and deficits and highlight opportunities to improve efficiency and effectiveness. The performance budgeting team in MEF is working with the DIRESAs to analyze deficits, using the SIGA system. This has been coupled with an effort to diagnose deficits and strengthen staff allocations in health centers and hospitals charged with birthing services (*Funciones Obstétricas y Neonatales*, FON). The emerging results of this analysis confirm that Peru needs *both* to increase overall staffing – especially in basic health – *and* to improve staff distribution and performance. However, it is also clear that the lion’s share of the solution needs to come through the contracting of additional professionals, since there is only limited scope, in practice, for resolving sufficiency issues in some regions through redistribution of staff from others.

3.4.2.4 Ensuring the sufficiency of human resources in the NHS system

133. This section focuses on staffing in the NHS system (MINSA and the DIRESAs), which employs more than half of the professionals in the Peruvian health system. The NHS employs 62 percent of physicians and 58 percent of nurses, and 60 percent of total health human resources (Table 5).

134. Staffing benchmarks in Peru indicate that there should be 10 medical doctors, 5 obstetricians and 10 nurses (a total of 25 professionals) per 10,000 inhabitants.⁶⁷ However, the overall number of staff in Peru's NHS system falls well below those goals, and their uneven distribution means that some segments of the population (rural populations in poor regions) are worse served than the averages would suggest.

135. In 2006 there was a national average of 9.4 professionals per 10,000 inhabitants served by the NHS system,⁶⁸ with major regional differences, ranging from 16.8 in Lima to 3.3 in Cajamarca. Even when Lima (where the specialist hospitals are concentrated) is excluded from the analysis, the five regions with the largest share of professionals had three times more staff than the five with the smallest share (Figure 14). Nationwide there were 3.9 obstetricians, 7.9 nurses and 8.6 doctors per 10,000 inhabitants covered by the NHS (taken to be 60 percent of the total population) (Figure 15).

Table 5: Distribution of human resources, 2007

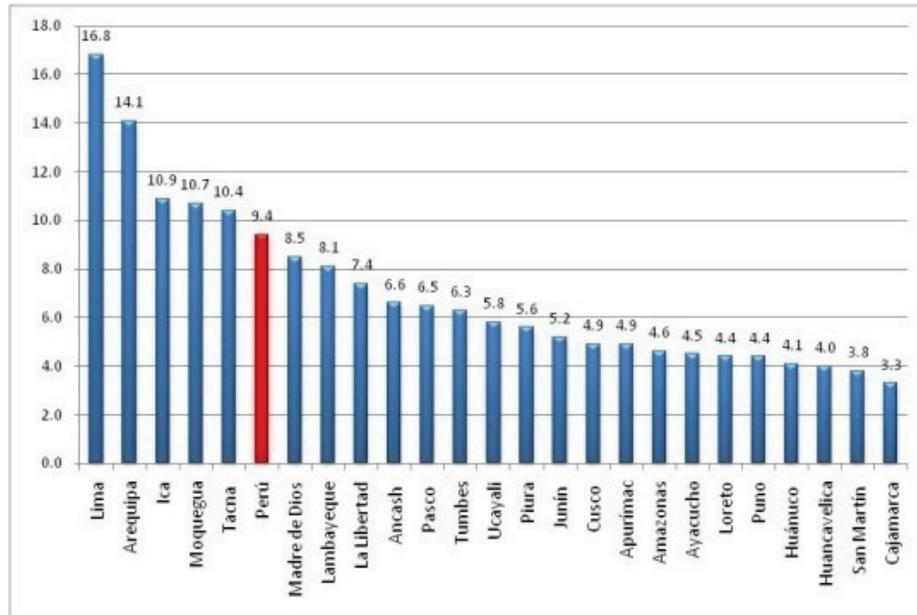
	NHS ^{1/}	<i>EsSalud</i> ²	Police forces	Armed forces	Total
Physicians	14,689	7,125	552	1,187	23,553
Nurses	13,696	7,615	832	1,267	23,410
Obstetric nurses	6,832	928	157	76	7,993
Total	35,217	15,668	1,541	2,530	54,956
Population, 2007 ³					28,220,764
Human resources density ⁴					19.5

Source: Health Human Resource Observatory, DGGDRH. Notes: 1/ MINSa and Regions – Census information of DISAS and DIRESAS 2007. 2/ *EsSalud* – Personnel Development Office - Dec 2007. 3/ CPV 2007 - Census of population and dwellings. 4/ Professionals/10,000 population.

⁶⁷ See the sixth guideline of *Lineamientos of Política of Salud 2007 – 2020*. A detailed analysis of staffing trends up to 2006 can be found on the website of the Health Human Resource Observatory (in Spanish). <http://www.minsa.gob.pe/portal/Especiales/2007/observatorio/default.htm>.

⁶⁸ Estimated at 60 percent of the total population.

Figure 14: Medical professionals per 10,000 inhabitants, 2006, public sector



Source: Taken from Nuñez et.al, 2009.

136. Physicians are concentrated in the secondary and tertiary levels of care, as Table 6: Distribution of medical professionals by levels of care, 2007, NHS system as Table 6 shows. Only 39 percent nationwide are in primary facilities. Although Lima has a relatively high proportion of physicians, the number of physicians available in primary facilities in Lima is relatively low, because they are concentrated in the secondary and tertiary levels of care.

137. Over the last two decades, Peru has made a considerable effort to improve the coverage of physicians in poor communities. Nevertheless, the gap between the bottom quintiles and quintile V (the least poor) remains considerable (MINSA Human Resource Observatory, 2007). The number of doctors per 10,000 population living in the poorest districts (quintile I) rose from 0.8 in 1992 to 4.2 in 2006; in quintile II it rose from 2.6 to 4.9 in the same interval (Figure 16)

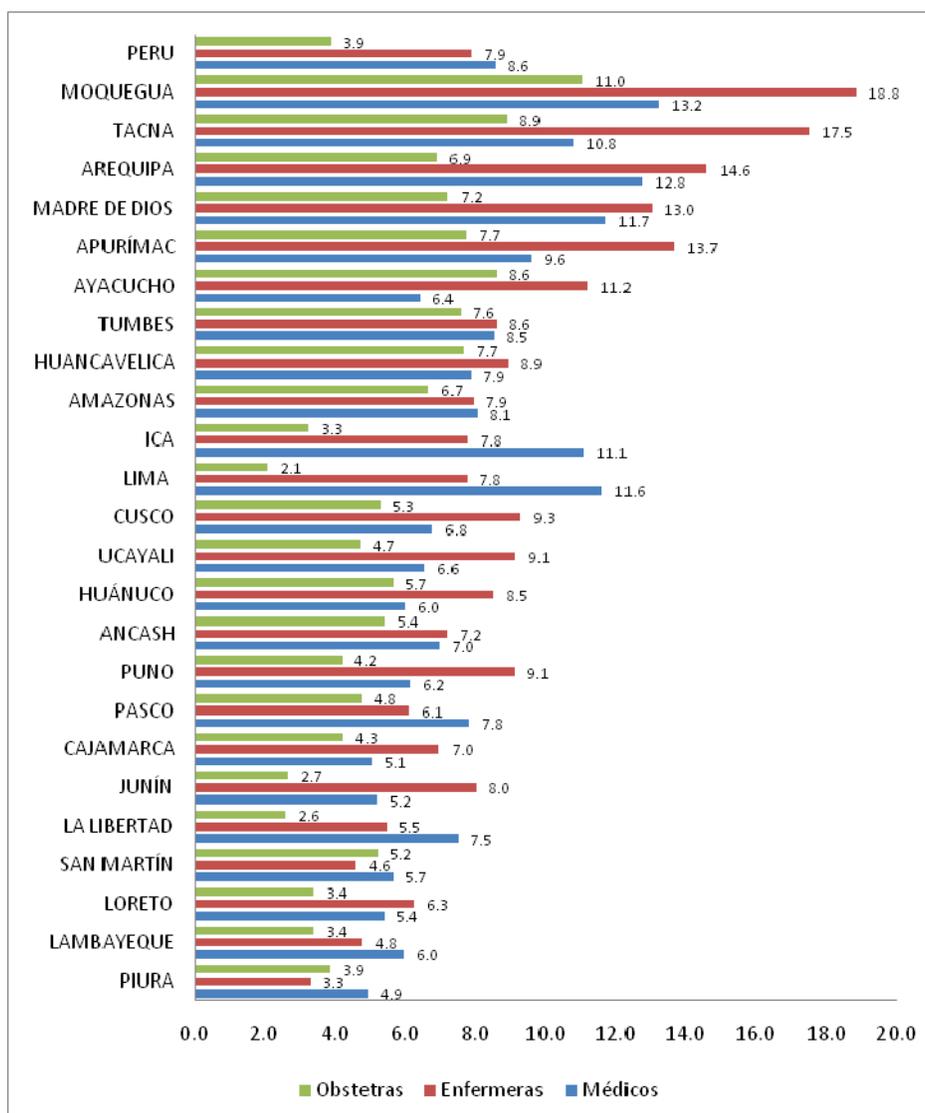
138. There were also noteworthy increases in the number of doctors in quintile III (up from 3.9 to 7.4 and quintile 4 (up from 7.9 to 13.1). At the same time, the number of doctors in quintile V increased only marginally (from 14.3 to 15.8). As a result, there has been a steady improvement in the pattern of distribution of physicians, relative to the poverty characteristics of the districts where they work. In 2006, districts in quintile V had 3.6 more doctors per head of population than those in quintile 1. This is well below the ratios of 17.9 reported in 1992 and of 5.5 reported in 1996.

Table 6: Distribution of medical professionals by levels of care, 2007, NHS system

Levels of care	N° of physicians	percent
Primary care	5,432	38.8
Secondary care	3,100	22.2
Tertiary care	5,452	39.0
TOTAL	13,984	100

Source: Human Resource Observatory, Sector Program III - MINSA, 2007. Note: The number of physicians in this table does not coincide with data table 5 which showed 14,689 physicians working in the NHS system in 2007, a difference of 705.

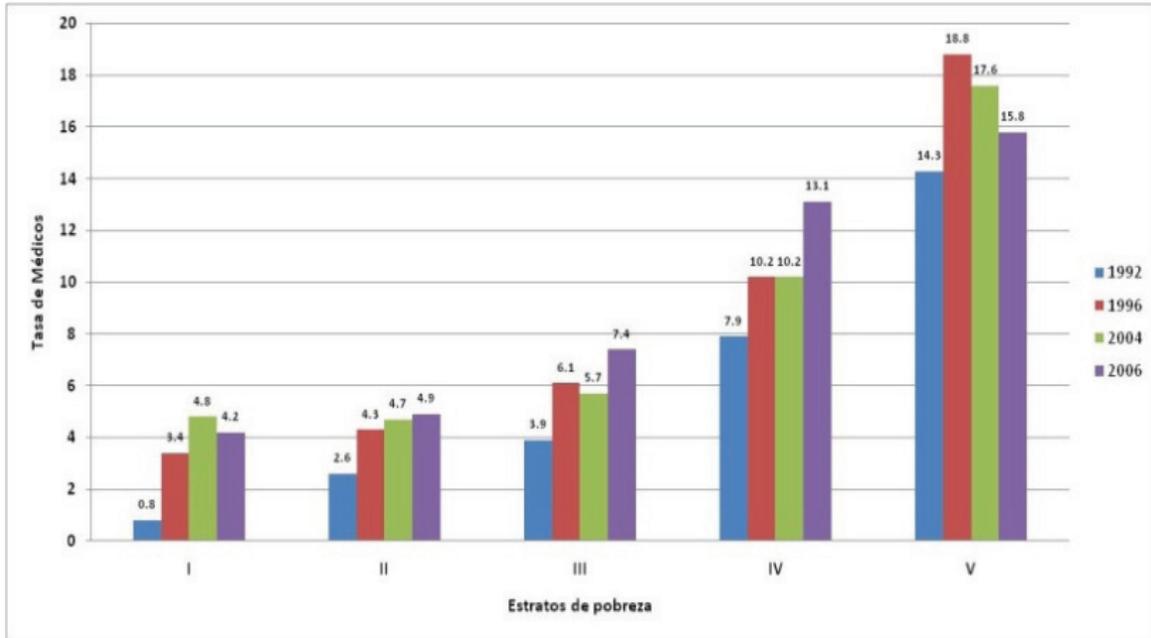
Figure 15: Professionals per 10,000 inhabitants covered by NHS services, 2007



Source: http://www.minsa.gob.pe/dggdrh/observatorio/estadisticas/pdf/densidad_of_recursos_humanos_peru_2007.pdf.

Note: Includes SERUMS personnel.

Figure 16: Distribution of physicians, by level of district poverty, rate of medical professionals per 10,000 inhabitants



Source: Taken from Nuñez et.al 2009.

139. The recent expansion of staffing has reduced deficits of nurses and obstetricians, but there is still a significant overall gap of 13 percent. For physicians the gap is 14 percent and for obstetricians it is 15 percent. The lowest gap is for nurses, at 11 percent (Table 7).

140. The slow increase in the number of physicians on permanent hire and the continued regional disparity in their distribution are highlighted in Table 8. Between 2007 and 2009 the total number of doctors in the NHS system rose only from 14,689 to 15,054. Overall, in 2009 there was a deficit of 13.9 percent nationwide (2,230 doctors), compared with the standard of 10 doctors for every 10,000 inhabitants served by the NHS system. Nineteen regions had a deficit; and 13 regions had a deficit of more than 30 percent, while five regions (Lima, Arequipa, Tacna, Madre de Dios and Moquegua) had a surplus. The total deficit in the regions with deficits is 3,700 doctors, while the surplus regions have an aggregate surplus of around 1,500 doctors. There are deficits of more than 300 doctors in Cajamarca, Junin, Piura and Puno.

141. However, the gaps calculated in Table 8 and Table 9 should be regarded as indicative. The number of staff per head of the population needs to take account of epidemiological and geographic characteristics, demographic densities and scale factors. There will also be regional variations in the proportion of the population that depends on the NHS system. A MINSA study carried out in 2008⁶⁹ estimated the deficit in staff, taking account of factors such as morbidity, classification and portfolio of services of the health care facilities and demand for levels of primary care, with an emphasis on levels I- IV. A total deficit of 5,200 staff was identified. Three

⁶⁹ Multi-disciplinary team of the Human Resource Directorate, Epidemiology Directorate and the Office of Statistics and Information, led by the Human Resource Observatory.

priority specialties were identified: family and community medicine (a shortage of 1,482 physicians), gynecologists and obstetric nurses (841 physicians) and pediatricians (824 physicians) (Moscoso 2009). Table 9 presents the estimated deficits by region.

142. The same methodology was applied in 118 hospitals nationwide, where estimated deficits were as follows: 449 gynecologists/obstetricians, 442 pediatricians, 225 neonatal specialists and 330 internists. These findings reinforce the conclusion that increased budget for staffing will be needed to facilitate improved outcomes in maternal-child health. In 2010 there were still around 7,000 first level health establishments staffed by auxiliary nurses (*técnicos de enfermería*).⁷⁰

143. The importance of the challenge of addressing the staffing deficit in the NHS system in rural areas is underlined by emerging evidence from a new survey conducted by INEI in 2009 in FON – certified health centers, which provides clear evidence that expanding staffing can contribute decisively to improved outcomes in health, discussed in Chapter 4 (below).

Table 7: Distribution of total medical staff and gap in the NHS system for achieving 25 profesionales per 10,000 inhabitants

	Total medical staff			Gap (%) compared with norm/1		
	2007	2008	2009	2007	2008	2009
Physicians	14,689	14,814	15,054	14	14	14
Nurses	13,696	13,623	15,483	20	21	11
Obstetricians	6,832	6,735	7,390	20	22	15
Total	35,217	35,172	37,927	18	19	13

Source: Prepared based on information from MINSA-Human Resource Observatory. 1/ Methodological note: The gap is calculated using the standard of 10 physicians, 10 nurses, and 5 obstetricians per 10,000 inhabitants as a reference.

<http://www.minsa.gob.pe/portal/Especiales/2007/observatorio/default.htm>.

⁷⁰ Personal communication, Dr. Manuel Leon Nuñez Vergara Director of Human Resources, MINSA, April 2010.

Table 8: Distribution of doctors and gap in the NHS system for achieving 10 profesionales per 10,000 inhabitants, 2007-2009

N°	REGION	Existing physicians			Gap		
		2007	2008	2009	2007	2008	2009
1	AMAZONAS	181	203	168	-25.7%	-19.4%	-31.9%
2	ANCASH	459	471	482	-30.3%	-30.1%	-27.6%
3	APURÍMAC	262	258	261	-0.5%	-4.0%	-2.1%
4	AREQUIPA	903	920	784	27.5%	27.6%	8.4%
5	AYACUCHO	283	258	302	-24.8%	-35.6%	-21.7%
6	CAJAMARCA	457	451	423	-48.4%	-49.4%	-52.8%
7	CUSCO	505	505	520	-32.5%	-32.2%	-31.5%
8	HUANCAVELICA	225	230	172	-19.1%	-21.3%	-39.2%
9	HUÁNUCO	286	293	272	-40.7%	-39.9%	-44.7%
10	ICA	475	494	445	9.6%	10.8%	0.3%
11	JUNÍN	396	405	432	-48.2%	-48.1%	-44.3%
12	LA LIBERTAD	755	765	804	-25.2%	-24.9%	-22.3%
13	LAMBAYEQUE	402	418	408	-43.0%	-40.3%	-43.2%
14	LIMA	6710	6721	7143	16.2%	16.1%	20.2%
15	LORETO	309	305	291	-45.5%	-46.0%	-50.0%
16	MADRE DE DIOS	81	81	79	21.0%	17.2%	11.6%
17	MOQUEGUA	130	134	141	30.6%	32.2%	38.8%
18	PASCO	116	139	119	-32.2%	-21.8%	-31.7%
19	PIURA	520	523	594	-49.8%	-50.5%	-43.6%
20	PUNO	525	498	484	-33.6%	-38.4%	-39.8%
21	SAN MARTÍN	244	261	242	-45.5%	-43.4%	-47.7%
22	TACNA	192	195	194	4.4%	7.9%	2.5%
23	TUMBES	99	107	113	-21.7%	-14.6%	-13.6%
24	UCAYALI	174	179	181	-34.7%	-34.3%	-34.2%
TOTAL		14689	14814	15054	-14%	-14.3%	-13.9%

Source: Based on information from MINSA-Human Resource Observatory. Note: A negative gap means that there is a surplus in the region. 1/ Methodological note: The gap is calculated using the standard of 10 physicians per 10,000 inhabitants, assuming that the NHS should cover 60 percent of the population.

<http://www.minsa.gob.pe/porta/Especiales/2007/observatorio/default.htm>.

Table 9: Estimated deficit in medical specialists in health care facilities, levels I-4, primarycare, 2008

		Family and community medicine	Gynecology and obstetrics	Pediatrics	Anesthesiology	Surgery	Internal medicine	Other specialties	Total
1	AMAZONAS	33	5	5	1	1	2	2	49
1	BAGUA	7	4	3	1		1	0	16
2	ANCASH	75	173	180	55	45	51	172	751
3	APURIMAC I ABANCAY	30	13	13		13	13	1	83
3	APURIMAC II ANDAHUAYLAS	13	20	20			4	19	76
4	AREQUIPA	61	16	16	9	9	2	2	115
5	AYACUCHO	57	42	42	7	7	1	6	162
6	CAJAMARCA	87	27	24		24		30	192
6	CUTERVO	8	8	10	5	5	10	21	67
8	CUSCO	206	206	206	103	103	206	234	1264
9	HUANCAVELICA.	110	22	22	14		14	0	182
10	HUANUCO	160	90	90	90	90	90	0	610
11	ICA	23	23	23	2	1		0	72
12	JUNIN	28	30	25	10	9	10	99	211
13	LA LIBERTAD	20	14	5		7		46	92
14	TUMBES	12	6	6	2	2	6	44	78
14	LAMBAYEQUE	40	17	16	1		2	7	83
15	LIMA	153	19	31		19	19	15	256
16	LORETO	72	8	8	8	8	8	0	112
17	MADRE OF DIOS	15	10	10		5	1	33	74
18	MOQUEGUA	30	12	12	8			13	75
19	PASCO	28	34	34	34	6	6	58	200
20	PIURA	76	36	36	24	24	36	4	236
21	PUNO	60	60	60	60		60	3	303
22	SAN MARTÍN	1	36	36	23	25	12	54	187
23	TACNA	15	4	4				0	23
25	UCAYALI	5	5	5	3	3	3	6	30
28	CALLAO	40	18	22	12	10		7	109
29	SOUTH LIMA	70	50	30	10	10		0	170
30	EAST LIMA	62	15	18	16	13	14	0	138
31	LIMA							0	0
	TOTAL	1482	841	824	441	393	517	702	5200

Source: Human Resource Observatory, MINSA, 2008.

http://www.minsa.gob.pe/dgdrh/observatorio/estadisticas/pdf/densidad_de_recursos_humanos_peru_2007.pdf

Methodological note: The information originates from a survey of all DIRESAS, which considered the services available in the health care facilities, as well as the epidemiological profile. Three criteria were used: FACTOR 1: morbidity (the 100 most frequent diagnoses, disease burden, from the study by the General Epidemiological Directorate and PRAES). FACTOR 2: Hospital demand. FACTOR 3: Demand for primary services, by classification of facilities. The study was carried out by an ad hoc committee (see Moscoso 2009). Note: Statistics for Cusco, Ancash and Huánuco are outliers.

3.4.2.5 Staff management: the search for a viable labor contract

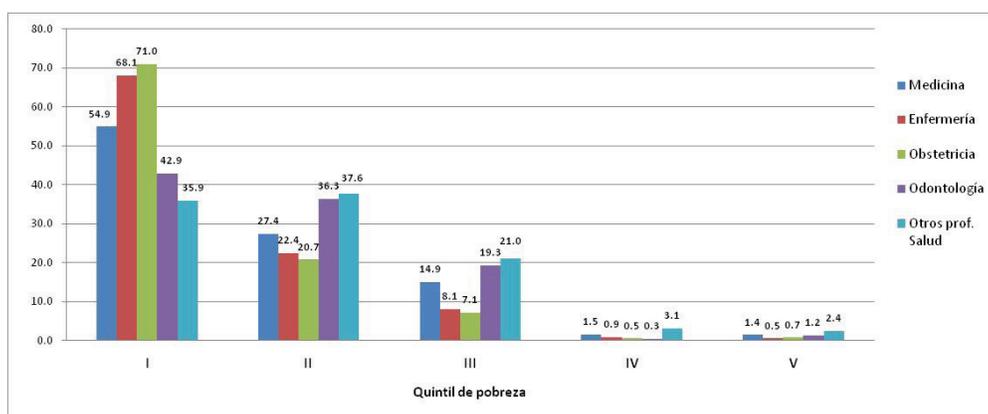
144. The constrained growth of staffing has been due, in part, to the difficulty of finding a contractual model that strikes an appropriate balance between the rights of the employees and the

system’s reasonable needs for managerial control and flexibility. As is well known, the traditional form of public sector employment relationship – in Peru, as elsewhere across the LAC region - is weighted towards the rights of the employee and is somewhat light on the effective regulation of staff performance.

145. Early responses to this problem were generally unsustainable. One example is the CLAS model, which sought to put staff under community control (as discussed above). Following lobbying, CLAS doctors were transferred to official posts in 2004, but the CLAS sector still covers a large number of other health professionals working on private sector contracts. However (as was also commented above), the erosion in remuneration for CLAS staff is unsustainable. Another unsustainable option was the use of “non personal services” contracts. This practice arose in response to efforts to ring-fence budget expansions for non-staff expenditures. Although MEF tried to prevent DIRESAs using funding from SIS for staff expenditure, the *de facto* use of SIS resources for staffing – disguised as non personal services contracts – became widespread. (In the medium term, regimes of second class employees can “cost” more through the loss of motivation and instability in service provision, linked to staff turnover, than they save in budget.

146. A more promising approach is to use graduating young medical professionals to provide services in remote regions. The SERUM program contracts young health professionals for one year to work in MINSA primary and secondary care facilities.⁷¹ Since 2006 MINSA has been expanding the budget for hiring SERUMS. MINSA is working to strengthen the program by creating stronger financial and professional incentives to participate in this program. Completing a period of work as a SERUM is a requisite for being able to apply later for a permanent position in the NHS system. In 2007 MINSA agreed with the health regions a series of reforms to the SERUM program, including reinforcing the non-monetary incentives (qualifying points) linking SERUM work to the later assignment of permanent posts. In 2010 there were over 5,000 SERUM posts available – compared with around 2,336 four years earlier. The program is concentrated on improving staffing the poorest districts (Figure 17).

Figure 17: SERUMS by profession and district poverty quintile, 2007



Source: Taken from Nuñez et.al 2009.

⁷¹ Surgeons, dentists, obstetric nurses, biologists, nutritionists, psychologists, technicians, sanitary engineers, veterinarians and pharmacists are eligible to participate in the SERUMS Program. More information on the program can be found at <http://www.minsa.gob.pe/portada/servicios/serums/default.asp>.

147. Many remote health systems depend heavily on SERUMs. This is a good model, because it is horizontally equitable – all graduating professionals who want to work in the NHS system in the future must contribute a period of work under the SERUM system. This has a further benefit in the “externality” of exposing young urban professionals to the reality of rural poverty in Peru, which leads in many cases to a lifelong sensitivity towards those problems. There is scope to increase these requirements, in order to improve the availability of well-trained staff in remote areas.

148. Another positive step is the creation in 2009, of a new modality of public sector labor contract (*Contrato de Administración de Servicios - CAS*), which provides basic labor rights and protections for health system contract staff, without creating full civil servant status, and without tying the DIRESA to an open-ended budget commitment. Legislative Decree 1057 created CAS as a special regime for hiring administrative services, applicable in all public entities. CAS contracts are fixed-term, renewable contracts that are exempt from the law governing administrative professions, from private labor law and other laws that regulate special administrative careers. They stipulate a maximum of 48 hours of work per week, with two days off, and at least 15 continuous calendar days a year of vacation. CAS employees are given health care coverage by *EsSalud*, and pension coverage is mandatory. In general, CAS contracts are not used in the CLAS, which are private. However, some CLAS in Cusco do use them, and some DIRESAS use CAS contracts for personnel who are assigned to the CLAS. The idea is that CAS should replace the non-transparent hiring of staff under “non-personal services” contracts, which entail no social protection or labor rights. This should improve budgetary transparency and help to reduce horizontal equity. In 2009 there were 32,529 staff under CAS contracts in the Peruvian health system, which is 30 percent of the total staff in MINSA health centers (the staff number increases to 38,601 and the percentage increases to 31 percent if we consider staff outside MINSA health centers).⁷² However, inevitably, the creation of additional social rights for people previously hired on non personal services contracts has created budget pressures. In some cases the nominal salary has been adjusted downwards to cover the cost of the social benefits; in other cases budget adjustments have been made in other areas to compensate.

149. However, none of these approaches resolves the problem of the need to adequately regulate and motivate the performance of mainstream “*nombrado*” staff in the health system, which represent 56 percent of all human resources working in the Peruvian NHS in 2009. The regional DIRESAs – who were the employers of 57 percent of all the staff in the system in 2009, should give high priority to this issue. In any organization, regardless of employees’ contractual rights – transparency and fairness in remuneration and workloads are critical factors for effective staff management and motivation. When a system is mired in unfairness, and staff has neither adequate resources nor equitable remuneration, the likely outcomes are cynicism, the evasion of work and high staff turnover. The Peruvian public health sector loses a large number of physicians; for example, in 12 months to July 2008, 389 medical specialists resigned from the MINSA, including 66 pediatricians and 39 gynecologists-obstetricians (Moscoso 2009).

150. The rationalization of hiring models and salary structures remain central challenges for Peru’s health sector. There is a variety of contracts for professionals who perform the same

⁷² <http://www.minsa.gob.pe/dggdrh/observatorio/estadisticas.html>.

functions: permanent appointments in the public system, public system contracts, CAS contracts (which have replaced hiring of staff disguised as “non-personnel services”) and private labor contracts with the CLAS. The structure of salary and bonuses remains highly differentiated between these hiring modalities. Permanent appointees (*nombrados*) and some contract staff receive bonuses to pay for schooling, lunches and food. They also receive extraordinary payments known as AETAS. Physicians, obstetricians and nurses receive different numbers of AETAS. Physicians in Lima receive more AETAs than colleagues in the rest of the country.⁷³

151. In summary, the expansion of staffing to ensure quality services and the improvement of staff management to strengthen motivation and sustainability are both “work in progress” in Peru’s health system. Peru’s NHS still has a wide gap in the provision of physicians and other health professionals, compared with reasonable norms, especially for basic services in rural areas. Only six of the country’s 24 regions have an acceptable overall balance, but even there, basic services are understaffed due to concentrations at the tertiary level. Policy makers in MINSA and MEF have advanced with the measurement of staff deficits. Budget negotiations between MEF, MINSA and the DIRESAs are giving increased priority to correcting deficits in priority facilities (such as FON centers). Advances have also been registered with staff management and contract arrangements, for example, through the CAS model to replace non-personal services contracts. Nevertheless, the sector still has a multiple contract system which includes very low remuneration for some (such as CLAS employees) and in general, is characterized by the uneven treatment for staff with similar levels of responsibility. This creates an environment that is hardly conducive to motivating staff or strengthening results-based management.

4 THE CHALLENGE OF INCREASING THE COVERAGE AND QUALITY OF INSTITUTIONAL BIRTH SERVICES IN PERU ⁷⁴

4.1 Introduction

152. This Chapter analyses how the reform initiatives that were discussed in Chapter 3 have played out in relation to the Government’s strategic goal of increasing the coverage and quality of institutional birth services in Peru. Reducing peri-natal and maternal mortality has been a strategic priority, and the PpR system has identified as the related output indicator the expansion of the coverage of institutional births (IB) especially in rural areas.⁷⁵ IBs refer to births that take place in a health establishment and are attended by health professionals –doctors, obstetricians and/or nurses. IB coverage is a good tracer indicator for the overall quality of mother and child health services and serves as an operational standard for the primary and secondary health system. In 2005 the rural coverage of IBs was 43 percent, whilst urban coverage was 92 percent

⁷³In Lima AETAs are partly financed from user fees levied on patients. The expansion of universal insurance coverage is likely to reduce revenue from user fees, undermining this system. For a discussion of this issue, see Alvarado and Morón (2008). This study identified a series of perverse incentives among staff created by the management systems.

⁷⁴ This chapter is based on a background paper prepared by Ana Maria Muñoz with inputs from Janice Seinfeld.

⁷⁵ MINSA defines institutional births as births assisted by trained healthcare practitioners, which takes place in a healthcare facility that has the appropriate conditions to attend eventual delivery complications.

and overall coverage was 72 percent. The Government set a target to increase rural coverage to 70 percent, and overall coverage to around 85 percent, by 2011.

153. Reaching this goal requires policy actions related to: (a) the demand side (which are related to costs and their financing and also to women's attitudes towards the services); and (b) the supply side (to improve service quality and accessibility), as follows:

(a) *Demand-side factors*. SIS covers the user fees for poor women giving birth in an NHS institution and *Juntos* transfers help to increase disposable incomes and to strengthen linkages to the health system, increasing the likelihood that women will choose to use the services available. Several other initiatives have sought to improve the responsiveness of services to demand patterns. These include greater sensitivity to the cultural preferences of women regarding how they would like to give birth (e.g., allowing accompaniment during the birth, providing staff who can communicate in indigenous languages, facilitating birthing in a vertical position and accommodating traditional preferences regarding the disposal of the placenta).

(b) *Supply-side factors*. The PpR system has set targets for institutional births production, and MINSA has worked to improve the quality of birthing services through the designation of the FON (*Funciones Obstétricas y Neonatales*) health centers (at three levels: basic, specialized and intensive). MINSA is monitoring service quality in those centers (compliance with the FON regulation), and plans have been developed to correct deficiencies in capacity (for staff, equipment and buildings) compared with the norms. Maternal waiting homes have been created to make it possible for women to be within physical access of an adequate hospital or health post when they go into labor.

154. This Chapter reviews progress on achieving the desired IB target, evaluates the contribution of these policies to the desired goal, and seeks to identify the remaining obstacles. It draws on extensive analysis of available datasets (household surveys, administrative records, institutional evaluations) and qualitative research carried out with the support of the World Bank in indigenous areas.

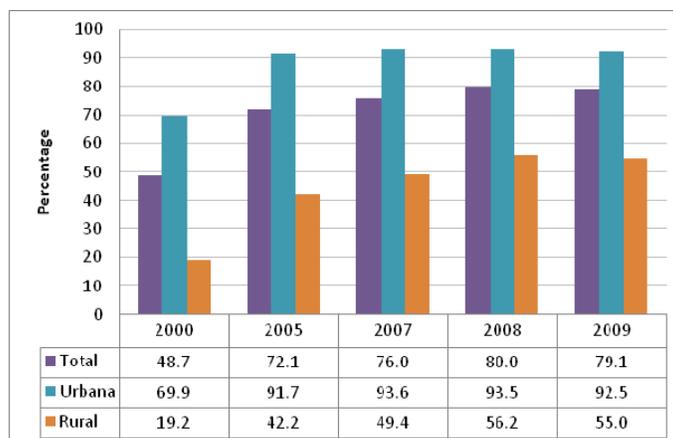
4.2 Trends in Institutional Births coverage

155. According to ENDES,⁷⁶ national coverage of IBs increased by 30 percentage points from 2000 to 2009 (Figure 18). Between 2000- 2005 rural coverage doubled to 42 percent and urban coverage rose almost 30 percent, to 92 percent. Since 2005 urban coverage has remained stable while rural coverage kept increasing, reaching around 55 percent in 2008 and 2009 (Figure 19). There are important differences between natural regions and income levels. While Lima has

⁷⁶ The ENDES survey seeks to measure demographic and social characteristics of women in childbearing age and of children of 5 years of age and younger. It provides detailed information regarding pregnancy, delivery and post-delivery characteristics of each birth. It was first implemented in 1986. Between 2004 and 2007 it was implemented in a continuous format, gathering information every nine months from approximately 6,500 households for a total sample of 33,000 when accumulated. Although representative at the national, regional and by area of residence (urban/rural) levels, the continuous modality reduced the size of the sample for each of these levels. In 2008 it reverted to an annual survey with a sufficiently large sample to allow regional validity for key results. The survey records births that took place 3 years prior to the data collection. ENDES provides an estimation of the coverage of IBs that at a 95 percent confidence interval.

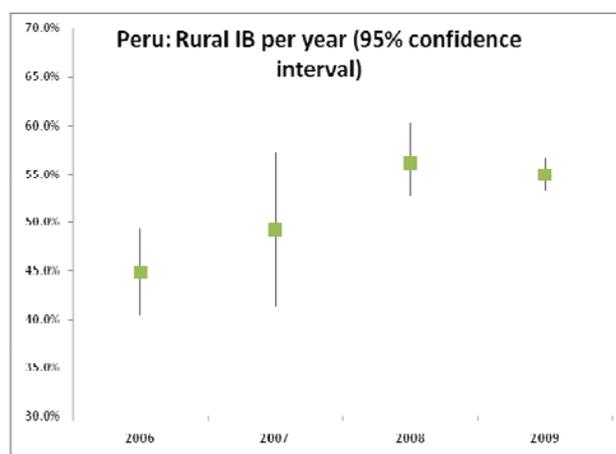
nearly universal coverage, in the *Sierra* and *Selva* coverage is 67 and 62 percent, respectively. In quintile 1, coverage is below 50 percent (Table 10).

Figure 18: Institutional births coverage at the national, rural and urban levels



Source: ENDES 2000, 2005, 2007, 2008 y 2009.⁷⁷

Figure 19: Rural IB coverage estimation with confidence intervals



Source: World Bank estimates base on ENDES 2005, 2007, 2008 and 2009.

⁷⁷ Observations for each year are 2000: 10,487; 2005: 2,097; 2007: 2,149; 2008: 4,920; 2009: 9,305.

Box 6: Maternal mortality rates in Peru

Most maternal deaths take place at women's homes due to lack of skilled health assistance. Maternal mortality in Peru was 185 per 100,000 live births in the decade from 1991-2000, well above MMR average rate for Latin America & Caribbean which was of 130 per 100,000 live births. The 2007 National Concerted Health Plan (*Plan Nacional Concertado de Salud*⁷⁸) seeks to reduce MMR to 120 per 100,000 live births by 2011 and further lower it to 66 per 100,000 live births by 2020. But there are several difficulties in measuring MMR and the baseline may be understated. Adjusted UN figures report a ratio double that reported by the Ministry of Health. Peru's adjusted MMR according to UN, WHO and UNFPA was of 240 for 2005. Only Bolivia (290) and Haiti (670) are higher in LAC. The 2005 adjusted MMR for Ecuador was 110 and for Paraguay it was 150. This makes Peru's MMR rate look like an outlier since both of these countries have a Human Development Index below Peru. A new estimate for Peru's MMR will be available at the end of 2010, based on the decade 2001-2010.

Table 10: Institutional births coverage by income quintile

	2005	2007	2008	2009
Quintile 1	31.7	34.4	39.7	47.9
Quintile 2	50.5	50.3	62.9	75.7
Quintile 3	88.2	87.5	85.3	93.2
Quintile 4	94.3	94.5	96.0	96.8
Quintile 5	97.4	98.4	97.5	97.2

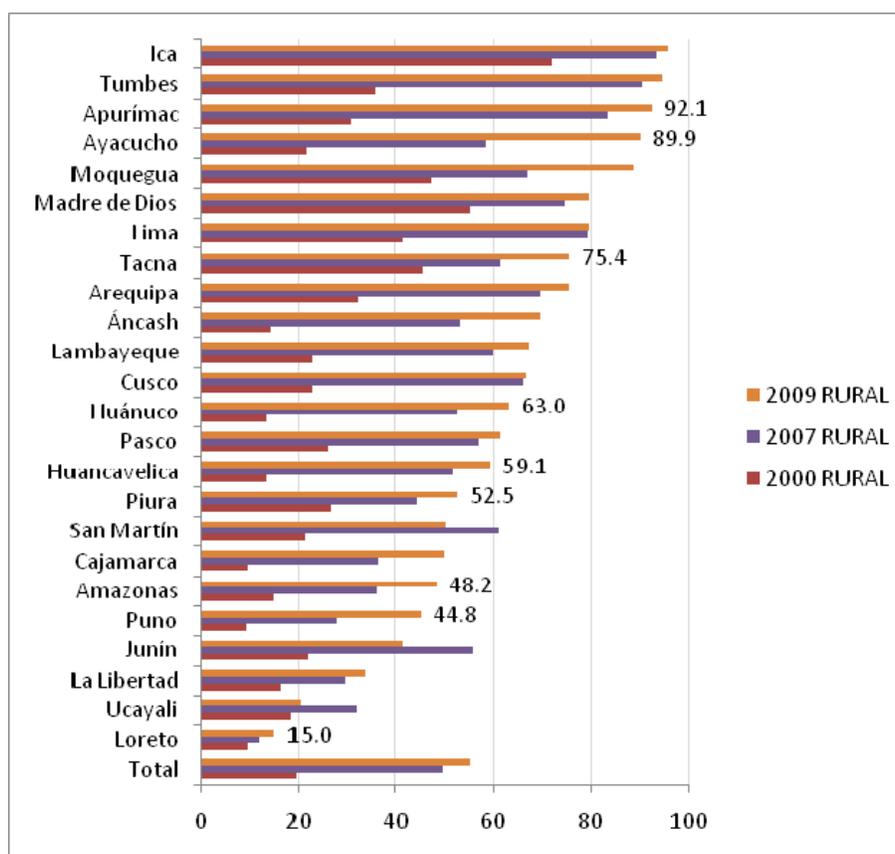
Source: INEI-Encuesta Demográfica y de Salud Familiar ENDES 2000, 2005, 2007, 2008 and 2009.

156. The institutional data on IBs do not allow rural and urban IBs to be distinguished, so the Government has also set targets for total IB production and coverage in ten poorest departments, which are largely (but not entirely) rural. These are Amazonas, Apurímac, Ayacucho, Cajamarca, Huancavelica, Huanuco, Loreto, Piura, Puno and Tacna.⁷⁹ There is no clear trend on IBs in these departments. On the one hand Apurímac and Ayacucho are among the five highest coverage rates nationally for rural births, but Loreto and Amazonas –both located in the *Selva*– have coverage below 45 percent (Figure 20). The steady increase in IB coverage is reflected in an increase in the roles of hospitals and health centers and a considerable decline in the percentage of births at home (Table 11). In rural areas, health centers and health posts both have an increasing role. In spite of the limitations of most health posts, they increased their share of births from 9 percent to 13.5 percent between 2007-2009. This likely reflects their proximity to the homes of the women.

⁷⁸ Ministerial Resolution No. 589 – 2007/ MINSa.

⁷⁹ It is important to note that given the limited number of cases for some departments, the rates for the rural level have for some departments over 15 percent of variation so the figures cannot be considered more than referential. This situation applies to Loreto, Ucayali, La Libertad, Junín, Piura, Lambayeque, Arequipa, Tacna, and Moquegua.

Figure 20: Rural IB Coverage by region, 2000, 2007, 2009



Source: INEI-Encuesta Demográfica y de Salud Familiar ENDES 2000, 2005, 2007, 2008, 2009.

Table 11: Deliveries by place of birth and by place of residence

	2004-2007			2009		
	Total	Urban	Rural	Total	urban	rural
Hospital MINSA	35.0	46.3	20.2	39.4	48.4	23.2
Hospital <i>Essalud</i>	9.8	14.8	3.3	10.3	14.9	2.1
Hospital FFAA/PNP	0.8	1.5	0.0	0.4	0.6	0.0
Health Center MINSA	13.8	13.9	13.7	14.7	13.7	16.5
Health Post MINSA	5.6	3.1	8.9	6.1	2.0	13.5
Center/Post CLAS	-	-	-	-	-	-
Center/Post <i>EsSalud</i>	1.4	2.3	0.3	1.2	1.7	0.1
Private Practice	7.0	10.7	2.2	7.9	11.5	1.3
Respondent or Midwife's Home	25.7	7.0	50.2	18.8	6.0	41.8
Other	0.9	0.6	1.3	1.4	1.2	1.6

Source: ENDES Continua 2004-2007, 2009.

157. IB must be attended by doctors, obstetricians or nurses and must take place in an appropriate institution. However, it is noteworthy that a significant proportion of non IBs are attended by health professionals - - almost 15 percent in 2009. This seems to be indicative of access problems for the women to reach the health post, rather than resistance to the use of modern professional services (Table 12). For IBs, rural women are less likely to have a doctor attending their births and more likely to be seen by an obstetrician or a nurse.

Table 12: Type of delivery by caregiver, 2009

		Doctor	Obstetrician	Nurse	Health Specialist	Traditional Birth attendant	Other	None	Total
Non IB	Total	3.8	7.7	4.5	0.6	36.6	45.5	1.3	100.0
	Urban	12.2	10.4	2.4	1.3	36.5	36.0	1.3	100.0
	Rural	1.3	6.8	5.2	0.4	36.6	48.4	1.3	100.0
IB	Total	61.5	36.0	2.6	0.0	0.0	0.0	0.0	100.0
	Urban	67.4	31.6	1.0	0.0	0.0	0.0	0.0	100.0
	Rural	43.3	49.3	7.4	0.0	0.0	0.0	0.0	100.0

Source: ENDES Continua 2009.

4.3 Demand-side factors limiting IB coverage in Peru

158. Educational levels and income are strongly correlated with IB participation. 72 percent of total non-IBs were among women with primary education or less (Table 13). However, almost a quarter of all non-IBs are of mothers with secondary or higher education, who are less likely to be uncomfortable with having an IB, suggesting that (physical or financial) access problems may be a factor in those cases.

Table 13: Type of delivery by highest completed level of education and location (2009)

	Non Institutional Delivery			Institutional Delivery		
	Total	Urban	Rural	Total	Urban	Rural
No education, Preschool	9.1%	3.7%	10.7%	2.4%	0.9%	6.9%
Primary	62.6%	51.3%	66.1%	22.8%	14.1%	49.4%
Secondary	24.0%	31.1%	21.8%	47.5%	50.9%	37.1%
Higher	4.3%	13.9%	1.4%	27.2%	34.0%	6.6%

Source: ENDES 20009.

Table 14: Type of delivery by income level (%)

	ENDES 2004-2007						ENDES 2009					
	Non Institutional Delivery			Institutional Delivery			Non Institutional Delivery			Institutional Delivery		
	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural
Quintile 1	66.1	45.4	67.9	33.9	54.6	32.1	52.1	31.6	54.5	47.9	68.4	45.5
Quintile 2	46.2	28.4	50.8	53.8	71.6	49.2	24.3	16.5	33.5	75.7	83.5	66.5
Quintile 3	12	8.6	21.5	88	91.4	78.5	6.8	5.3	17.6	93.2	94.7	82.4
Quintile 4	4	3	15.3	96	97	84.7	3.2	3.3	0.2	96.8	96.7	99.8
Quintile 5	1.6	1.6	8.4	98.4	98.5	91.6	2.8	2.8	0.0	97.2	97.2	100.0

Source: ENDES Continua 2004-2007, 2009. Quintiles based on a wealth index.

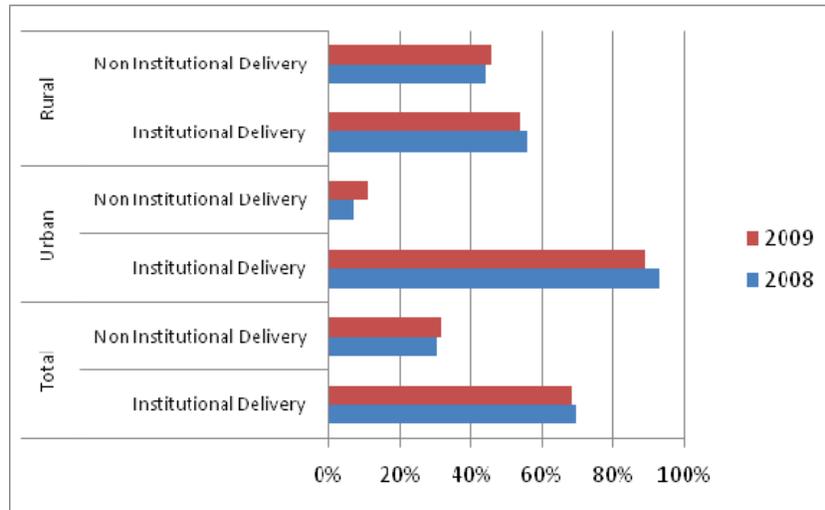
4.3.1.1 Overcoming financial barriers: the role of SIS

159. The large gaps between the poorest and richest quintiles (Table 14) suggest that there may be demand side barriers regarding linked to the financial costs of having an IB, reflecting limited willingness to pay and/or limited access to credit. The SIS was created as a policy response to remove the burden of medical care costs from poor people. In 2008, 70 percent of SIS consultations were for the two poorest quintiles, most of them from the Sierra and Selva regions, and over 90 percent of those consultations were performed in health posts or health centers.⁸⁰ Between 2005 and 2008, according to its information system, SIS financed about 1.2 million IBs, which is more than 60 percent of all births in Peru. This seems likely to be an exaggeration of the real number financed by SIS, based on the fact that its coverage is much lower than 60 percent of the population. Nevertheless, not all rural women with SIS cover have an IB. In fact, 45 percent of rural SIS affiliates still give birth at home. About 76 percent of SIS financed births take place in urban areas. Overall, a third of SIS affiliated women give birth at home (Figure 21).⁸¹

⁸⁰ SIS (2009). <http://www.sis.gob.pe/Portal/estadisticas/index.html>

⁸¹ ENDES 2008 and 2009.

Figure 21: Type of delivery of women affiliated to SIS



Source: ENDES 2008, 2009.

160. Table 15 shows SIS coverage in 2008, relative to estimated births, by region. Overall, SIS covered 63 percent of births, and 69 percent of births for the two poorest quintiles. In Ayacucho SIS financed 72 percent of all births and 74 percent in the poorest quintiles; but in Huancavelica it only reached 47 percent and in Tacna only 36 percent of poor had their birth covered by SIS.⁸² SIS also covered many births in Quintile 3 (71 percent for the total country and between 51 percent-89 percent in the ten poorest regions). This reflects the fact that in urban centers, SIS coverage is combined with relatively good supply of services, so that releasing the demand side constraint by providing insurance and financing is likely to have a big effect. In contrast, in remote rural areas where there is poor supply of services, the financing constraint is not likely to be binding.

⁸² Lima has the lowest SIS cover due to the concentration of non-poor population there. Details are in Appendix 2.

Table 15: SIS coverage of births by region (ten poorest regions) 2008

REGIÓN	TOTAL			Percentage of estimated births for Quintile 1 and 2 covered by SIS
	SIS covered IBs	Estimated births	Percentage of births covered by SIS	
National	355,030	561,178	63.3%	68.6%
Amazonas	5,933	11,195	53.0%	53.4%
Apurímac	7,711	11,062	69.7%	69.3%
Ayacucho	11,096	15,272	72.7%	73.7%
Cajamarca	20,957	31,104	67.4%	67.3%
Huancavelica	6,804	14,607	46.6%	46.6%
Huanuco	13,770	19,623	70.2%	71.0%
Loreto	16,741	23,641	70.8%	67.3%
Piura	20,187	35,116	57.5%	60.0%
Puno	16,487	29,841	55.2%	55.4%
Tacna	3,771	5,286	71.3%	35.7%

Source: SIS Database and population estimations 2008 MINSA-INEI. Poverty quintiles: FONCODES. Note: Region and poverty quintile are based on residency of the mother.

4.3.1.2 Overcoming cultural barriers to IBs

161. There might likely be non monetary barriers on the demand side, such as cultural factors. There is no clear sign of this in the descriptive household data: in rural areas IB coverage does not seem to be sensitive to race – except that Quechua speakers have a *higher* rural IB incidence than any other group (Table 16). However there is qualitative evidence that some indigenous women might perceive IBs as ‘inappropriate’ and not respectful of their cultural preferences and standards (Box 7).

Table 16: Type of delivery by mother tongue and location (2009)

ENDES 2009	Total		Urban		Rural	
	ID	NID	ID	NID	ID	NID
Spanish	83.1%	16.9%	93.3%	6.7%	53.9%	46.1%
Quechua	70.8%	29.2%	88.6%	11.4%	61.5%	38.5%
Aymara	64.3%	35.7%	79.4%	20.6%	51.9%	48.1%
Other indigenous languages	15.8%	84.2%	43.0%	57.0%	13.7%	86.3%

Source: ENDES 2009.

162. MINSA has promoted culturally-informed practices related to the birthing process, such as allowing a vertical birthing position, use of outer clothing, presence of family members, the participation of unrelated males, specific foods, light and others, as well as the disposition of the placenta by the mother.

163. In 2005 Peru adopted the Technical Norm for Attention of Vertical Intercultural births (*Norma Técnica para Atención del Parto Vertical con Adecuación Intercultural*) for the Amazon basin (*Selva*) and the Highland (Sierra) regions –the two with the lowest IB coverage - which

mandates that vertical births must be permitted and that facilities and equipment must make them viable in practice. The norm was further strengthened by the 2006 Technical Health Norm for Crosscutting Focus on Human Rights, Gender Equity, and Interculturality in Health (*Norma Técnica de Salud para la Transversalización de los Enfoques de Derechos Humanos, Equidad de Género e Interculturidad en Salud*) which promotes respect for cultural diversity by health workers.

Box 7: Qualitative evidence on the demand for institutional births among indigenous women

In order to understand the role of cultural beliefs in seeking birth care, as part of this study a qualitative assessment was carried out in 2008 in four rural districts of extreme poverty in the Sierra region –two districts located in mainly Quechua speaking areas, and two in Aymara speaking zones⁸³. In each, interviews were conducted with women who had an IB and women who gave birth at home. All of the women interviewed had a live birth with no complications during pregnancy or labor and had less than secondary level of education. All belonged to communities with access to a health center, and were not isolated (had public transport access on a daily basis). Respondents who gave birth at home were asked in individual and group sessions about the reasons they did not seek an IB. Women who had an IB were asked if there was anything about it that they didn't like (that may stop them from going back to the health facility for their next birth). The most salient responses included the following:

- Attention is provided by unknown persons, who do not speak indigenous languages;
- Lack of adequate explanations about procedures and disqualification of their traditional practices
- Family members are not allowed to be present and husbands are not allowed to help in the birth;
- Modesty does not allow them to fully disrobe as required by health personnel.
- Vaginal examinations and other intrusive procedures are performed too frequently; and combined with cold rooms, excess of light, and doors being opened they may damage the baby;
- Women are given “improper” food that upsets the balance between “hot” and “cold” humors
- There is no rope (“soga”) for vertical births, and head wrapping and traditional herbal remedies are not allowed;
- Placentas are not disposed according to their practice, nor they are not allowed to keep them
- Time for after-birth rest is limited and women and their babies must leave earlier than is thought safe.

Most of these conditions, such as having equipment for vertical births; delivery rooms to have soft lights, controlled temperature, and appropriate colors are covered in the Norm for Vertical Birth, but its implementation remains uneven and poorly documented. Other factors inhibiting demand for IBs among these women included the following:

Access to information: Uncertainty about what was going to happen to them in a health facility inhibited them from seeking care. This included being exposed to misleading information or narratives of other women's bad experiences. Difficulty to conduct effective communication between health care provider and patient is part of this problem. Previous negative experiences may also be a barrier.

Time costs: Going to a maternal waiting home involves a cost in being absent from the home for several weeks, being unable to fulfill their normal family responsibilities. In several cases the cost is also economic –when women stop working the land or caring for animals; or when the husbands have to stop working to take over care responsibilities or to accompany women to give birth.

Distance and access to health facilities: In some cases transportation means to access the health center are unavailable outside regular hours or do not exist at all. These transport costs are not covered by SIS or other social program (SIS only covers emergency referrals). Women will often prefer to stay home than having to walk or face long hours waiting for transportation or on the road.

Additional financial costs: Reported costs include food and lodging for their partners or other family members accompanying women to the health facility during birth; and purchasing of toiletries and other articles required by the health establishment such as diapers, detergent, etc. These additional costs may range from NS/. 35 to NS/. 110. None of these costs are perceived as needed during home births. When assisted by family members there are not costs involved and traditional health attendants do not always get paid and/or are paid in-kind with agricultural produce.

164. The norm also provides for development of personnel, services and attention, equipment, and referrals. It mandates professional training in culture and gender, competency in indigenous

⁸³ Districts are: Seclla, Huancavelica (Quechua), Vinchos, Ayacucho (Quechua), Rosaspata, Puno (Aymara), Vilquechico, Puno (Aymara).

languages, participatory diagnosis, the incorporation of local men and women into services to provide culturally and linguistically appropriate services, and incentives to improve quality (Cotlear 2006, MINSA, 2006a). Finally, in 2008 the National Health Strategy for Indigenous Peoples (*Estrategía Sanitaria Nacional de Salud de los Pueblos Indígenas*) was approved providing for modification of health services and facilities such that they are more culturally appropriate, which is particularly relevant to childbirth; increasing access to culturally-appropriate services and facilities, and in-service training in culturally appropriate services, including in childbirth (MINSA, 2008).

165. An offsetting factor that might undermine the this intercultural focus is the norm for Categorizing Health Establishments (*Norma de Categorización de Establecimientos de Salud*) which promotes IBs in relatively well equipped health centers and hospitals, and limits IBs in health posts to emergency cases. It is at the health post level that most of the efforts for cultural adaptation have been undertaken. This sets up a possible tension between improving medical quality and strengthening cultural adaptation. For most rural indigenous women, there can be little doubt that the improved quality that comes from stronger norms is likely to be an important factor encouraging IB demand. However it is also possible that some women may be dissuaded from an IB as a result of the lower levels of cultural sensitivity in the more advanced centers. We do not have evidence about the empirical dimensions of this possible trade off.

4.4 The supply side

166. The evidence presented in the previous section suggests that demand factors are an important consideration but that policies to address demand constraints have their limitations when access and the quality of services are limited. In this section we review efforts to strengthen the supply of birthing services in the areas with the biggest coverage gaps. These policies include interventions to strengthen the network of services and to help women to access it through maternal waiting homes.

4.4.1 Maternal waiting homes

167. Maternal waiting homes, where pregnant women and their relatives can live in the weeks before the birth, have been developed since 1997, to bring maternal care to women facing access barriers. In most cases they also provide ante-natal care and are equipped to respond to emergencies and complications.⁸⁴ By the end of 2008, 401 such homes were distributed throughout the country. They are designed to provide a bridge between the home and community (where potentially life-saving obstetric services might not be available) and ensure appropriate levels of care. They have the potential to increase access to and use of hospitals and other institutional settings for childbirth. They can help address two of the three potentially fatal delays in providing appropriate obstetric care when complications may be present: they put women in a position where problems are likely to be recognized sooner (the first barrier) and they locate them in a place from which they can reach a health center more quickly (the second barrier).⁸⁵

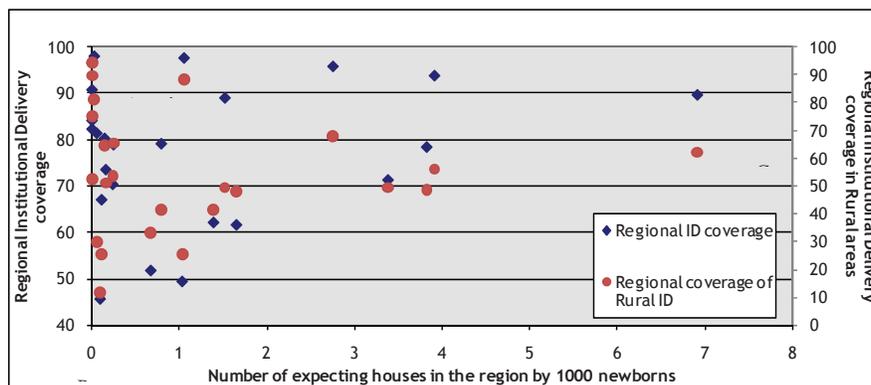
⁸⁴ Indeed several of them are located nearby or in the same grounds than the regional hospital.

⁸⁵ The three delays are: (i) the recognition of need and the decision to seek appropriate care for an obstetric emergency; (ii) reaching an appropriate obstetric facility on time; and (iii) receiving timely and appropriate care once that facility has been reached (Barnes-Josiah, Myntti, and Augustin, 1998).

Figure 22 shows the generally positive correlation between the regional density of waiting homes and the coverage of rural institutional deliveries.

168. Although such data cannot evidence the direction of causality, it seems plausible that rural IB coverage is positively affected by maternal homes. In the Sierra region, Cusco has the largest number of waiting homes (140) -and also a high proportion of IB (over 60 percent in rural areas); while Puno and Cajamarca have both low coverage levels and few maternal homes. Loreto –in the *Selva* - which has the lowest proportion of institutional deliveries (15 percent for rural women and 50 percent for urban ones) - has 2 maternal waiting homes in place.

Figure 22: Number of maternal waiting homes by regional rate of institutional delivery



Source: MINSA and ENDES Continua 2004-2007.

169. Waiting homes face difficulties related to their long term sustainability. Although MINSA supports their creation, their regular operation and concurrent costs are not covered. The guidance note for maternal homes recognizes this need and suggests the creation of local community level management models.⁸⁶ The main funding sources include international cooperation (UNFPA, USAID, UNICEF); community health committees; local or regional governments; and NGOs such as CARE. However, MINSA’s strategy for sexual and reproductive health has promoted budget allocations for waiting homes from SIS and Regional budgets under the budgetary lines for ‘healthy communities’ and ‘healthy municipalities. Although this model has proven results, it is not yet acknowledged in the performance-based budgeting strategic program for maternal health.

4.4.2 Standards and targets

170. The Peruvian Government has two mechanisms for setting standards and targets related to IBs, accompanied by monitoring systems to oversee compliance. MINSA has developed the National Concerted Health Plan and the Neonatal Function’s Norm (FON), supported by the

⁸⁶ MINSA (2006) Documento Técnico. Casas de Espera Maternal, Modelo para la Implementación. Dirección de Promoción de la Salud http://bvs.minsa.gob.pe/local/PROMOCION/204_PROM32.pdf. It estimates operational costs of an average maternal home of about US\$1,000 monthly for food and other associated costs. While the *mamawasi* and community collaborations may cover for the costs of women while they stay, their cost to access the waiting home/return to their localities is not provided. Facilities physical costs have been covered in some cases by programs such as Parsalud and or the Local Concerted Plan.

Parsalud project. MEF's PpR also sets physical targets lined to budgetary allocations for IBs and monitors them using survey and administrative data.

4.4.2.1 The FON standard

171. The 2007 National Health Plan (*Plan Nacional Concertado de Salud*) includes strategies to promote IBs, such as intercultural services, increased network coverage to reduce geographic barriers, and improving the capacity of health professional and services to respond to obstetric and peri-natal emergencies. Arguably the most important strategy is the improvement of resolution capacity for health facilities. The Neonatal Obstetric Functions (FON) standard – which has been introduced with the support of the *Parsalud* program - allows MINSA to assess the response capacity of the health network for IB care. The FON norm classifies health facilities by their capacity of performing primary, basic, essential and intensive obstetric and neonatal functions (FONP, FONB, FONE and FONI).⁸⁷ The lowest level of functions –P- focuses on primary care, while E level institutions are expected to have facilities and human resources capable to deal with surgical procedures and other complications.⁸⁸ Since 2007 MINSA has been evaluating the resolution capacity of FON institutions. Table 17 presents the results of the 2007 and 2008 evaluation for the health facilities evaluated each year (approximately 65 percent of the 6,486 MINSA health institutions nationwide).

Table 17: Results from FON evaluation (2007-2008)

FON LEVEL	2007			2008		
	Number of facilities	Number of facilities with CR over 80%	%	Number of facilities	Number of facilities with CR over 80%	%
FONP	3611	852	24%	3773	955	25%
FONB	455	164	36%	472	187	40%
FONE	72	38	53%	85	49	58%
FONI	1	1	100%	1	1	100%
TOTAL	4139	1055	25%	4331	1192	28%

Source: INE. Note: Tumbes, Lima Norte and Ayacucho Health Directions had no information available.

172. The overall capacity of resolution for FON by 2008 at the national level was less than 30 percent, which implies that almost one of every four health institutions expected to be able fully to perform obstetric and neonatal functions are not fitted to do so. A new census of the staffing and production of services of FON-certified birth facilities in 13 health regions of Peru carried out by INEI (ENESA 2009) rigorously evaluated FON resolution levels. It found that of the 276 FONB facilities analyzed in 13 regions, only one showed a resolution capacity over 80 percent, hence, it was in compliance with the expected resolution level. None of the 54 FONE facilities

⁸⁷ MINSA “*Directiva para la Evaluación de las Funciones Obstétricas y Neonatales en los Establecimientos de Salud*”, December 2005 (*Resolución Ministerial 1001-2005/MINSA*). See Annex 3 for a detail of FON levels.

⁸⁸ Under this classification no health post is allowed to perform any obstetric function but ante-natal checkups.

evaluated was compliant with 80 percent of the norms.⁸⁹ However, the full standard is quite demanding. The data are not reported in such a way as to allow analysts to see what specific gaps exist or how far other centers are from being qualified as satisfactory. This is an example of the problem of failing to use the available information to its full potential, which was discussed in the section on PpR, in Chapter 3, above. It would be recommendable to report the data in such a way that the gaps could be seen and movement towards sufficiency could be tracked.

173. The *Parsalud* project (which is supported by the World Bank and the IADB) provides health facilities with support to improve their infrastructure and equipment and train personnel to comply with the FON standard. A study by GRADE⁹⁰ found that staff training by the program had a significant impact on the number of IB deliveries performed and on the number of cesarean interventions. The most effective intervention is training on peri-natal technology for doctors and obstetricians, which is linked to increased assistance of deliveries with complications at the target facilities.

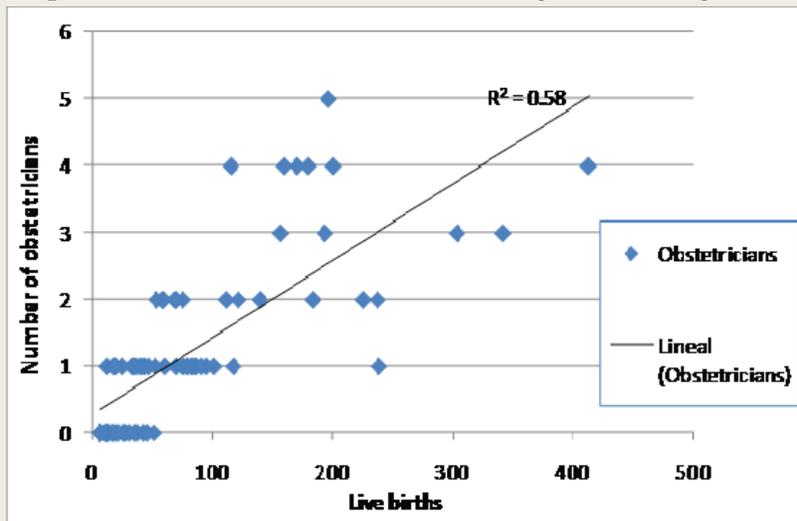
⁸⁹ Amazonas, Ancash, Apurimac, Ayacucho, Cajamarca, Cusco, Huancavelica, Huanuco, Junin, La Libertad, Pasco, Puno, Ucayali.

⁹⁰ Díaz, J. and Miguel Jaramillo (2008).

Box 8: The case of Apurimac: strengthening services to expand coverage

Apurimac is one of the ten poorest regions in Peru but has achieved one of the highest IB coverage, reaching over 90 percent even in rural areas. Rural coverage rose over fifty percentage points between 2000 and 2007. There is little doubt that this owes much to a sustained drive to strengthen the supply and quality of birthing services. Apurimac's health network now has at least one obstetrician in every FON facility, and 24 of health posts also have at least one obstetrician, and the distribution of the staff is congruent with the projected distribution of births at district level (Figure a). A key difference between Apurimac lies in the FON resolution capacity of its health facilities. Most of the 266 facilities that underwent evaluation in 2007 met the FONB standard. In the 2009 INEI evaluation, Apurimac was among the regions with the highest resolution capacities. However, even so, the high level of IB coverage has only been attained providing services in part through health posts. This is inevitable since 38 of the districts in Apurimac do not have a health center or a hospital¹. Poor districts are especially dependent on health posts. According to SIS data, in districts in quintile one, 33 percent of all births funded in 2007 took place in a health post; this fell to 7 percent in the second quintile. These data suggest that – as it drives to try to replicate Apurimac's success in other regions - MINSA and the DIRESAs will need to strike a careful balance between the policy to shift as many births as possible towards higher-resolution facilities (in order to improve capacity and reduce neonatal deaths) and the importance of providing IB services to women who still cannot access such facilities easily.

Figure a - Relation of obstetricians and live births per district in Apurimac



Note: Excludes the main cities of Abancay and Andahuaylas.

174. The INEI FON survey also provides clear evidence that expanding staffing can contribute decisively to improved outcomes in health. It allows analysis of the correlation between the supply of obstetricians and the institutional birth coverage (using IB cover data from ENDES). As can be seen in Figure 23, there is a strong correlation between the two variables. Apurimac – which has 2.5 obstetricians per 10,000 population–achieves over 90 percent coverage of IBs; while Cajamarca, which has only one fifth of the number of obstetricians in Apurimac (0.5 per 10,000) achieves only 58 percent IB cover. The r^2 for the correlation is 0.64. Data from the same study also reinforce the message that IB cover is a critical factor in reducing prenatal mortality, which is down to 10 in Ayacucho and Apurimac, compared with a figure of 15 or more in 6 regions with lower IB coverage (r^2 0.39).

Table 18: Relation between IBs programmed in the budget, IBs based on administrative data and demographic Indicators, 2008

Region	IBs planned by SIS and DIRESAs as a % of births ¹	IBs planned by DIRESAs as a % of births ²	IBs planned by Regional Governments as a % of IBs reported by MINSA ³
Amazonas	80%	25%	36%
Ancash	208%	163%	173%
Apurimac	179%	117%	113%
Arequipa	137%	105%	124%
Ayacucho	199%	147%	144%
Cajamarca	161%	102%	128%
Cusco	174%	124%	119%
Huancavelica	201%	122%	154%
Huánuco	161%	97%	102%
Ica	67%	47%	54%
Junín	119%	79%	96%
La Libertad	112%	78%	110%
Lambayeque	119%	84%	126%
Loreto	222%	158%	239%
Madre de Dios	224%	137%	115%
Moquegua	147%	119%	155%
Pasco	101%	55%	72%
Piura	156%	110%	209%
Puno	188%	120%	161%
San Martín	132%	90%	105%
Tacna	65%	44%	56%
Tumbes	62%	44%	39%
Ucayali	136%	97%	98%

Source: MEF Base de Datos Metas Físicas 2008; Census 2007; ENDES 2008; MINSA 2009.

Notes: 1. Includes: normal deliveries, complicated non surgical deliveries and cesareans as adjusted physical outputs for 2008 for regional governments and SIS. 2. Includes only physical outputs for 2008 estimated for executing units –regional governments, for each region. 3. MINSA Dirección General de Salud de las Personas, Partos Institucionales 2005-2009 (administrative records).

176. In most cases the number of IBs programmed by SIS and the DIRESA are very different. In some regions the planned IBs are less than 70 percent of births in the region in that year, while in others they total over 200 percent. In general, due to double counting across agencies which co-fund the service, there are many more IBs registered in the budget system than can possibly have really occurred in the region.

177. It remains unclear how the budgetary goals are set and if the priority given to some interventions over others has more to do with a need for resources—regardless of their allocation—or with an unmet need of IBs. The immediate challenge is to develop a set of budget projections that is congruent with the ENDES data, allows the specific roles of DIRESAs and SIS funding to be clarified, and traces the needed increase in the production of IBs in each region that would meet the overall goal of 70 percent rural coverall.

4.4.3 Conclusion

178. The data evidence strong growth in the coverage of IBs in Peru and a review of the evidence suggests that the policies adopted by the Government on the demand and supply side

have played an important role in that process. The sharp rise in coverage in urban and rural areas up to 2005 was coincidental with the expansion of SIS coverage which addressed the issue of financial obstacles to access. Since then supply constraints have played a growing role. These can be divided into problems of physical access – which have been successfully addressed by maternal waiting homes and by network expansions linked to improved staffing in many health regions – and the quality limitations, which are being tackled by the roll out of the FON standard. A pending issue is the tension between shifting towards higher resolution FON centers to further improve quality and reduce peri-natal mortality among children born in institutional settings, and the possibility that this might undermine cultural adequacy of the services and reinforce access problems for the remote communities that depend on health posts for their services. Another pending challenge is the need to strengthen the quality of budgetary programming and monitoring information.

5 CONCLUSIONS AND RECOMMENDATIONS

179. This report has reviewed the epidemiological challenges facing Peru’s health system (Chapter 2); has analyzed the complex range of policy initiatives undertaken to address those challenges over the last decade (Chapter 3), and has illustrated some of the most important themes with reference to the strategic challenge of improving the coverage and quality of institutional birth services (Chapter 4). This section concludes with a synthesis of the principle recommendations of the study, which is organized along the thematic axes identified above: (a) policies to strengthen users’ rights and entitlements and overcome demand-side constraints to better health outcomes; and (b) policies for public sector management reform, which improve the performance of the health system and strengthen the supply of services.

5.1 Rights and entitlements

180. Peru has made strong advances to strengthen users’ rights to a service of adequate quality - the so-called “short route to accountability” – through insurance contracts and the dissemination of clearer standards for users’ entitlements. The development of the SIS insurance program over the last decade has brought the great majority of poor Peruvians within the coverage of the system, which now covers a third of Peruvians, resulting in significant improvements on key indicators, such as the coverage of institutional births.

181. However, SIS faces major challenges to strengthen its information systems. It also needs to consider moving towards more effective payment mechanisms, moving away from paying for the treatment of morbidities. It might get better results – and reduce transactions costs – by moving towards an incentive system focused on providing funding for the effective epidemiological management of health networks, and which provides sufficient budgetary stability to allow local planners to work effectively. The 2008 experiment with a introducing a per-capita element in the financing of health posts by the SIS, supported by the Government of Belgium, was undermined by a fiscal freeze, but offers an interesting option for future development of the system.

182. With the passing of the Universal Health Insurance (AUS) legislation in 2009 and the subsequent creation of the minimum statutory mandate for health insurers (the PEAS), Peru has

taken a further important step towards democratizing and unifying health provision. This opens the way for establishing a coherent system of public subsidies in health. Peru reasonably should expect to continue to increase public spending on health, from its present level of 2.5 percent of GDP, by at least one percentage point of GDP, to bring it closer into line with other countries in LAC with similar income levels. But it is critical to plan that expansion carefully, to make sure the subsidies go to the right people for the right things. The technical work done to define the PEAS goes a long way to resolving the second of these problems (the right things will be financed), but effective, transparent targeting to ensure that the right people get the subsidies remains “work in progress”. The expansion of subsidized financing also needs to happen without creating a gamut of perverse incentives that might undermine the role of the *EsSalud* health insurance system, which covers 20 percent of the population, and whose recent expansion needs to be reinforced.

183. For the universalization of the PEAS to be possible, from a budgetary perspective, it will be critical to develop the ‘semi subsidized’ window for access to health insurance. To avoid the pitfall experienced by Colombia, where the 1994 reform led to a “two class” system predicated on inferior services for the poor, Peru needs to be clear, firm and fair about limiting the fully subsidized window to the poor. If it were to prove unfeasible to strengthen SIS sufficiently to play the more complex role as a real public insurer, an alternative would be to consider using *EsSalud* to manage subsidized funds. The ongoing reforms to separate financing and provision functions within *EsSalud* would facilitate such a move.

184. Whichever institutional solution is found, the non poor should have access to health insurance covering the PEAS mandate (which deals with the financial risks they face when confronted by illness), but should normally be expected to pay for it. The semi subsidized window of SIS has been well-calibrated to fill this role. The monthly cost of NS/.10 per person is only 20 percent of the cost of formal sector *EsSalud* insurance. This is an eminently affordable amount for the vast majority of Peru’s urban population to pay, but is sufficient to cover the estimated cost of the variable part of the PEAS that should be paid through SIS (estimated at about NS/.120 a year). For these reasons, the semi-subsidized window should become the window of choice for financing health insurance for the urban informal population (those without *EsSalud*). This will only be possible, however, if the targeting rules for access to the fully subsidized window are firm and transparent. The SISFOH targeting system developed by MEF, if updated, offers an important potential tool for achieving that goal.

185. At the same time, the Government will need to ensure that the DIRESAs are provided with sufficient budget for staffing and fixed costs to respond to the unleashing of the latent demand that is likely to follow the elimination of financing constraints to the access to health services for the mass of poor Peruvians. This part of the cost will not come from the users contributions under the semi-subsidized system – it will need to be covered out of general revenues.

186. An important risk is that an over-ambitious expansion of stated “rights”, which runs ahead of resource mobilization (either from the budget or from users contributions), might lead to a loss of credibility, due to the inability of the system to deliver what has been promised, thus undermining the reform. For this reason, the roll out of the minimum guarantees linked to the PEAS should be calibrated against the availability of fiscal resources and users’ contributions.

5.2 Public sector and management reform

187. Peru has also made important steps in the development of the “long route to accountability” – that is, policies to improve the quality of the political nexus between voters/users, communities and the political/budgetary authorities; to strengthen contractual and regulatory controls over service operators; and establish workable incentives for service operators and other users of public funds. Reforms have come in three broad areas:

(i) Decentralization: Most of the health system has now been transferred to the administration of the regional health authorities, DIRESAs. Upcoming challenges for the decentralization process include the need to strengthen the role of MINSA as rector of the system; to strengthen regional planning, budgeting and management capacity; to develop a stronger role for the health networks by de-concentrating the DIRESAs; and to reinforce local participation in health systems at the level of micro-networks. This raises the need to define a *modus vivendi* between the DIRESAs and community based health agencies (CLAS), based on a clear management model. Ongoing reforms to the DIRESA model, which are promoting de-concentration of health network management, will facilitate this process. The CLAS have been allowed to deteriorate due to the lack of technical support over the last few years, but their future role is now better defined by new legislation. There is also a need to clarify the role for municipalities in health, both as the voice of the local community and as a provider of services in some areas.

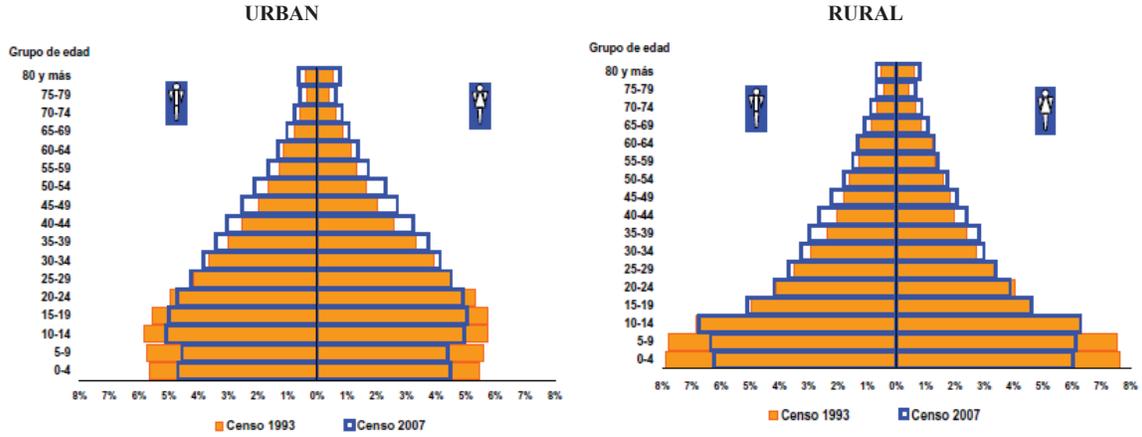
(ii) Staffing and labor management: The first challenge in this area is to address the considerable gap in staffing of the NHS system, compared what is needed to ensure adequate services. Good advances have been made, but considerable additional budget commitment is still needed. Peru also needs to develop a more uniform system of labor contracts and incentives which will allow managers to control staff performance and facilitate the assignment of staff to priority sectors, while also providing acceptable rights and motivation for employees. Like many countries, in response to overly protective and inflexible standard public sector labor contracts, Peru has experimented with hiring arrangements in the public sector (non personal services contracts) which effectively eliminated employee rights and social protection, leading to horizontal inequity, the loss of motivation and instability. It is not clear whether this problem been fully resolved by the new intermediate variant, the CAS contract, but it is definitely a step in the right direction. There is also a continuing need to address the bonus and remuneration structure for the standard civil service employees of the sector (the “*nombrados*”). Meanwhile, in the communal CLAS regime, which operates around 1/3 of health posts, most staff are still on very low wages; this needs to be rectified, if Peru wants this sub-system to play an important role in the future of the network (which, as argued above, it should). Finally, there is still scope to do more with the SERUM system which sends graduating health professionals to work in poor and remote areas.

(iii) Performance budgeting: Finally, there remains ample scope to strengthen performance budgeting in Peru’s health system. Good advances have been made in Peru towards the definition of high level strategic goals for the health sector and the channeling of resources towards key interventions that will plausibly make a difference (such as CRED consultation and Institutional Births). One option is for the financing system, to move towards capita payments to health regions or networks, made against performance on appropriately chosen performance indicators. This could be linked to strategic tracers such as: coverage of PI and CREDs (in rural

areas). In urban areas, additional tracers related to the management of chronic illness and public health problems such as alcoholism could be added. The challenge is to ensure adequate budgets and financial flows for the health production function (staff, physical facilities, equipment and medicines) while providing incentives to effectiveness and helping managers in the system to focus on the strategic goals of the system and use performance information to improve the functioning of the system. In doing so, it will be critical to move towards a “fiscal decentralization with accountability” model. Peru needs to strike an adequate balance between the delegation of authority to exercise fiscal discretion in pursuit of the system’s objectives and the accountability of managers for the results they generate. To support that process, it also needs to continue to progressively devolve planning and management tools such as SIGA to a lower level in the system.

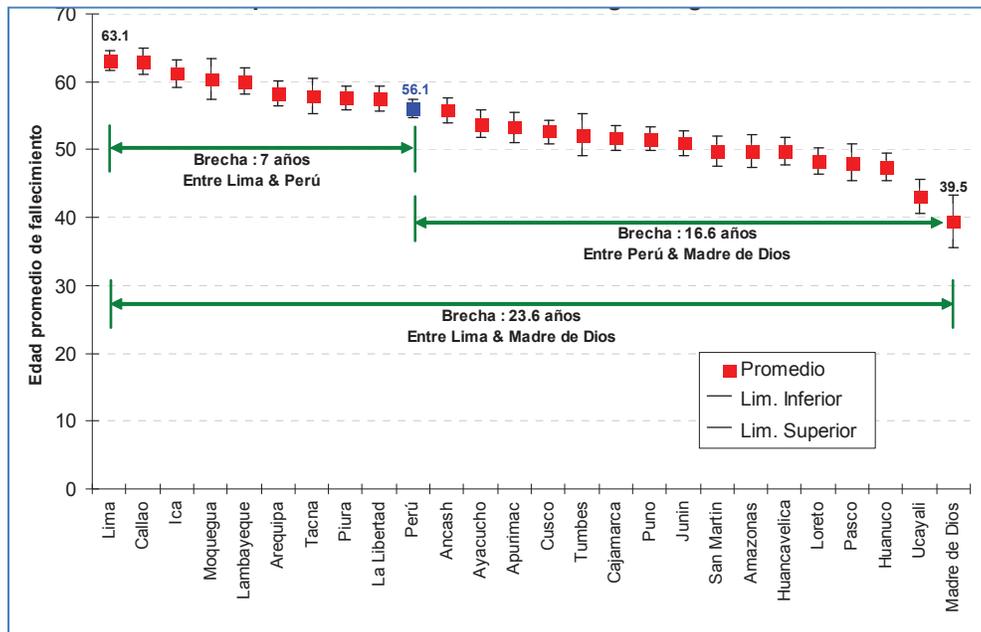
ANNEX FIGURES AND TABLES

Figure 1: Average age of death, by departments, 2005



Source: INEI.

Figure 2: Peru: Population pyramid, Census 1993 and 2007, in urban and rural areas



Source: Vital Statistics System- OGE, MINSA. Prepared by DIS, DGE, MINSA.

Table 1: Infant and child mortality rates for the 10 years preceding the survey, for every 1,000 live births

Area of Residence	1996	2000	2004/2006
Infant Mortality	50	43	27
Area of Residence			
Urban	35	28	21
Rural	71	60	36
Child Mortality	68	60	37
Area of Residence			
Urban	46	39	26
Rural	100	85	50

Source: National Statistics Institute (INEI). Demographic and Family Health Survey (ENDES), 1996 and 2000; (ENDES Continua), 2004/2006.

Table 2: Burden of disease in Peru, by age groups, disease groups and type of diseases in 2004

GRUPO I	TOTAL	0-4	5-14	15-44	45-59	60+
Infectious and parasitic diseases						
Pneumonia	246,174	115,180	12,362	36,457	19,634	62,541
Tuberculosis	72,770	3,987	47,089	16,385	2,545	2,764
Other infections	59,967					
Diarrhea	43,177	28,300	2,950	4,727	1,000	6,200
Bartonellosis	17,639	5,102	7,882	4,139	364	152
AIDS	15,946	151	28	13,527	1,940	300
Chagas Disease	14,905	389	864	11,941	1,147	564
Leptospirosis	10,087	273	519	7,820	938	537
Hepatitis B and C	6,772	511	681	4,110	869	602
Syphilis	5,965	11	51	5,546	269	88
Pertussis	1,748	829	782	63	0	73
Yellow fever	1,730	36	226	1,458	0	11
Malaria P. vivax	1,171	52	370	644	81	24
Malaria P. falciparum	835	82	309	386	50	7
Leishmaniasis	449	22	124	257	31	15
Chlamydia	392	20	47	277	30	19
Meningitis	220	142	76	2	0	0
Dengue	174	2	31	117	18	5
Herpes	59	0.3	2	48	6	3
Gonorrhea	51	2	5	36	5	3
Rubella	23	2	19	2	0	0
Brucellosis	11	1	1	6	2	1
Upper respiratory tract infections	19,068	4,298	8,017	5,615	656	482
Otitis media	241	26	109	84	13	8
TOTAL	519,573	155,092	74,421	107,948	28,928	73,907
Maternal diseases						
TOTAL	TOTAL	0-4	5-14	15-44	45-59	60+
Obstructed delivery	24,029	0	0	24,029	0	0
Maternal bleeding	19,873	0	0	19,808	65	0
Abortion	19,272	0	0	18,957	315	0
Maternal sepsis	7,210	0	0	7,210	0	0
Pregnancy hypertension	5,606	0	114	5,473	19	0
Other obstetric problems	3,670					
TOTAL:	79,661	0	114	75,478	400	0
Perinatal diseases						
TOTAL	TOTAL	0-4	5-14	15-44	45-59	60+
Low birth weight/prematurity	202,222	202,222	0	0	0	0
Anoxia, asphyxia, birth trauma	165,114	165,114	0	0	0	0
Other perinatal	103,346					
Neonatal sepsis	20,655	20,655	0	0	0	0
Sudden Infant Death	0	0	0	0	0	0
TOTAL	491,337	387,991	0	0	0	0
Nutritional disorders						
TOTAL	TOTAL	0-4	5-14	15-44	45-59	60+
Protein-calorie malnutrition	172,011	154,770	3,136	5,738	2,214	6,152
Iron deficiency anemia	57,402	56,456	149	366	166	265
Other nutrition disorders	23,675					
Vitamin A Deficiency	11,875	11,860	0	0	0	16
Iodine Deficiency	1,089	1,021	0	25	41	3
TOTAL	266,052	224,107	3,285	6,129	2,420	6,435

Grupo II	TOTAL	0-4	5-14	15-44	45-59	60+
Malignant Tumors						
Stomach Malignant neoplasm	48,981	0	0	11,830	14,594	22,557
Colorectal malignant neoplasm	15,756	0	0	3,532	4,629	7,595
Malignant liver tumor	24,050	997	1,350	7,111	5,566	9,026
Malignant Pancreatic malignancy	7,382	0	0	1,002	2,450	3,930
Larynx malignant neoplasm	1,381	0	0	125	428	828
Malignant lung tumor (excepting Trachea and bronchi)	18,431	0	0	3,115	5,617	9,700
Melanoma (excepting other skin neoplasms)	1,923	0	0	392	604	927
Breast cancer	30,862	0	0	11,880	13,769	5,213
Cervical cancer	44,924	0	0	18,133	18,711	8,080
Ovarian cancer	7,611	0	43	2,299	3,222	2,047
Prostate cancer	12,975	0	0	52	1,605	11,318
Lymphoma	14,603	329	899	6,587	3,334	3,454
Multiple myeloma	2,397	0	0	395	916	1,086
Leukemia	30,414	3,621	6,981	13,907	3,254	2,651
Malignant brain tumor	17,574	856	2,960	8,190	3,084	2,484
Malignant kidney tumor	4,178	11	158	948	1,369	1,690
Gallbladder (bile ducts) malignant neoplasm	7,449	0	0	708	2,493	4,248
Bone and cartilage malignant neoplasm	5,428	179	369	3,261	839	781
Other malignant neoplasms	65,218					
Malignant tumors of non-melanoma skin	3,384	0	19	1,209	912	1,245
Thyroid malignancy	3,046	0	10	1,018	907	1,111
Mouth, oropharynx malignant neoplasm	2,994	0	4	818	1,072	1,100
Esophageal malignant neoplasm	2,553	0	0	366	777	1,410
Malignant bladder tumor	2,340	0	0	90	735	1,515
Body of uterus malignant neoplasm	2,197	0	0	517	1,032	647
Total	378,050	5,993	12,793	97,485	91,917	104,644
Blood diseases	TOTAL	0-4	5-14	15-44	45-59	60+
Diabetes Mellitus	152,589	0	0	47,121	74,770	30,698
Other blood diseases	50,803					
Hypothyroidism and hyperthyroidism	2,128	21	274	1,148	355	331
TOTAL	205,520	21	274	48,269	75,125	31,029
Neuropsychiatric diseases	TOTAL	0-4	5-14	15-44	45-59	60+
Unipolar depression	193,391	0	0	62,416	114,273	16,701
Bipolar disorder	4,010	0	71	3,407	459	72
Squizofrenia	95,252	0	0	95,126	57	68
Epilepsia	64,406	1,658	15,266	41,986	4,429	1,066
Alcoholism	231,820	0	0	185,208	23,874	22,737
Cerebral degeneration, dementia	29,277	0	0	0	42	29,235
Parkinson disease	16,823	0	0	3,253	4,142	9,428
Esclerosis múltiple	11,401	0	0	8,513	2,297	591
Drugs addiction	45,130	0	4,458	37,941	2,279	451
Post-traumatic stress disorder	25,976	182	14,040	7,665	2,235	1,855
Obsessive-Compulsive Disorder	9,088	0	0	7,816	879	393
Panic attacks	24,724	0	0	22,032	2,328	363
Motor neuron disease	916	0	0	492	369	55
Other neuropsychiatric diseases	74,042					
TOTAL	826,254	1,841	33,835	475,856	157,664	83,016
Congenital abnormalities	TOTAL	0-4	5-14	15-44	45-59	60+
Other congenital diseases	40,690					
Congenital cardiac anomalies	40,265	36,881	1,008	2,030	231	114
Spina bifida	13,358	13,358	0	0	0	0
Down Syndrome	8,596	7,982	374	190	37	13
Anencephaly	4,751	4,751	0	0	0	0
Cleft lip	1,912	1,818	0	94	0	0
Cleft Palate	1,462	1,462	0	0	0	0
Esophageal atresia	1,441	1,329	112	0	0	0
Renal agenesis	346	271	0	0	75	1
Anorectal atresia	235	235	0	0	0	0
TOTAL	113,057	68,088	1,494	2,314	342	129
Cardiovascular diseases	TOTAL	0-4	5-14	15-44	45-59	60+
CVC Rheumatic Disease	4,800	266	303	2,525	770	936
CVC ischemic disease	49,866	0	0	0	13,354	24,340
Cerebrovascular Disease CVC	116,385	0	0	37,477	35,229	43,679
CVC Inflammatory heart disease	13,436	853	796	8,976	1,978	833
CVC hypertensive disease	105,389	0	0	23,333	38,354	43,702
Other cardiovascular diseases	100,245					
TOTAL	390,121	1,119	1,099	72,311	89,685	113,490
Respiratory diseases	TOTAL	0-4	5-14	15-44	45-59	60+
Chronic obstructive pulmonary disease (COPD)	28,329	0	0	2,842	10,752	14,735
Asthma	63,443	3,339	10,705	39,139	7,117	3,142
Pneumoconiosis / pneumonitis	4,738	0	0	1,074	1,866	1,798
Other Respiratory Diseases	142,388					
TOTAL	238,898	3,339	10,705	43,055	19,735	19,675
Genitourinary diseases	TOTAL	0-4	5-14	15-44	45-59	60+
Prostatic hypertrophy	40,527	0	0	0	14,954	25,572
Other genito-urinary diseases.	451					
Glomerulonefritis e insuficiencia renal crónica	77,587					
Total	118,565	0	0	0	14,954	25,572
Skin diseases	TOTAL	0-4	5-14	15-44	45-59	60+
Dermatitis	5,241					
Musculoskeletal and connective tissue diseases	TOTAL	0-4	5-14	15-44	45-59	60+
Artritis reumatoide	61,500	0	0	42,609	13,680	5,211
Osteoarthritis	165,636					
Osteoporosis and pathologic fractures	31,917	0	0	1,587	15,986	14,344
Other musculoskeletal diseases	49,330					
TOTAL	308,383	0	0	44,196	29,666	19,555
Oral diseases	TOTAL	0-4	5-14	15-44	45-59	60+
Caries	84,603	3,636	18,163	54,838	5,497	2,469
Periodontal disease	2,155	0	0	765	981	410
Other oral diseases	10,691					
TOTAL	97,449	3,636	18,163	55,602	6,478	2,879
Diseases of the sense organs	TOTAL	0-4	5-14	15-44	45-59	60+
Glaucoma	1,997	0	0	103	1,116	779
Cataract eye disease	11,353	0	0	652	2,780	7,921
Other sense organs diseases	26,681					
Hicacusia	8,703					
TOTAL	48,735	0	0	755	3,896	8,700

Grupo III	TOTAL	0-4	5-14	15-44	45-59	60+
Accidents and Injuries						
Traffic accidents	256,807	6,962	28,061	190,082	24,508	7,194
Other accidents	237,702					
Falls	83,296	2,024	3,821	7,503	2,488	67,461
Violence	58,693	512	7,929	45,823	3,655	774
Drowning	32,996	7,757	5,182	16,233	2,571	1,255
Burning	30,909	6,798	4,732	17,716	1,299	365
Poisoning	25,419	1,709	2,081	17,169	3,332	1,128
Suicide	15,495	0	953	12,492	1,520	530
War	0	0	0	0	0	0
TOTAL	741,318	25,761	52,758	307,017	39,373	78,706

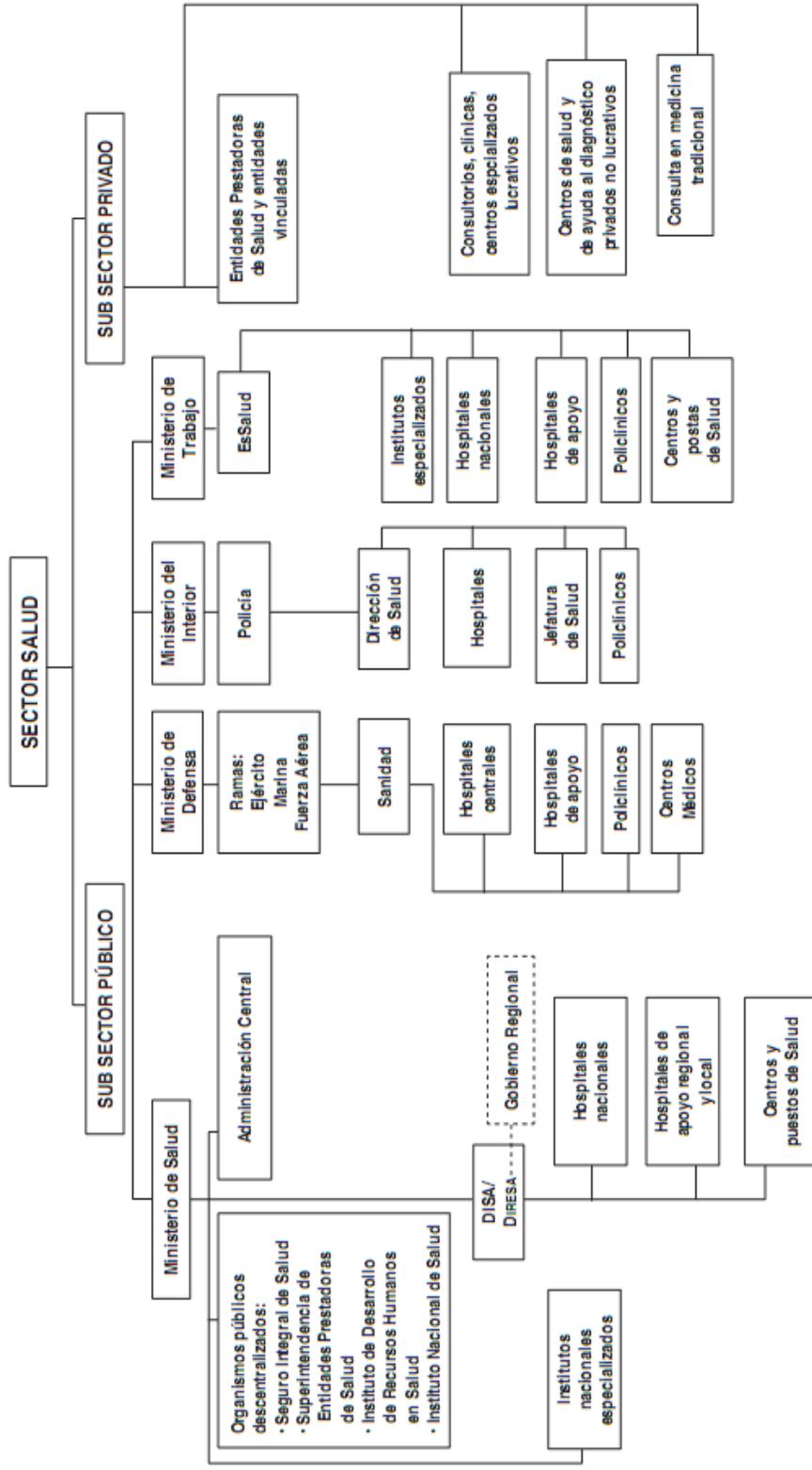
Source: Charpentier, C. (2009).

Table 3: Causes of morbidity by poverty segments, 2005

	Extremely poor	Very poor	Poor	Moderate	Acceptable
Infectious and parasitic diseases	54.66	52.80	47.48	35.88	29.63
Tumors	0.06	0.08	0.32	0.92	1.59
Diseases of the circulatory system	0.37	0.49	0.88	1.93	3.48
Complications of pregnancy, birth and the postpartum period	1.02	1.37	2.44	2.87	1.46
Trauma and poisoning	6.12	6.03	6.62	5.87	4.99
Other diseases	37.78	39.23	42.25	52.52	58.86

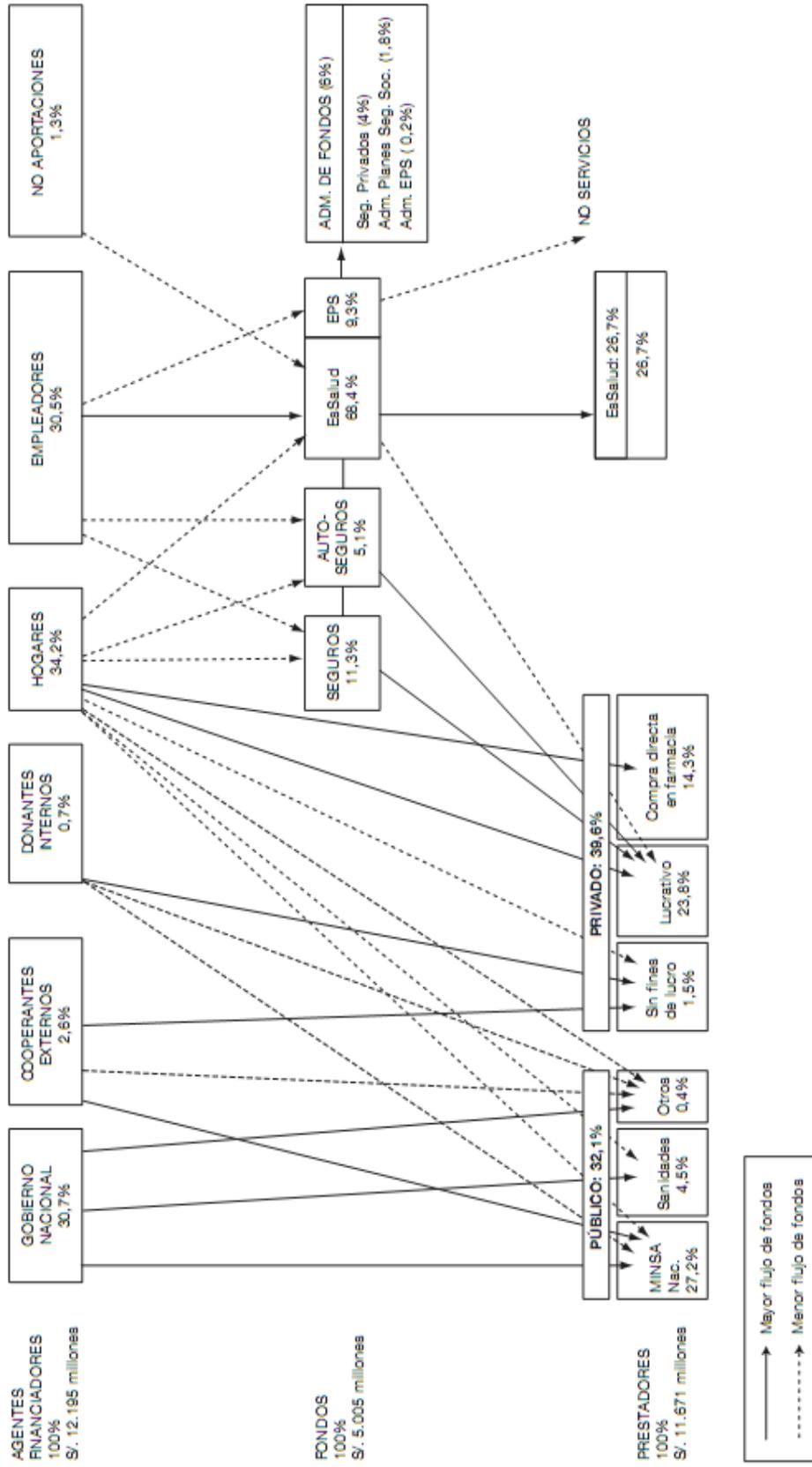
Source: OGEI, MINSA. HIS 2005. Prepared by DEIS, DGE, MINSA.

Figure 3: Organizational charge of the public and private health sector. National Health Accounts, 2005



Source: MINSA, National Health Accounts 1995-2005 (2008).

Figure 4: Flows: financial, intermediary and providers, 2005



Source: MINSA, National Health Accounts 1995-2005 (2008).

Table 4: Structure of health financing, 1995-2005

Agentes	1995	1996	1997	1998	1999	2000	2002	2003	2004	2005
Gobierno	25.2	26	23.1	24.3	24.3	24.1	28.1	28.7	28.9	30.7
Cooperantes externos	1.4	1.1	1.2	1.2	1.3	1.1	0.9	2.1	2.8	2.6
Donaciones internas	0.7	0.7	0.6	0.7	0.8	0.7	0.7	0.7	0.7	0.7
Hogares	45.8	39.9	40.1	37.7	38.5	37.9	38.4	35.9	35.5	34.2
Empleadores	25.60	29.7	32.4	31.8	32.4	35	30.9	31.8	30.9	30.5
Otros	1.3	2.6	2.6	4.3	2.9	1.9	0.9	0.8	1.1	1.3
Total	100	100	100	100	100	100	100	100	100	100
Total millones de nuevos soles	5,917	6,799	7,803	8,444	8,851	10,122	10,332	11,243	12,195	12,195
Total millones de nuevos soles de 1995	5,917	5,992	6,096	6,070	5,800	5,720	5,619	5,973	6,371	6,371
Total millones de dólares americanos	2,627	2,776	2,933	2,886	2,618	2,885	2,977	3,301	3,708	3,708

Source: MINSA, National Health Accounts 1995-2005 (2008).

Table 5: Budget level and trends of public health care agents: SIS, MINSA and regions
Constant values, base year 2001

	2003	2004	2005	2006	2007	2008	2009	2010*
SIS								
5-1: PERSONAL Y OBLIGACIONES SOCIALES	5,829,392.04	11,243,100.86	13,282,931.99	14,621,397.92	12,241,936.66	10,861,918.16	11,202,217.05	15,211,650.00
5-3: BIENES Y SERVICIOS	5,216,356.79	2,268,880.46	2,644,101.27	7,208,045.34	19,635,283.01	4,829,609.81	4,892,894.44	7,350,673.07
5-4: OTROS GASTOS CORRIENTES	150,984,869.87	260,872,128.63	230,030,927.74	241,156,613.27	246,803,943.41	342,682,997.84	356,690,262.62	435,905,642.88
6-5: INVERSIONES	0.00	0.00	0.00	0.00	0.00	0.00	595,482.75	1,015,150.95
6-7: OTROS GASTOS DE CAPITAL	428,466.74	650.14	527,664.19	35,407.50	48,834.59	282,362.96	0.00	0.00
Total SIS	162,459,085.45	274,384,760.09	246,485,625.20	263,021,464.04	278,729,997.67	358,656,888.77	373,380,856.86	459,483,116.90
Total SIS (thousands of millions)	162,459	274,385	246,486	263,021	278,730	358,657	373,381	459,483
Growth rate		1.69	0.90	1.07	1.06	1.29	1.04	1.23
MINSA								
5-1: PERSONAL Y OBLIGACIONES SOCIALES	707,394,601.67	720,990,560.86	814,961,093.68	871,731,782.38	871,418,728.98	845,952,571.11	795,891,777.46	995,805,925.96
5-2: OBLIGACIONES PREVISIONALES	163,172,332.89	156,828,253.64	164,195,073.38	163,239,081.42	160,880,921.60	141,320,080.55	166,232,628.79	190,909,879.24
5-3: BIENES Y SERVICIOS	710,146,891.91	667,979,808.85	704,415,062.65	731,123,185.94	784,814,822.20	678,013,453.12	859,413,117.51	1,068,758,935.96
5-4: OTROS GASTOS CORRIENTES	105,455,613.41	168,184,520.28	68,556,699.33	67,841,437.98	10,089,291.37	34,945,063.30	137,422,282.20	57,656,275.36
6-5: INVERSIONES	50,263,092.79	74,080,315.19	103,222,828.18	51,443,133.36	72,650,375.53	54,526,889.06	227,224,081.93	638,393,304.96
6-7: OTROS GASTOS DE CAPITAL	20,386,400.65	25,362,518.44	29,869,586.23	55,802,175.42	102,935,264.72	97,357,644.08	31,914,826.80	0.00
Total MINSA	1,756,818,933.32	1,813,425,977.26	1,885,220,343.45	1,941,180,796.50	2,002,789,404.39	1,852,115,701.23	2,218,098,714.69	2,951,524,321.49
Total MINSA (thousands of millions)	1,756,819	1,813,426	1,885,220	1,941,181	2,002,789	1,852,116	2,218,099	2,951,524
Growth rate		1.03	1.04	1.03	1.03	0.92	1.20	1.33
REGIONS								
5-1: PERSONAL Y OBLIGACIONES SOCIALES	573,143,403.15	691,185,327.08	806,546,020.96	865,780,200.76	851,205,231.44	895,309,159.62	1,096,857,609.31	1,399,221,942.99
5-2: OBLIGACIONES PREVISIONALES	0.00	0.00	0.00	0.00	0.00	0.00	914,217.41	836,279.32
5-3: BIENES Y SERVICIOS	346,332,303.47	333,994,960.21	356,208,408.53	381,442,612.23	387,256,789.39	537,757,901.75	681,889,452.03	973,738,318.32
5-4: OTROS GASTOS CORRIENTES	25,994,973.70	33,236,922.32	43,542,501.16	45,094,013.85	103,047,640.78	104,976,453.44	123,161,336.48	99,054,445.21
6-5: INVERSIONES	39,770,229.60	62,809,606.76	86,159,865.32	187,969,742.02	353,406,701.75	470,496,947.81	401,728,985.58	916,752,495.30
6-7: OTROS GASTOS DE CAPITAL	14,241,342.81	25,464,517.47	28,224,081.06	29,599,478.78	46,917,810.97	88,261,079.19	1,711,415.65	51,172,918.93
Total Regions	999,482,252.74	1,146,691,333.84	1,320,680,877.04	1,509,886,047.63	1,741,834,174.32	2,096,801,541.80	2,306,263,016.46	3,440,776,400.08
Total Regions (thousands of millions)	999,482	1,146,691	1,320,681	1,509,886	1,741,834	2,096,802	2,306,263	3,440,776
Growth rate		1.15	1.15	1.14	1.15	1.20	1.10	1.49
TOTAL	2,918,760,271.50	3,234,502,071.19	3,452,386,845.69	3,714,088,308.17	4,023,353,576.38	4,307,574,131.80	4,897,742,588.01	6,851,783,838.46
TOTAL (thousands of millions)	2,918,760.00	3,234,502.00	3,452,387.00	3,714,088.00	4,023,353.00	4,307,575.00	4,897,743.00	6,851,783.00

Source: MEF, SIAF, several years. Prepared by author.

*PIM: modified initial budget.

Table 6: Comparison of proposed priority interventions list of the SIS (LPIS) and the Basic Insurance Plan (PEAS), to June 2009

<p>SIS Insurance Plans before they were replaced with the LPIS</p> <p>SIS offered five plans:</p> <ol style="list-style-type: none"> 1) Plan A for children aged 0 to 4 years. 2) Plan B children and adolescents aged 5 to 17 years. 3) Plan C for pregnant and puerperal women. 4) Plan D for adults in emergency situations. 5) Plan E for targeted adults, as stipulated by law. 6) Contributive plan in implementation. <p>Prioritized List of Health Interventions – LPIS - in effect.</p> <p>Subsidized: 100 percent coverage for the population living in poverty and extreme poverty, all life stages</p> <p>Semi-subsidized: to 65 years.</p> <p>The main difference in the classification of plans and benefits of the earlier SIS was that they were organized by population groups whereas currently, all people living in poverty and extreme poverty are covered.</p>	<p>Basic Health Insurance Plan, PEAS</p> <p>The entire population living within the national territory...”</p> <p>“... is the <u>prioritized list of insurable conditions and interventions</u>, which, at a minimum, are covered for all those insured by health insurance fund administrators, whether these are public, private or mixed, through a beneficiary plan that contains explicit guarantees for access and quality for all users.” “...permits access to a set of health care interventions...preventative, promotional, treatment and rehabilitative...” (PEAS June 2009).⁹¹</p> <p>Conditions</p> <p><u>I Healthy Population</u></p> <p>Healthy newborn, healthy child, healthy adolescent, healthy adult, healthy older adult</p>
<p>Preventative</p> <ol style="list-style-type: none"> 1. Immunizations for children and adults, in accordance with MINSA guidelines 2. Comprehensive child health care (growth and development, nutrition, breastfeeding), in accordance with MINSA guidelines 3. Screening for eye problems and blindness in children 4. Prevention of cavities (screening, treatment and fluoride application) 5. Reproductive health (counseling and family planning), in accordance with MINSA guidelines 6. Prenatal care 7. Screening, counseling and prevention of sexually-transmitted diseases and HIV-AIDS, in accordance with MINSA guidelines 8. Screening for mental health problems 9. Cancer screening (breast, uterus, prostate) 	<p><u>II Obstetric and Gynecological Conditions</u></p> <p>Incomplete, uncomplicated miscarriage, complicated incomplete miscarriage, normal pregnancy, birth and postpartum period, trophoblastic disease, Hyperemesis gravidarum, ectopic pregnancy, fetal obital disease, hemorrhage during the second half of pregnancy, gestational diabetes, pregnancy complicated by polyhydramnios, fetal-pelvic disproportion, multiple pregnancy, prolonged pregnancy, pregnancy after age 35, maternal infection: HIV, gestational hypertension, pregnancy complicated by Rh isoimmunization (-), delayed intrauterine growth / oligohydramnios, pregnancy complicated by risk for fetal hypoxia, pregnancy complicated by emboli, threat of pre-term birth, pre-term birth, pregnancy complicated by failure to induce delivery/prolonged labor, breech birth, prolapsed cord, perinea tearing, levels III or IV/cervical tearing, postpartum hemorrhage, retention of membranes, puerperal sepsis/postpartum infection,</p>

⁹¹ In <http://www.minsa.gob.pe/portada/aseguramiento/default.html>, consulta al June 23, 2009.

<p>10. Micronutrient supplements for children under five and pregnant women, in accordance with MINSA guidelines</p> <p>Treatment</p> <ol style="list-style-type: none"> 1. Newborn care (normal and complicated) and prematurity. 2. Treatment of eye disorders in children (only strabismus and cataract) 3. Normal delivery and postpartum care 4. Complicated delivery and postpartum care 5. Diagnosis and treatment of acute respiratory infections 6. Diagnosis and treatment of acute diarrheal disease and parasitosis 7. Diagnosis and treatment of infectious and communicable diseases 8. Diagnosis and management of soft tissue wounds (treatment and stitches) 9. Diagnosis and treatment of sprains, dislocations and fractures of the extremities 10. Diagnosis and treatment of medical and surgical emergencies to stabilize patient and/or for a period of 30 days 11. Acute medical conditions of the digestive tract (non-cancerous) 12. Surgical care at the primary care level <p>Rehabilitation</p> <ol style="list-style-type: none"> 1. Rehabilitation therapy for fractures or sprains at the primary care level <p>Some exclusions apply</p>	<p>urinary tract infection in pregnancy, birth and the postpartum period, postpartum period complicated by infection of the surgical wound, genital dystopia, vulvovaginitis, pelvic inflammatory disease, benign diseases of the breast, menopause</p> <p><u>III Pediatric conditions</u></p> <ul style="list-style-type: none"> • <u>Condicions that affect the newborn</u> <p>Newborn affected by birth, newborn affected by maternal conditions, low birthweight, neonatal sepsis, metabolic disorders: neonatal hypoglycemia, hypocalcemia, hypomagnesemia. Non-physiological neonatal jaundice, asphyxia of the newborn, newborn respiratory problems, neonatal seizures, congenital hypothyroidism, Rh/ABO incompatibility in the newborn</p> <ul style="list-style-type: none"> • <u>Conditions that affect children under 10 years</u> <p>Acute respiratory infection, seizures, seizure disorder, congenital hydrocephalitis, immuno-preventable diseases, fever of unknown origin in children under 36 months of age, cleft palate, congenital hip dysplasia, diarrheal disease, parasitosis, malnutrition, nutritional anemia</p> <p><u>IV Cancers (tumors)</u></p> <p>Uterine, fibroid, breast, prostatic hypertrophy, colon, stomach, prostate</p> <p><u>V Communicable diseases</u></p> <p>Extra-hospital pneumonia, pulmonary tuberculosis, extra-pulmonary tuberculosis, tuberculosis with complications, multidrug-resistant tuberculosis, lower urinary tract infection, upper urinary tract infection, HIV, STDs, AIDS, malaria, bartonellosis, classic dengue, hemorrhagic dengue, trypanosomiasis, leishmaniasis, bubonic plague, yellow fever, rabies, hydatid cyst, leprosy, bacterial skin infections, skin and related infections, cutaneous mycosis, cutaneous abscess, brucellosis, chickenpox, hepatitis, conjunctivitis, blepharitis, sties, chalazion, cavities, pulpitis, gingivitis</p> <p><u>VI Non-communicable diseases</u></p> <p>schizophrenia, anxiety, depression, alcoholism</p> <p><u>VII Chronic and degenerative conditions</u></p> <p>Bronchial asthma, uncomplicated diabetes mellitus, hyperthyroidism and hypothyroidism, hyperlipidemia/dyslipidemias, obesity, cataracts, refraction disorders, glaucoma, osteoporosis, osteoarthritis, rheumatoid arthritis, disease of intervertebral discs, Parkinson's disease, epilepsy</p>
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	<p><u>VIII Acute conditions</u></p> <p>Acute appendicitis, acute gastritis, uncomplicated peptic ulcer, hemorrhage of the upper digestive tract, colelithiasis, foreign object in the digestive tract, intestinal blockage, painful back, superficial contusion and trauma wounds, lesions of soft tissues of the arms/legs, fracture of the spinal column and pelvis, fracture of the extremities , several multiple trauma, intracranial trauma, cerebral ischemia, cerebral hemorrhage, lesions associated with domestic violence, urinary lithiasis, organ poisoning-phosphates, foreign body in respiratory tracts, respiratory insufficiency, first-, second- and third-degree burns, heart ischemia</p> <p><u>Types of care covered:</u> diagnosis, treatment and follow-up.</p>
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Source: Alvarado, B. (2009)

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