COLOMBIA: COST EFFECTIVENESS & PRIORITY SETTING CASE STUDY

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Introduction

The rising cost of medical care and the growing number of people unable to afford it threatens the economic and social health (welfare) of any society. At the root of this problem lies the lack of a national health policy and a rational and equitable means of allocating health care resources.

Faced with the social and economic consequences of this irrational system and the lack of a coherent national policy and plan, Colombian legislators passed the Law 100 in 1993. Reformers focused on three fundamental and interrelated health care reform questions: who and what would be covered, how would the reform be financed and how would it be delivered. In order to meet the goal of the Colombian system of a social health insurance, "*deliver to the entire population the services they need within economic constraints* (Report on the Colombian Health Reform and Proposed Master Plan Implementation, 1996)", it was necessary to achieve universal access through the creation of a basic benefit package.

Under the social insurance plan, which is funded through wage taxes and government subsidies, the entire population receives a package of basic health services provided through a health plan. Membership in these plans falls into one of two regimes depending on the income level of the member; the "régimen contributivo" for those that can afford to pay into the system (formal sector workers and wealthier self-employed) and the "régimen subsidiado" for the poor and low income population. Coverage of the régimen contibutivo or contributory regimen, is financed by a contribution of 11% of each memeber´s income as well as contributing an additional 1% of their salaries toward financing of the régimen subsidiado thus introducing an element of redistribution. The régimen subsidado or subsidized regimen is financed through municipalities and central government budget subsidies and the 1% from the wage contribution of the contributory regimen members.

The Law 100 mandates two standard health packages, the Plan Obligatorio de Salud (POS) for the contributing population and the Plan Obligatorio de Salud Subsidiado (POSS) for the subsidized population. The POSS entails a less comprehensive package than the POS (initially) until the year 2000, however both include health promotion and basic preventive care, while the contributory regimen includes curative and emergency services. By the year 2002 the POSS should be entirely converged to the POS in order to meet key goals of the reform which are solidarity and equality.

To improve efficiency and quality every citizen chooses and enrolls in a health plan or Entidad Promotora de Salud (EPS) or Administradoras del Regimen Subsidiado (ARS) the later specifically created to serve the needs of the subsidized members. They may be public or private organizations and may provide services directly or through other institutions and are responsible for the provision of standard health benefits. Under this approach there is a fixed risk adjusted premium – unidad de pago por capitación (UPC), based on age and sex, that follows each enrollee to their chosen plan. Health plans contract with providers to provide services and compete for enrollees based on quality since they cannot change the price of the premium.

In order to achieve the goal of providing increased access to services there must be an adequate supply of both human and physical resources, thus it is necessary that hospitals

and clinics be appropriately distributed so that travel distance is not the major barrier to access. Assuring financial soundness in the system and improving efficiency payment systems with proper incentives are also necessary. The prevalent payment mechanism in Colombia has traditionally been the fee-for-service system which encourages the increased use of curative services and results in cost inflation. The new health system must move away from that and implement alternative payment methods such as capitation, per admission and blended payments. The development of succesful payment methods is also contingent on the development of appropriate payment, clinical and costing information systems in order to correctly calculate payment rates.

The first phase of this report addresses and analyzes key topics related to designing the basic health package for Colombia and using co-payments in the new system. The report is based on available data and a review of existing literature.

The following paragraphs describe the specific processes undertaken to create the basic health package or the Plan Obligatorio de Salud (POS). The universal health care benefits package was initially developed[1] to embrace essential public health and clinical services based on the epidemiological profile of the country (patterns of morbidity and mortality) and the benefits that would substantially reduce the burden of disease, all at affordable costs. The POS was conceived as an instrument that would achieve universal coverage, ensure that health care be provided to all in an equitable manner and promote solidarity. In order to attain these goals certain implications could not be ignored. For example, the POS could not ration services in any way, therefore, when defining the POS it was necessary to be rational in its content and financing, otherwise it would simply be converted into a list of acquired rights rather than actual delivered services. Secondly, the POS should represent paired procedure/interventions in order to respond to the patterns of morbidity and mortality according to age and sex. Additionally, the paired procedures/interventions should be based on the appropriate available technology in the country.

CRITERIA USED TO DETERMINE HEALTH NEEDS AND DEMANDS OF THE POPULATION

In order to determine the basic health package it was necessary to first know what the needs and demands of the population were and then establish which services could be provided most cost-effectively given the financial constraints of the system. One of the most difficult challenges that policy makers face is striking a balance between available resources and the health needs and demands of a population; this implies establishing priorities while keeping in mind how the services will be delivered, the state of the infrastructure, and the availability of necessary inputs and appropriate technology.

In general terms, the essential health package was established by assessing the specific burden of disease in Colombia and by formulating a series of cost-effective public health and clinical interventions. The burden of disease was evaluated by a specific team within the Ministry of Health using the concept of disability adjusted life years (DALYs). The interventions were chosen on the basis of reducing morbidity and mortality consequently increasing the quality and life expectancy of an individual. Within the context of the

[1] Decisions about what should be included in the POS and POSS was initially undertaken by a health sector reform team in 1994

burden of disease methodology, changes in the pattern of demand and supply in health care were also taken into consideration given that Colombia was in the midst of both a demographic and epidemiological transition resulting in a marked heterogeneity of disease patterns. The aging population, with an increasing disease load and more chronic degenerative disorders would require costly and complicated treatments. The population also needed prevention programs, treatment of infectious diseases and reproductive problems related to an increase in births. Under these conditions, the health needs of the population could continue to grow at a more rapid rate than the health system was capable of responding to. The cost-effectiveness calculations were based on the model suggested by the World Development Report: Investing in Health, 1993.

The data for obtaining the morbidity and mortality information consisted of ambulatory and hospitalization statistics taken from the National Department of Statistics (DANE) and from the Ministry of Health. The data consisted of 183 groups of diseases encompassing the 999 causes of morbidity and mortality according to the International Classification of Disease (ICD-9). Later these 183 groups were organized according to their importance at a national level, and were adjusted and differentiated by age and sex groups. The Ministry of Health later developed a list of 53 groups representing more than 89% of total morbidity and mortality by age and sex, and assigned ICD-9 codes to each corresponding group. Upon completing this exercise, a list of 480 diseases was produced. This ranking was a result of the outcomes measured in DALYS or AVISAs (Años de Vida Saludables Ajustados por Discapacidad).

The estimates for the AVISAs were calculated based on average observed mortality during 1989-1991 and according to different epidemiological pattern of diseases (illnesses and deaths) in other Latin American countries, particularly those of Mexico. In addition, four social values were considered: i) the time lost due to a premature death; ii) the value of one healthy year of life according to age; iii) the value of time lost in the future due to an illness or lesion in the present, and iv) disability weights and their average duration and severity. Due to the lack of information available in Colombia to calculate the AVISAs, in many instances assumptions were based on rules applied to a similar study carried out in Mexico largely because of the socioeconomic similarities and health indicators.

In the overall assessment of the burden of disease, there were important variations among sex and age groups. Interestingly, the data showed that by age and sex the number of life years lost is greater among men in all of the age groups, more so in the 15-44 years than women: 1.9 million AVISAs versus 0.6 million which is equivalent to a male/female ratio of 3:9 This difference is primarily due to injury and violence. A large percentage of the number of years lost for women were attributed to perinatal problems related to the mothers health and the quality of services received during pregnancy, delivery and postpartum make up (La Carga de la Enfermedad en Colombia, 1994).

CRITERIA USED FOR DETERMINING INTERVENTIONS

The emphasis on clinical efficacy, incidence and utilization, lethality rates, clinician expert opinion and cost-effectiveness were the basic criteria used to select the services covered under the benefit package. A number of factors prevented fully determining these criteria (e.g., the reluctance of some institutions to provide information). However, the lack of

information particularly in the area of utilization and cost of services made obtaining this data most difficult. This section will present an overview of the important steps taken in the ranking procedure in order to determine the interventions included in the package.

From the list of the 480 diseases, each disease or medical condition (e.g., appendicitis) was paired with one or more therapies used to treat the condition (e.g., appendectomy) according to the classification used in the Current Procedural Terminology, Fourth Edition (CPT-4). The CPT-4 as well as the ICD-9 codes were used to facilitate actuarial analysis of the final priority list. In addition, the team working on the basic package was aware of the limitations imposed in using the CPT-4 and ICD-9 because of the broad descriptions used and a their lack of specificity. Given the time constraints and political pressure these limitations were not overcome though it was clearly stated that this issue would require additional specification.

The lack of specificity in large part reflects the reliance on ICD-9 and CPT-4 codes. Establishing the condition/treatment pairs involved quite an intricate process, as there was an abscence of a previous model in the country but also the review of the research literature and of previous experiments (such as the Oregon case) indicated inconclusive reports as well as insufficient data. That explains why much of the information had to be obtained from physcian testimony and assumptions due to deficient clinical data. To give an idea about some of the missing information, co-morbidity was not measured for example. This is an important point since the presence of other conditions can often affect the medical outcomes of treatments. There was also a lack of current medical-effectiveness data. The overall impression is that many types of patients and treatments are encompassed within a broad description, ranging from simple treatments to potentially life-threatening conditions. The most appropriate route for establishing these clinical practice guidelines would probably involve duly constituted panels using an appropriate concensus process to estimate the outcomes and maybe incorporate some type of public preference data as was done in the Oregon case. Without a gold standard of validity there can be no “right” way to set health priorities nor a single “correct” list. These pririties or lists will be flawed and inevitably will change over time. In any case, the overriding merit of the process created the awareness of the need for improved information and provided a wealth of baseline information for future efforts to set health care priorities.

Later, a sample of a standard protocol to treat diseases was established (Annex 1). The work was conducted by a number of medical specialist in the country (pediatricians, internist, gynocologist-obstetrician, orthopedist and epidemiologists). The standard protocol was based on observing the same intervention 10 times in different hospitals (public and private) throughout the country. The purpose of this exercise was to define an average protocol for treating diseases including procedures and interventions for the creation of clinical practice guidelines. The individual costs of specific interventions were obtained by analyzing fixed and variable costs incurred by a sample of private and public hospitals and the Social Security Institute (ISS). The interventions considered in the package required minimum elements such as the availability of appropriate technology needed to treat the diseases based on routine medical practice in the country during one year of treatment.

In a later stage, and in order to prioritize, it was necessary to determine the cost-effectiveness of these 183 interventions and to determine a co-financing mechanisms for the interventions considered costly, less frequent and least cost-effective. The estimates of cost-effectiveness were based primarily on empirical evidence due to the amount of time and information that was available. It was also stated that the prioritizing process was a formative step requiring constant monitoring and reassessment.

The most cost-effective interventions responding to a large share of the burden of disease (AVISAs) were clustered (POS contained 33 clusters). The design was practical because the services were arranged by level of complexity (I, III and III level hospitals), by related activities and strategies for delivery, and by the costs of the services.

In order to determine the effectiveness of each cluster several steps were taken into account:

1. The relative weight of the AVISAs at a national level and their representativeness within each cluster.
2. Estimates of actual coverage of the interventions considered at a national level. Coverage information was obtained through the National Household Survey 1992, National Health Survey 1980, Knowledge Attitude and Practice Survey, Demographic and Health Survey, Profamilia Survey, ISS publications and the Ministry of Health.
3. Expected coverage for the year 2000 was also estimated based on existing infrastructure, delivery systems and the demand for services based on the changes that the Law 100 would make for providing services.
4. The efficacy of each intervention was estimated based on international calculations, particularly those in Latin America. Basically, the efficacy of each intervention was calculated where optimal clinical conditions can be achieved, this means evaluating how each intervention contributes in postponing death and/or diminishing the disability the disease can generate with or without treatment. This implies evaluating the AVISAs lost due to premature death and disability when a certain intervention is applied and comparing the same AVISAs lost if no intervention were applied.
5. The effectiveness of the interventions was also estimated. Based on observed conditions in the country, certain interventions can yield different expected results on the health of a patient according to the efficacy of these. This means that patients can or cannot thoroughly understand the physicians instructions, the supply of services is not within reach of everyone and/or that there are deficiencies in the allocation of services or in there administration that don't allow the population to demand services. This deals more with the effectiveness of the delivery of health services.
6. Medical diagnostic precision was also evaluated. This diagnostic precision is measured by the number of cases treated and diagnosed correctly in relation to the total number of cases treated. This precision was estimated using information from other Latin American countries, the World Bank Report, the Oregon Health Services Commission estimates, and specific information from Mexico.
7. AVISAs gained by avoiding premature deaths and reducing disability adjusted by diagnostic precision.
8. AVISAs gained considering an increase in coverage for the year 2000 (expected coverage – actual coverage).

9. The coefficient for the cost-effectiveness was calculated by dividing the annual cost per person per treatment by the AVISAs gained yearly by person by treatment adjusted by effectiveness. This method allows one to make a comparison between different treatments and to prioritize the contents for the basic package.

Each health cluster included interventions that could be given to the same individual, at the same time, and using the same mode of delivery (health center, hospital). As a result the clusters developed were able to affect various population groups directly. For example, interventions able to control major diseases in early childhood were included, such as immunizations, the school health program, family planning, management of the sick child, prenatal care and delivery. Tuberculosis treatment as well as the treatment of high risk individuals with sexually transmitted diseases were among the major risk factors affecting adults. Among the most cost-effective interventions regarding women were those associated with reproduction: family planning, prenatal and delivery care, and breast feeding promotion. Table 1 illustrates the clusters of interventions provided in the benefit package.

Many of the activities and resources contained in the POS are directed towards those population groups located at two extremes; 57.1% of the resources are geared towards those diseases that affect older individuals (e.g., neoplasias, neuro-psychiatric diseases, respiratory diseases, arthirtis, cronic obstructive pulmonary disease, cardiovascular diseases and diabetes); 15.8% are interventions related to women´s reproductive issues and to the health of the baby (prenatal care,normal and high risk delivery, cervical-uterine cancer prevention, insertion of IUD, oral contraceptives and salpingoplastia); 20.8% of interventions are for children older than one year and less than 15, and the remaining 6.3% of the resources go to visual and oral health inerventions.

Table 1

Clusters of Interventions
Health Centers
AIDS Prevention
Expanded Program in Immunizations
School Health Program
Promotion of Breast feeding
Non-surgical Family Planning
Level I Hospitals and Clinics
Short course chemotherapy for tuberculosis
Treatment of Sexually Transmitted Diseases for High Risk Groups
Management of the sick child (Tx of ARI &ADI)
Treatment for Intestinal Parasites in Children
Treatment for Upper Respiratory Infections in Adults
Prenatal Care
Insertion of IUD
Diabetes control
Treatment of Cardiovascular Diseases

Chronic Respiratory Infections
Prevention of Urinary Infections
Arthritis
General Consultation
Minor Trauma (emergency)
Basic Dental Health
Eye Care for Adults
Neuro-Psychiatric Diseases
Prevention of Cervical-Uterine Cancer

II & III Level Hospitals

Chronic Diarrhea and Dysentery in Children
Treatment for Respiratory complications in Adults
Treatment for Respiratory complications in children
Normal Delivery
High Risk Delivery and Intermediary Perinatal care
Vasectomy
Salpyngoplasia
Treatment for Epilepsy
Surgery for Severe Appendicitis
Surgery for Strangulated Hernia
Major Trauma (emergency)
Neuro-Psychiatric Disease
Other Neoplasias
Meningitis

It is worth noting however, that these were the original benefits and services provided in the POS. In the final stage of negotiation the POS was considerably expanded due to the fact that the ISS refused to accept the initial POS and successfully demanded that it be expanded to include virtually all services in the ISS´s existing package. At this point a new study was not commissioned, rather the preferences of other individuals, providers and stakeholders in the system were given serious consideration, thus technical expertise gave way to political pressure compromising the fundamental premises of the original package. Interestingly, by this point the discussion had become a political one and the technical experts were no longer consulted including the medical establishment. The revision or "hand adjustments" made encompassed a simplification of the earlier more intricate methodology. After a process of serious lobbying, the National Council for Social Security in Health (Concejo Nacional de la Seguirdad Social en Salud) through an affirmative ruling, ratified the POS as requested by the ISS. As a result the POS covers basically all health interventions except for a number of services that are specifically excluded[2].

Table 2 demonstrates the differences between the POS and the POSS (Plan Obligatorio de Salud Subsidiado). Under the contributory regimen almost all health interventions are covered, whereas the POSS covers only essential clinical services, a few surgeries and the treatment of catastrophic diseases. The major difference between he two packages can be seen in the provision of services in the secondary and tertiary level of care.

Table 2
Benefits and Services Provided Under the Contributory and Subsidized Regimen

Benefits		Contributory	Subsidized
I. Public Health Education	**1) Health Promotion**	**All**	**All**
II. Public Health Outreach	**1) Preventive Programs**	**All**	**All**
III. Ambulatory Services	**1) Reproductive Health**	**All**	**All**
	2) Child Health	**All**	**All**
	3) Infectious diseases	**All**	**All**
	4) Vector Borne Diseases	**All**	**All**
	5) Chronic Diseases	**All**	**1) Hypertension** **2) Diabetes** **3) Asthma** **4) Neuro-psychiatric**
	6) Injuries	**All**	**1) Non-complicated fractures** **2) Minor burns** **3) Minor trauma**
IV. Dental Care	**1)Prevention and treatment**	**All**	**1) Fluoridation** **2) Prophylaxis** **3) Emergencies** **4) Cavity Occlusion**
V. Inpatient Services	**1) Primary level**	**All**	**1) Uncomplicated**

[2] Excluded Treatments and Procedures: Cosmetic surgery, nutritional programs for aesthetic reasons, infertility treatments, experimental drugs or treatments, rest or sleeping cures, support hose, wheelchairs, orthotics, back and leg brace, contact lenses, long term psychiatric or psychotherapy, dental prosthesis, periodontics and orthodonture, and curative care in terminal stage diseases (other than the managment of pain).

Hospitalization			**delivery** **2) Serious pneumonia** **3) Peptic Ulcer**
	2) Secondary level	**All**	**1) Complicated delivery** **2) Newborns** **3) Infants < 1 year** **4) GI Bleeding** **5) Prostate problems**
	3) Tertiary level	**All**	**1) Intensive Care**
VI. Surgical Services	**1) Primary Care**	**All**	**1) Minor wounds** **2) Tubal ligation** **3) Vasectomy**
	2) Secondary level	**All**	**1) Herniorrhapy** **2) Tonsillectomy** **3) Appendectomy** **4) Cesarean Section** **5) Cholecystectomy**
	1) Tertiary level	**All**	**1) Cardiac surgery** **2) Neurosurgery** **3) Hip Replacement** **4) Complicated Fractures**
VII. Catastrophic Illnesses	**1) Congenital malformations**	**All**	**1) Corrective surgery**
	2) Organ Transplant	**All**	**1) Corneal** **2) Renal** **3) Bone Marrow** **4) Heart**
	3) Major Trauma	**All**	**1) Emergency care** **2) Major trauma** **3) Extensive burns**
	4) Cancer	**All**	**All**
	5) AIDS	**All**	**All**
	6) Services with high level of complexity	**Included**	**Excluded**

Source: Report on Colombia Health Reform and Proposed Master Implementation Plan, 1996

One must point out that, fundamental to the success of the basic benefit package to serve the poor was not necessarily the introduction of an enlarged basic package, nor was this to impede further affiliation or expanding coverage, most important to consider was that the adequate funding for cross-subsidization be available. Universal coverage and equal access to basic health care depend on the adequacy of funding and the appropriate financing methods established. The POSS was designed as an interim benefit package until adequate resources become available, the ultimate goal is to gradually increase the services covered under the POSS until it is identical to the POS, finances allowing. Inorder to do so, the funds from the contributory population must be sufficient to cover the risk adjusted premium for their benefits and in a system which has solidarity principles, the funds must provide a cross subsidy to the poor population. The cross subsidy is not likely to cover all the costs of the premiums of the poor population, therefore it is necessary that the government assure adequate funds from general tax revenues to finance the basic package. In order for this system to function effectively, steps such as improved collection

mechanisms and methods for the transfer of funds targeted for this purpose,should be taken to ensure further affiliation of the undeserved population.

In late July of 1994, prior to the change of government, final efforts were made to try to dissuade the political decision makers, despite the opposition, from making final decisions without seriously considering the basic package on the basis of the burden of disease study and the cost-effectiveness criteria. The essential package presented included 15 preventive services, 29 clinical treatments, and 6 surgical interventions. A conclusion was made that if implemented on a national basis, the package would avert 2.42 million DALYs or AVISA´s in the year 2000; 80% through essential clinical services and 20% through public health intervention and health education. This would represent a reduction of 44.8% in the burden of disease, on the basis of the total DALYs observed lost during 1990**.** The estimated cost in 1994 for the delivery of this package, assuming a health services coverage of 60%, was US$67.02 per capita per year. This figure did not include the per capita cost for administrative services and coverage for catastrophic illnesses at tertiary care facilities (Escobar M.L., 1994).

The difference in the proportion of total costs of women´s and men´s health services represented in the basic health package were not explicitly calculated. The benefits that were included were intended to achieve a standard of good health through cost-effective public health and clinical interventions. The POS was intended to meet the health requirements of *eventually* all Colombians in the initial years of the reform, until the POSS converges to the POS by the year 2002. The subsidized package or POSS for the targeted population, containing fewer services than the full POS, was to include health services such as promotional health, some specific clinical and surgical services and the treatment of medical conditions considered financially catastrophic for families. Both the POS and POSS were intended to provide comprehensive individual benefits as a whole (family coverage) and not necessarily cover services related to women´s and men´s health in particular.

Under the new law however, the government gave priority to vulnerable groups in the population such as mothers and infants placing a strong emphasis on preventive and promotional health services. The recipients of an already existing program aimed at addressing the needs of this particular population group, Programa de Atención Materno Infantil (PAMI) or Maternal and Child Health Care Plan, were automatically enrolled in the POSS. The concept here is that while the POS and POSS provide indivicual benefits, the public health programs aimed at the larger population are covered under the PAMI and also the PAB or Plan de Atención Básica. These programs are intended to complement the POS and POSS. The goal of the PAMI program in particular was and is to provide government funded services for pregnant women, for their deliveries and for their children up to one year of age. The program is financed with one percent of the resources derived from the solidarity account in the “Fondo de Solidaridad y Garantia”. Issues such as high infant and maternal mortality and low coverage of related services in some regions were addressed with highly cost-effective interventions to prevent mortality and disability of related causes. The cost-effective interventions covered by PAMI include:

1. Pregnancy, including health, education, nutrition, dental health and 6 prenatal visits.
2. Delivery, including normal delivery, high risk delivery and cesarean section

3. Infant care, including follow-up of newborns up to age one year, nutrition, breast feeding programs, immunizations, outpatient services and hospital treatment for acute respiratory infections and diarrhea.

In addition to the basic benefit package covered by the POS, the majority of preventive and promotional services (PAB - plan de atención básica or general public health programs) or complementary services continue to be provided, financed and delivered by the Ministry of Health. These type of programs cover services that provide positive externalities for the whole community including services linked to major activities related to health promotion, outreach programs, school health programs and environmental programs. As previously mentioned PAMI focuses on maternal and child health programs. Extra services in the form of complementary plans and/or Planes de Medicina Prepagada are attractive to a defined segment of the population and offer additional services not included in the POS, such as medical and hotel services (medical treatment for aesthetic purposes or private rooms and suites in the event of hospitalization), and services not considered essential in the POS. These services, by definition, should complement the services covered in the POS. However, these plans are not always defined as such and as a result Colombians with higher incomes have access to higher quality services than those with only the POS. One might infer that the focus here is on curative care while the public health programs maintain the balance by providing the majority of preventive and promotional services. Once again, it is difficult to ascertain the balance of these services, and to know if they are curative, preventive and promotional, and how they pertain to women and men's health (excluding PAMI).

THE VALIDATING PROCESS

The discussions about the basic health package in the Colombian Congress had been undoubtedly the most controversial due to its radical conversion from the existing system and to the fundamental axiom that all persons have a right to basic health care. As a result, in the initial stages of the reform process, the medical establishment consequently played a major role in setting the stage for the design of the basic benefit package. Apart from the representatives from Congress and other public sector personnel, the private sector was also heavily represented by medical personnel. Among those were the pharmaceutical companies, the Colombian Medical Association, the Colombian Medical Federation, the Colombian Association for Hospitals and Clinics and the National Academy of Medicine. In order to validate the initial results of the basic health package, health care professionals (doctors, epidemiologists and public health specialist), academics from different universities in the country, personnel from the regional health services, ISS and private sector insurers among others, were invited to a workshop to discuss the definition and the prioritization process of the treatments. It was explained from the start that this was an elaborate, systematic effort for prioritizing health services within a limited budget.

The outcome was rather controversial as many physicians could not agree on the protocols established nor on the value of including some interventions and excluding others. This, they concluded, was in violation to their code of ethics. On the other hand others that were present endorsed the process although the majority objected to the plan´s scope or content, the process and or the implications of the plan. Advocates of the project emphasized the political and long-range context in which the basic package should be perceived and

understood; as part of a total design to enhance universal access to all and as a major health care system reform affecting all parties. Critics often misconstrued this context by treating the list items as a final product. The package presented was meant to initiate a long process of debate, reassessment and negotiation, with the ultimate political goal of a national system of universal health care. If at some point it was to be successfully defined and implemented then it would be on its way to eliminating wasteful spending on ineffective procedures. The critics of the package expended energies pointing out the flaws with arguments that the contents were far from reality and that this was an explicit rationing scheme. The critics failed to recognize the implicit rationing which already was occurring in various forms, such as rationing based on income, or lack of access.

Other questions that were addressed in reviewing the whole process of defining the basic health package follow:
Do other avenues to universal health need to be explored? Does prioritizing interventions reinforce a two tier system where two standards of medical care evoke, with the lower standard to those who are targeted?
Would an increase in access lead to increase costs? After all, an increment in access will lead to a greater use of some services

COPAYMENTS

The Law 100 specified the need to collect user fees and co-payments as both a way of reducing an unnecesary demand for services and also as a way of financing services respectively.
Thus, co-payments specifically, was not the mecanisms used to regulate demand, rather they along with the user fees, complemented the payment mecanisms used in order to control unnecessary services. Additionally, the user fees in particular, were established in such a way that they would discourage people from using services unnecessarily thus reducing the demand for services. Co-payments on the other hand, play a double role - they help finance services and control demand at the same time. They are primarily used in institutions where strict cost controls are applied. It is important to point out that the effect of both these mecanisms on the lower strata of the population will be to control the use of services, while in a higher social strata these can be useful co-financing mecanisms especially for those diseases that this strata can pay for without significantly affecting their income.

The Law 100 also established that co-payments be applied only to the dependents of the worker affiliated to the system (their family members) and to those activities not subject to user fees. This distinction of charging co-payments to the dependents only was based on a political decision, as a way of satisfying the opposition (the trade union). Interestingly, the opposition when affiliated to the ISS never made these type of payments nor does the ISS obey the Law with regard to user fees and co-payments giving them an unfair competitive advantage over the other EPS.

These co-payments were meant to help finanace the new system but also as a way to teach the user to make reasonable and rational use of services. The criteria used to define how much an individual pays was done according to their ability to pay and to their socioeconomic stratification, such as those used by the public services or other methods

such as the SISBEN (Sistem for Identification of Government Subsidies Recipients). This was also done so that the users (especially the poor) would not encounter any barriers to access services. The co-payments apply to both the contributory regimen as well as the subsidized regimen. They also apply to complementary plans. Co-payments and user fees can never be charged simultaneously.

In 1994 the CNSS authorized the Entidades Promotoras de Salud (Health Plans) to collect user fees and co-payments totaling up to maximum $8,000 pesos per person per year, on average. The co-payments are obligatory for all dependents, for specific procedures or interventions[3]. They amount to 10% of the charge for the services for strata 1,2 and 3 and 20% for the higher strata (4,5 and 6), see Table 3. After one year of affiliation the EPS can reduce the co-payment to half of what was previously established, 5% for strata 1,2 and 3 and 10% for strat 4, 5 and 6. The application of user fees to control expenditure and utilization have been far more popular than the co-payments. For example in 1995, no EPS levied any co-payments, they have the legal right either to use them or not to and if they prefer not to use them to help finance their provision of services they shoulf not be forced to.

Table 3

User Fees	**Socioeconomic Strata**					
Activity-procedure-intervention	**1**	**2**	**3**	**4**	**5**	**6**
1) general consult	10%	10%	10%	20%	20%	20%
2) specialized consult	10%	10%	10%	20%	20%	20%
3) ambulatory prescriptions	10%	10%	10%	20%	20%	20%
Copayments						
Activity-procedure-intervention	10%	10%	10%	20%	20%	20%
1) lab tests, x-rays and other diagnostic procedures	10%	10%	10%	20%	20%	20%
2) orthodoncy	10%	10%	10%	20%	20%	20%
3) ambulatory and hospital surgeries	10%	10%	10%	20%	20%	20%

[3] Diagnostic services (lab tests, x-rays...); orthodontic procedues and; ambulatory surgery and hospitalizations.

LESSONS LEARNED

Colombia experienced a radical change in its health care system within a relatively short period of time. It was able to accomplish this and has withstood the political pressures of five different Ministers of Health and two changes of government. This is to be applauded. However, because the health care reform in Colombia is ambitious and innovative and of great interest both here and abroad, when recommending reform strategies for other governments initiating this kind of process it would be worthwhile for them to consider the following "a priori" recommendations:

- A reform of this dimension requires a wide variety of data from many different sources in order to carry out all the established objectives. In the case of constructing a basic health package it would be useful for countries to gather the following type of information before beginning: mortality, morbidity, disability and burden of disease estimates by age/sex, region and if urban or rural; rates of utilization for general and ambulatory and inpatient services by age/sex, region and if urban or rural; hospital occupancy rates and service costs; and finally national health accounts data on total expenditures and flow of funds in order to gaurantee proper funding of the package and to accommodate to possible fiscal constraints and more importantly to avoid political manipulation of the package.
- Once a package is established there are several adjustments that must considered. For example, if a country faces limited resources and is unable to initially include all services within the package then a selection criteria might be introduced in order to expand the benefits. These might include the clinical efficacy of an intervention, the incidence and utilization, the lethality, expert opinion by different clinicians, the cost-effectiveness of an intervention and more ideally, social preferences or the value judgements of society regarding certain interventions.

On a larger scale and based on the Colombian objectives of universal converage and access it is important for the POSS to acheive convergence with the POS. In order to achieve this we recommend that there be a re-assessment of the cost-effectiveness methodology with a more thourough revision of both cost and the burden of disease. A comprehensive assessment of the financing and contents of the packages including the PAB and the PAMI, and an evaluation of the cost-effectiveness interventions to be included in the next year or two need to be established. Finally, as was initially created, a specific group or task force needs to be established in order to continually assess the content of the package, its impact on the population and its costs. By doing this adjustments could be made on a regular basis or when deemed necessary or the UPC could be increased based on technical foundations and not political pressures.

In reference to this study's particular objective of looking at gender specific issues, it is difficult to determine whether or not women's health issues should be considered in an explicit fashion. The way the Law 100 was conceived did not consider this in such a particular way, although priority was given to the most vulnerable population groups in which poor women are included. Based on the experience of developing a basic health package for an entire population, whether or not to construct one for women in particular might prove to be an easier tasks, primarily because of their risk factors and patterns of

utilization of services. On the other hand it might be quite cumbersome for policy makers to have to deal with different packages especially when monitoring and evaluating their progress. It also might prove more difficult from a financial point of view as it is hard to keep track of the flow of resources to different population groups.

ACCESS AND UTILIZATION OF HEALTH SERVICES AFTER THE 1993 HEALTH REFORM IN COLOMBIA

In the following section we take a closer look at this issue of access and utilization of health services of not only women but of the entire population and their impact since the introduction of the reform. The risk adjustment mechnism is also analyzed in order to determine if it has been adequate in setting the capitated amount to be paid to insurers and if co-payments have had any impact on access or on the utilization of care. We summarize the major objectives that were studied and give a brief overview of the most important conclusions dealing with these issues mentioned. A more detailed description of this entire section is available in the chapter that follows. Perhaps after careful analysis, instruments for focusing on women's health issues may be developed if proven worthwhile and cost-effective.

Five specific objectives were analyzed. Firstly, the the effect on access to services is analyzed by gender when considering the basic benefit package to the subsidized population. Since there is no existing comparable data before or after the implementation of the Law 100, the differences between those affiliated and the non-affiliated are analyzed while controlling for the effect of other variables related to the socio-economic characteristics of the individual.

The second objective evalutes if the effect on access to services has been different for different socio-economic groups. The third objective analyzes if the access to services of individuals in different socio-economic levels is different to those already affiliated to the subsidized regimen when compared to those not yet affiliated (vinculados). The fourth objective evaluates the way in which the UPC for the subsidized regimen has been adjusted correctly and if it has prevented risk selection among the insurance companies. Additionally, the risk adjustment is also analyed by regions in order to determine if any risk selection is taking place. Finally, the issue of co-payments is addressed in order to determine if it has been an effective instrument in rationing the use of services.

The objectives just mentioned are addressed in the following manner. Insofar as access is concerned it is important to consider how other facotrs affect this variable such as gender, state of affiliation, household income and type of insurer. We begin by looking at the need to access services and how this relates to the utilization of services when considering the variable mentioned. Apart from the need to access services, other factors also affect directly or indirectly the utilization of services. Therefore we also take into consideration other factors such as employment conditions, the availability of basic services in the household and other sector policies. If these factors mentioned are not taken into account when analyzing access and utilization of services, one can easily conclude erroneous or biased results. It is important to note that some and not all of these factors will affect access.

In order to incorporate this methodology in the study and achieve the objectives mentioned, this section is divided into five parts of which this short introduction is the first. The second part describes the populations health perception and analyzes the relationship it may have with the utilization of services. The third section incorporates the variables that

measure the state of health while considering other socio-economic variable in trying to explain access and the rate of utilization. This is also divided into two parts, the first formally estimates a utilization of services model where services are described in detail and differences in the types of services used by gender, income, affiliation and publicor private insurer are analyzed. The second part analyzes the relationship between access, quality and the restrictions to affiliate. Additionally, access and quality are analyzed in order to determine if these weigh heavily on the utilization of services. Finally the relationship between gender and the type of insurance company (private or public), state of affilation and income are analyzed in relation to utilization of services.

The fourth part analyzes the risk adjustment issue and the effect of co-payments on the subsidized regimen. The fifth part contains the conclusions.

It is important to point out that the core of the analysis is the subsidized regimen and in sections two and three the results obtained are compared to the contributory regime and to the non-affiliated population. This is done in order toevaluate the effect of introducing the POSS and to see how this has affected access and the utilization of services in the subsidized regimen. As already mentioned, there are no other existing data sources that allow us to measure these changes effectively. The main source of information comes from the 1997 Quality of Life Survey (ECV-97). Nevertheless, in order to complement this data obtained from the survey, two other data bases were used that deal with affilation data from two Administradoras del Regimen Subsidiado – ARS (subsidized regimen administrators) in Bogotá. The monetary value of services was obtained from these two data bases as this variable is no included in the ECV-97 and were used as points of comparison for the results obtained when analyzing the section on risk selection.

GENERAL CONCLUSIONS

The following paragraphs briefly summarize the conclusions. As proposed, the general health conditions of the population were analyzed as a determinant of the need to access services. We conclude that:

1. Women perceive the need to access services much more than men, however other characteristics also affect patterns of use.
2. Those individuals affiliated to the subsidized regimen have a greater need to access services than those not affiliated, it seems that the initial perception of the state of health of an individual affects his or her decision to affiliate themselves to the subsidized regimen. Those affiliated to the contributory regimen have a better perception of their state of health. Nevertheless, the rate of utilization of services for those affiliated to the contributory regimen is far greater than those affiliated to the subsidized regimen or those not affiliated at all. Those non-affiliates who perceive themselves in healthy conditions present a greater use of services than those affiliated to the subsidized regimen.
3. The perception about the state of health improves as income rises just as the rate of utilization increases directly with the level of income.

Secondly, the effect on the rate of utilization was also analyzed considering additional variables such as the need to access, gender, income and affiliation into the system. These additional variables allow us to determine how socio-economic characteristics such as age,

employment, availability of basic services in the household, the way in which the UPC-S is adjusted and if an insurance company is private or public affect the individuals use of services. We conclude that:

4. When controlling the effect of other variables, we found that gender is highly correlated to the use of services. The mayor impact found corresponds to the initial state of health, the quality of services, income, age and the state of affiliation. Nevertheless, when analyzed by gender, we found that an inferior quality in the delivery of services is much more prominent when it come to women as opposed to men. Also the general state of health, affiliation and literacy rate in women also affects utilization of services.
5. Major differences in the specific types of services used were not found when analyzing gender, income, state of affiliation or type of insurers.

In analyzing the effect of quality, ways of accessing services or restrictions on access according to gender, state of affiliation and type of insurer (public or private) on the utilization of services we conclude that:

6. Although this question had a very low response rate in the ECV-97, those individuals that did respond said that the quality of services delivered was generally good. Differences were seen however when talking about private or public insurers. The private insurers seem to provide more quality services than the public insurers. No significant differences in quality were found by gender.
7. It appears that those individuals affiliated to pre-paid health plans in the contributory regimen have much greater access and utilization of services. No differences were detected by gender nor type of insurer.
8. The origin of resources in order to pay for the affiliation is closely related to the employment position an individual has within the household. This variable introduces major differences in access, according to the state of affiliation, type of insurer and gender. Particularly, whether or not an individual is a dependent on the worker affiliated plays a major rol on access. In the case of women, there is greater dependency on the affilated worker, less resources come from them or from their employer. This shows a correlation between a woman´s position within the household and her potential for affiliation.
9. The main motive for not affiliating is due to the lack of resources, but just as important is the lack of formal employment.
10. Differences in access are also noted due to the different coverage provided by the different health plans.
11. The analysis on the rate of utilization by gender shows that the differences by type of insurers, state of affilation and household income are the same, independent of sex.

The analysis on risk adjustment and the effect on the rate of utilization of services for the subsidized regimen show that:

12. The current UPC-S scheme is insufficient for insurers for compensting high cost individuals thus not creating the necessary incentives for exercising risk selection of individuals. However there does exist the sufficient amount of information so that insurers can carry out risk selection. Also, the risk adjustment variables presently usedfor the subsidized regimen leave much to be desired, the formula currently used has much to gain.

13. As far as co-payments are concerned, they have played an important role in rationing the use of services.
14. Co-payments capture the effect that other variables may have on the value of services used by the individual. These include literacy rate, employment characteristics and the availability of basic services in the household.
15. The value of services as foreseen by public entiities for those individuals affiliated to the subsidized regimen is greater than those foreseen by private entities.

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