Desk Review of Macroeconomics and Health Studies Undertaken in Nepal over the Period of January 1999 – August 2004

BC Rajendra Kumar[a] and Banmali P[a]

Abstract

Introduction A healthy population contributes to poverty reduction and long-term economic growth of a country. As there is a need of equitable access to health care for attainment of an acceptable level of health and better quality of life, strategic planning of investments across health and health related sectors to improve the health status of pro-poor is most important.

Objectives The general objective of this study was to review the existing macroeconomics and health studies undertaken in Nepal over the period of January 1999 – August 2004.

Methods Retrospective review method was adopted and followed different methods of information collection and analysis. Standardized self-administered information collection format was used to collect the information on studies undertaken.

Results Twenty-nine studies and six background documents were reviewed during the study period. It was found that user fee charge rates varied depending upon the types of services provided at the health facilities of public and private sectors. Private sector usually charged more than pubic sector. It was found that the cost of services were high for both inpatient and outpatient category in private hospitals compared to public hospitals. Some private hospitals reported of some services to poor at lower prices. It was found that the costs of a house delivery represented 36 percent of the poorest household's monthly income compared to 1 percent of that the healthiest. The economic burden of some diseases particularly Visceral leishmaniasis, Japanese encephalitis and Tuberculosis diseases at the household level comprised of the direct and indirect cost. The rural households were found spending more than urban households, both as a percentage of total expenditures and as the absolute levels. It was also found that very insignificant numbers of people were participated in health insurance scheme. It was also found that the average national per capita drug expenditure was Rs. 584 (US$ 7.78) per year.

Conclusion It has been concluded that the macroeconomics and health process helps place health at the centre of the broader development agenda in Nepal.

Keywords Macroeconomics and Health, Nepal

Introduction

Health is the state of equilibrium between one's internal and external environment. Health should be holistic and be compatible with people's life-style, bio-geo-chemical conditions, social systems and country's development status. Good health for all being an international development goal and a building block for sustainable economic development, national policy makers are obviously concerned to inter-link macroeconomics and health. Such linkages have been a growing concern, particularly with the establishment of commission on macroeconomics and health at international and national level[1].

The commission on macroeconomics and health showed that investing substantially more in health would result in great economic returns. Disease creates poverty, but effective health care, especially targeted to the poor, will create economic growth. The health sector no longer only consumes resources, it can be a productive economic sector with very high returns on investment, if resources are used for prioritized interventions and targeted to those in greatest need. The main agenda of the macroeconomics and health focused on (i) achieving better health for the poor, thereby reducing poverty and stimulating economic growth, (ii) eliminating financial constraints by increasing investments in health, and (iii) eliminating non-financial constraints to providing a package of essential interventions to the poor[2].

Since early 1990s, some improvements in health status have been observed; for instance, provision of essential health care services has reached 70 percent, average life expectancy reached 59 years, primary health care network has expanded through establishment of PHCs and sub-health posts at

Corresponding Author: Dr. Rajendra Kumar BC, **P.O. Box:** 7626, Kathmandu, **E-mail:** drrajendra2005@gmail.com,
[a]Nepal Health Research Council, Ramshah Path, Kathmandu, Nepal.[1]

election constituency level and VDC level, respectively, and use of trained volunteer female community health workers for outreach services. A national drug finance policy, legislation on human organ transplants and anti-biotic policies have also been enforced with success[3].

Despite these achievements, health status indicators revealed the fact that much more needs to be done. As in any least developed country, Nepal has too many problems of health and health services. The major problems include inappropriate supply of manpower, drugs and equipment at the community level; defective decision support system especially at the policy and planning level; vague political commitment with actions not matching promises or slogans; poor management with ad-hocism and weak coordination, support and supervision system of health services; poor management of resources coupled with their scarcity; poor transport and communication system; inequitable provision of essential services to the targeted group; underutilization of health facilities and human resources; and low absorptive capacity of donors funds. These are some of the ugly features deeply rooted in the health care systems in Nepal. It seems that it is impossible to solve the problems of health in Nepal. However, with a good management one can make even impossible possible. A good management needs a good plan. A good plan needs a good policy. A good policy and a good plan need information, which is adequate, reliable, relevant and usable.

International and national health organizations are working together and supportive in order to achieve the goal mentioned in the second long term health plan (1997-2017) set out by the Ministry of Health (MOH). For this to happen, His Majesty's Government (HMG) of Nepal has to continue to strive harder to provide an efficient, cost-effective health service with assurance of quality in care with due attention to the issues of equity, gender sensitivity, human rights and social justice. Therefore, strategic planning of investments across health and health-related sectors to improve the lives of poor people is needed. Responding to this urgent need, we undertook the present study to review the existing macroeconomics and health studies undertaken in Nepal over the period of January 1999 – August 2004.

Methodology

The review was retrospective and followed different methods of information collection and analysis. A snowball sampling technique was adopted because of the limited time and resources. Standardized self-administered information collection format was used to collect the information on studies undertaken. Before starting the information collection, the meeting was organized with the related personnel for rapport building. Information was collected through secondary sources.

Results and Discussion

We have collected and reviewed 29 studies and 6 background documents in detail. Of the 29 studies, 21 were original research and 8 were reviews. Of the 21 original studies, 12 were national, 3 regional and 6 district based.

Most of the original studies had clear objectives and used a sound methodology, and the research results were relevant at the applicable level. Most of the 8 reviews were also found to be of good quality. During the study documents collection process, some studies were thrown out, as they were found not up to the standard.

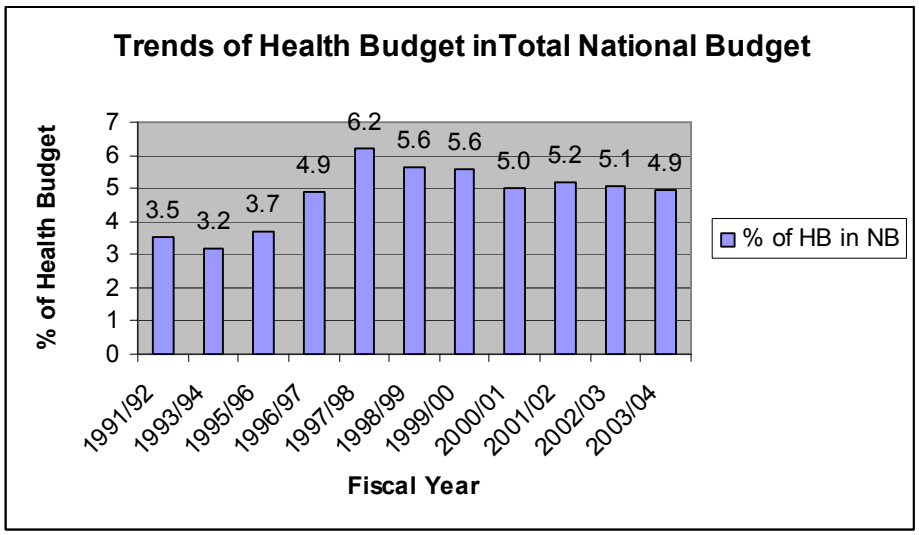
User fees: It was found that user fee charge rates varied depending upon the types of services provided at the health facilities of public and private sectors. Private sector usually charged more than pubic sector. However, quality of services in some hospitals was perceived poor on the basis of drug unavailability, no laboratory test facility and long waiting time to see the health provider. The study showed the key areas perceived to be of importance to service users were proper treatments including technical skill, attitude along with inter-personnel communication skills of health personnel and availability of services. There was no clear exemption policy for the poor and even exemption for age group did not work well. There were no exact criteria for verifying income and setting threshold levels for exemption.

Economic burden of diseases: It was found that some diseases particularly Visceral leishmaniasis (VL), Japanese encephalitis (JE) and Tuberculosis (TB) hit the poor segment of population more frequently than others. The economic burden of these diseases at the household level comprised of the direct and indirect cost.

Maternal health: Study showed that costs were a major barrier to women seeking essential maternity services in Nepal. The costs of a house delivery represented 36 percent of the poorest household's monthly income compared to 1 percent of that the healthiest.

Health care expenditure: It was found that there had been limited allocation of budget in the health sector of Nepal. Public health expenditures (government plus donor grants and loans recorded in the budget) were very low in absolute terms and fluctuating in preceding biennium. Expenditures were equal to 3.5 percent of total government expenditure in 1991/1992 and had increased to 6.2 percent in 1997/1998. Since 1998/1999, the allocation was in decreasing order and stands at 4.9 in 2003/2004 (Figure 1).

Figure 1



The assessment of public expenditure in health by sources revealed that, through development expenditures constituted 60 percent of the total, about 50 percent of the development budget was financed from external sources, which raised serious doubt on the sustainability of development budget. The absorptive capacity on the part of development budget had remained lower (75 percent) while was relatively high in regular budget (86 percent) probably due to lack of efficiency in financial mechanism of the MOH, among others. The expenditure on the health sector during the last decade was about 1 percent of the GDP[4].

The size of health expenditure coming from the household was significant. The HH out-of-pocket expenditure accounted for over 75 percent of the total funds used to finance the health economy. The government, donor, and private companies made up 13.1 percent, 10.1 percent and 1.5 percent respectively. On average, an individual in Nepal spent around Rs. 505 (US$ 6.91) per year on health related goods and services standing at 5 percent of total per capita HH expenditure. It varies from 3.2 percent for the poorest to 7.8 percent for the wealthiest group. Urban HHs spent Rs. 106 (US$ 1.45) more on health care than rural HHs (Rs. 35 or US$ 0.47)[5].

Urban household spent more on health care than rural households. However, when analyzed by income group, the rural households were found spending more than urban households, both as a percentage of total expenditures and as the absolute levels. Individuals from wealthier HHs were considerably more likely to utilize health care services than individuals from the poorer HHs[6].

In mountain/hill, only 38 percent had paid for health expenditure; in Terai 35 percent and in valley 44 percent. The total calculated amount paid for health expenditure by the private companies in Nepal in the FY 2001/02 was Rs. 144,570,000 (US$ 1,980,410.95). Most of the data presented in this health expenditure study was sketchy and very hard to find the consistency between its own data.

It was found that treatment related to expenditure were more in clinics than in hospitals and nursing homes. It was revealed that the consumers' drug expenditure during the FY 2002/03 was estimated to Rs. 13,515,637,677 (US$ 185,145,721.60) in Nepal. From this estimation, it was found that per capita drug expenditure was Rs. 584 (US$ 8.00) per year. The lowest per capita drug expenditure was found in mid western (Rs. 158 or US$ 2.16), far western (Rs. 152 or US$ 2.08) and mountain (Rs. 44 or US$ 0.60) regions (Table 1 and 2)[7].

Table: 1

Developmental Regions	Population	Consumers' Drug Expenditure (Rs.)	Per Capita Drug Expenditure (Rs.)
Eastern	5,344,476	2,486,752,174	465
Central	8,031,629	8,428,276,845	1,049
Western	4,571,013	1,792,115,258	392
Mid-western	3,012,975	474,919,200	158
Far-western	2,191,330	333,574,200	152
Nepal	**23,151,423**	**13,515,637,677**	**584**

Source: Drug Bulletin of Nepal, 2003. Department of Drug Administration, Nepal.

Table: 2

Eco Developmental Regions	Population	Consumers' Drug Expenditure (Rs.)	Per Capita Drug Expenditure (Rs.)
Mountain	1,687,859	73,499,400	44
Hill	10,251,111	6,675,027,374	651
Terai	11,212,453	6,767,110,903	604
Nepal	**23,151,423**	**13,515,637,677**	**584**

Source: Drug Bulletin of Nepal, 2003. Department of Drug Administration, Nepal.

It was reported that INGO and NGOs based health facilities were providing better quality of health services than public health facility. The total money estimated to flow in and within I/NGOs in Nepal in the year 2003 was Rs. 2.37 billion or Rs. 2,372,567,126.00 (US$ 32,500,919.53) (Table 3)[8].

Table: 3

S.N.	Type of I/NGO	Numbers	Amount (Rs.)
1.	INGO	63	1,487,164,965.00*
2.	Large NGO	11	839,125,048.00
3.	Medium NGO	12	29,579,127.00
4.	Small NGO	205	16,697,986.00
	Total	**291**	**2,372,567,126.00**

** Most of US based INGOs (13) financial information not included.*

Health insurance: It was found that there were different types of health insurance schemes being operated in Nepal and these were social health insurance scheme, community based health post model and health cooperative model. The premium per year charged by such scheme ranged either from Rs. 90 (US$ 1.23) to Rs. 600 (US$ 8.21) or from Rs. 100 (US$ 1.36) to Rs. 300 (US$ 4.11). The study showed that there were altogether 17 insurance companies involved in insurance business in Nepal. Out of which 12 companies were involved in non-life insurance business. Health insurance was one of the smallest components of non life insurance. Very insignificant numbers of people were participated in health insurance scheme.*Public private and NGO partnership:* It was found that the cost of services were high for both inpatient and outpatient category in private hospitals compared to public hospitals. Some private hospitals reported of some services to poor at lower prices. The price list of different kinds of health services charged by public and private hospitals is given in table 4. NGO coordination council was active in 33 districts of Nepal and this forum was used to improve the communications between the government and NGOs. It was found that the practices of coordination and collaboration had evolved over the years; however, there was no effective structural system for effective partnership.

Table: 4

S.N.	Price of Services	Public Hospital (Rs.)	Private Hospital (Rs.)
1.	Registration fee	10-15	0-15
2.	Doctor's fee	No	200-275
3.	General bed	0-160	250-400
4.	Cabins	500-2500	450-3000
5.	Blood routine	40-60	40-100
6.	Blood culture	100-120	110-120
7.	X-ray chest	80-175	165-250
8.	Ultrasound	400-425	500-550

Note: 1 US$ = Nepalese Rs. 73.00

Tobacco economics: Study showed that the total tobacco revenue of government was about Rs. 2 billion (US$ 27,397,260.27) in the fiscal year 2002/2003. The total annual household income and expenditure of the tobacco farmers showed that no farmer was saving at the end of the year; rather overall they ended up in debt.*Human resource for health:* It was indicated that the human resource policies and plans were not translated fully into the action although these were clearly addressed by second long term health plan (1997-2017).

Study showed that the production of health personnel was mismatched as oversupply in some areas and under supply in others. The ratio of general physician to specialist physician was not appropriate and there were a limited number of medical doctors in basic medical sciences.

Discussion

User fees: The variation of user fee charge rates at the different health facilities was due to running different schemes and facilities. It was understood that the user fees were restricted to essential drugs only. However, the drugs for treatment of tuberculosis, leprosy and expanded program for immunization (EPI) vaccines were exempted from charges. The amount of user fee raised under the community drug program (CDP) was treated as major source of income[6].

Setting fee level and spending of the revenue collected from user fees were mainly decided by Hospital Management Committee (HMC) and the decision for exemption was generally done by the doctor of the hospital. Without providing safety net for the poor, user fees could have a negative impact on utilization[9].

Quality improvement was critical issue for user willingness to pay for services they perceived as quality. It was important to know which aspects of quality were important for the local context because perception of quality could vary between individuals and different geographic area[10]. Shortage of drugs in the hospital and the fact that patient have to buy from outside pharmacy would still be issues for consideration. Many studies suggested that access, price and quality play key roles in utilization of health services. However, it was seen that the quality was more important than price.

The attitude of health personnel was also an important quality issue. Attitude of health personnel was focused on in several studies as a negative experience that might discourage users from using service again[11,12] and suggested that improvement of interpersonal skills and attitude of health personnel was one important aspect of quality improvement.

It was suggested that drug availability was one of the best indicators for quality[13,14].

People were willing to pay first for getting drugs, second for inpatient care and third for laboratory test and finally for seeing the doctor[15]. People were willing to pay for health services as long as the quality was assured. Increasing user fees accompanied with increasing quality of care could promote utilization and this could increase the potential for revenue generation[16].

Economic Burden of Diseases: Poor people were suffered more with the diseases like Visceral leishmaniasis, Japanese encephalitis and Tuberculosis. This was because they had poor knowledge about the transmission and general symptoms of these diseases, and they did not seek immediate health care from local health system expecting the patient to recover after a few days. In addition, due to lack of cash in hand or provision of health insurance, poor people had to incur time loss in course of financial management such as seeking loans with relatives or local money lenders, selling ornaments and lands. Both these factors caused worsening of the condition of the patient resulting in longer days for recovery, greater treatment cost, life long disability or even death of patient. The illness increased the expenditure (for medical treatment, transport, food) and loss of productivity, which reduced the income. This way the non-poor segment of population became poor and poor to the hard-core poor. Increasing poverty acted as a bottleneck in the development of the society. Study conducted in Kolar district of Karnataka, India, reported similar findings.

Maternal health: Study indicated that there was a difference between the facility-based costs incurred by poor compared to rich households, which suggested that exemptions schemes were not working effectively and the poor were not protected from the cost of care. It was indicated that the costs of a house delivery represented 36 percent of the poorest household's monthly income compared to 1 percent of that the healthiest. This level of expenditure pushed more households below the absolute poverty threshold.

Health care expenditure: An analysis of the trend in the growth of regular and development expenditure of health sector showed a fairly stable growth in regular expenditure over the previous four fiscal years while more disturbing was the declining trend in the share of the development expenditure.

It was found that the lowest per capita drug expenditure was found in mid western (US$ 2.16), far western (US$ 2.08) and mountain (US$ 0.60) regions. The large geographical and regional disparities in subsidy levels in Nepal were likely to be associated with a much greater pro-rich bias in overall government spending.

The empirical observation from a health outcome suggested that there had been inefficiency in public health expenditure in uplifting health outcomes. There was under-reporting of the health expenditure by the public sector, the external donors and the private sector. Due to which it might lead to duplication of programs, lack of transparency in assessing the utilization of those funds and effective management of health expenditures too.

It was indicated earlier that the health sector expenditure during the last decade was about 1 percent of the GDP, so health expenditure should be raised to 2 percent of GDP in order to perform definite health sector outcomes with clear vision statement, priorities and consistencies.

It was mentioned that INGO and NGOs based health facilities were providing better quality of health services than public health facility. In I/NGOs based health facilities, there was a low waiting time, good queue system, and availability of service providers, and most of them received the fund from

bilateral as well as multilateral donors. They were project based.

Health insurance: It was found that the premium per year charged by health insurance scheme ranged from Rs. 90 (US$ 1.23) to Rs. 600 (US$ 8.21). This scheme covered a provision of primary to tertiary level treatment services free of charge. The premium was affordable and the people were willing to pay for the scheme but it was found that very insignificant numbers of people were actually participated in the health insurance scheme. This might be due to not having good knowledge of the scheme and its benefit packages.

Public private and NGO partnership: The cost of services was high in private hospitals compared to public hospitals. It was because that private hospital provided efficient services with short period of time. It was mentioned that there was no effective partnership between the NGOs, public and private sectors. This might be due to not adequately willing to share their information in full fledged manner and not properly understand the exact meaning of partnership among them.

Tobacco economics: It was indicated that the total tobacco revenue of government was about Rs. 2 billion in the fiscal year 2002/2003. In absolute terms the amount of revenue generated from tobacco was good but in terms of proportion this revenue had declined drastically in the last 15 years. It was showed that the annual income of farmers working for tobacco was minimum. They were forced to do tobacco farming because of the absence of alternative opportunities to make their living in their localities.

Human resource for health: It was mentioned that the production of health personnel was mismatched as oversupply in some areas and under supply in others. This might be due to not having effective policy that dealt with the issue of the production of health personnel as well as health institution establishment policy. Due to which the production was random and did not follow the demand and supply of the country. It was also mentioned that the ratio of general physician to specialist physician was not appropriate and there were a limited number of medical doctors in basic medical sciences. It was observed that most of the medical graduates wanted to become clinicians as it was a much more profitable and respectable job than becoming a basic science teacher, so it might be less likely considered subjects to be studied. As most of the physicians wanted to become specialist physicians, they tried their level best to seek opportunity to study higher education, thereby causing a situation of mismatch ratio.

Conclusion

User perception of quality influenced the decision for payment of health care. If user fees were to be increased, certain aspects of quality would need to be improved to ensure continuing utilization of the services. Geographical accessibility of the health institution and perceived quality of health care at there were another key areas needs to be considered. Policy makers should thoroughly examine potential issues effecting establishment of fee structures, for example poor quality of health services, lack of willingness to pay, opposition of key stakeholders and users ability to pay before establishing user fees. Clear definition of criteria for exemption scheme and strict adherence in following up such criteria is required for the hospital. Attention should be paid to women, children, underprivileged and marginalized groups because they might be deprived of health services because of inability to pay.

Certain tropical diseases like JE, VL, TB etc. impose multidimensional impact such as economic burden on the households, local health system, society and increase in the marginal poor. These diseases had an impact not only on the income but also on the sources of income as well, which affected their future income flow. This aggravated the poverty situation in the society. Therefore, there is a need of an effective strategy for targeting (or identifying) the poor, based on geographic characteristics or through community peer assessment.

In order to assess health care expenditure in Nepal, it is very important to mechanize the effective implementation of the National Health Accounts system. This would give the necessary information to monitor and evaluate health programs, to be effectively directed for attaining the ultimate goal of Nepal's sustainable economic development. Government should provide the format of account keeping by types of expenditure category to all private hospitals, nursing homes and clinics.

Although some private and non-government organizations have been implementing different types of health insurance schemes on a limited scale for the past few years, the government has not yet been able to fully integrate the health insurance schemes into the health service extension process. Without the regular service and the quality maintained, people will have no faith upon the health insurance scheme. The benefits of health insurance should be promoted among the group to motivate them in its favorable fare before the insurance scheme was launched. Appropriate information, communication and education tools should be developed for motivation.

Public-private-NGO partnership can contribute to reform management of public health sector, improve efficiency and cost effectiveness and explore new areas to work with private sector. Such partnership requires highest level of political commitment and understanding how they could be implemented in a given socioeconomic conditions. Creation of enabling environment may work as a motivating factor for increasing contribution of NGO through encouragement to provide services to a particular patient group, geographical area or services.

The production policy of different category of health personnel was not present in Nepal, so the mismatch on production had occurred. There should be a clear policy for human resource for health development, health institution establishment and the production of health personnel in each area. Each and every sanctioned post of the health services formulated by MOH should have to be fulfilled with an appropriate plans and policies.

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References

1. Commission on Macroeconomics and Health, available at Nepal Health Research Council's library 2001.
2. Macroeconomics and Health Nepal - Situational Analysis, available at Nepal Health Research Council's library 2004.
3. His Majesty's Government of Nepal, Annual Report, Ministry of Health, Nepal, 2002-2003.
4. Health care financing and financial management in Nepal. Nepal Health Economic Association, Maharajgunj, Kathmandu, Nepal 2003.
5. National Health Account. Ministry of Health, Nepal 2003.
6. Poudyal LP and Shrestha BR. *Alternate health care financing: synthesis of existing experience in Nepal*. DFID/District Health Strengthening Project, Department of Health Services, Teku, Kathmandu, Nepal 2003.
7. Drugs expenditure survey. Full Bright Consultancy (p) Ltd. and EastConsult (P.) Ltd., Gyaneshwor, Kathmandu, Nepal 2004.
8. INGO and NGO's Health expenditure survey. Center for Development and Management Studies, Naxal, Kathmandu, Nepal 2004.
9. Leighton C and Diop F. Protecting the poor in Africa: impact means testing on equity in the health sector in Burkina Faso, Niger and Senegal. Technical Notes No. 40. Agency for International Development 1995.
10. Wouters AV. Essential National Health Research in developing countries: Health is financing and the quality of care. *International Journal of Health Planning and Management* 1991; 6:253-71.
11. Van Der Geest S, Mubiana Maewan GL, Kamwanga J, Mulikelela D, Mazimba A and Mundia Mwangel WA. User fees and drugs: what did the health reforms in Zambia achieve? Health Policy and Planning 2000; 15:59-65.
12. Gilson L, Alilio M and Heggenhougen K. Community satisfaction with primary health care services: An evaluation undertaken in the Morogo region of Tanzania, *Social Science and Medicine* 1994; 39:767-80.
13. Van Der Geest S, Mubiana Maewan GL, Kamwanga J, Mulikelela D, Mazimba A and Mundia Mwangel WA. User fees and drugs: what did the health reforms in Zambia achieve? *Health Policy and Planning* 2000; 15:59-65.
14. Reerink HI and Sauerborn R. Quality of primary health care in developing countries: recent experiences and future directions, *International Journal for Quality in Health Care* 1996; 8:131-9.
15. Abel-smith B and Rawal P. Can the poor afford "free" health services?" A case study of Tanzania. *Health Policy and Planning* 1992; 7:329-41.
16. Litvack JI and Bodart C. User fees plus quality equals improved access to health care: Results of a field experiment in Cameroon, *Social Science and Medicine* 1993; 37: 369-83