Costing Study on Incentives Packages for Nepal's Health Care Professionals

August 2008

Health Sector Reform Support Programme

RTI INTERNATIONAL

HSRSP Report No. 2.9-08-08

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Ministry of Health and Population

Government of Nepal

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This study estimates the cost of providing financial and non-financial incentives packages to various health care professionals, and makes various recommendations for adoption. Funding was provided by the U.K. Department for International Development through the Health Sector Reform Support Programme. RTI International provided technical assistance. The opinions expressed herein are those of the authors and do not necessarily reflect the views of DFID.

The Health Sector Reform Support Programme aims to provide policy and strategy support to the Ministry of Health and Population (MoHP) in implementing its sector reform agenda. Additional information on HSRSP is available by contacting: Mr. Devi Prasad Prasai, Health Economist or Dr. Rob Timmons, Team Leader at: HSRSP, Ministry of Health and Population, P.O. Box 8975, EPC 535, Kathmandu, Nepal. (telephone: 977-1-426-6180; fax: 977-1-426-6184; email: hsrsp@np-hsr.rti.org)

Suggested citation:

RTI International, 2008. *Costing Study on Incentives Packages for Nepal's Health Care Professionals.* Research Triangle Park, NC, USA.

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1. Introduction/Rationale

The World Health Report from 2000 defines incentives for health workers as "all the rewards and punishments that providers face as a consequence of the organizations in which they work, the institutions under which they operate, and the specific interventions they provide" (WHO, 2000).

This study was designed to examine the issue of motivations and incentives from the perspective of an individual or an organizational provider, and focuses on what Adams and Hicks (2000) refer to as external incentives - that is, methods used by health systems to control the activities of health organizations or donors. It is recommended that a mix of incentives be used to attract and retain health care workers to rural areas. Supply side factors (such as well-equipped facilities, and proper sanitation), social and professional factors (opportunities for career development, private practice, educational opportunities for children, good management), and political factors (including political pressure or regional instability) are all likely to affect health worker location preferences (WHO- HPSR, 2008). In addition to these considerations, environmental factors also affect preferences, such as lack of transportation and communication infrastructure, shortage of food grain, and extreme heat or cold.

In the changing context of Nepal, the workload of health workers has increased considerably due to the introduction of free care and the growing demand for health care after the popular uprising of 2006. In comparison to the four months prior to free care being implemented, outpatient care utilisation has increased by 70 percent (HMIS) in the four months following implementation.

The security of health workers has remained an issue and many health care providers face risks and threats due to patients or their families upset about poor quality of service delivery, complications or side effects, misunderstanding, or low cure rates – especially in remote areas. In response, providers are demanding more benefits as risks increase.

Health systems in developing countries have a number of cultural and economic contexts that shape providers' expectations and responses to incentives. In Nepal, for example, health care workers expect a high salary as the medical profession is considered a highly prestigious job and because providers often come from the higher income groups in the first place. Thus, their expenses are likely to be higher than other groups.

The Nepal Portfolio Performance Review has prepared an action plan to improve the performance of civil servants, and as such, has planned to review and recommend incentive packages for the placement of civil servants in remote and underserved areas to be submitted to the Council of Ministers.

2. Problem Statement

The length of health workers' stays in remote areas is generally very brief, especially among medical doctors, radiographers, nurses, and laboratory technicians due to:

- Inadequate salaries and allowances
- Lack of diagnostic facilities
- Lack of quarters with basic facilities (computers, internet, library)
- Lack of social security (benefits)
- Fewer private practice opportunities

The productivity of health workers is low, yet there is the opportunity to increase their productivity by offering financial and non-financial incentives.

3. Overall Objective

To develop and cost an incentives package that will attract and retain qualified health workers to underserved and remote areas.

3.1 Specific objectives

The specific objectives of the study are as follows:

- To define the special incentives package for the retention of health workers
- To estimate the cost of the proposed special financial and non-financial incentives package
- To define the general incentives package for the retention of health workers
- To estimate the cost of the proposed general financial and non-financial incentives package

4. Methodology

The following methods were used for developing and costing the incentives package

4.1 Literature review on retention

A total of fourteen documents published in international journals, specifically those from studies conducted in Vietnam, Cambodia, the Arab Republic of Egypt, Uganda, and Zambia were reviewed because of their applicability to the Nepali context. Details are provided in the references section.

4.2 Consultation with officials of the MoHP

Senior government officials - the Chief of PPICD, Director General of the Department of Health Services, the Joint Secretaries, and the Coordinator of Health Sector Reform Units - were consulted in developing the financial and non-financial incentives packages. Similarly, the members of the Taskforce on Human Resource Development and the Health Policy Advisory Group were consulted.

4.3 Estimation and use of internal rate of return

The **internal rate of return** (IRR) is a capital budgeting metric used by firms to decide whether they should make investments. It is the annualized effective compounded return rate which can be earned on the invested capital, i.e., the yield on the investment. Usually, IRR is calculated for the purpose of investment, but it is used here to estimate the income of recent medical graduates.

For the purposes of this study, the capital outlay for the education necessary to become a doctor is treated as an investment, and, naturally, there is the expectation that there will be a return on this investment. Therefore, an effort has been made to calculate the return on the investment. The present value of investment in a medical education is equal to the present value of the returns on the investment assuming a five-year payback period. The discounted rate of return for the household is determined by considering the risk and the bank interest rate. For our calculations, a rate of five percent was used. The Government of Nepal imposes a bond of five years for repaying medical scholarships; therefore a five year payback period was used for the calculations.

4.4 Quick inquiry on the opportunity costs to physicians

Opportunity cost is the value of a product forgone to produce or obtain another product. Opportunity cost analysis is an important part of a company's decision-making process, but is not treated as an actual cost in any financial statement. If a doctor decides to join a government hospital, the opportunity cost is the value of the benefits he might have received

had he decided to work at a private hospital, for example. For obvious reasons, most physicians prefer to work in a hospital where they get a greater salary and allowances. Considering these facts, a quick inquiry was made to understand the opportunity costs for physicians before fixing the total income of physicians and nurses using market prices to calculate the opportunity cost. The benefits forgone, in this case, were based on the salary and benefits at three NGO-run hospitals.

4.5 Quick survey on the expectations of new physicians

A quick survey was conducted to assess the expectations of recent medical graduates prior to entering government service. The survey covered 67 medical graduates, and although the sample size was inadequate to estimate the expected benefits, the responses were used as an indicative figure for determining the total income of a physician.

5. Developing the Special Incentives Package

The special incentives package was developed for physicians, nurses, radiographers, and laboratory technicians in remote areas by reviewing the national and international literature, assessing the preferences of physicians on incentives, and consulting with senior officials of the MoHP.

Lehmann et al. (2008) have identified low wages, poor working conditions, lack of supervision, and lack of equipment and infrastructure as contributing to the flight of health care personnel from remote areas. These all are valid in the Nepali context, and the incentives package should be developed in consideration of these factors.

According to Zurn et al. (2005), “motivation at work is believed to be a key factor in the performance of individuals and organisations and is also a significant predictor of intention to quit the workplace.” They stress that policymakers and managers must strive to recruit people to the workplace and encourage them to stay at their posts and perform to an acceptable standard. It is within this context that policymakers, planners, and managers have turned their attention to using incentive systems to improve the recruitment, motivation, and retention of health care personnel. In Nepal selecting and recruiting people to work in their native communities improves retention of health care personnel, however, there is a tendency for health care workers to migrate from remote to more developed areas.

Dieleman et al. (2003) have performed a study on job motivation among rural health workers in northern Vietnam, and have concluded that motivation is influenced by both financial and non-financial incentives. The main motivating factors for health care workers were appreciation by managers, colleagues, and the community; a stable job and income; and training. The main discouraging factors were related to low salaries and difficult working conditions.

The problems associated with deployment and retention of non-private practice in Nepal are similar to ones identified in other countries (Hongoro and McPake, 2003), and have provided the basis for developing the incentives package for physicians and other health workers. In Nepal, both financial and non-financial incentives should prove effective because salaries are relatively low and non-financial incentives, create career opportunities from post-graduate training and benefits to the families otherwise not affordable. Financial incentives are strong when health workers' incomes are low, as in most developing countries (WHO, 2000). In Nepal, salaries and allowances for new medical officers range from NRs. 19,000 (USD 292) to NRs. 27,000 (USD 415) per month, depending on the remoteness of the post.

A better salary is a strong motivating factor, but may not in itself be sufficient. Chataut et al. (2008) have identified career development, education and training opportunities, transportation, accommodation, educational facilities, and scholarships for the children of health workers as the non-financial factors influencing the retention of health workers in Nepal.

Research has confirmed that non-financial incentives play an equally crucial role (WHO, 2008). Many factors, including the complexity and challenges involved in providing and managing competing demands in patient care, can contribute to job dissatisfaction and low motivation among health care professionals. Such factors can also have a negative impact on the retention of staff and, importantly, the quality of care they provide.

5.1 Determining non-financial incentives

From the above literature review, we compiled the following list of common non-financial incentives for the retention and motivation of health workers:

- Post-graduate training
- Career development
- Scholarships for the children of health workers
- Educational facilities at hospitals

A quick survey was also conducted to ascertain the expectations of recent medical graduates of the government system. The leading priority was academic support for post-graduate training, followed by financial incentives, career advancement support, allowances, better diagnosis facilities, and security. Details are given in Table 5.1, below.

Table 5.1: Incentives, as ranked by recent medical graduates

Incentive	Order of priority	Percent
Academic support for further training	1	41
Financial (higher salary)	2	29
Support for career advancement	3	15
Allowances (food, accommodation, etc.)	4	15
Better diagnostic facilities	5	13
Other (security, senior medical officers, coordinating staff)	6	7

Source: HSRSP Quick survey, 2008

Non-financial incentives are important levers that organizations can use to attract, retain, motivate, satisfy, and improve the performance of staff. Their use is common in public and private sector organizations across all work settings. They can be applied to individuals, groups of workers, teams, or organizations, and may vary according to the type of employer.

On the basis of the literature review, national assessment, and the quick survey of recent medical graduates, a non-financial incentives package was developed for the retention of physicians, nurses, radiographers, and laboratory technicians.

Table 5.2: Non-financial incentives package for remote areas

Physicians	Nurses	Radiographers/Lab technicians
Tuition for children	Tuition for children	Tuition fees for children
Health insurance	Health insurance	Health insurance
Housing	Rent (where facilities are not available)	Housing (wherever facility allows)
Support for post-graduate studies		
Common: Create an enabling environment (computers, Internet, library, communications, etc.) for all		

5.2 Determining financial incentives

First, the total income of health workers was determined by triangulating figures from the internal rate of return, the expectations of recent medical graduates, and the opportunity costs to physician and other health workers.

The internal rate of return was calculated by the cash flow as described above, with a resulting estimated total income of NRs. 42,000 per month in the first year for recent medical graduates, with a payback period of five years. This figure increases to NRs. 60,000 per month in the fifth year when adjusted for inflation. Details are given in Table 5.3, on the following page.

Table 5.3: Internal rate of return (IRR) of household for the investment in a medical education

Total investment: NRs. 2,555,000

Payback period: 5 Years

Year	Fiscal Year	Monthly income	Months	Yearly income from public	Private income	Total income	Tax (TDS)	Income after tax	Subsistence costs	Discount rate at 5%	IRR (Net cash flow)
1	2008/09	42,000	13	546,000	180,000	726,000	108,900	617,100	96,000	0.952	496,087
2	2009/10	46,000	13	598,000	180,000	778,000	116,700	661,300	105,600	0.907	504,020
3	2010/11	50,400	13	655,200	180,000	835,200	125,280	709,920	118,800	0.864	510,728
4	2011/12	55,000	13	715,000	180,000	895,000	134,250	760,750	132,000	0.823	517,461
5	2012/13	60,000	13	780,000	180,000	960,000	144,000	816,000	144,000	0.784	526,848
		Total		**3,294,200**	**900,000**	**4,194,200**	**629,130**	**3,565,070**	**596,400**		**2,555,144**

The second step was to assess the expectations of recent medical graduates. The median expected salary of recent graduates was found to be NRs. 36,500 per month, with a mean salary of NRs. 28,060 per month and a Standard Deviation (SD) of NRs. 4,179. Over one quarter (28%) of recent medical graduates expected a salary of NRs. 20,000 -3 0,000 and another quarter expected a salary of NRs. 30,000 - 40,000 per month. Yet another quarter expected over NRs. 50,000 per month. Details are given in Tables 5.4 and 5.5.

Table 5.4: Expected salary of recent medical graduates

Expected salary	Frequency	Percent
20,000- <30,000	19	28
30,000- <40,000	16	24
40,000-<50,000	14	21
50,000- <60,000	10	15
60,000- <70,000	3	4
70,000- <80,000	1	1
80,000- <90,000	3	4
90,000- 100,000	1	1
Total	**67**	**100**

Median salary	36,500
Average salary	28,060
SD	4,179

Table 5.5: Expected allowance of recent medical graduates

Expected allowance	Frequency	Percentage
2000-<6000	15	22
6000-<10,000	37	55
10,000-<14,000	7	10
14,000-<18,000	4	6
18,000-<22,000	1	1
22,000-<26,000	2	3
26,000-<30,000	1	1
Total	**67**	**100**

Median allowance	6,500
Average allowance	5,728
SD	618

Similarly, the median expected allowance for recent medical graduates was found to be NRs. 6500 with Std 618 and a mean of NRs. 5727 per month. Over half (55%) of the medical graduates expected an allowance between NRs. 6,000 -10,000 to work in moderately remote districts. Details are given in Table 5.6, on the following page.

The standard deviation is large for the expected salary of a physician, so the median salary and allowance for estimating total benefits for health workers is used. The total expected median salary and allowance for a physician is NRs. 43,000 per month (salary: NRs. 36,500, allowance: NRs. 6500), which is close to the monthly expected return on the investment in medical education (NRs. 42,000).

Table 5.6: Total expected salary and allowance for physician

	Median	Mean	Std
Salary	36,500	28,060	4,179
Allowance	6,500	5,728	618
Total	43,000	33,788	

We also reviewed the opportunity cost of physicians, as described above. Salaries at private institutions like the TEAM and HDCS hospital groups are significantly higher than at government facilities, so physicians take a pay cut in choosing to work at public hospitals. Most physicians consider the income forgone of TEAM and HDCS hospital groups. The benefits forgone range from NRs. 27,800 to NRs. 66,720 per month. The average opportunity cost to the physician is thus calculated at NRs. 45,500 per month.

Table 5.7: Opportunity costs to physicians

Opportunity cost	Dadeldhura (TEAM)	Lamgunj (HDCS)	Rukum (TEAM)	Average
Salary	22,000	44,500	35,000	33,833
Allowance	5,800	22,220	7,000	11,673
Total	27,800	66,720	42,000	45,507

Triangulation was used to determine total salary and allowance by considering the expectations of recent medical graduates, the internal rate of return, and calculated opportunity costs, resulting in an estimated total income for physicians of NRs. 45,000 per month for a moderately remote area.

Table 5.8: Triangulated estimation of required income of physician

S.N.	Method	Required total income per month in NRs.
1	Measuring internal rate of return	42,000
2	Quick survey on the expectations of medical graduates (median)	43,000
3	Measuring opportunity costs (mean)	45,507

Next, we estimated additional financial incentives by subtracting the existing allowance from the total required income for a physician. The same method was applied in determining the additional incentives for a nurse, radiographer, and laboratory technician.

The additional incentive for a new physician is NRs. 17,963 per month, as estimated in a high incentive scenario, while a nurse, radiographer, or laboratory technician would get NRs. 8,500 in the most remote areas (those classified as Ka-1 in the Health Act). The retention of health workers in areas categorized as Ka-1 has been the lowest, so a high incentive scenario has been used to determine additional incentives. The additional incentive decreases for less remote areas, and is set at NRs. 10,785 for Kha-2 areas for new physicians and NRs. 1,905 for nurses, radiographers, and laboratory technicians. Details are given in Table 5.9, below.

Table 5.9: Additional incentives for new physicians in a medium incentive scenario

Remoteness category	Total required income for a health worker	Existing (salary + allowances)	Additional financial incentive (Total required income - existing salary and allowance)
Physician			
Ka-1	45,000	27,037	17,963
Ka-2	40,000	25,187	14,813
Kha-1	35,000	23,015	11,985
Kha-2	30,000	19,215	10,785
Nurse / radiographer / lab technician			
Ka-1	27,000	18,501	8,499
Ka-2	24,000	18,220	5,780
Kha-1	22,000	17,320	4,680
Kha-2	19,000	17,095	1,905

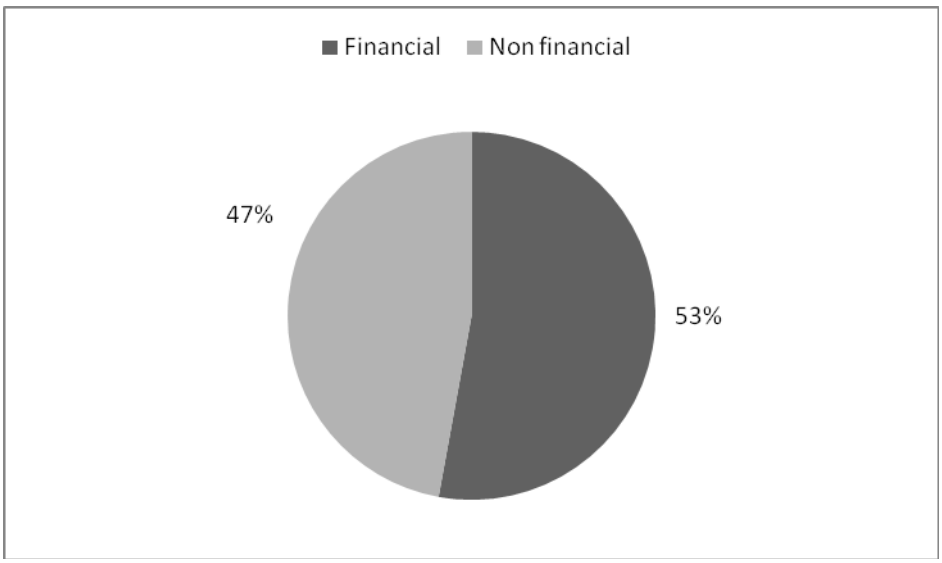
6. Costing Financial and Non-financial Incentives

The total cost of the special incentives package for physicians, nurses, radiographers, and lab technicians is NRs. 158 million, of which financial incentives account for 53 percent and non-financial incentives account for 47 percent. Offering incentives to physicians, nurses, radiographers, and lab technicians in Ka-1 and Ka-2 only would cost NRs. 62 million per year, accounting for 40 percent of the total cost. Table 6.1 explores different options (incentives for remoteness categories of Ka-1 through Kha-2). Offering financial incentives only would cost NRs. 83.5 million.

Table 6.1: Total cost of financial and non-financial incentives

Remoteness	Financial	Non- financial	Total	Share %
Ka 1	9,544,353	17,719,420	27,263,773	17.25
Ka 2	14,793,870	19,974,220	34,768,090	22.00
Kha 1	27,037,725	24,033,795	51,071,520	32.32
Kha 2	32,174,220	12,740,000	44,914,220	28.42
Total	83,550,168	74,467,436	158,017,604	100
Share	53	47	100	

Figure 6.1: Financial and non-financial incentives



6.1 Financial incentives

Over half (57%) of the financial incentives go directly to physician, at a total cost of NRs. 46.6 million. Around one quarter (27%) of the incentives goes to nurses, and about one sixth of the incentives go to radiographers and lab technicians.

Table 6.2: Cost of financial incentives

Care provider	NRs.	USD	Percent
Physicians	47,666,034	744,782	57.05079
Nurses	22,771,827	355,810	27.25527
Radiographers and lab technicians	13,112,307	204,880	15.69393
Total	83,550,168	1,305,471	100

6.2 Non-financial incentives

If the government decides to provide non-financial incentives to health care providers in Ka-1 districts only, it will cost NRs. 17.7 million. To provide incentives in both Ka-1 and Ka-2 the cost will be NRs. 37.7 million. If government provides health and accident insurance it will cost NRs. 4.64 million. Support for a post-graduate programme is the most expensive incentive, costing NRs. 44.13 million, followed by educational support for health workers' children, at NRs. 20.7 million. Table 6.3, below, shows the various incentives options.

Table 6.3: Cost of non-financial incentives by remoteness

Remoteness	Health and accident insurance	Educational support	Rent	Annualized for PG programme	Computers and library	Total
Ka-1	294,000	1,512,000	612,025.0	14,709,195	592,200	17,719,420
Ka-2	630,000	3,600,000	612,025.0	14,709,195	423,000	19,974,220
Kha-1	1,269,000	5,292,000		14,709,195	2,763,600	24,033,795
Kha-2	2,444,000	10,296,000	0	0	0	12,740,000
Total	4,637,000	20,700,000	1,224,050	44,127,586	3,778,800	74,467,436

Table 6.4, below, provides the cost of non-financial incentives by beneficiary and by programme. The total cost for non-financial incentives to three categories of care providers (physicians, nurses, and radiographers/laboratory technicians) in categories Ka-1 to Kha-2 districts would be NRs. 74.47 million, including computers, internet access, and libraries. If the government chooses to provide incentives to physicians only, the cost will be NRs. 51.5 million. If it provides incentives to physicians and nurses, the cost goes up to NRs. 64.8 million. If the government chooses to provide incentives to radiographers and laboratory technicians in Ka-1 through Kha-2 districts, the cost is NRs. 5.9 million. Again, the highest cost component is the support of post-graduate programmes for physicians.

Table 6.4: Cost of non-financial incentives by beneficiary and programme

Beneficiary	Health and accident insurance	Educational support	Rent	Annualized for PG programme	Computers and library	Total
Physicians	1,541,000	5,796,000		44,127,586		51,464,586
Nurses	2,084,000	10,044,000	1,224,050	-		13,352,050
Radiographer and Lab technicians	1,012,000	4,860,000	-	-		5,872,000
Facility	-	-	-		3,778,800	3,778,800
Total	4,637,000	20,700,000	1,224,050	44,127,586	3,778,800	74,467,436

7. Developing the Financial and Non-financial General Incentives Packages

In this section, the emphasis is on developing a general incentives package for all health care providers in all remote districts, whereas the special incentives package covers physicians, nurses, radiographers and laboratory technicians in the remote districts (Ka-1, Ka-2, Kha-1, and Kha-2) only, as specified in the health act.

Using the methods mentioned in section six, the following financial incentive package has been developed for the all health workers. The medium incentive scenario has been used for developing the general financial incentive package. Under this package, a physician gets an additional NRs. 15,269 per month in financial incentives in the most remote districts, and NRs. 6800 per month in the least remote districts. Similarly, nurses, radiographers, laboratory technicians and health assistants each get an additional NRs. 7224 per month in the most remote districts, and NRs. 850 in the least remote districts. Details are given in Table 7.1, below.

Table 7.1: Additional financial incentives for health workers, per month (medium cost scenario)

Remoteness Category	Physician	Nurse	Radio/ Lab tech	HA	Program Assistant	AHW	ANM	VHW	MCHW
Ka-1	15,269	7,224	7,224	7,224	5,418	4,064	4,064	3,048	3,048
Ka-2	12,591	4,913	4,913	4,913	3,685	2,764	2,764	2,073	2,073
Kha-1	10,187	3,978	3,978	3,978	2,984	2,238	2,238	1,678	1,678
Kha-2	9,167	1,619	1,619	1,619	1,214	911	911	683	683
Ga	6,800	850	850	850	638	478	478	359	359

The package covers health and accident insurance, educational support for children of all care providers, rent for nurses only, and post-graduate support for physicians only. Computers, internet access, and libraries are common to all. Details are given in Table 7.2, on the following page.

Table 7.2: Non-financial incentives for all care providers

Beneficiary	Educational support for children	Health insurance	Post-grad support (remote)	Rent	Computers/ Internet/ Library
Physician	√	√	√		
Nurse	√	√		√	
Radiographer/ lab technician	√	√			
HA	√	√			
Programme Assistant	√	√			
AHW	√	√			
ANM	√	√			
VHW	√	√			
MCHW	√	√			
Facility					√

8. Costing of the General Incentives Package

The total cost of the general incentives package for physicians, nurses, radiographers, and lab technicians, as mentioned above, plus programme assistance from paramedics is NRs. 1.12 billion, of which financial incentives account for 36 percent and non-financial incentives account for 64 percent.

Fig.8.1: Composition of financial and non-financial incentives in the general incentives package

8.1 Costing of the general incentives package by remoteness

If government chooses to offer non-financial incentives to the health workers in Ka-1 and Ka-2 districts only, the cost will be NRs. 119 million per year, accounting for 21 percent of the total cost of the incentives package. Nearly half of the cost (47%) goes to Kha-1 districts. Table 7.1 provides the costs (incentives for Ka-1 to Ga-1 districts) by remoteness in order to show the various options. If the government chooses to offer financial incentives only, the cost will be NRs. 408.5 million.

Table 8.1: Cost of the general incentives package by remoteness in a medium incentive scenario

Remoteness	Financial	Non financial	Total	Percent
Ka-1	94,458,834	88,630,839	183,089,673	16.31
Ka-2	23,291,840	30,485,056	53,776,896	4.79
Kha-1	192,412,590	336,295,583	528,708,173	47.09
Kha-2	39,248,067	68,354,000	107,602,067	9.58
Ga-1	59,118,431	190,576,000	249,694,431	22.24
Total	408,529,761	714,341,478	1,122,871,240	100.00

8.2 Costing the general incentives package by beneficiary

Table 8.2, below, shows the cost of financial and non-financial incentives packages by beneficiary. The cost of incentives to physicians and nurses accounts for 18 percent of the total cost, while incentives for ANMs account for ten percent. AHWs as a single category account for over one fifth (26%) of total cost, while community health workers such as VHWs and MCHWs account for one third (34.2%) of costs due to the size of their population.

Table 8.2: Cost of the general incentives package in a medium incentive scenario, by beneficiary

Beneficiary	Financial	Non-financial	Total	Percent
Physicians	60,859,351	64,162,678	125,022,029	11.13
Nurses	23,439,335	52,211,200	75,650,535	6.74
Radiographers/lab technicians	13,702,823	14,105,600	27,808,423	2.48
HAs	47,819,620	39,564,000	87,383,620	7.78
Programme Assistants.	7,104,029	13,338,000	20,442,029	1.82
AHWs	102,523,210	189,988,000	292,511,210	26.05
ANMs	36,931,691	68,972,000	105,903,691	9.43
VHWs	64,989,348	147,672,000	212,661,348	18.94
MCHWs	51,160,357	120,576,000	171,736,357	15.29
Facility	-	3,752,000	3,752,000	0.33
Total	408,529,761	714,341,478	1,122,871,240	100.00

8.3 Cost of general incentive package by types and categories of incentives

Table 8.3, below, shows costs by type and category of incentive. The highest cost incurred is for the educational support of children of health workers, which costs NRs. 564 million, accounting for over fifty percent of total costs. Health insurance accounts for 6.5 percent of the total costs, followed by support of post-graduate programmes for physicians (4.31%).

Table 8.3: Cost of the general incentives package by type and category

Type and category	Costs	Percent
Direct financial incentive	408,529,761	36.38
Educational support to children	564,063,200	50.23
Health insurance	72,722,000	6.48
Rent for nurses	25,408,800	2.26
PG support to physicians	48,395,478	4.31
Computer/ Internet/books support	3,752,000	0.33
Total	1,122,871,240	100.00

Providing an enabling learning environment (computers, internet access, and libraries) is a common incentive to all, and costs only NRs. 3.75 million.

9. Discussion and recommendations

The special incentives package was developed for health care workers who work in remote areas in order to increase their length of stay at post. It responds to the recommendations of the Nepal Portfolio Performance Review and was prepared according to the Ministry of Finance's action plan to improve the performance of health workers.

The right mix of financial and non-financial incentives is crucial in improving the performance of health workers. In Nepal, salaries are relatively low compared to other SAARC countries, so financial incentives are bound to work well. The role of non-financial incentives in improving the performance of health workers, however, must not be overlooked.

The state's willingness and ability to pay for health care in general is an important factor in ensuring incentives for care providers. In general salaries and incentives may have system-wide implications, but health workers are governed by the health acts, so these incentives packages may only have an impact in the health sector. On the basis of this study and the macroeconomic situation in general, we recommend, for the initial phase, implementing an incentives scheme for health care workers operating in remote areas.

Service outputs can be expected to increase if incentives are tied to performance, so it is recommended that a general incentives scheme be introduced to the health sector as a pilot programme to improve the performance of health workers. This costing has been conducted using a number of variables, including beneficiary, remoteness of post, and type of incentive, giving policymakers a number of options. If, for example, we fix outpatient consultations per month per physician at a minimum of 300, then they only get salary and allowance for the given services. If a physician offers outpatient consultation to 500 in a month, then, he or she is eligible to get additional incentives for those 200 consultations. If we fix incentives at NRs. 50 per additional consultation, then he/she gets additional income of NRs. 10,000 in a month. The same method can be applied to emergency and inpatient services. This payment method helps to increase the performance of physicians. In very remote areas, a retention-based payment system can also be introduced to prolong the retention of medical doctors, nurses, radiographers, and laboratory technicians.

A study should be conducted to gauge the effectiveness of financial and non-financial incentives, because their impact on quality of care is of primary concern. International cases have yielded mixed results, with relatively few significant impacts on quality of care. However, it is worth noting that payer programmes often include a quality improvement component in addition to incentive payments, making it difficult to assess the independent effect of the financial incentives (Christianson, Leatherman, & Sutherland, 2007). There is little evidence from Nepal on the effect of incentives on quality of care; therefore, a study should be conducted to examine the impact of incentives on quality of care.

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