Outlining organizational set up for the National Health Insurance of Nepal along with its functions and functionaries

NEPAL

Final Report

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ABBREVIATIONS

DRG	Diagnosis Related Groups
ERP	Enterprise Planning Systems
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
ID	Identification
IT	Information Technology
MIS	Management Information System
MoHP	Ministry of Health and Population
NHIA	National Health Insurance Agency
NRP	Nepali Rupees
UHIS	Universal Health Insurance Scheme
UZIS	Institute of Health Information and Statistics of the Czech Republic
WHO	World Health Organization

SUMMARY

The subject of the report is a proposal for the institutional setup and for formation of business processes within the Universal Health Insurance Scheme (UHIS) that is being prepared in Nepal. The proposed institutional setup is based on assumption that the Nepali side opts for a system with explicit enrolment of population into the UHIS, a split of provision of health care and its purchasing within the new scheme and with individualized claiming by health care providers. Should some assumption prove to be not valid in the course in the design of the UHIS the corresponding part of the proposed organizational structure can be dropped out or it can be modified accordingly. A new institution with the working name National Health Insurance Agency (NHIA) is proposed to be founded in an early stage of the design and implementation of the new scheme. It could be a very small institution for beginning (10-15workers) with a concrete task to finalize the design of the new scheme and prepare its implementation. The NHIA is in a semi-autonomous position to the Ministry of Health and Population. It is proposed that its operation will be supervised by a Steering Committee composed of representatives of different ministries and other relevant authorities. The principal documents like the design of the UHIS and its modifications in future, annual insurance plans etc. are submitted for an approval via the Steering Committee to the Ministry of Health and Population. The NHIA will be also in charge of administration of the UHIS after the scheme is implemented. An organizational structure of the NHIA is proposed including detailed description of tasks of each organizational unit. Two different options for decentralization the NHIA are proposed based on two tiers or three tiers structure. The lowest tier will be district branches of the NHIA. The district branches could be staffed with a very moderate number of workers for the beginning (4-5 workers) but they will grow in accordance with higher penetration rate of the new scheme. A rough calculation of administration costs as a percentage of expected revenue of the NHIA was done. It shows up that for lower penetration rates of the UHIS (below 30 % of the population) administration costs are rather high in comparison to expected revenue and some subsidization of administration cost would be desirable in initial periods of operations of the scheme. The share of administrative costs can be remarkably reduced provided an active selling of policies will be replaced by funding of the scheme from tax sources or when detailed claiming of health care providers will be replaced by just aggregate claiming without reference to individual patients. However, there is threat against sustainability of the UHIS in the latter case as the NHIA can lose control over its expenditures. The design of the organizational setup for the administration of the new scheme is complemented by description of core business processes for the new scheme with their mapping to the proposed organizational structure. The design of business processes is made in options depending on the technical solution of identification of insurees and acquiring their current entitlements for coverage of health care. The series of steps that should be taken to successfully design and implement the UHIS is listed with short comments to their details and with mapping them to the underlying organizational structure. A desirable IT support of the NHIA is discussed and overview of requirements for the information system of the NHIA is provided.

1. INTRODUCTION

The objective of the report is to propose an organizational setup and business processes for an (UHIS) that the Government of Nepal intends to implement in future. See detailed ToR in Annex 1.

In recent years, the Government of Nepal paid a lot of attention to improving of people's access to health care. Several new programs of financing of specific areas of health care have been launched such as the Free Health Services Program that brings to the population a package of basic services free of charge. The other programs focused on more specific areas of health care are the Safe Motherhood Program or the Screening and Treatment of Uterine Prolepses Program. These new programs were funded by increased expenditure of the Ministry of Health and Population. This expenditure has increased in relation to the total government expenditures from 4.5 % in 2004/05 to 6.1 % in 2009/10 [4]. Despite this fact there is still a high share of out-of-pocket expenditures of the population on the total health care expenditures- around 55 % [4]. The major part of these out-of pocket expenditures is spent on medical goods dispensed to out-patient patients (48.6 %) and curative health services (29.2 %). Out-of-pocket expenditures are received mainly by the private health care sector-in retail sales outlets (47.6 %) and in private hospitals (29.5 %). The governmental health care facilities received only 4 %.

The Ministry of Health and Population has launched exploring activities towards possible ways of improving equity, access and efficiency of health care provision. Attention is focused on possibility of implementing of the UHIS that could address the contemporary key challenges of the health care financing system in Nepal, especially [7]:

- limited capacity of the Government of Nepal to generate additional resources for funding of health care,
- limited ability of the health financing system to address inequities in access to health care; especially to protect poor people,
- inefficient use of resources due to a fragmented resource allocation,
- limited power of the Government of Nepal to influence price and quality of rendered health care.

The UHIS definitely may respond at least partially to the challenges mentioned above. It can mobilize additional funds from contributions of insurees. Inequities in purchasing power of poor people can be solved more easily by subsidization of payments for their insurance policies than by subsidization of health care for them. The UHIS will probably also trigger a merge of currently separated financial flows within different public programs and articulating of the priorities of these programs in the design of the benefit package in future. Mobilization of additional funds and concentration of the existing ones will strengthen definitely the negotiation position of the purchasing side and it will allow influencing of prices and quality of health care provision.

However, the design of such UHIS and its viable implementation is not an easy task, especially in developing countries like Nepal with extremely small percentage of formally employed inhabitants.

The focus of this material is an administration of a potential universal health insurance scheme in Nepal. It means an institutional setup, a definition of business processes, a supporting IT system and adequate human resources. The administration is derived in many aspects from the definition of the UHIS.

The report is based on some assumptions regarding the UHIS. It is supposed that initially the UHIS will be built without any specific legislative support. It is supposed that the scheme will be voluntary for all citizens of Nepal, the benefit package will be built on top of currently provided benefits within the publicly funded health care programs. Community rates[1] will be used for contributions paid by households up to a defined number of dependents with some subsidization of the state budget for households recognized to be poor. The scheme will be operated according to the concept of purchaser-provider split and provision of benefits in kind[2]. It is supposed that both public and private health care providers will be contracted by the scheme for provision of the benefits covered by the scheme. However, deviations of this concept can be accommodated in the proposed institutional setup or business processes. The long-term vision of the development of the UHIS may encompass some dedicated legislation allowing making the scheme mandatory at least for some groups of population (e.g. formally employed persons and their household dependents) and/or including of benefits provided currently within public programs in the benefit package of the universal insurance scheme. These additional features of the UHIS will not change proposed institutional setup substantially and experience gathered from operation of the initial phase of implementation of the UHIS can be utilized for a smooth transition to a modified scheme in the future.

The proposed institutional setup for administration of the UHIS is described in the second chapter including assessment of the administration costs. The third chapter describe proposal for core business processes within the UHIS and their mapping onto the organizational structure proposed in the second structure. The fourth chapter summarizes activities that should be accomplished during the design and the implementation phase of the new health insurance system. The fifth chapter focuses on the IT support for the UHIS and the sixth chapter contains some comments to the relation of remuneration mechanisms of health care providers to sustainability of health insurance schemes.

[1] Flat contributions irrespective of risk

[2] That means third party payment of health care providers

2. INSTITUTIONAL SETUP FOR THE UNIVERSAL HEALTH INSURANCE SCHEME

It is proposed that the National Health Insurance Agency (NHIA) will be founded that will be responsible for design of the UHIS, its implementation and afterwards its administration. Foundation of such institution is very important for speeding up and streamlining of the whole process of introducing of the UHIS. The new institution will fully focus on this task on one hand and it will be responsible to the Ministry of Health and Population on the other hand.

2.1. Steering structure of the NHIA

The Ministry of Health and Population will exercise its control over activities of the NHIA trough a Steering Committee (see the Figure 1) that would be composed of representatives of the most relevant resorts of the Nepali state administration (Ministry of Health and Population, Ministry of Finance, Ministry of Home Affairs, Ministry of Women Children and Social Welfare etc.) and some other stakeholders relevant to the UHIS (trade unions, associations of employers etc.). However, participation of representatives of health care providers in such steering committees is usually considered to be inappropriate as the NHIA represents the purchasing part in the purchaser-provider arrangement. It is assumed that such split is followed by the Ministry of Health and Population. The exact composition depends on actual distribution of authorities within the Nepali state administration.

The purpose of the Steering Committee is supervision of activities of the NHIA executive body on one hand and approving major conceptual documents on the UHIS from points of view of different stakeholders on the other hand.

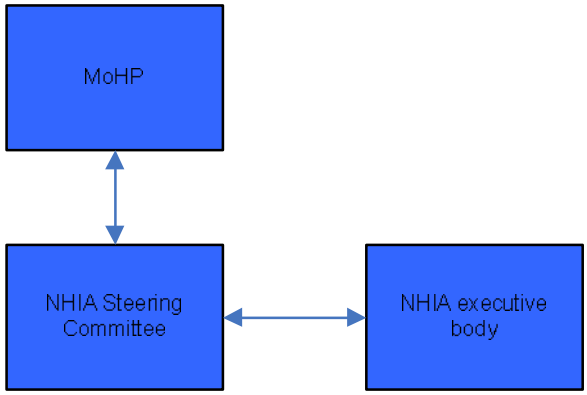

Figure 1: Steering structure of the NHIA

Regarding authorities of the Steering Committee, they depend on perception of the role of MoHP in the process of design, implementation and administration of the UHIS. At minimum, the MoHP should reserve itself the right to approve:

- Design of the insurance product for the UHIS (benefit package, cost-sharing, contribution rates etc.);
- Guidelines for contracting of health care providers within the UHIS;
- Annual insurance plan of the NHIA;
- Annual report of the NHIA.

These documents are submitted to the MOHP by the Steering Committee after its assessment and its preliminary approval.

Regarding authorities of the Steering Committee towards the executive body of the NHIA there is hardly some worldwide practice that could be communicated. The following authorities of the Steering Committee can be proposed as a subject for further discussion:

- Approval of major investments done by the NHIA;
- Approval of contracts with distribution channels;
- Approval of the high level management staff[3];
- Approval of major suppliers for the NHIA;
- Approval of contracted network of health care providers;
- Approval of major outsourcing contracts of the NHIA.

2.2. Executive structure of the NHIA

A proposal for the organizational structure of the executive part of the NHIA is depicted in the Figure 2. It is supposed that the organizational structure will evolve from a simply one (the boxes in ochre colour) just for the task of designing of the new scheme across an interim one (the boxes in ochre and turquoise colours together) to a final organizational structure both for the administration and continuous development of the UHIS (all boxes together).

[3] With a potential exception of a managing director that can be appointed by the MoHP

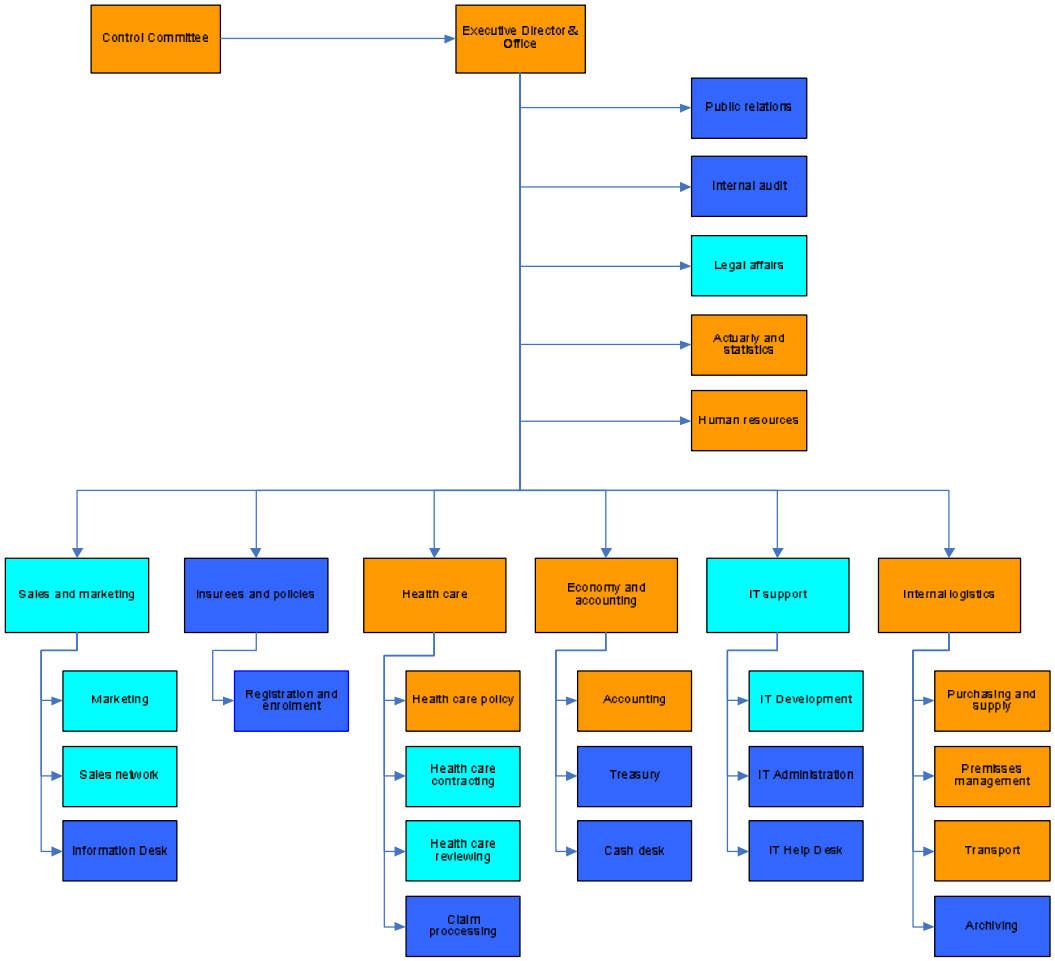

Figure 2: Organizational structure of the executive part of the NHIA

2.3. Description of roles and staffing of the organizational units

The paragraph contains description of responsibility of each organizational unit from the organizational structure in the Figure 2 including a proposal for staffing of the unit.

Section Public Relation

Staff: 1-2 public relation specialists

Responsibility:

- Communicating with the public on activities and results of the NHIA;
- Reaction on objections, comments from the public space;
- Final preparation of annual reports of the NHIA.

Section Internal Audit

Staff: 2 + (2 per 50 branches) specialists and 1+(1 per 50 branches) administrative officers

Responsibility:

- Auditing of operations of all departments and all branches;
- Proposing of enhancements for internal operations;
- Gathering statistics on the most frequent encountered errors in internal operations.

Section Legal Affairs

Staff: 2 + (1 per 5,000,000 insurees) jurists and 1+(1 per 5,000,000 insurees) administrative officers

Responsibility:

- Reviewing of all contracts for supplies to the NHIA;
- Reviewing and final preparation of all model contracts with health care providers;
- Settlement of legal issues with insurees and health care providers.

Section Actuary and Statistics

Staff: 2-3 actuaries/statisticians and 1 administrative workers

Responsibility:

- Gathering statistics on utilization of health care;
- Assessment of expected impact of cost-sharing schemes;
- Proposing of a setup of parameters of cost-sharing schemes to be used for the benefit package;
- Calculation of contribution rates;
- Elaboration of actuarial/statistical reports.

Section Human Resources

Staff: 1 + (1 per 300 workers of the NHIA) human resources specialists

Responsibility:

- Recruiting of new workers;
- Maintaining of personnel records of all workers;
- Creating training/educational plans for internal workers;
- Organizing of internal trainings.

Department Distribution and Marketing

It is responsible for marketing of the universal health insurance among the population and for a setup and operation of distribution channels for policies.

Section Marketing

Staff: 2 marketing specialists+2 administrative workers

Responsibility:

- Preparation and running of marketing campaigns for the UHIS;
- Preparation of information booklets for insurees;
- Evaluation of effectiveness of marketing campaigns.

Section Sales Network

Staff: 3 administrative workers per branch office

Responsibility:

- Identification of the most effective sale channels;
- Preparation of contracts and contracting of sale channels;
- Training of sale force;
- Supplying of sale channels with material (forms) and equipment;
- Evaluation of effectiveness of sale channels;
- Distribution of policies at a counter of the district branch.

Section Information Desk

Staff: 2 + (1 per 5,000,000 insurees) information workers

Responsibility:

- Answering of queries of insurees (by phone, by e-mail);
- Forwarding of complicated queries to relevant departments;
- Gathering statistics on the most frequent queries.

Department Insurees and Policies

It is responsible for registration of insurees, issuance of identification cards, recording of new and renewed policies.

Section Registration and enrolment

Staff: (1 per 100 000 insurees[4]) administrative officers

Responsibility:

- Taking over forms on enrolment or renewals from sale agents;
- Recording all data on households, their members and sold policies in the NHIA information system;

[4] The assumptions used: the average processing time for an enrolment of a household – 10 minutes, the average number of insurees per household, the effective full time working time annually - 7 hours x 220 days

- Issuance of insurance cards.

Department Health Care Remuneration

It is responsible for definition of the benefit package, contracting of health care providers and settlement of their claims.

Section Health Policy

Staff: 2 health care/economics specialists on relevant sectors of health care, 1 administrative worker

Responsibility:

- Definition of the benefit package reflecting priorities of the (state) health policy;
- Selection of remuneration mechanisms of health care providers;
- Creation and maintenance of used classifications of units of health care (services, hospital cases, drugs etc.);
- Pricing/costing of units of health care;
- Recording of the benefit package and all associated classifications into the information system.

Section Health Care Contracting

Staff: 1 + (0.5 per branch office) health care/economics specialists

Responsibility:

- Formulation of guiding principles for contracting of health care providers;
- Assessment of health care capacity needed for insurees on the respective territory;
- Preparation of model contracts for the relevant types of health care providers;
- Seeking of and negotiating with potential contractual health care providers on contractual terms;
- Maintaining of the register of contractual health care providers and entering of attributes of the signed contracts in the information system.

Section Health Care Reviewing

Staff: 3+ (0.5 per 300 000 insurees[5]) health care specialists of different medical specialties, 1 administrative officer

Responsibility:

- Preparation of instructions for assessment of medical adequacy and quality of health care;
- Selecting of claims for medical review;
- Assessment of medical adequacy of claimed health care (for selected claims);
- On spot (at health care providers) assessment adequacy and quality of health care;
- Communication with health care providers on findings;
- Recording of findings in the NHIA information system.

Section Claims Processing

Staff: (4 per 100 000 insurees[6]) administrative officers

Responsibility:

- Taking over claims from representatives of health care providers;
- Entering claims into the NHIA information system;
- Checking correctness of claims (usually it is done automatically by the information system);
- Communicating with health care providers on problems encountered;
- Handing over settled claims to the archive.

Department Economy and Accounting

It is responsible for accounting of all financial operations within the NHIA and between the NHIA and insurees and health care providers. Further, it is responsible the availability of liquidity for meeting all financial obligations of the NHIA.

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[5] The assumptions used: the average reviewing time for a selected claim including subsequent communication with a health care providers – 15 minutes, the average number of claims per insure annually -1, the effective full time working time annually - 7 hours x 220 days, the average percentage of reviewed claims – 5%

[6] The assumptions used: the average processing time for a claim including subsequent communication with a health care providers –4 minutes, the average number of claims per insuree annually -1, the effective full time working time annually - 7 hours x 220 days.

Section Accounting

Staff: 1 specialist, 1 per a branch + (1 per 600 000 insurees[7]) accountants

Responsibility:

- Accounting of all financial operations;
- Valuating of claims according to predefined rules (usually it is done automatically by the NHIA information system;
- Producing of basic accounting reports for the annual report.

Section Treasury

Staff: 1 economist with specialization on treasury + 1 administrative officer

Responsibility:

- Depositing/investing of available funds with an objection to maximize earnings while ensuring timely delivery of financial means to meet financial obligations of the NHIA.

Section Cash Desk

Staff: (1 per a branch) cashier

Responsibility:

- Direct debiting of insured households;
- Taking over contributions from sales agents.

Department IT support

It is responsible for development and effective availability of an IT support for business processes within the UHIS.

Section IT Development

Staff: 2-3 analysts

Responsibility:

- Specification of requirements for the IT support[8];
- Design and maintenance of all forms for business processes;
- Organization of the user acceptance procedure for the NHIA information system;
- Continual gathering of new requirements for the IT support;
- Communication with IT vendors.

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[7] The assumptions used: the average processing time for a claim including subsequent communication with a health care providers –2.5 minutes, the average number of claims per insure annually -3, the effective full time working time annually - 6 hours x 220 days.

[8] It is supposed that the development of the NHIA information system is outsourced or the NHIA information system is got on the market (maybe as an open source solution)

Section IT Administration

Staff: 2 administrators (depending on the level of centralization of the IT solution)

Responsibility:

- Administration of all components of the IT support (that are not outsourced);
- Managing of user accounts in the NHIA information system.

Section IT Help Desk

Staff: 1 + (1 per 1000 internal IT users) software workers

Responsibility:

- Running 1st level help desk for the internal staff of the NHIA;
- Gathering data on all issues in the IT support.

Department Internal Logistics

It is responsible for supply of all needed material and equipment for the staff of the NHIF, ensuring working places and transport for the staff and archiving of paper documents according to an archiving order.

Section Purchasing and Supplies

Staff: 3-4 administrative workers

Responsibility:

- Preparation of all tenders;
- Purchasing of supplies for the NHIA.

Section Management of Premises

Staff: 1 + (1 per a branch)

Responsibility:

- Ensuring working places with all amenities and communal services.

Section Transport

Staff: 1 + (1 per a branch) drivers

Responsibility:

- Transport of the staff to fulfil their duties in the field.

Section Archiving

Staff: 1 + (1 per 5,000,000 insurees) archive workers

Responsibility:

- Elaboration of an archive order;
- Taking over documents to be archived;
- Managing of the archive.

2.4. Regionalization of the organizational structure of the NHIA

The NHIA is founded as an institution that should administer the UHIS on the whole territory of Nepal. It has to ensure its availability for insurees and health care providers. So, although the UHIS is planned as a uniform nationwide scheme with pooling at the state level, it has to create branches at least at district level. However, it should be noted that distribution of the organizational structure of the NHIA increases costs of administration due to replication the organizational structure in 75 districts. So, whatever can be done effectively centrally should be done centrally. The extent of distribution of the tasks of the NHIA to the regional level is associated closely with decision space for management of the regional (district) branches. The broader the space is, the deeper decentralization of the NHIA should be.

There is also a question whether the NHIA should be decentralized into one or two regional levels - see the Figure 3.

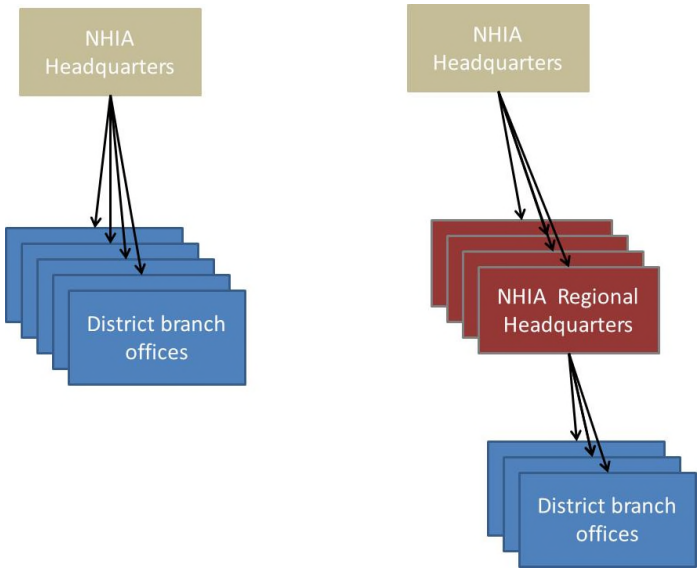

Figure 3: Two/three tiers organizational structure of the NHIA

The two-level scheme is definitely sufficient for piloting. However, it should be noted that managing of 75 branches from the single NHIA Headquarters within the single pooled scheme may be a challenging task. Therefore, an insertion of an interim managing level (NHIA

Regional headquarters) may have sense. A question of federalization of the Nepali state is an open question in Nepali politics. Reflection of the concept of federalization in the UHIS can be different depending whether the potential federal units will have their own health insurance schemes or whether the scheme will be unified for the whole country. In the first case, there may be separate headquarters at the federal units and they can have just district branches as in this case the number of branches is manageable. In the second case, the second tier in the third their model according to the Figure 3 can represent the federal level.

Irrespective whether we speak about two tiers or three tiers organization of the NHIA, we have to discuss what tasks could be delegated from the NHIA headquarters downward. The Figure 4 shows an example of a possible arrangement (blue colour means allocating of the tasks to the headquarters, red colour means allocating to the regional/district level and yellow colour means only partial delegation to the regional/district level.

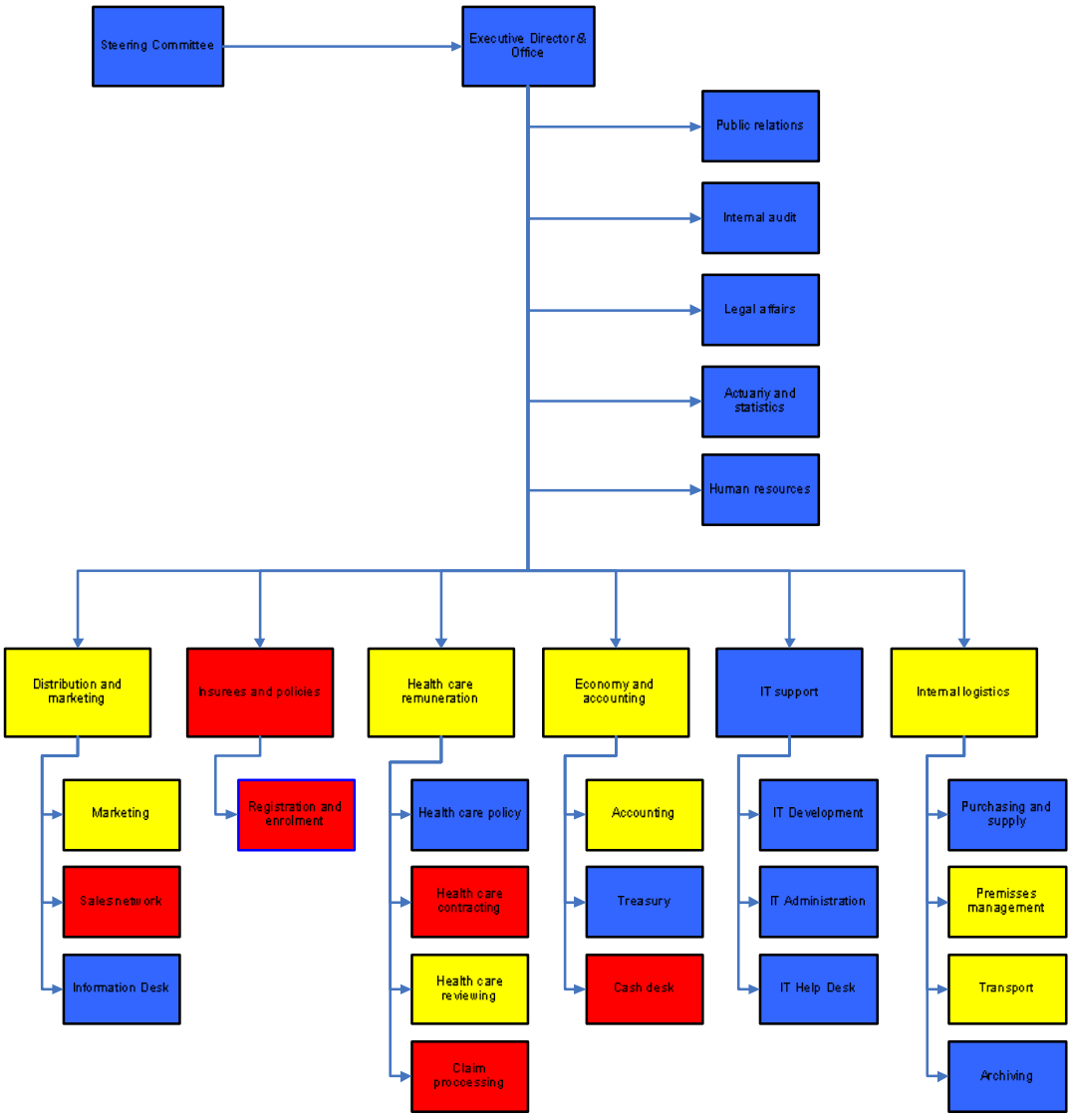

Figure 4: Decentralization of tasks in the NHIA

It is supposed that there will be a district manager at the top of a district branch that will be responsible for the branch from managerial point of view. Activities of departments at the branch level should be methodologically influenced by the corresponding departments in the NHIA headquarters.

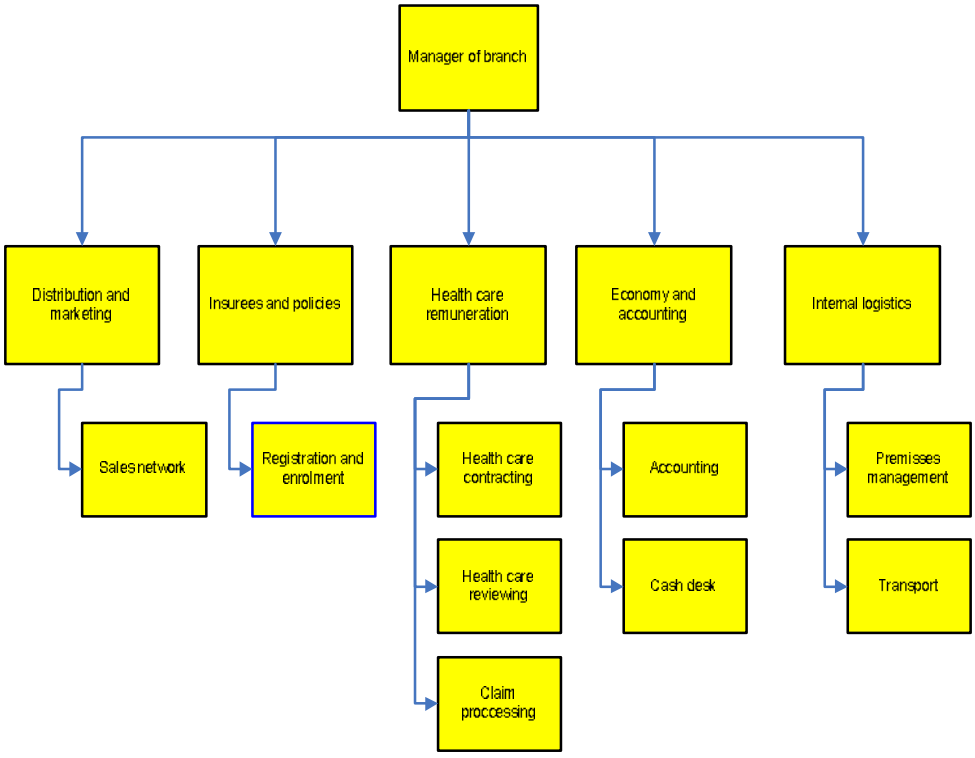

Figure 5: Organizational structure of a district branch

2.5. Administration costs of the Universal Health Insurance Scheme

It should be stressed that splitting of purchasing and providing health care accompanied by some type of output oriented remuneration is not free of charge nor are the costs negligible. Let's roughly estimate share of administration costs of the UHIS on the total revenue of the scheme for the proposed staffing of the NHIA given in the preceding paragraph for different numbers of enrolled insurees. We will come out of assumptions summarized in the following table:

Indicator	Assumed value
Number of NHIA branches	75
Average monthly salary of a specialist	40,000 NPR
Average monthly salary of an admin. worker	20,000 NPR
Average annual contribution per household	1,500 NPR
Average number of members in a household	5
Average purchasing value of hardware equipment per employee of the NHIA	50,000 NRP
Depreciation period	5 years
Coverage of employees of the NHIA with hardware equipment	70 %

Table 1: Assumptions for modelling of administration costs

We will assume that overhead costs represent from 20 % to 17 % of total personnel costs dependent on the number of NHIA staff. Commissions (bonuses for sales network of policies) let range from very moderate 4 % to 2 % of the revenue from contributions. As a justification of decreasing percentage of overhead costs can be fact that with more workers on one working place (e.g. a district branch office) costs of maintenance, office equipment, energy consumption increase less than proportionally. Regarding bonuses, the majority of bonuses paid for higher percentage of insured population are for renewals of policies and not for new enrolments. The bonus for a renewal can be smaller as the renewal is less time demanding task in comparison to an enrolment of a new household.

The following table shows rough estimation of administration cost in dependence to the number of insured persons.

Number of insured persons	1,000,000	5,000,000	10,000,000	20,000,000	25,000,000
Expected revenue (NPR)	300,000,000	1,500,000,000	3,000,000,000	6,000,000,000	7,500,000,000
Number of specialists	109	118.5	129	150.5	162
Salaries of specialists (NPR)	52,320,000	56,880,000	61,920,000	72,240,000	77,760,000
Number of administrative staff	724	972.5	1284	1908	2220
Salaries of admin. staff (NPR)	173,760,000	233,400,000	308,160,000	457,920,000	532,800,000
Overhead costs (% of personnel costs)	20.0%	19.5%	18.9%	17.6%	17.0%
Depreciated capital costs (NPR)	5,831,000	7,637,000	9,891,000	14,409,500	16,674,000
Distribution costs	4.0%	3.6%	3.2%	2.4%	2.0%
Administration costs	96.3%	27.3%	18.2%	13.0%	11.7%
Amount of subsidization of administrative costs (NPR)	253,004,551	229,011,396	186,558,294	62,499,996	

Table 2: Results of modelling of administration costs

The Table 2 shows expected revenue of the NHIA for given number of insured persons taking into account the average number of members of one household and expected annual contributions per household. It doesn't matter in this context that for poor households the contributions could be fully or partly subsidized by the state budget. The numbers of specialists and of administrative staff are derived from the staff requirements[9] given in the preceding paragraph. A breakdown according to sections of the proposed organizational structure of the NHIA is given in the Table 3.

[9] It should be noted that the staff requirements are proposed rather low. For example, a norm of 1,700 insured persons per one staff in the institution like the NHIA is considered in the Czech Republic. The numbers of staff of insurance agencies in Germany are even remarkably higher.

Section/number of insured persons	1,000,000		5,000,000		10,000,000		20,000,000		25,000,000	
	Specialists	Admin. workers	Specialists	Admin. workers	Specialists	Admin. workers	Specialists	Admin. workers	Specialists	Admin. workers
Director	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5
Public relation	1	0	1	0	1	0	1	0	1	0
Internal audit	4	2	4	2	4	2	4	2	4	2
Legal affairs	3	1.5	4	2	5	2.5	7	3.5	9	4.5
Actuary and statistics	2	1	2	1	2	1	2	1	2	1
Marketing	2	2	2	2	2	2	2	2	2	2
Sales network	0	225	0	225	0	225	0	225	0	225
Information desk	0	3	0	3	0	4	0	6	0	7
Registration and enrolment	0	95	0	175	0	275	0	475	0	575
Health policy	2	1	2	1	2	1	2	1	2	1
Contracting	38.5	0	38.5	0	38.5	0	38.5	0	38.5	0
Medical reviewing	5	1	11.5	1	20	1	36.5	1	45	1
Claim processing	0	40	0	200	0	400	0	800	0	1000
Accounting	1	78	1	85	1	93	1	110	1	118
Treasury	1	0	1	0	1	0	1	0	1	0
Cash desk	0	75	0	75	0	75	0	75	0	75
IT development	3	0	3	0	3	0	3	0	3	0
IT administration	2	0	2	0	2	0	2	0	2	0
Purchasing	0	3	0	3	0	3	0	3	0	3
Mangement premises	0	76	0	76	0	76	0	76	0	76
Transport	0	76	0	76	0	76	0	76	0	76
Archive	0	2	0	2	0	3	0	5	0	6
Human resources	4	4	5	5	6	6	8	8	9	9
Help desk	2	0	3	0	3	0	4	0	4	0
Total	109	724	118.5	972.5	129	1284	150.5	1908	162	2220

Table 3: The number of staff according to sections and the number of insurees

Going back to the Table 2 the salaries of both categories of workers are calculated as the product of average annual salary for given category and the number of workers. The rows for overhead costs and distributions costs give percentages used for calculations of contribution of these types of costs to the final administrative costs. Depreciated capital costs were calculated from the number of staff, average equipment costs[10] per one worker, depreciation period and the expected percentage of workers in the NHIA with such equipment (taking into account some level of sharing of the equipment). The most important row is the row for administration costs expressed as the percentage of the expected revenue. The last row shows the volume of subsidization of the administration costs needed to keep the share used for funding of health care at the level of 88 % of revenue; it means at the level of 12% spent at most for the administration.

Important observations can be derived from the Table 2. Administration costs of the UHIS are at an acceptable level only if more than one third of Nepali population is insured. Up to this level of penetration of the UHIS the administration costs are proportionally to the expected revenue very high and they have to be subsidized from other sources to ensure reasonable share of the revenue for funding of health care. The reason

[10] Such as computers, printers, embossing equipment for personalization of insurance cards, etc.

is that the assumed contribution rate per household is very small in comparison to expected salaries of the NHIA personnel[11].

Several approaches how to tackle the problem can be considered. The first one is making the scheme mandatory to ensure a high penetration of the scheme from the onset and also to allow for mobilization and merging contemporary public funding of the Nepali health sector with the new scheme. This approach would definitely push down the share of administrative costs on collected revenue to reasonable figures. The problem is how to effectively ensure that all or nearly all will pay contributions. It is questionable whether inland-revenue offices are capable to take over such task.

The other potential remedy is to renounce collection of contribution and to fund the additional benefit package from general taxes. Nearly 40 % of administration costs dismiss in such case and the scheme becomes mandatory by definition. The principal question is whether the Nepali state can afford it or whether it can increase some other taxes to get funds for the additional benefit. The NHIA still makes sense as it can focus only on efficient provision of health care and its remuneration.

As a compromise may be regarded shrinking of the UHIS only to coverage of poor households. Anyway, a subsidization of contributions for poor households is on the current agenda. This arrangement means much lower distribution costs on one hand and lower utilization of the staff of the outcome part of the NHIA on the other hand. It is questionable whether these two opposing trends will result finally in a decrease of the share of administration costs on the revenue of the NHIA. However, a major objection definitely would be that not only poor households need an affordable health insurance.

Major savings in the outcome part may be achieved by abandoning of individual claiming (it means claiming with a reference an individual patient) and by replacing it by claiming just of aggregated volumes of health care in a specific period. However, such approach may remarkably diminish capability of the NHIA to control expenditures for health care with a potential threat of a negative impact on the sustainability of the health insurance scheme. It should be stressed that the NHIA should contract also private health facilities that may be less open to some subsequent checking of aggregated claims.

The other approach to saving of administration costs is a centralization of activities whenever possible. This is a trend encountered at both public and commercial insurers that were triggered by web based technologies in insurance information systems. An option for saving of administrative costs is also a streamlining of the interface between health care providers and the NHIA. If health care providers will submit claims in an electronic way, it saves human resources at the side of NHIA whereas an increase of burden on the side of health care providers may be only moderate.

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[11] The ration of salaries of employees of health insurance agencies and average premium is quite different in European social health insurance systems and therefore administration costs are not such a striking problem.

Finally, not all workers should be employees of the NHIA. If advantageous some of them can be only contracted for accomplishing specific tasks, for example for mastering of peaks in data entry. It should be also noted that the NHIA can accommodate at least partly contemporary staff engaged in managing of public programs or in funding of health care at the district level.

2.6. Outsourcing options for the NHIA

Operations of the NHIA can be definitely at least partly outsourced. The question is whether it makes sense and whether it is beneficial for participants in the scheme. The UHIS is generally publicly subsidized scheme and it can be expected that the share of public funding will increase by merging with current public programs of financing of health care in future.

Generally, administration of the whole scheme can be outsourced to a private insurance company or to a joint-venture with a private insurance company[12]. The key question is who will bear the risk of potential deficit of the UHIS. If the risk should be borne by the administrator there is a danger that the administrator may seek for ways how to focus on the healthier segment of the population only.

If the risk of running of the UHIS should be taken over by the state and the administrator should be liable only of efficiency of internal operations of the scheme (for example by granting of a fixed percentage of the revenue of the schema for coverage of operating costs) then there is again a problem. The state should audit activities of the administrator in order to ensure that only adequate and necessary health care was remunerated. It is requires expertise on the side of state comparable with expertise needed for administering of the scheme. So, expertise of the administration of the UHIS is required at the state's side anyway and lack of expertise shouldn't be used as an argument for outsourcing on such a massive scale. One argument to outsourcing of the administration of the UHIS to a for example private insurer might be using of its probably established sales network. It is again a question whether an insurer capable and willing of taking over of the administration of the UHIS is present on the Nepali insurance market.

One of common attribute of universal health insurance schemes is that they are operated in a not-for-profit regime. Any merging with a for-profit concept needs very careful consideration and testing whether it is in conformance with the goals of the scheme.

Besides a total outsourcing of the administration of the UHIS there is possibility to outsource separate activities within the administration. There are several candidates for such outsourcing that may increase quality of administration and finally maybe its costs. For example, administration and maintenance of the NHIA information system can be outsourced to a specialized company including running of users' Help Desk. Obligations and criteria of quality of operations can be relatively easily described by a so called Service Level Agreement stating a

[12] See for example in Maldives.

minimal availability of the information system, maximal response times for users' problems etc.

The other area for a beneficial outsourcing is selling of policies as the UHIS is planned to be voluntary. The NHIA may have its selling posts at their branches. However, selling of policies require much broader distribution channels. As selling of policies by dedicated sale agents may be rather costly, the NHIA should concentrate on distribution channels for which selling of policies is just a complementary activity, e.g. health facilities, local public administration, post offices and for which commissions to be paid are rather marginal.

Depending on enrolment and claim submission schedules there may emerge peaks in demand for data entry at the NHIA. Outsourcing of data entry services may alleviate this problem and save resources under some circumstances.

There are other activities for which the NHIA doesn't need to employ its own staff but that can be done by contracted workers. A typical activity is medical reviewing that requires medical specialists. As it is not a purpose of the NHIA withdraw fully scarce medical specialists from the Nepali health sector, they can be contracted on a part-time basis by the NHIA. A bit tricky problem is that these part-time specialists shouldn't review claims from health facilities in which they are employed. It can be managed by the NHIA insurance information system that should be able to present claims for medical reviewing to any section of medical reviewing in the organizational structure of the NHIA including sections of medical reviewing in other district branches.

3. BUSINESS PROCESSES WITHIN THE UNIVERSAL HEALTH INSURANCE SCHEME

This chapter contains a description of selected business processes within the UHIS. The business processes can be classified according to their affinity to the main health insurance business as core, control or support business processes. The focus of the description is on core business processes. A description of a flow of activities and of their content is provided along with identification of key actors and key supplies and documents for running of the corresponding business processes. The description of the business processes is mapped into the organizational structure of the NHIA proposed in the preceding chapter.

3.1. Design features with impact on business processes

There are several features of the design of the UHIS that have impact on details of business processes. They are as follows:

Fixed or floating period of enrolment

Households may enrol either to a fixed date (or dates) during a year or they can enrol anytime. Fixed enrolment periods are sometimes used as a prevention of intentional enrolling[13] of insures because of their acute health care needs. Fixing of dates of enrolment and coverage doesn't eliminate the problem fully but remarkably alleviates it. The disadvantages are peaks in processing of enrolments and renewals of policies and at least at the onset of the scheme constraint opportunity to offer and sell policies to new households.

Grace periods

Grace periods may apply to renewals of policies irrespective whether a fixed or floating period for enrolment is used and it applies to enrolments with fixed period of enrolment as well. Relating to renewals, a policy should be generally renewed by its policy holder before its expiry date. However, a grace period (one or two months) may be allowed for a delayed renewal after the expiry date that preservers all advantages of a renewal against a new enrolment (for example no registration fee covering extra costs associated with new members of the scheme, no waiting periods for coverage etc.). The coverage of an expired policy may extend across the grace period or may stop on the expiry date. A grace period for enrolment with a fixed period of enrolment means that a policy can be acquired even after the end of enrolment period (one or two months). The holder of such policy is punished by a shorter insurance period. Expire date for such policy is determined according to the end of the enrolment period and not according to the actual date of enrolment.

[13] The problem of so called adverse selection is completely eliminated by making the scheme mandatory. It is one of big advantages of public mandatory health insurance schemes over private schemes that adverse selection doesn't play any role in them.

Contributions in instalments

Sometimes instalments are allowed for contribution to make policies more affordable. The policy is effective after the first instalment provided it is of some minimal amount. A maximal number of instalments and a maximal period for full payment of contributions are usually defined.

Waiting periods

They are one of measures to prevent intentional enrolment because of instant need of health care. They can be applied for the whole range of benefits or only for specific types of covered benefits (e.g. for elective surgery). They can be applied with floating period of enrolment to alleviate the problem of an adverse selection and simultaneously solve the problem of time needed for processing of enrolment documents and issuance of a health insurance card after the act of an enrolment in the NHIA.

Ceilings for expenditures

Ceilings for expenditures are sometimes applied at the level of the whole policy/household, at the level of an individual insuree or at the level of an individual claim. Ceilings can be applied for the benefit package as a whole or just for partial sectors of health care. If ceilings at the level of a policy or at the level of insuree are applied they require information of up to the date expenditures for the policy or for the insuree. The data can be located in the central NHIA insurance information system or can be also located in a distributed manner at insurees in the form of content on a chip insurance card (or an insurance booklet).In the first case, a form of the reserving of funds for an insuree at the NHIA has to be implemented when the insuree is asking for health care at a health facility in order to overcome the problem of claims incurred but not processed yet. If ceilings at the level of policy are applied, individual smart insurance cards[14] don't help and some form of centralized keeping of data on expenditures per household has to be used (see below)

Ceilings for utilization

Ceilings for utilization are also sometimes applied at the level of the whole policy, at the level of an individual insure. Ceilings for utilization can be applied for the benefit package as a whole or just for partial sectors of health care. Ceilings for utilization limit the numbers of provision of specific medical services and/or medical or they limit the number of specific or all out-patient visits or specific or all in-patient stays. Regarding a tracking of ceilings for utilization the same applies as in the case of ceilings for expenditures.

From the point of view of complexity of business processes, the simplest combination is a floating enrolment period with a common waiting period, without grace periods, instalments and ceilings. However, other consideration as prevention of adverse selection, availability of the insurance product to a broader population or sustainability of the UHIS

[14] It means for individual insurees and not just one insurance card per household.

may lead to an application of other options that have to be reflected in the core business processes.

3.2. Technical issues with an impact on business processes

There are also some technical issues that influence business processes of the NHIA. They relate to the way of identification of insurees and to the way of tracking their entitlements for coverage. As the UHIS will be probably voluntary, an identification of enrolled insurees is necessary. This is done usually by an insurance card or an insurance booklet that are issued by a health insurance agency. There are generally two concepts of roles of insurance cards.

The first concept considers an insurance card to be just a reference key to an entry to a central insurance information system for retrieving of further identification of an insuree, information whether his/her policy is valid and how he/she stands with exploitation of possible ceilings associated with the policy. In this concept the insurance card can be very simple one with only an insurance ID of the insuree, his/her name, the date of birth, sex and it is all. An expiry date is not necessary as a query on entitlements for coverage gets from the central information system fresh data on the topic. So, the insurance card can be used for several cycles of renewals of policies and unless medical personnel allow interchanging of a person for a treatment the chance of a fraud is rather limited. The disadvantage is necessity of an on-line connection to the central insurance information system that can be partially alleviated in case by an off-line substitutive solution of access to the NHIA insurance information system.

The second concept is quite opposite to the first one. The insurance card contains all data relating to identification of an insuree, to the period of validity of his/her policy and also the data on current status of his/her entitlements. The last feature requires that the insurance card has some writable memory (it a chip card) or it is just a booklet. The advantage is that a health care provider is not dependent on an on-line availability of data from the NHIA insurance information system. The disadvantage is necessity to replace or to rewrite the insurance card by each renewal and also of a chance of faking of the insurance card by a patient. As both concepts represent still options for the Nepali UHIS, they are both reflected in the description of the business processes below.

3.3. Core business processes

Three core business processes relating to the revenue (input) part of the NHIA are described – enrolment and collection of contributions, modification of a policy and renewal of a policy. The business process of claim processing relates to the output part of the NHIA.

3.3.1. Enrolment Process and Collection of Contributions

The process encompasses a set of steps required to enrol a household and collect its contribution. The overview of the process is depicted in the Figure 6.

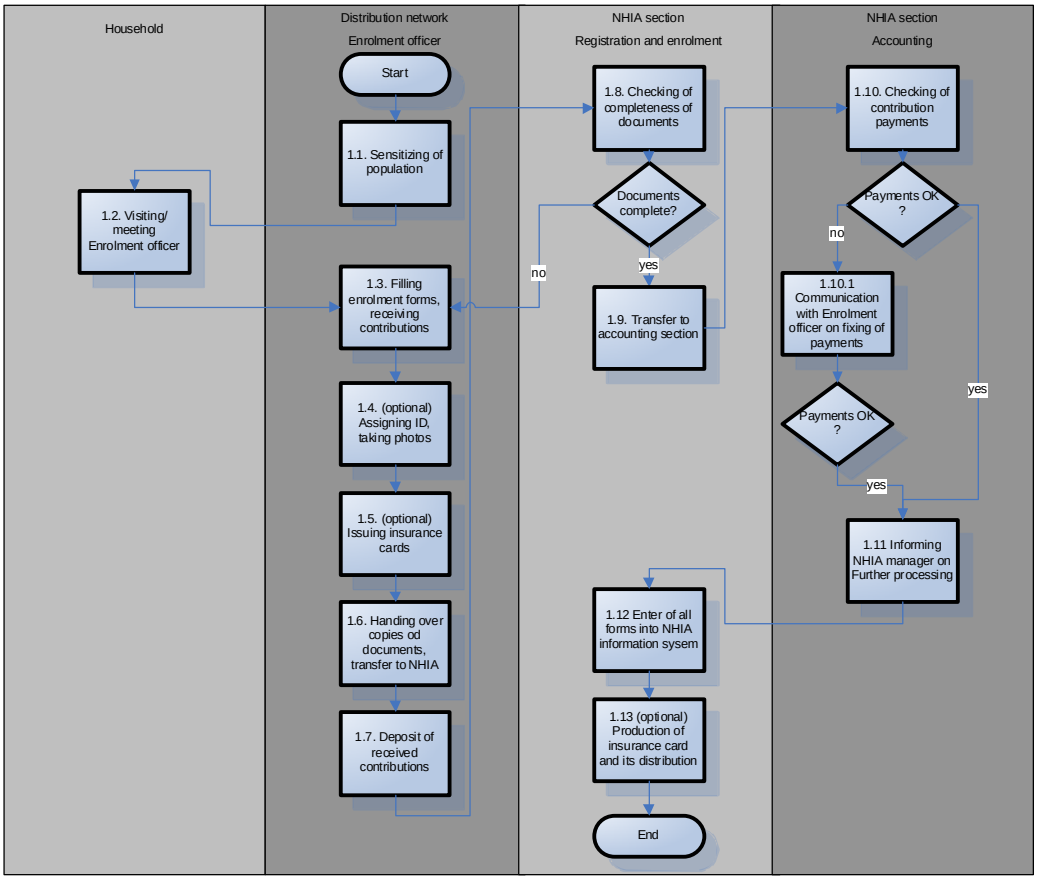

Figure 6: Overview of the Enrolment and Contribution Collection business process

The steps of the process have the following meaning:

Step 1.1: Enrolment officers[15] sensitize the population on the concept of UHIS and encourage them to join.

Step 1.2: The enrolment officers either make appointments with households in agreed places or households come to selling points[16]. Households are asked to bring their entire family with available identification documents. Depending on options below, they are asked to bring their photos of a specific format.

Step 1.3: The Enrolment officer informs the household about the conditions of participating in the UHIS. The Enrolment officer calculates

[15] Such as Health care workers of local health facilities, local community officers, etc.
[16] Reception desks of local health facilities, selected community offices.

the contribution according to the conditions of the UHIS and collects the contribution from the household and issues a receipt. Separate enrolment forms are filled for the head of the household and all dependents. A receipt number for the contribution is then written on the enrolment form of the head of household.

Step 1.3.1: If the household is a poor one, the Enrolment officer notifies in the enrolment form the number of a confirmation document[17] and calculates the contribution in accordance with the rules adopted by the UHIS for the poor households.

Step 1.4:

Option 1: The Enrolment officer assigns an ID to each member of the household according to predefined rules or takes a pre-printed ID from the enrolment form. The Enrolment officer takes a photo for the head of household by a camera or a mobile phone with an installed application and associates the photo with the corresponding ID of each member of the household. The photos with associated IDs of members of the household are sent by the Enrolment officer from his/her mobile phone to the insurance information system.

Option 2: The Enrolments officer clips photos of members of the households to the corresponding enrolment forms. The IDs of members are not assigned at this stage.

Step 1.5:

Option 1: The Enrolment officer issues an insurance card for each member of the household. The start date of the insurance coverage is indicated in the insurance card[18]. The insurance card is filled in on the spot and possibly laminated. The issue of the insurance card is noted in the enrolment forms of the members of households. The household is informed about the start date of its insurance coverage.

Option 2: Insurance cards are not issued at this stage. The Enrolment officer informs the household on the way and time of delivery of insurance cards.

Step 1.6: The Enrolment officer deposits the contributions onto the UHIS account either by direct handover at the cash desk of the NHIA district branch or using a financial transaction and retains the transaction identification.

Step 1.7: Copies of all enrolment forms are handed over to the household. The Enrolment officer completes a package with all enrolment forms for the household and transfers the package to the NHIA district branch.

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[17] It is supposed that a reasoning whether a household is poor or not is done externally to the UHIS and a confirmation document is issued to such households by an external authority.

[18] If fixed enrolment periods are used than the start date is the first date of the enrolment period. If enrolment is not fixed to a specific period than the start date is set several weeks after the enrolment date to accommodate for time needed for processing of the enrolment on one hand and to prevent adverse risk selection on the other hand.

Step 1.8: A NHIA officer from the section Registration and enrolment determines whether each household package is complete. A complete package contains enrolment forms for the head of the household and all dependents and one household receipt on the payment of contributions. The Enrolment officer and NHIA officer sign off on this hand-over. Each party is issued a signed copy of an exchange form.

Step 1.8.1: If any of the household packages is incomplete, the NHIA officer requests the Enrolment officer to retrieve the missing information. If member photos are required and some photos are missing the Enrolment officer is asked to deliver the missing ones. The NHIA officer holds onto the partial household package until the additional information is retrieved.

Step 1.9: The completed household packages are sent to the NHIA Accounting section along with the transaction identification for the contribution transfer.

Step 1.10: A NHIA accountant checks whether the receipts align with the actual payment received to the NHIA account.

Step 1.10.1: If the payment does not align, two situations are possible. In the first the number of households enrolled does not match the number of receipts submitted. The NHIA accountant then contacts the Enrolment officer and requests him/her to retrieve the missing payments from defaulting households. In the second situation, the number of receipts matches the number of households enrolled, but the total payment does not align. The NHIA accountant then contacts the Enrolment officer and requests that he/she compensates the difference.

Step 1.11: The NHIA accountant informs the NHIA manager of the section Registration and enrolment on complete packages for enrolled households and the NHIA manager initiates further processing of these packages by the section Registration and enrolment.

Step 1.12: The NHIA officer enters enrolment forms one by one into the NHIA information system and activates coverage of all members of the entered household[19]. If the NHIA information system is used also for tracking of payments of contributions, the data on payment of the contributions are entered also with indication of the receipt number, the day of payment, the amount of payment and potentially the type of payment.

Step 1.13: If insurance cards were not issued on spot, the NHIA officer issues insurance cards for all members of the household[20]. The insurance cards are handed over to the corresponding Enrolment

[19] The UHIS may allow payment of the contribution in a specific number of instalments. It depends on the definition of UHIS product whether the coverage is triggered by the first instalment or by the last instalment reaching the due contribution.

[20] The issuing of the insurance card includes printing/embossment of the card according to the type of the card. If the card is supplied with a chip, all data necessary for initiating of the chip are downloaded from the NHIA information system.

officers for their disposing or they are distributed directly to the household by another way[21].

The following tables summarize the key actors of the process and supplies/documents needed:

Key actors of the process	
Role	**Department/section**
Head of a household	N/A
Member of a household	N/A
Enrolment officer	Member of an external distribution channel or Distribution and marketing/Sales network
NHIA officer	Insurees and policies/Registration and enrolment
NHIA accountant	Economy and accounting/Accounting
NHIA manager	Head of the section Registration and enrolment

Table 4: Key actors of the Enrolment and Collection of Contributions business process

Key supplies/documents	Comment
UHIS insurance cards	It is recommended for each member of a household
(Smart) mobile phone or camera (optional)	For each enrolment officer
Enrolment forms	See the Annex 2
Exchange forms	
Receipts (for contributions)	
Money collection bag	
Money security equipment	For each enrolment officer
Laptop	For each NHIA officer
Motorbike/car (optional)	If NHIA officers collect documents from enrolment officers at the spot
NHIA insurance information system	

Table 5: Supplies/documents for the Enrolment and Collection of Contributions business process

[21] By the post, by a courier or the household is called upon to pick up the cards at the NHIA branch office.

3.3.2. Modification of policies

The following business process is triggered when a UHIS member's policy has to be modified. The overview of the process is in the Figure 7.

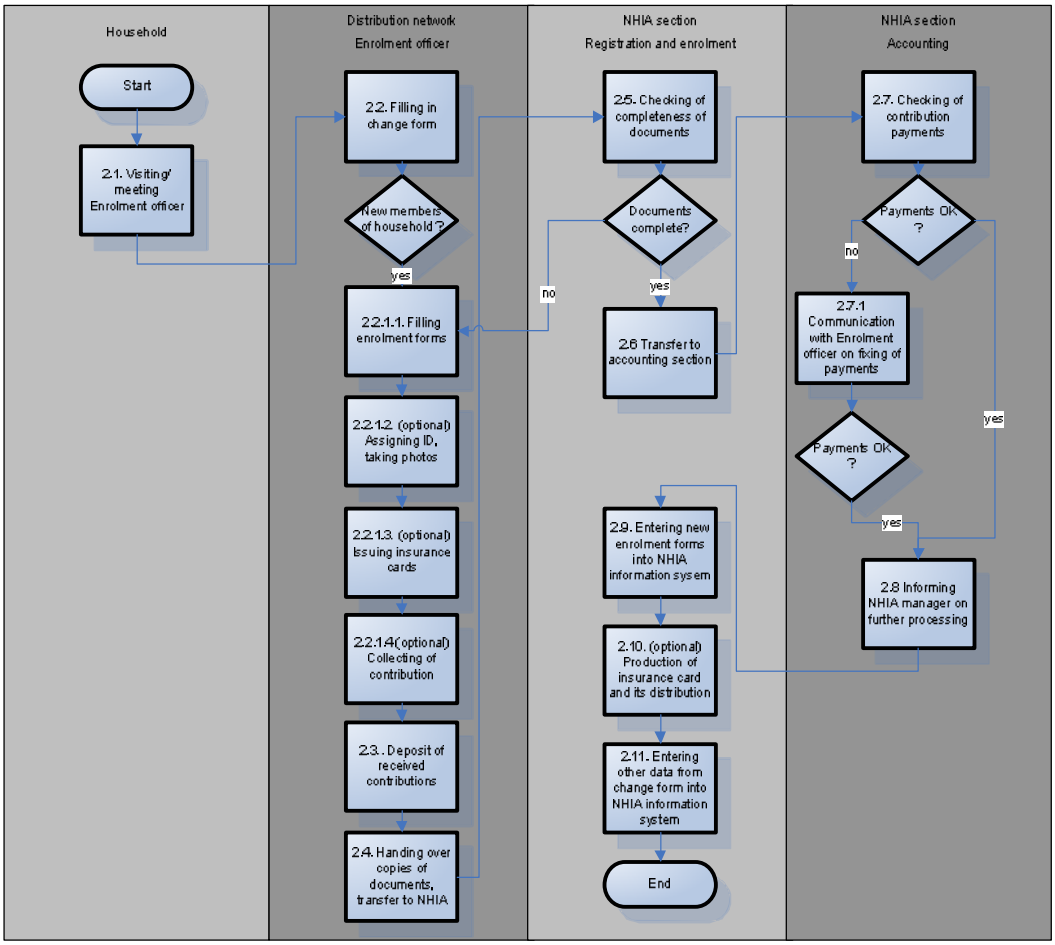

Figure 7: Overview of the Modification of a Policy business process

The steps of the process have the following meaning:

Step 2.1: A representative of the household approaches his/her Enrolment officer or a NHIA branch office and declares a change in the policy of his/her household.

Step 2.2: The Enrolment officer fills in the change form accordingly and the following steps are taken according to type of modification:

Step 2.2.1: Adding of a new member of a household. It may happen for a birth, marriage or an incorporation of new member of the household. In case a new member was not participating in the UHIS before the following steps are taken:

Step 2.2.1.1: The Enrolment officer fills in the enrolment form for the new member of the household.

Step 2.2.1.2:

Option 1: The Enrolment officer assigns an ID to the new member of the household according to predefined rules or takes a pre-printed ID from the enrolment form. The Enrolment officer takes photo for the new member of the household by a camera or a mobile phone with an installed application and associates the photo with the corresponding ID of the new member. The photo with associated IDs of the new member of the household is sent by the Enrolment officer from his/her mobile phone to the insurance information system.

Option 2: The Enrolments officer clips photo of the new member of the households to the corresponding enrolment forms. The ID of the member is not assigned at this stage.

Step 2.2.1.3:

Option 1: The Enrolment officer fills in and issues an insurance card for the new member of the household. The start date of the insurance coverage is indicated in the insurance cards[22]. The insurance card is filled in on the spot and possibly laminated. The issuance of the insurance card is noted in the enrolment form of the new member of the household. The Enrolment officer completes the change form and the enrolment form. The household is informed about the start date of its insurance coverage.

Option 2: Insurance cards are not issued at this stage. The Enrolment officer informs the household on the way and time of delivery of insurance cards. The Enrolment officer completes a package with the change form and the enrolment form.

Step 2.2.1.4: Enrolment officer determines whether an additional contribution has to be paid for the additional member of the household[23]. If yes, he/she calculates its amount and collects the contribution from the representative of the household and issues a receipt. The receipt number for the contribution is then written on the enrolment form of the new member.

Step 2.2.2: Removing of a member of a household. It may happen for a death, marriage out of a household.

Step 2.2.2.1: The Enrolment officer collects the previous member's insurance card and fills in the change form.

Step 2.2.3: Changing of address of the household.

Step 2.2.3.1: No action besides filling in of the change form. The change form can be filled in by an Enrolment officer either at a place of moving from or at a place of moving to.

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[22] In the case of additional members of households the start date may equal to the enrolment date provided a possible additional contribution is paid.

[23] If the new member has been already participating in the UHIS and he/she has been covered at the time of the change, a rule can be adopted that no additional contribution is paid for the new member until a renewal of the new household's policy. However, it should be monitored whether this rule is not speculatively misused.

Step 2.2.4: Changing of other contact information of the household.

Step 2.2.4.1: No action besides filling in of the change form.

Step 2.2.5: Changing of the head of a household.

Step 2.2.5.1: No action besides filling in of the change form.

Step 2.3: The Enrolment officer deposits the contributions (if paid for additional members) onto the NHIA account either by direct handover at the cash desk of the NHIA district branch or using a financial transaction and retains the transaction identification.

Step 2.4.: The Enrolment officer hands over copies of all documents to the representative of the household. The Enrolment officer transfers the change forms eventually packed with enrolment forms (and photos) for the new members to the NHIA district branch.

Step 2.5: The NHIA officer from the section Registration and enrolment determines whether the change forms are completely filled in and accompanied with other forms if necessary. The Enrolment officer and NHIA officer sign off on this hand-over. Each party is issued a signed copy of the exchange form.

Step 2.5.1: If any of the household packages are incomplete, the NHIA officer requests the Enrolment officer to retrieve the missing information. If member photos are required and some photos are missing the Enrolment officer is asked to deliver the missing ones. The NHIA officer holds onto the change form until the additional information is retrieved.

Step 2.6.: The change forms and the enrolment forms for new members are sent to the NHIA accountant from the section Accounting along with the transaction identification for the contribution transfer.

Step 2.7: The NHIA accountant checks whether the receipts align with the actual payment received to the NHIA account.

Step 2.7.1: If the payment does not align, two situations are possible. In the first situation, the number of receipts submitted does not match the number of households obliged to pay additional contributions because of new members. The NHIA accountant contacts the Enrolment officer and requests him/her to retrieve the missing payments from defaulting households. In the second situation, the number of receipts matches the number of households with new members and the obligation to pay an additional contribution, but the total payment does not align. The NHIA accountant then contacts the Enrolment officer and requests that he/she compensates the difference.

Step 2.8: The NHIA accountant informs the NHIA manager of the section Registration and enrolment on complete packages for households with new members and the NHIA manager initiates further processing of the change forms (also for other changes).

Step 2.9: The NHIA officer of the section Registration and enrolment enters new enrolment forms one by one into the NHIA information

system and activates coverage of all new members of the household[24]. If the NHIA information system is used also for tracking of payments of contributions, the data on payment of the contributions are entered also with indication of the receipt number, the day of payment, the amount of payment and potentially the type of payment.

Step 2.10: If insurance cards were not issued on spot, the NHIA officer issues insurance cards for new members of the household[25]. The insurance cards are handed over to the corresponding Enrolment officers for their disposing or they are distributed directly to the household by another way[26].

Step 2.11: The NHIA officer enters into the NHIA information system all other changes from the change forms.

The following tables summarize the key actors of the process and supplies/documents needed:

Key actors of the process	
Role	**Department/section**
Head of a household	N/A
Member of a household	N/A
Enrolment officer	Member of an external distribution channel or Distribution and marketing/Sales network
NHIA officer	Insurees and policies/Registration and enrolment
NHIA accountant	Economy and accounting/Accounting
NHIA manager	Head of the section Registration and enrolment

Table 6: Key actors of the Modification of a Policy business process

[24] The UHIS may allow payment of the contribution in a specific number of instalments. It depends on the definition of UHIS product whether the coverage is triggered by the first instalment or by the last instalment reaching the contribution due.

[25] The issuing of the insurance card includes printing/embossment of the card according to the type of the card. If the card is supplied with a chip, all data necessary for initiating of the chip are downloaded from the information system.

[26] By the post, by a courier or the household is called upon to pick up the cards at the NHIA district branch

Key supplies/documents	Comment
UHIS insurance cards	It is recommended for each member of a household
(Smart) mobile phone or camera (optional)	For each enrolment officer
Change forms	See the Annex 2
Enrolment forms	See the Annex 2
Exchange forms	
Receipts (for contributions)	
Money collection bag	
Money security equipment	For each Enrolment officer
Laptop	For each NHIA officer
NHIA insurance information system	

Table 7: Supplies/documents for the Modification of a Policy business process

3.3.3. Renewal of policies

The process of renewal of policies is triggered some time (several weeks) before elapsing of insurance periods of valid policies. The process includes also an inventory of data on households with the policies to be renewed. The insurance product of the UHIS may define so called grace period after the renewal date of a policy within which a household may renew its policy without loss of benefits[27]. The overview of the process is in the Figure 8.

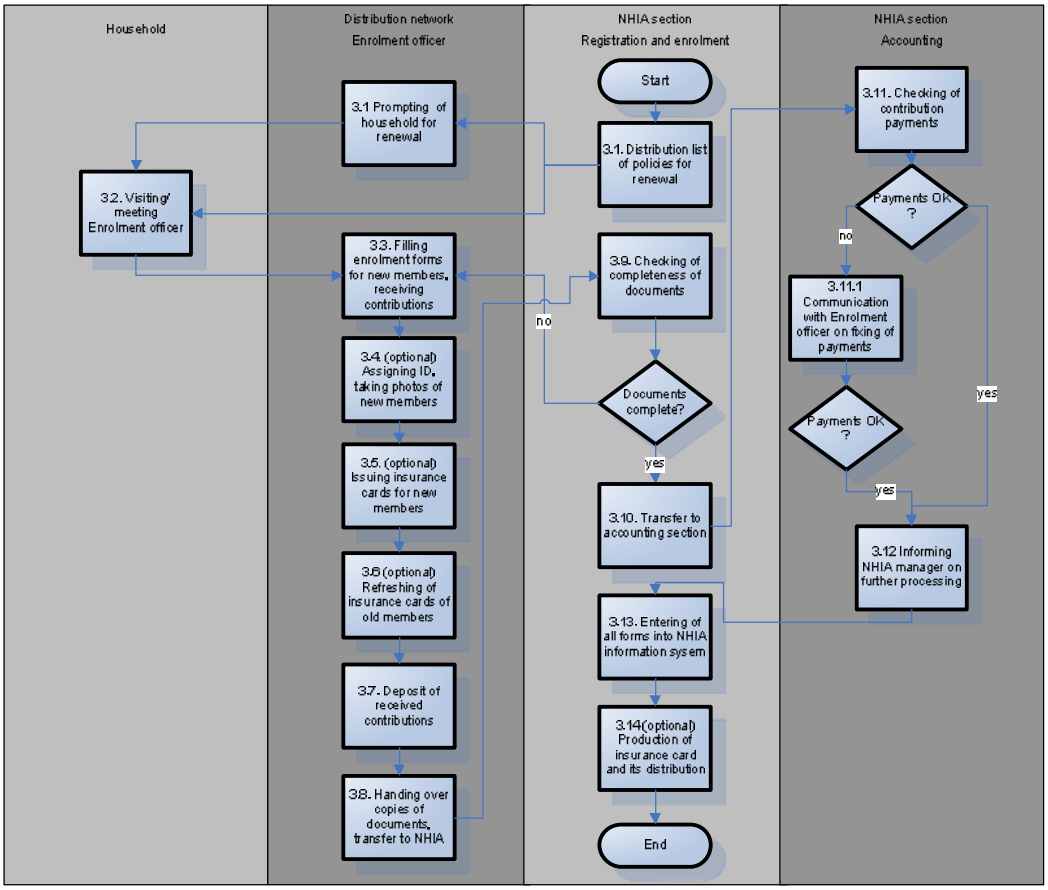

Figure 8: Overview of the Renewal business process

The steps of the process have the following meaning:

Step 3.1:

Option 1: The Enrolment officer gets from the NHIA branch office a list of households whose policies should be renewed in an upcoming period. It is indicated whether for some members of a household photos has to be refreshed[28]. The Enrolment officer contacts the household from the list and makes appointments with them. The households are asked to bring

[27] E.g. without obligation to pay a new registration fee, without waiting for coverage.

[28] There should be a rule that a photo is refreshed after some number of years dependent on the age of an insuree.

the members whose photos have to be refreshed and to bring new members of the households who haven't been enrolled yet.

Option 2: The households whose policies should be renewed in an upcoming period are prompted by the NHIA district branch[29] to contact their enrolment officers for renewal of their policies. It is indicated whether for some members of a household photos have to be refreshed[30]. Households are asked to bring the members whose photos have to be refreshed and to bring new members of the households who haven't been enrolled yet.

Step 3.2: The Enrolment officer either makes an appointments with the household in agreed places or the household comes to a selling point.

Step 3.3: The Enrolment officer calculates the contribution for a renewal according to the conditions of the UHIS and collects the contribution from the household and issues a receipt. Separate enrolment forms are filled for new members of the household. The receipt number for the contribution is then written on the renewal form for the household.

Step 3.3.1: If the household has been a poor one or has become poor since last enrolment or renewal, the Enrolment officer notifies in the renewal form the number of a confirmation document[31] and calculates the contribution in accordance with the rules adopted by the UHIS for the poor households.

Step 3.4:

Option 1: The Enrolment officer assigns an ID to each new member of the household according to predefined rules or takes a pre-printed ID from the enrolment form. The Enrolment officer takes photo for the new members of the household and for members whose photos have to be refreshed by a camera or a mobile phone with an installed application and associates the photos with the IDs of new members of the household and members whose photos had to be refreshed. The photos with associated IDs of members of the household are sent by the Enrolment officer from his/her mobile phone to the NHIA insurance information system.

Option 2: The Enrolments officer clips photos of new members of the households to the corresponding enrolment forms. The ID of new members is not assigned in this step. The photos for members with refreshed photos are clipped to a paper slip indicating their insurance ID, names and the date.

Step 3.5:

Option 1: The Enrolment officer fills in and issues an insurance card for each new member of the household. The start date of the insurance

[29] By a call, SMS or by post

[30] There should be a rule that a photo is refreshed after some number of years dependent on the age of an insuree.

[31] It is supposed that a reasoning whether a household is poor or not is done externally to the UHIS and a confirmation document is issued to such households by an external authority.

coverage is indicated in the insurance cards[32]. The insurance card is filled in on the spot and possibly laminated. The issue of the insurance card is noted in the enrolment forms of the new members of the household.

Option 2: Insurance cards for the new members and the members with refreshed photos are not issued in this step. The Enrolment officer informs the household on the way and time of delivery of new and refreshed insurance cards.

Step 3.6: Insurance cards for old members are updated in case insurance cards bear data on validity of the policy and/or utilization/expenditures for health care within an insurance period[33].

Step 3.7: The Enrolment officer deposits the contributions onto the NHIA account either by direct handover at the cash desk of the NHIA branch district level or using a financial transaction and retains the transaction identification.

Step 3.8: Copies of all new enrolment forms, the change form and the renewal form are handed over to a representative of the household. The Enrolment officer completes a package with all new enrolment forms and renewal form for the household and transfers the to the NHIA district branch.

Step 3.9: The NHIA officer determines whether each household package is complete. A complete package contains the renewal form, the change form and enrolment forms for the new members of the household and one household receipt. The Enrolment officer and NHIA officer sign off on this hand-over. Each party is issued a signed copy of the exchange form.

Step 3.9.1: If any of the household packages are incomplete, the NHIA officer requests the Enrolment officer to retrieve the missing information. If member photos are required and some photos are missing the Enrolment officer is asked to deliver the missing ones. The NHIA officer holds onto to partial household package until the additional information is retrieved.

Step 3.10: The completed household packages are sent to the NHIA accountant along with the transaction identification for the contribution transfer.

Step 3.11: The NHIA accountant checks whether the receipts align with the actual payment received to the NHIA account.

Step 3.11.1: If the payment does not align, two situations are possible. In the first the number of households with renewed policies does not match the number of receipts submitted. The NHIA accountant then contacts the Enrolment officer and requests him/her to retrieve the missing

[32] If fixed enrolment periods are used than the start date is the first date of the enrolment period. If enrolment is not fixed to a specific period than the start date is set several weeks after the enrolment date to accommodate for time needed for processing of the enrolment on one hand and to prevent adverse risk selection on the other hand.

[33] This step needs some elaboration in future. Enrolment officers could have equipment allowing refreshing content of (smart) insurance cards. Alternatively, old insurance cards should be replaced completely.

payments from defaulting households. In the second situation, the number of receipts matches the number of households whose policies had been renewed, but the total payment does not align. The NHIA accountant then contacts the Enrolment officer and requests that he/she compensates the difference.

Step 3.12: The NHIA accountant informs the NHIA manager on complete packages for renewed households and the NHIA manager initiates further processing of these packages in the section Registration and enrolment.

Step 3.13: The NHIA officer enters renewal forms and enrolment forms for new members one by one into the NHIA information system and renews coverage of all members of the renewed household[34]. If the NHIA information system is used also for tracking of payments of contributions, the data on payment of the contributions are entered also with indication of the receipt number, the day of payment, the amount of payment and potentially the type of payment.

Step 3.14: If insurance cards were not issued on spot, the NHIA officer issues insurance cards for all new members of the household[35] and the members with refreshed photos. The insurance cards are handed over to the corresponding Enrolment officers for their disposing or are distributed directly to the household by another way[36].

The following tables summarize the key actors of the process and supplies/documents needed:

Key actors of the process	
Role	Department/section
Head of a household	N/A
Member of a household	N/A
Enrolment officer	Member of an external distribution channel or Distribution and marketing/Sales network
NHIA officer	Insurees and policies/Registration and enrolment
NHIA accountant	Economy and accounting/Accounting
NHIA manager	Head of the section Registration and enrolment

Table 8: Key actors of the Renewal business process

[34] The UHIS may allow payment of the contribution in a specific number of instalments. It depends on the definition of UHIS product whether the coverage is triggered by the first instalment or by the last instalment reaching the contribution due.

[35] The issuing of the insurance card includes printing/embossment of the card according to the type of the card. If the card is supplied with a chip, all data necessary for initiating of the chip are downloaded from the information system.

[36] By the post, by a courier or the household is called upon to pick up the cards at the NHIA branch office

Key supplies/documents	Comment
UHIS insurance cards	It is recommended for each member of a household
(Smart) mobile phone or camera (optional)	For each enrolment officer
Renewal forms	See the Annex 2
Change forms	See the Annex 2
Enrolment forms	See the Annex 2
Exchange forms	
Receipts (for contributions)	
Money collection bag	
Money security equipment	For each enrolment officer
Laptop	For each NHIA officer
Motorbike/car (optional)	If NHIA officers collect documents from enrolment officers at the spot
NHIA insurance information system	

Table 9: Supplies/documents for the Renewal business process

3.3.4. Claim preparation, submitting and processing

The process is triggered by a visit or an admission of an insured person to a health care provider. The overview of the process is in the Figure 9.

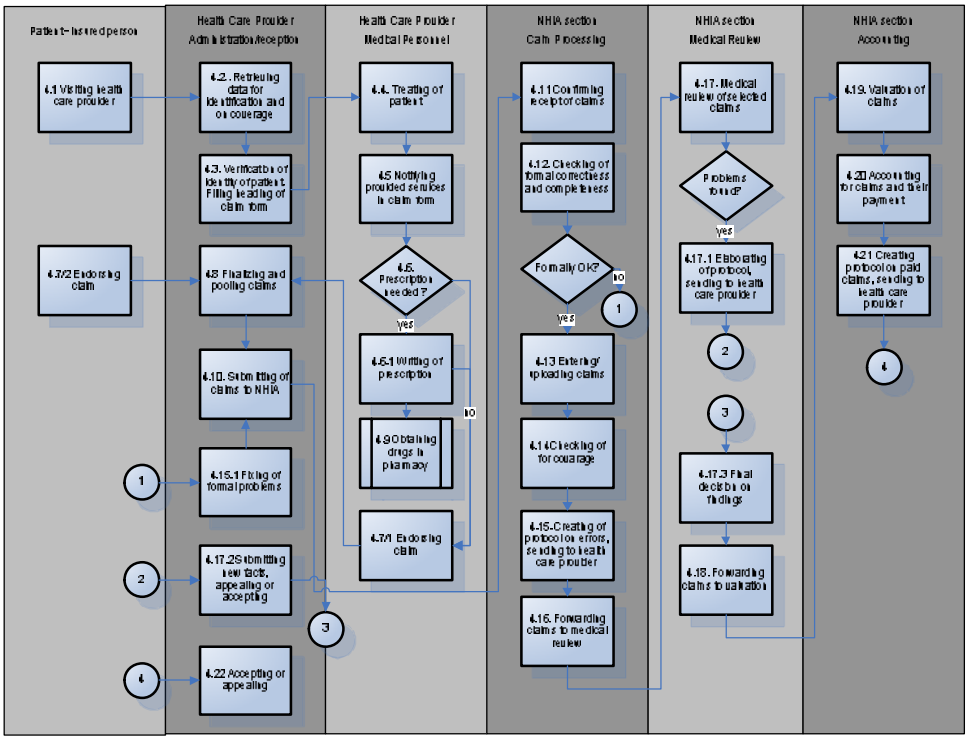

Figure 9: Overview of the process claim preparation/processing

The steps of the process have the following meaning:

Preparation of claims

Step 4.1: A UHIS member approaches the health facility as a patient.

Step 4.2: The receptionist of the health facility welcomes the patient and determines whether the patient has brought his/her insurance card (except when the patient approached facility in emergency situation e.g. after an accident).

Step 4.2.1: If the patient has his/her insurance card, the receptionist then determines his/her identity and his/her coverage by:

Option 1: Typing is or scanning of patient's insurance ID into an equipment connected to the NHIA information system and issuing a query for a photo and the data on current status of his/her coverage. If on-line connection is down, the receptionist issues a query to the local database fed off-line from the NHIA information system.

Option 2: Inserting his/her insurance card with patient's photo into a card reader connected to a local computer and obtaining the data on the current status of his/her coverage.

Step 4.3: The receptionist verifies the identity of the patient through photo recognition and verifies whether the patient is covered by the UHIS for the requested health care.

Step 4.3.1: If the patient is entitled for coverage of the health care, the receptionist provides the patient with a claim form and writes his/her name, the insurance ID, health facility code and a claim code[37] on it.

Step 4.3.2: If the patient is not entitled for coverage of the health care, the registration and billing procedure for non-insured patient is followed.

Step 4.4: The patient is diagnosed by a health professional and provided a treatment plan and associated lab tests if required.

Step 4.5: The health professional writes the diagnosis[38] and services provided on the claim form.

Step 4.6: The health professional determines if a prescription is required.

Step 4.6.1: If a prescription is required, the health professional writes down the prescription form and indicates this on the claim form.

Step 4.7: The health professional signs the claim form and hands the form back to the patient. The patient endorses the claim form by signing it. One copy is issued to the patient, one remains for health facility records, and one is saved for claim submission[39].

Step 4.8: The health professional returns one copy of the claim form to an administration of the health facility. The administration finalizes the claim and pools the claims forms from all departments of the health facility.

Step 4.9: If a prescription was issued, the patient seeks the pharmacist and they determine whether or not the prescribed drugs are available.

Step 4.9.1: The pharmacist dispenses the drugs to the patient and records the delivery on the prescription form.

Step 4.9.2: The pharmacist indicates that the drugs were not available on the prescription form[40].

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[37] Claims are identified by a combination of a health facility code and a code unique within the health facility.

[38] A distinction between a principal diagnosis that is a reason for the treatment and secondary diagnoses is followed.

[39] Preparation of claims can be done by means of electronic equipment (computer, smart phone etc.) and/or on paper forms. Hardcopies of claim can be required either as printouts from a computer or as a paper form claim. No hardcopy is necessary if there is a secured electronic transfer of documents between the health care provider and the NHIA, the claim has no impact on future entitlement of the patient (e.g. there are no ceilings for coverage at the level of an insuree or a household) and the patient is not required to confirm provided health care by his/her signature on the claim. If there is a requirement that the patient confirms the claim by his/her signature, one hardcopy is necessary for submission of the claim to the NHIA or for retaining at the health care facility. If there are some ceilings imposed on coverage per insuree and/or household during the insurance period, one hardcopy of the claim is necessary also for the patient.

[40] The process may be elaborated further allowing for only partial dispensing of drugs.

Step 4.9.3: The patient endorses the prescription form by signing it and hands the prescription form to the pharmacist. One copy is issued to the patient, one remains for pharmacy records, and one is saved for a submission of the prescription by the pharmacy.

Submission of claims

Step 4.10: A representative of the administration of the health facility submits the claim form to the Claim Processing section of the NHIA. The health facility can submit claims to the NHIA one by one as soon as a treatment is finished or they can submit claims in some batches for some defined period of time. The batches have one advantage that they allow for easier confirmation of receipt of the batch of claims from the side of the NHIA. Each batch can have a simple note (with an identification of the batch, identification of the health care provider, the day of submission and the number of claims in the batch), that can be confirmed by the reception point of the NHIA. Claims can be submitted on a paper form or in an electronic form either off-line[41] or on-line through a dedicated portal of the information system of the NHIA. If claims are submitted on paper forms or off-line in the electronic form, submission in batches in regular intervals (monthly, biweekly) should be a norm.

There is point relevant to submission and receipt of claims. If the NHIA has district branches and an insuree seeks for health care outside his/her district then the selected health care provider can submit the corresponding claim either at its district branch of the NHIA or at the branch according to the residence of the insuree. The first option has lower transaction costs and especially in case of a central pooling is recommended. The prerequisite is that the NHIA information system allows for it.

Step 4.11: A dedicated NHIA officer from the Claims Processing section confirms the submission of the batch of claims to the representative of the administration of the health facility by signing of a copy of the batch note. If claims are submitted by the health facility on-line electronically to the NHIA information system, a list of submitted claims of given health facility can be generated automatically for a confirmation.

Entry of claims

Step 4.12: A NHIA officer (from the section Claim processing) checks formal correctness of claim forms, e.g. whether the claim is signed by a representative of the health care provider and/or by the patient if such signature are prescribed.

Step 4.12.1: If a claim doesn't pass the test of formal correctness, the NHIA officer returns the claim back to the administration of the corresponding health care provider with an indication of reason on an accompanying protocol.

[41] In a flash memory.

Step 4.13: The NHIA officer enters claims received in the paper form or uploads claims in the electronic form off-line into the NHIA information system .The following data items are usually entered:

- a code of health care provider
- an insurance ID number of the patient
- an identification code of the claim
- a date (or dates in case of a hospital stay) of provision of health car
- a date of preparation of the claim
- services/medical items provided and their quantities and optionally prices[42]
- primary diagnosis[43]
- (optionally) secondary diagnoses
- a verbal explanation if given on the claim

Checking of claims

Step 4.14: The NHIA officer starts checking of the entered claims for conformance with the insurance product of the UHIS. This checking is done automatically by the NHIA information system. It is checked for each claim whether:

- the patient has a valid policy
- claimed services and medical items are in the scope of the benefit package
- there is no violation of any further conditions like waiting periods,
- minimal time between provision of the same service or medical item is preserved or whether provision the service or medical item doesn't contradict to the sex and/or the age of the patient
- whether ceilings for expenditures or utilization of specific services are not exceeded (if defined)

Step 4.15: The NHIA officer prints a protocol on violation of checking rules and sends it to the administration of the corresponding health care provider.

Step 4.15.1: The administration of the health provider tries to fix the problems and re-submits the claims.

Step 4.16: The NHIA officer forwards all claims that were not completely rejected during the checking to the section Medical Review[44.]

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[42] There may be services or medical items(drugs), price of which is not determined in a contract with the health care provider in advance.

[43] Primary diagnosis stands for the diagnosis that was the reason of the treatment.

[44] This step is done by built-in workflow features of the NHIA information system.

Medical review of claims

Step 4.17: The NHIA medical officer selects claims that should be reviewed from the medical point of view. One side of coin is formal and factual correctness of a claim; the other side is whether provision of claimed health care was justified by the health status of a patient and if yes, whether health care was provided in an adequate way. To assess it is the task of medical reviewing of claims. The assessment is done by NHIA medical officers with medical education and practice. Usually, only a fraction of processed claims is reviewed[45]. The selection of claims for reviewing is done randomly or is based on the value of a claim or the deviation of the value from some mean value of similar treatments. A medical reviewer looks at the history of claimed treatments for the corresponding patient, assesses conformance of the treatment with the principal and secondary diagnoses recorded within the claim or may compare the way of treatment with some guidelines. In case of necessity, the medical reviewer may visit the corresponding health facility of the treating personnel or contact directly the patient.

Step 4.17.1: In case of problems found, the NHIA medical officer elaborates a protocol on the medical assessment and forwards it to the administration of the corresponding health care provider.

Step 4.17.2: The administration of the health care provider either accepts the conclusions of the NHIA medical officer or brings new evidences of adequacy of claimed health care to the NHIA medical officer or appeals to an appeal board[46].

Step 4.17.3: Based on re-assessment of the case the NHIA medical officer either confirms his/her previous decision, changes his/her previous decision or follows a decision of the appeal board.

Step 4.18: The NHIA medical officer forwards all claims that were not completely rejected during the medical assessment or that haven't been reviewed at all to the section Accounting[47].

Valuation of claims

4.19 A NHIA accountant evaluates the claims according to the rules of the UHIS and according to contracts between the NHIA and the corresponding health care provider. This step should be done automatically by the NHIA information system.

4.20 The NHIA accountant accounts for valuated claims and issues corresponding payment orders in favour of the health care provider. The NHIA information system should produce an interface file for accounting.

4.21 The NHIA accountant creates a protocol on paid claims and sends the protocol to the administrations of the corresponding health care provider.

4.22 If the administration of the health care provider has an objection it appeals to the Claim processing section.

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[45] Let's say 5-10 %

[46] The appeal board can be established at the headquarters of the NHIA or at the MoHP.

[47] This step is done by built-in workflow features of the NHIA information system.

4.22.1 Based on re-assessment of the valuation the NHIA accountant either confirms the previous valuation or adjusts the valuation.

The following tables summarize the key actors of the process and supplies/documents needed:

Key actors of the process	
Role	**Department/section**
Insuree	N/A
Receptionist	Health care provider
(Claim) Administrator	Health care provider
NHIA officer	Health care remuneration/Claim processing
NHIA accountant	Economy and accounting/Accounting
NHIA medical officer	Health care remuneration/Medical reviewing

Table 10: Key actors of the Claim preparation/processing business process

Key supplies/documents	Comment
(Smart) mobile phone (optional)	For receptionists
Claim forms	See the Annex 2
Prescription forms	
Laptop/desktop	For receptionists and NHIA workers
NHIA insurance information system	

Table 11: Supplies/documents for the Claim preparation/processing business process

3.4. Control processes

The control processes encompass collection and/or retrieving data on activities and performance of the NHIA and contractual health care providers, taking decisions based on the data at corresponding levels of the management of the NHIA and acting according to the decisions taken. There are several operational indicators that should be provided by the NHIA information system. They can be categorized as either primary or derived (derived by a mathematical operation from the primary indicators).

The primary operational indicators can be as follows:

Code	Primary indicator	Breakdown according to	Description
P1	No. of policies	Time, District	The number of policies of given district on the last day of a respective period
P2	No. of new policies	Time, District	The number of new policies of given district purchased during a respective period
P3	No. of expired policies	Time, District	The number of policies for given district that expired during a respective period
P4	No. of renewals	Time, District	The number of policies that were renewed for given District (or a converted one) during a respective period
P5	No. of insurees	Time, District	The number of insurees covered by policies of given district on the last day of a respective period
P6	No. of newly insured insurees	Time, District	The number of insurees covered by new policies of given district during a respective period
P7	Newly collected contributions	Time, District	Amount of acquired contributions (for policies of given district) during a respective period (Date of payment of contribution is within the respective period)
P8	Available contributions	Time, District	Amount of premiums that should be allocated for policies of given district for a respective period provided a uniform distribution throughout the insurance period takes place.
P9	Number of claims	Time, Health facility, District	The number of claims for given district and health facility that emerged during a respective period (The date of the start of the treatment in a claim is within the respective period)
P10	Amount remunerated	Time, Health facility, District	Amount remunerated for claims for given district and health facility that emerged during a respective period (The date of the start of the treatment in a claim is within the respective period)
P11	Number of rejected claims	Time, Health facility, District	The number of claims for given district and health facility that emerged during a respective period and were rejected (The date of the start of the treatment in a claim is within the respective period)

Table 12: Primary operational indicators for managing of the NHIA

The derived operational indicators that are important for management of the NHIA are as follows:

Code	Derived indicators	Breakdown according to	Description
D1	Incurred claims ratio	Time, District	It is the ratio P10/P8
D2	Renewal ratio	Time, District	It is the ratio P4/P3
D3	Growth ratio	Time, District	It is the ratio P2/P1-for immediately preceding period
D4	Promptness of claims settlement	Time, District	It is the average (date of sending to payment-date of submission of the claim) for all claims relating to given district and emerging in a respective period
D5	Claims settlement ratio	Time, Health facility, District	It is the ratio (P9-P11)/P19
D6	Number of claims per insuree	Time, District	It is the ratio P9/P5
D7	Average cost per claim	Time, Health facility, District	It is the ratio P10/P9

Table 13: Derived operational indicators for managing of the NHIA

One of important tools in the hands of the NHIA for controlling of expenditures for health care is benchmarking of heath care providers. Benchmarking allows comparison of values of an indicator for a specific health care provider with a value of the same indicator for some peer group, for example all health care providers of the same category within Nepal. We can compare average expenditures per one patient/insure for health care according to a disease, gender, age of patients, type of health care for one specific hospital with the same indicator for all hospitals in Nepal of the same category. Such benchmarking can reveal to the NHIA potential problems with claiming at health care provider. Benchmarking capabilities are usually provided by management information systems (MIS) of health insurance agencies (see the chapter 5).

4. STEPS TO IMPLEMENTATION OF THE UNIVERSAL HEALTH INSURANCE SCHEME

The chapter shows activities that should be taken to design the UHIS and subsequently to implement it.

1. (MoHP) **Launch the process of design and implementation and confirm its basic features of the health insurance scheme for piloting:**

- voluntary membership for all citizens in Nepal
- pooling at the central (state) level
- contributions paid per family
- contributions paid by poor families at a reduced level. The reduced contributions will be subsidized by the state budget[48]
- benefits are provided by selected health facilities of any legal form (public and private)
- split of purchaser/providers and third party payment
- benefit package for the piloted health insurance scheme will be designed on top of current benefits for free provided within existing governmental health care programs.

2. (MoHP) **Establish a separate institution under government control called *National Health Insurance Agency of Nepal* (NHIA) and**

- appoint its director
- appoint a steering committee supervising activities of the NHIA
- issue a charter specifying role of the steering committee towards the executive part of the NHIA[49]
- ensure premises for the NHIA
- ensure initial budget for operations of the NHIA
- The task of the NHIA is to finalize the design of the UHIS, implement its piloting and its roll-out in future and administer the whole scheme.

3. (NHIA-Director**) Establish the initial organizational structure of the NHIA and recruit suitable staff**

It is responsibility of the appointed director to start building up of the institution. For the beginning just sections dealing with the design of the health insurance scheme are needed and a few support departments/sections-see the chapter 2.

[48] It means they will not be cross-subsidized by contributions of not poor.

[49] See the chapter 2.

4. (NHIA-section Health policy) **Design a benefit package for the health insurance scheme**

The benefit package is designed on top of current benefits provided to the population in Nepal. Impact on health status of population, equity to access to health care and effectiveness of health care are the most important criteria. Both positive and negative approaches to the design can be used. The benefit package can be designed in options for further evaluation.

5. (NHIA-section Health policy) **Selection of basic forms[50] of remuneration mechanisms for health care included in the benefit package**

A basic form of remuneration mechanism is selected for distinct health care sectors that are relevant to the proposed benefit package.

6. (NHIA- section Health policy) **Creation of a list (a classification) of units of health care if performance oriented remuneration mechanisms are selected**

If a performance oriented basic remuneration mechanism is used, lists of different types of units of health care has to be created that covers health care encompassed in the benefit package, e. g. list of services for fee-for-service remuneration or list of types of hospital cases for per case remuneration. Codes should be assigned to the type of units of health care for easy claiming and claim processing.

7. (NHIA- section Health policy) **Pricing (or costs) information is associated with the lists of units**

Prices for distinct units of health care based on analysis of pricelists of domestic health care providers, taken from abroad[51] or based on results of cost studies are associated with the lists of units of health care. The pricelists can serve as an input for negotiation with health care providers.

8. (NHIA-section Actuary and statistics) **Proposals for options for the insurance product within the UHIS are finalized.**

This the final and crucial step in the design phase. Staff of the section formulates proposals for the range (width of coverage) of benefit package taken from the proposals of the section health policy, cost-sharing schemes (depth of coverage) and associates with these proposals corresponding contribution rates. The following data are taken into account while calculating contribution rates for different options of the width and depth of the benefit package:

- demographic characteristics of families in Nepal
- data on distribution of health care expenditures of families if available for the proposed width of the benefit package

[50] It means the mechanism without additional constraints.

[51] Just relations among prices should be taken abroad. The overall level of remuneration should be adjusted to the Nepali cost level.

- data on utilization health care included in the benefit package
- data on pricing of health care proposed by the section Health policy

The contribution rates are accompanied by all assumptions made regarding administration costs of the scheme, security loading etc.

9. (NHIA-Steering Committee) **Reviewing proposals for options for the insurance product within the UHIS and selecting one for further implementation.**

The Steering Committee assesses proposals submitted by the execution part of the NHIA. If necessary it asks for supplemental explanation or data and/or for additional options. Finally agrees on one option that is further forwarded to the MoHP or to a governmental decision making process. After that the insurance product is freed for the implementation[52].

10. (NHIA-section IT development) **A method of an unique identification of insurees is selected**

A method of unique identification of insured persons in the health insurance scheme should be selected for the purpose of confirming insuree' s entitlements for coverage. The identification method may rely on an identification by national passports, biometrical data etc. If an identifier of insurees is assigned separately to insurees by the scheme, its construction is defined. One of two principal methods of identification of insurees and their entitlement to coverage can be chosen:

- Decentralized - all data on identity and entitlement of an insuree is in his/her insurance card
- Centralized - an insurance card contains only a reference (insurance ID) to centrally stored data on identity of the insuree (e.g. his/her photo) and his/her entitlements to a coverage. This data can be retrieved from a centralized health insurance information system at the spot of treatment

11. (NHIA-section IT development) **A set of forms (paper and /or electronic) is designed for administration and communication with the scheme.**

The set of forms should encompass enrolment of insurees, payment of contributions, change announcement, claims etc. The forms relating to enrolment, policies, contribution have to be individualized (related to one physical person and/or family) by definition. Claiming of health care can be done either on aggregated claim forms or on individual claims (either collective or separated[53]). Aggregated claims don't contain identification of individual patients. They only indicate amount of health care claimed split according to the type of health care. They can be used as an intermediate solution but only for limited period or in case global budgeting is used as a way of remuneration (see the chapter 6)..

[52] It depends on an entitlement of the Steering Committee embedded in its charter.
[53] Collective means that claim data on several patients can be placed in one form.

12. (NHIA-section IT development) **An IT support for core business processes is specified and selected or developed**

Based on previous step a specification of necessary IT support is implemented. Based on the specification either the IT support is acquired on the market (also as an open source solution) or the development of a tailored made system is launched (see the chapter 5).

13. (NHIA-section Sales network) **Distribution networks for policies are selected and a business model for selling policies is formulated**

Suitable distribution channels for selling policies within the UHIS have to be identified based on their proximity to potential insurees, costs of distribution and an image of the UHIS. An appropriate incentive scheme has to be formulated for each type of distribution channels.

14. (NHIA-section Legal affairs) **Model contracts for distribution channels are elaborated.**

Based on the decision about distribution channels and their remuneration model contracts are elaborated.

15. (NHIA-section Sales network) **Training materials and training courses are prepared for training of sales force of selected distribution channels on the offered health insurance product**.

The training should provide detailed information on:

- the process of enrolment and collection of contribution from the point of view of a sales agent
- insurance product - coverage, rights and obligations of insurees
- expected questions of insurees and their correct answers

16. (NHIA-section- health care contracting) **Formulation of guidelines for selection and contracting of health care providers**

Guidelines for selection of health care providers have to be formulated based on capacity and quality criteria – e.g. on their structural and procedural prerequisites for provision of quality health care.

17. (NHIA-section Legal affairs) **Model contracts for health care providers are elaborated.**

The model contracts are elaborated in co-operation with the section Health policy. Detailed description of remuneration methods, ways of claiming can be attached to the model contracts or the model contracts should refer to them.

18. (NHIA-section Health policy) **Training materials and training courses are prepared for training of health care providers**.

The training is prepared in co-operation with the section IT development and should provide detailed information on:

- authorization of a patient for insurance coverage
- remuneration mechanisms used
- process of claiming

- insurance product -coverage, cost sharing, rights and obligations of insurees

19. (NHIA-section Marketing) **Marketing campaigns are planned and launched to inform and to persuade the population to purchase policies of the UHIS.**

Population should learn about the offered insurance product, its availability and its advantages.

5. IT SUPPORT OF THE NHIA

The typical structure of an information system for a public health insurance institution is depicted in the Figure 10. There are usually two operational systems - the first one may be called a health insurance information system and this is the system supporting specific business processes of an insurance institution. The health insurance information system prepares data for an accounting system which is a component in a broader enterprise resource planning system (ERP) that besides accounting component may have other components, for example for human resources management, logistics of the institution etc. Whereas the health insurance information system is usually tailored made, the enterprise resource planning system is usually ready-made out-box system as it is applicable to a broad range of companies.

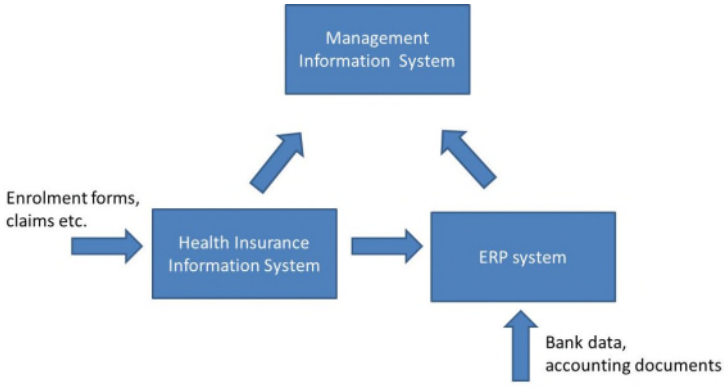


Figure 10: Structure of the information system of the NHIA

These two operational systems are usually roofed by a management information system (MIS) that provides data for analysis of phenomena in the health insurance scheme, for management and for actuarial calculations. The management information system is usually built on Business Intelligence technologies.

Several questions have to be addressed in relation to the IT support of the NHIA. Firstly, the level of centralization of operation of the NHIA should be decided. Secondly there is an issue of flexibility of the IT support. A common trend in health insurance agencies both public and private is a centralization of their operations that is enabled by a general availability of speedy internet connection. So, web based applications are prevailing now that have minimal hardware requirements on spots of usage and they remarkably shrink administration and also maintenance costs (the application is maintained from one spot). A health insurance application is resides on a remote server that can be placed even abroad. However, a reliable internet connection with the bandwidth at least 10 Mb/s at the server side and around 300 kb/s at client's side are desirable for using such applications efficiently on a broader basis. Response times of such applications are heavily dependent on the speed of the internet connection.

Flexibility of the IT support is also very important as adjustments in the benefit package; cost sharing scheme, contributions and rules of payment can be expected. The underlying health insurance application should allow a flexible definition of insurance products based on parameters that are presumed to change within time.

The following parameters of an insurance product can be used:

Enrolment, contributions and payments

- Enrolment is accomplished in cycles
    - starting dates for cycles
    - grace periods for a new enrolment after the start of a cycle
    - grace periods for a renewal after elapsing of a cycle
- Contribution for a household
- Maximal number of members of a household (for which the contribution is valid)
- Contribution for members on top of the maximal number (maybe separately for children and adults)
- One-time (registration) fee for the first enrolment (per household and/or per member)
- Maximal number of instalments
- Grace period for full payments of contributions
- Insurance periods (duration of a policy for given insurance product)

Benefit package

- A flexible selection of medical services/treatments and medical goods that are covered within given insurance product

Cost sharing scheme

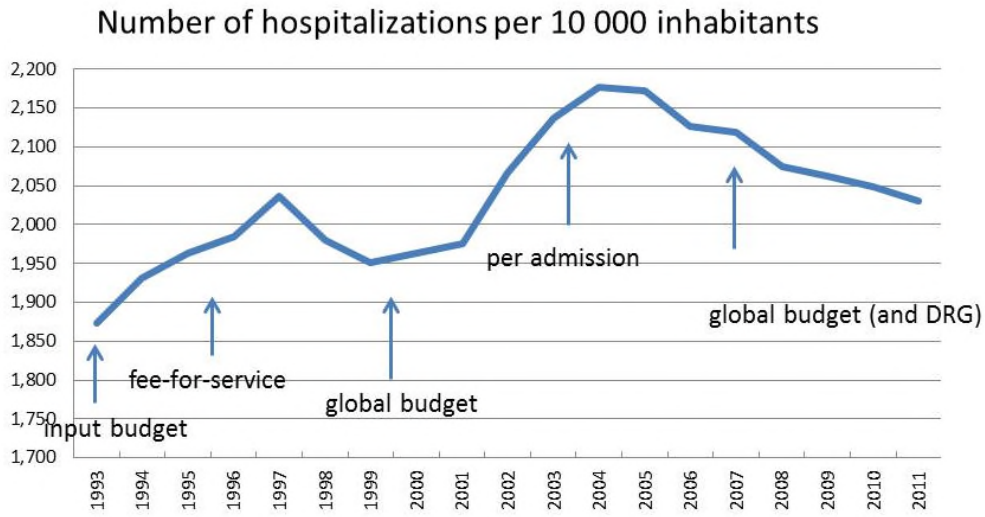
- Financial and/or utilization ceilings
    - per household/insuree/treatment
    - per type of health care (e.g.in-patient, out-patient)
    - per category of treatment (e.g. surgery, consultations etc.)
- Co-insurance (percentage of coverage) according to categories of services/medical goods (or according to individual services/medical goods and categories of insurees
- Limits for coverage (coverage up to a defined limit) according to categories of services/medical goods (or according to individual services/medical goods and categories of insures
- Waiting periods according to categories of services/medical goods (or according to individual services/medical goods and categories of insurees

A criterion for parameterization of the health insurance application may be occurrence of a discussion on a given feature (parameter) during the design phase of the insurance product. Even if the feature is rejected or not included in a final design it can be regarded as a candidate for a future change of the health insurance scheme. A detailed overview of requirements for functionality of the health insurance information system for the NHIA is in the Annex 3.

6. REMUNERATION OF HEALTH CARE PROVIDERS

6.1. Selection of suitable remuneration mechanisms

A way of remuneration of providers plays very important role for ensuring of sustainability of a health insurance scheme on one hand and in motivation of health care providers to provision of an adequate volume of quality health care. It influences remarkably behaviour of health care providers. For example, the Figure 11 shows the number of in-patient admissions per 10 000 in the Czech public health insurance system in the period of the last twenty years. Peaks and valleys in the figure are attributable only to the ways of remuneration of hospital care by the public health insurance system as amount of remuneration increased steadily and cost sharing of patients hasn't changed during the indicated period. The way of remuneration changed four times in the Czech system usually because of sustainability.



Source: UZIS

Figure 11: Number of hospitalizations-the Czech case

There are several well-known remuneration methods with known effects on motivation of health providers. However, there is no optimal one and to select the way of remuneration in a specific situation is not an easy task. If one way of remuneration is chosen it is not forever it will have to be adjusted most probably in future. Generally, a remuneration mechanism determines how the risk of overusing resources and of morbidity of patients is shared between a purchaser of health care and a health care provider.

Remuneration mechanism can be classified according to a subject of the remuneration. So, health care providers are remunerated for their consumption of input resources, for their outputs or their outcomes. The remuneration for consumption of input resources is used predominantly in Nepal now. The disadvantage is obviously lack of incentives for performance at the side of health care providers. The advantage is a high predictability of the volume of remuneration and a full control of the purchasing side over consumption of resources. Therefore, this

mechanism is still used even in very developed insurance schemes for coverage of capital investments at health care providers. Investments for medical equipment or for buildings predetermine future operational costs of health care provision and a control over it gives an important tool in hands of a purchaser. It is one side of a coin. The other is the problem that majority of costs of health care providers are fixed or semi-fixed. If a health care provider has only one dominant source of funding (from a health insurance scheme) and all costs of the health care provider have to be covered by an output oriented remuneration that is 100 % variable, it may lead to a strong motivation to an overproduction of the health care provider in order to be on a safe side. These all are arguments why input based remuneration could be considered for coverage of some types of costs of health care provision under some circumstances (e.g. as a component of remuneration of public health care providers).

Output oriented remuneration mechanisms remunerate performance of health care providers according to the volume of health care production measured in some units-services, visits, days of stay in hospital, admissions to hospital care or episodes of treatment. The order used in the list was not a random one but it was in ascending order of the share of the risk of overusing of resources and morbidity on shoulders of health care providers. So, fee-for-service is completely risk free for health care providers and usually it is their preference. Despite different allocation of the risk, all output oriented remuneration mechanisms have one common problem and it is the sustainability of a funding health insurance scheme. It is not a problem to motivate health care providers to a performance; it is a problem to pay for it.

There are two typical methods of coping with the problem of sustainability for output oriented remuneration methods-global budgeting and relative pricing. A global budget means that a health care provider is entitled to some predetermined budget provided it achieves some predetermined level (a threshold) of an output. What happens if the health care provider achieves the threshold for output? There are two options. Either the global budget is constructed as a fixed one and it that case there is no additional remuneration from the side of a health insurance scheme. This option obviously may lead to deferring of elective health care by health care providers. Despite of it, it is used in public health insurance systems. The second, a bit more elaborated option is remuneration of the output above the threshold by a discounted price, usually at the level of variable costs associated with the excessive production. The remuneration of excessive production may not start immediately after reaching of the threshold but only above some tolerance corridor (see the Figure 12).

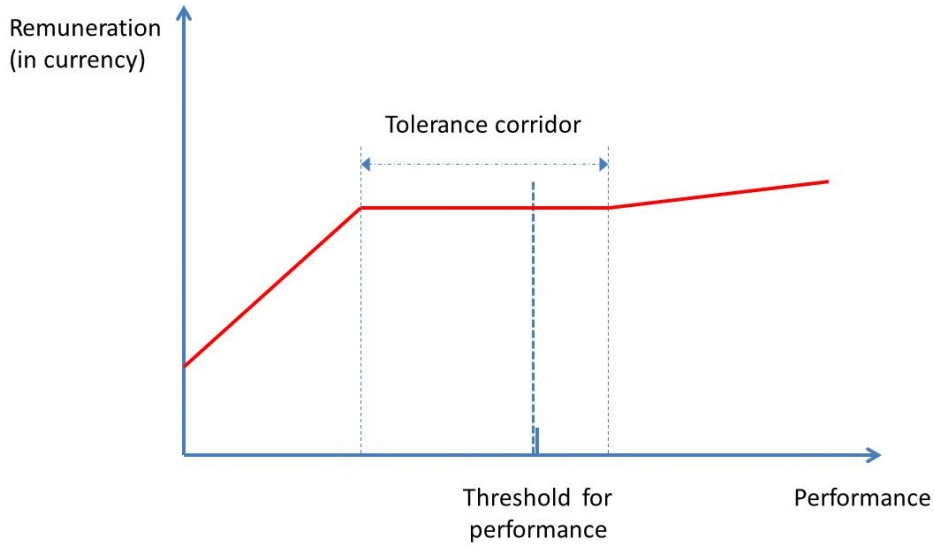


Figure 12: Construction of a global budget

There is a question how a health care provider is remunerated if its output is below the threshold. Different arrangements are again possible. The remuneration may be in accordance with an actual production or there may be an agreement between the purchaser and the provider that a full or a slightly decreased global budget is remunerated within some tolerance corridor for actual performance.

The second way of coping with the problem of sustainability of a health insurance scheme is so called relative pricing. It is a way how purchasers can shift all risk back on shoulders of health care providers. Therefore, this method will not be much favoured by health care providers but temporarily or for only a part of remuneration may be useful. The principal of the method is that nominal prices assigned to units of the remunerated output are subjected to a recalculation for a specific period (month, quarter of a year, year) according to available funds and actual production of all or a group of health care providers in the period. The result of the recalculation may be, for example, that a health insurance scheme has to pay only 90 % of nominal prices of corresponding units of health care. A health insurance scheme can assign to specific periods different percentage of its income in dependence to seasonal fluctuations of health care consumption in order to limit fluctuations in relative prices. Despite it health care providers don't know unit ex ante. This fact may result (and often results) in an overproduction of health care providers that strive to be again on the safe side.

There is another factor contributing to sustainability on one hand and also to accessibility of health care on the other hand. This is the level of units of health care that are used for output oriented remuneration. If it is paid for example for hospital cases it is important that the payment is not for a hospital case without any adjustment to patient's characteristics – e.g. his/her diagnose. If such adjustment is not used there is a motivation of health care providers to admit as much as possible simpler cases and to reject more complicated cases. So, adjustment of remuneration to complexity of health care is important both from the

point of view of a health insurance scheme and also of a patient. This may be a challenge for initial phases for implementation of a health insurance scheme when there is usually not enough data and experience for differentiating of units of health care within remuneration mechanisms.

Outcome oriented remuneration mechanisms focus on what is real outcome of health care. It seems that it is the best way for remuneration but the reality is a bit different. The problem is to find suitable indicators expressing outcomes of health care that can by strongly influenced by an activity of a single health care provider. Payments for outcome under the buzzword Payment for Performance (P4P) became popular in the UK and USA in recent years and also other countries (see for example Germany) are striving to develop national sets of indicators for P4P. It should be noted that payment for outcomes usually represents only a smaller part of a total remuneration. However, looking closely at such sets of indicators we can easily found that majority of them relate to processes of treatment rewarding only prerequisites for good outcomes of health care[54] than a real impact on health status of patients. That has several consequences.

Firstly, it is usually not difficult to attain high scores in process oriented indicators and it can be expected that majority of health care providers will do well. It is not a bad thing as it was an objective behind such way of payment. However, there may be problem of sustainability if a fixed price is set for a unit score. Final expenditures then may become a surprise for the purchaser. One way to avoid such surprise is usage of relative pricing described above. Some share of disposable funds for remuneration is put aside for a payment according to outcomes[55] before a period and the final price of the unit score is calculated afterwards according to an actually achieved total score of affected health care providers. As payment for outcomes is usually only a smaller part of revenue of health care providers, relative pricing can be acceptable for health care providers even in a long-term perspective.

Secondly, sets of indicators used for payment according to outcome are focused only on some aspects of health care. There is a danger that health care providers will pay attention only to these aspects and treat indicators instead of treat patients. This problem can be overcome by changing of the set of indicators during time. Despite all this snags an outcome oriented remuneration mechanism can be an option for the future Nepali health insurance scheme as a component in a blend of used remuneration mechanisms. Indicators pertinent to current vertical programs of funding specific areas of health care can be candidates for an inclusion into a final set of indicators for scoring of outcomes of health

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[54] For example, many sets of indicators for the area of primary health care include a percentage of smokers given a documented advice to stop smoking by a general practitioner. The actual outcome-the share of patients that actually stopped smoking is not included as any activity of the general practitioner can influence this indicator only indirectly.

[55] It is recommended that a component of remuneration according to outcomes should stand for around 20 per cent of total funding to represent sufficient incentives for health care providers.

care providers preventing a full dissolution of current programs in the future health insurance scheme.

There are some features that can justify the categorization of remuneration by capitation into outcome oriented remuneration mechanisms. Health care providers are remunerated by capitation for quality health care indirectly as good outcomes of their treatment result in lesser their cost in future and thus their profit or surplus increases. However, the problem is that health care providers, especially primary health care providers, can alleviate the risk of low-quality treatments by referring patients to another level of health care systems. Purchasers of health care can counter by considering of the frequency of referrals as a qualification for paying a full amount of capitation.

Each remuneration mechanism has its strengths and weaknesses. It is usually a good idea to use a mixture of them to achieve a right balance between motivation of health care providers to performance and quality on the one hand and sustainability and predictability on the other hand. Let's say that maximum value from the point of view of insurees is a priority for selection of remuneration mechanisms, not their simplicity. The general structure for remuneration of a health care provider in the future health insurance scheme in Nepal can be as depicted in the Figure 13[56].

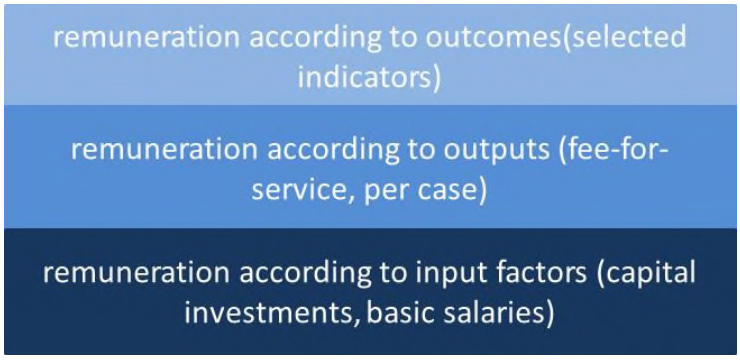

Figure 13: Components of remuneration mechanism

The component of remuneration according to input factors allows to the purchaser effective controlling of a balanced development of the network of health care providers and its capacity. The component oriented on output should motivate health care providers to an adequate performance and the last component oriented on outcome should motivate health care providers to paying attention to quality issues. Actual share of the components on the total remuneration should be subject of detailed reasoning. The share 3:5:2 may be a good starting point for such considerations.

There is another issue for the future health insurance scheme in Nepal. Universality of the anticipated health insurance scheme will require contracting also private health care providers as the capacity of public

[56] As in the first phase of the implementation of the universal health insurance in Nepal will be probably contribution based insurance added on top of current budgetary funding of health care facilities, the proposed structure relates more or less to further phases.

health care providers, especially in in-patient sector, is not sufficient. The UHIS will be definitely in a position of a dominant purchaser towards public health care providers but it is not sure, at least for beginning, for private health care providers. In case of private providers the three component's model of remuneration will not be feasible and the component of remuneration according to input factors will have to be abandoned. The component based on outputs should accommodate also the cost lines covered by remuneration according to input factors in case of public providers. A practical consequence is that unit prices for private and public health facilities may differ.

6.2. Design of a remuneration mechanism

Once a remuneration mechanism or a mixture of remuneration mechanisms is selected for given types of health care providers, all parameters of the selected mechanism have to be determined.

Regarding the component of remuneration based on consumption of input resources the design is not so complicated and it is based more or less on political decision. By the way, it is used in Nepal for funding/remuneration of public health care facility as a prevailing remuneration mechanism now. If capital expenditures will be incorporated in this component, actual and usually ad hoc capital expenditures will be covered by the remuneration. Definitely capital expenditures have to be planned well ahead taking into account even distribution of expensive equipment and health care capacities according to the number inhabitants in respective catchments areas of health care providers.

If the component of remuneration based on consumption of other factors will encompass some portion of basic salaries or overhead costs, a normative approach can be adopted based on a standards per one bed or one medical post and taking into account an even distribution of medical capacities throughout the country. The standards should be differentiated according to circumstances of activity of health care providers (e.g. will be different for mountain areas and lowland areas).

The design of output oriented remuneration mechanisms is a bit more complicated. The problem is that we have to agree on a reasonable distribution of predominantly fixed or semi-fixed costs of health care provision to defined units of health care (services, hospital cases etc.). To link prices of units of health care with their costs is important for fair distribution of funds among health care providers and also for motivating to a fair behaviour of health care providers towards patients. Should the price of a type of unit of health care deviate significantly from costs of its provision, it creates an incentive to over-provision or under-provision of such health care to a disadvantage for patients in any case.

Usually duration of health care is used as distribution key for determination of costs of health care units. Let's suppose that we have an average or a normative duration of a service, and the number and the composition of medical personnel participating in provision of such service. We can calculate, based on a cost study, what are personnel costs per one minute of work of medical personnel of specific ranks,

what are overhead, material and equipment costs[57] per one minute of duration of a service taking into account optimal or average utilization capacities of given medical specialty[58] in the country. If there are some extra expensive drugs, medical materials or equipment used only in association with specific services, they will not be incorporated into calculation of general material and/or equipment costs per minute but they will be attributed directly to corresponding services. We can sum up products of the duration of the service and minutes costs of the corresponding specialty and specifically attributable drug, material and equipment costs and we get an approximation of costs of provision of given type of service.

If the unit of health care is a hospital case, we have to have some so called case-mix classification of hospital cases. The well-known case-mix classification is the DRG (Diagnosis Related Groups) classification. It classifies (acute) hospital cases according to a primary diagnosis (that was the reason for a hospitalization), main surgical intervention if it was provided during a hospital stay, secondary diagnoses, age, sex and way of discharge into around 1,000 DRG groups of cases that are similar from clinical and cost point of view. The DRG itself needs some time for implementation[59], a license should be obtained somewhere, it needs a thorough training as it is very sensitive to proper coding of diagnoses and services and some infrastructure for maintenance in the national context should be built on. Although the DRG seems not be the first choice for Nepal, lessons from the DRG and its classification are very useful for the design of a viable, a bit simpler intermediate solution for an output oriented remuneration mechanism of hospital care within the UHIS.

If we look at the DRG it has several levels of classification of hospital cases. Cases are classified according to which organ or part of body is subject of the treatment on the first level. Then on the second level, whether the treatment was a conservative or a surgical one. Further, a case is classified according to a main diagnosis or surgical service that was provided during the treatment. The last level of classification is related to complications and co-morbidities related to the given case that are mostly assessed according to secondary diagnoses accompanying the hospital case. There are two lessons that are useful for an interim solution to be selected in Nepal. Firstly, the first three levels of the DRG classification are the most important for predictive power of the DRG. The fourth level is not so much contributing to the overall quality of the classification but is contributing significantly to its complexity. The second lesson is that average costs of treatment within each DRG group are strongly correlated with the average length of stay of cases within a DRG group.

These two lessons give some hints for developing of an interim classification of hospital cases and for its costing. The classification

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[57] If equipment costs are covered directly as an input factor, they are not included in the calculation of costs of services. The same is valid for other types of costs.

[58] Usually some variant of top-down approach is used for allocating of indirect and overhead costs of health facilities to productive departments in cost studies.

[59] Looking at experience from Europe, usually several years.

should classify cases roughly according to specialty of a treating department and further it should distinguish whether the treatment was conservative or surgical. Finally, some clusters of cases according to clinical similarity (clinically related main diagnoses or surgical interventions) and according to similar length of stay[60] should be created. We can assign average costs per one day of stay in given specialty to each cluster to get a base for pricing of per hospital case[61]. We can get average costs per day of stay in given specialty as ratio of total cost of corresponding production departments and total number of hospital days in a period.

Design of outcome oriented remuneration mechanisms has usually nothing to do with costing but with a deliberate rewarding of good achievements according to some scoring system. Each indicator of outcome has assigned a range of scoring points according to the level actual value of the indicator achieved by a health care provider and each indicator has usually a weight expressing assumed importance and/or impact of the indicator on quality of rendered health care. A price (either prospectively or retrospectively) is assigned to one unit in the scoring system. Final remuneration for a provider is calculated as the product of the unit price and number of units (points) achieved.

[60] Alternatively a usage of a simplified DRG classification without the last level of classification can be used.

[61] In DRG based classification systems about one quarter of DRG groups (not cases) does not have a strong correlation of costs with length of stay indicator but with expensive drugs and/or materials used for treatment of cases classified into given group. What is often done is an exclusion of such extra expensive drugs/materials from pricing per hospital case and remuneration of them separately on individual basis.

7. CONCLUSION

Building up of a universal health insurance scheme in Nepal with very small percentage of formally employed population is definitely a challenging task. The fact the scheme has to be administered by formally employed workers with a higher salary but it is predominantly targeted to the population without any formal employment and thus with usually a lower income creates also a new problem of affordability of administration costs of such scheme.

Foundation of the new partly autonomous institution National Health Insurance Agency is proposed in the report. The rationale behind an early foundation of such institution is to make the whole process of preparation of the UHIS transparent with one responsible body. The NHIA can start with a very limited team of mostly specialized staff (10-15 workers) that will focus on finalizing all aspects of the design of the UHIS and submitting of the proposal to the MOHP.

Based on the design the new scheme the NHIA will launch its implementation in selected pilot districts. It will require establishment of district branches of the NHIA in the pilot district again with very limited staff for the initial phase. The number of staff in the district branches will increase in conformance with increasing coverage of the population by the UHIS.

An organizational structure of the NHIA along with phasing of its building up and the core business processes is proposed in the report. The proposal is based on assumption that the UHIS will be based on active purchasing of health insurance policies, splitting of purchasing and provision of health care and claiming/invoicing of provided health care with reference to an individual patient. This arrangement can bring to the scheme revenue from contributions and lower reliance on tax money on one hand and allows maximal control of expenditures of the health insurance scheme on the other hand. However, such arrangement is the most demanding with respect to administration costs. The proposed staffing of the NHIA based on rough calculations and on experience from some other countries that use the similar arrangement. The calculations showed that the administration costs of the UHIS will at an acceptable level towards revenue from contributions when at least 30 % of the population will be insured within the new scheme. Up to this level, some subsidization of the scheme would be needed to keep administration cost below 15 % of the revenue.

Several measures of alleviation of this problem have been proposed for discussion and potential implementation. One way would be to eliminate costly enrolment process and collecting of contributions. However, it is questionable whether the Nepali state is able to mobilize additional tax revenue. The second approach could be abandoning of individualized claiming and reliance only on aggregate claiming. This option represents certain thread either to sustainability of the UHIS and/or to rights of insurees depending on which remuneration mechanisms will be finally utilized.

There are a couple of other measures that can be used. These might have the same impact as two measures mentioned above but in their

combination can bring major saving making the scheme manageable without subsidies for administration costs even by lower penetration of the new scheme.

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ANNEX 1 TERMS OF REFERENCE

Outlining organizational set up for the National Health Insurance of Nepal along with its functions and functionaries

1. Background:

Nepal has made good progress in improving access to health care services, still reaching the poor and marginalised remains a challenge. Over the last few years, the Ministry of Health and Population (MoHP) has embarked upon a process to improve the current health financing system and to further extend social health protection to citizens by introducing among others free primary and maternal health care for all. Additionally, a number of targeted programmes aim to cover the poor and marginalized. However, existing interventions for social health protection remain fragmented and often fail to adequately provide the necessary financial protection against catastrophic spending.

The health system in Nepal is still to a large extent financed by private households in the form of out-of-pocket payments (55%) paid directly by the patient during the utilization of health services. Evidence further indicates that retail sales outlets and other suppliers of medical goods receive 47.2 % of OOPs while private hospitals, clinics, labs and teaching hospitals receive 44.3%. This large amount of out-of-pocket spending represents a worrisome gap in financial protection as direct payments for health services can lead to impoverishment, and become an access barrier for those in need of medical attention.

On the top of tax-based financing system that exists in Nepal, Government of Nepal is aiming to introduce the public health insurance scheme at the national scale. In this endeavour, Ministry of Health and Population (MoHP) together with external development partners drafted a policy on National Health Insurance (NHI) which is in the process for approval from the government. Vision statement and objectives of the policy are depicted in the following box.

National Health Insurance Policy

Vision
The main objective of this health insurance scheme is to ensure universal health coverage **by increasing access to, and utilisation of, necessary quality health services.**

Specific objectives
The specific objectives of the health insurance scheme are to:
1) increase the financial protection of the public by promoting **pre-payment and risk pooling** in the health sector;
2) **mobilise** financial resources in an **equitable manner**; and
3) improve the **effectiveness, efficiency, accountability and quality of care** in the delivery of health care services.

As regards the institutional set up, NHI policy envisions establishing an autonomous entity, as an implementing agency, with its own Act, but only as a medium to long term goal. Given this context, MoHP is considering establishing a semi-autonomous body under the Development Board Act, as an implementer of the NHI. Roles and responsibilities of such an agency will have to be defined in its formation order to be issued by the government. MoHP has also very recently formed a NHI unit within the ministry structure. The unit is supposed to do necessary preparatory works for the establishment of the insurance agency and also define technical details for the implementation of the scheme.

Health Sector Support Programme, a GIZ supported programme in the health sector, is also closely engaged in this endeavour of the MoHP. GIZ's support is embedded in a coordinated approach of external development partners and MOHP in form of a local P4H network (Technical Working Group Health Financing[62]). This assignment relates to the establishment of the insurance agency along with its functions and functionaries and will support the discussions on the insurance design and implementation that are being led by the Technical Working Group including the MoHP.

2. Objectives

The overall objective of this assignment is to develop a proposal for the organizational structure for the systems and the corresponding functions of the NHI.
Specific objectives include:

- Define which NHI related responsibilities and/or functions are to be implemented by the NHI and which are to implemented by other bodies (evaluation including but not limited to: premium rate setting, exemption policies, fund-holding, definition of benefit package (incl. services & drugs), defining payment methods, defining prices, quality assurance, accreditation, standard

[62] This TWG includes government partners, e.g. MoHP, NHRC and MoF.

treatment / clinical guidelines, health infrastructure decisions from public funds, reserve investment policy…).

- Definition of what functions should be defined through which method of "regulation" – laws, decrees, circulars,…
- Identify open areas for political/administrative decision as a condition for defining functions + basic options
- Propose an overall organizational and administrative structure of the NHI, including structures at central and decentralized level and define their general responsibilities (including but not limited to: aspects like strategy, operational and financial oversight, governance, operational and financial management, stakeholder relations…);
- Define an administrative set-up and define functions of different offices, departments, etc. at central and decentralized level. This includes:
  1. Membership management (incl. social marketing, enrolment, databases, member identification systems, patient satisfaction,…)
  2. Fund management (fund collection, budgeting, claims processing, asset management, actuarial analysis,…)
  3. Quality management
  4. Operational management
  5. Provider management (registration, contracting, payment processes, claims verification, performance management,…)

  Define workflows within and between the different offices, departments.
- Define HR requirements on a skills basis for the NHI and give a rough estimate of staffing needs by offices/ departments
- Define general IT requirements of the NHI at different levels in terms of hard- and software.
- Health service providers
- Interactions between different institutions
- Defining what sort of task can be contracted out by the agency

Important cross-cutting issues that require attention are: IT; HR; monitoring of gender, geographic and socio-economic equity, etc.

3. Activities, timeline and deliverables

The following activities will be required to be implemented by the consultancy:

Timing	Location	Activity	Deliverable
14/10/13	Home	Preparation: remote interviews, desk review documents, meeting, agenda	
tbd	Nepal	Inception workshop & review	Inception report
tbd		Fact finding, concept development, report drafting	Draft report
tbd		Review workshop	
15/11/13	Home	Finalization of report	Final report (incl. chapters on each specific objective)

The contract will run for the duration of 14/10/2013 until 15/11/2013.

It is estimated that the assignment will require up to 30 working days of international consultancy. The international consultant(s) will be supported by a national consultancy contracted by the GIZ HSPP in Nepal.

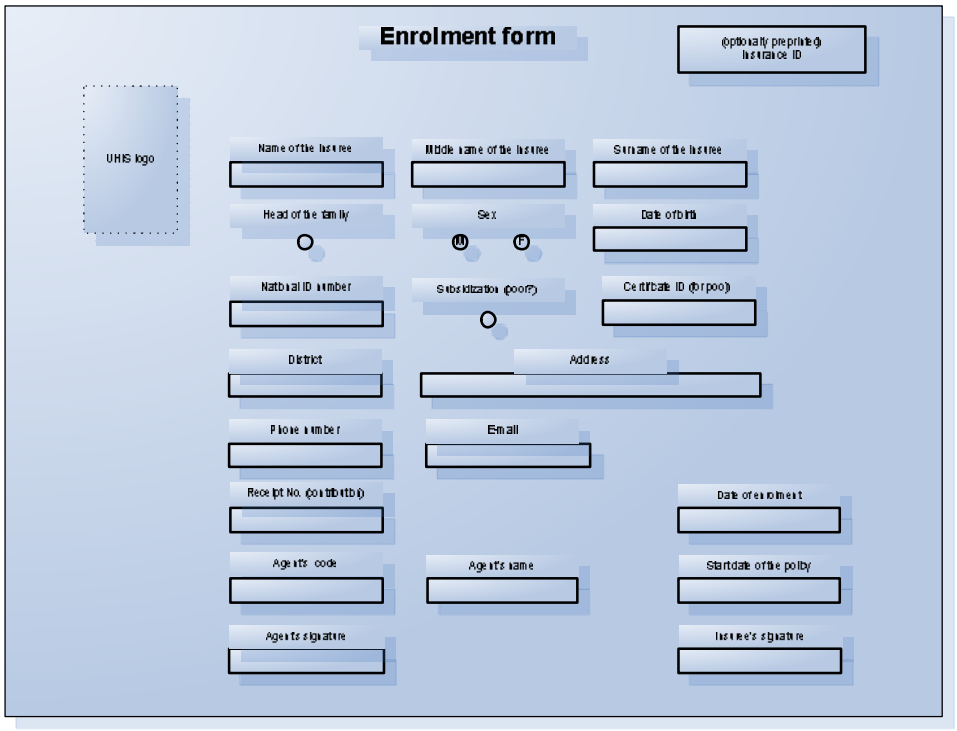
4. Professional requirements

The assignment will require a team of international and national consultants. Expertise in the following fields is required:

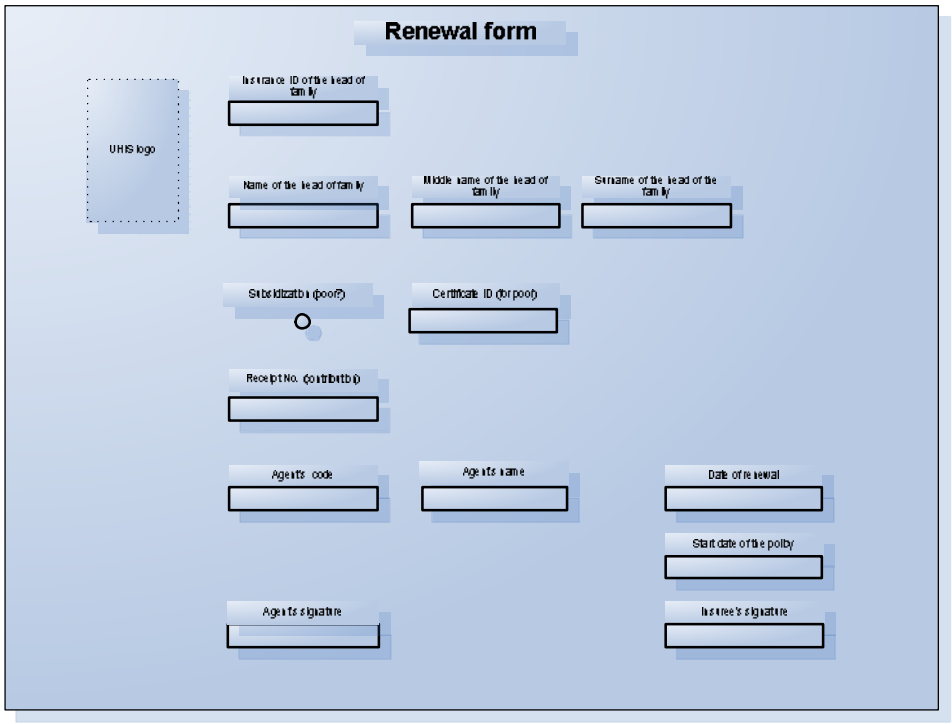
- Social health insurance expertise, including human resource development
- Experience on organizational development
- Hospital management expertise, especially insurance relations and claims management
- IT for social health insurance expertise
- Local health systems expert (Will be contracted locally and is not part of the given ToRs/contract).

ANNEX 2 DRAFT PROPOSALS OF SELECTED FORMS

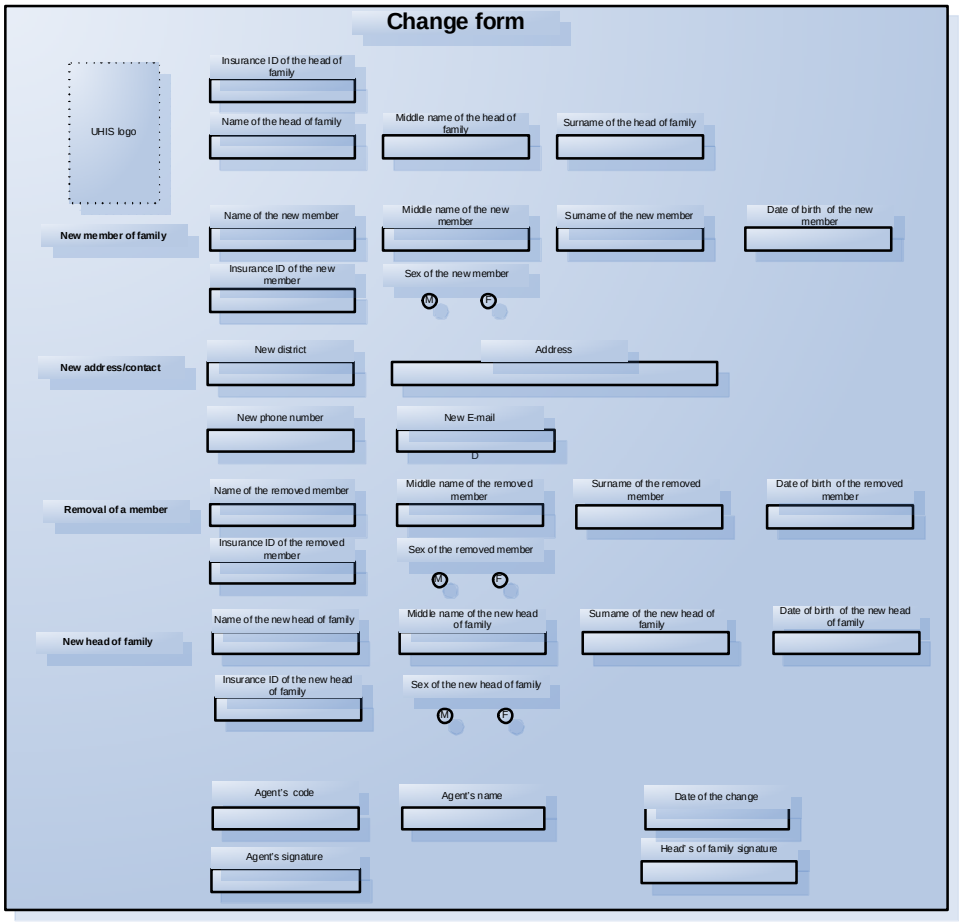
Enrolment form



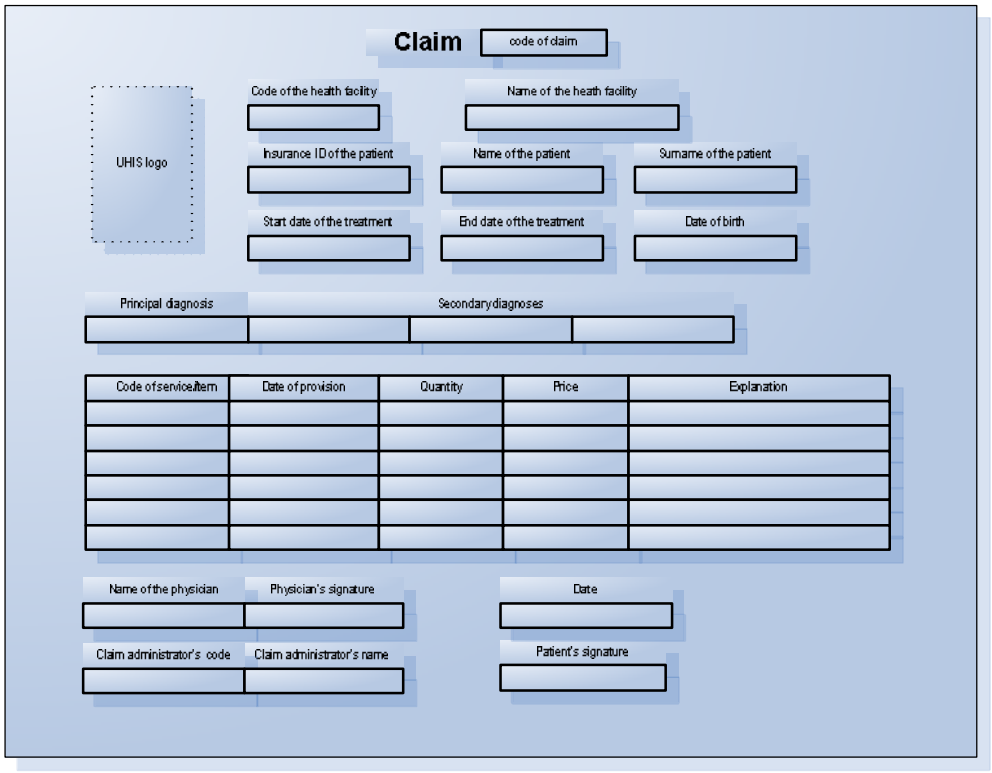
Renewal form



Change form


Change form
UHIS logo
Insurance ID of the head of family
Name of the head of family
Middle name of the head of family
Surname of the head of family
New member of family
Name of the new member
Middle name of the new member
Surname of the new member
Date of birth of the new member
Insurance ID of the new member
Sex of the new member
M
F
New address/contact
New district
Address
New phone number
New E-mail
Removal of a member
Name of the removed member
Middle name of the removed member
Surname of the removed member
Date of birth of the removed member
Insurance ID of the removed member
Sex of the removed member
M
F
New head of family
Name of the new head of family
Middle name of the new head of family
Surname of the new head of family
Date of birth of the new head of family
Insurance ID of the new head of family
Sex of the new head of family
M
F
Agent's code
Agent's name
Date of the change
Agent's signature
Head's of family signature

Claim form


Claim
code of claim
UHIS logo
Code of the health facility
Name of the heath facility
Insurance ID of the patient
Name of the patient
Surname of the patient
Start date of the treatment
End date of the treatment
Date of birth
Principal diagnosis
Secondary diagnoses
Code of service/item
Date of provision
Quantity
Price
Explanation
Name of the physician
Physician's signature
Date
Claim administrator's code
Claim administrator's name
Patient's signature

ANNEX 3 FUNCTIONALITY OF THE NHIA INFORMATION SYSTEM

The NHIA health insurance information system should provide the following functionality:

Functionality	Objects	Comment
Administration of registers (entering a new item, editing of an item, deleting of an item)	Register of users	Users can be associated with different functional roles and with data belonging to specific territorial units
	Register of locations	Territorial units in Nepal: region, district, city/village/ward
	Register of payers	Institutional payers that can subsidize or fully cover contributions of households
	Register of health care providers	Health care providers entitled to submit claims
	Register of medical services	Medical services that can be included in the benefit package
	Register of medical items	Medical items (e.g. drugs) that can be included in the benefit package
	Register of agents	Persons entitled for enrolment of households
	Register of claim administrators	Persons entitled for submitting of claims
	Register of insurance products	All insurance products that have been or are offered within the health insurance scheme
	Register of pricelists	Pricelists allow specification what medical services/items can be claimed by a health care providers and at what prices

Functionality	Objects	Comment
Entering/ modification/ deleting of/searching for	Household/family	
	Member of household	
	Insurance policy	
	Payment of a contribution	
Obtaining/sending to server of a photo of an insuree		
Associating a photo with a record on an insuree		
Retrieving a photo and an info on coverage for an insuree		For the centralized option
Downloading coverage data to a (smart) insurance card		For the decentralized option
Modification of coverage data on an insurance card		
Prompt to renewal/renewal	Insurance policy	
Downloading data on contributions to an accounting system		
Entering/modification/submission	Claim	
Checking against policy	Claim	
Selection for medical review	Claim	
Valuation	Claim	
Downloading data on claims to an accounting system		
Uploading data on payment of claims from an accounting system		
Producing of operational reports		

The NHIA health insurance information system should provide off-line clients for working in a territory without Internet connectivity and tools for synchronizing databases of a central version with off-line clients.