Need Based Resource Allocation Formula for HPN Sector

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Ministry of Health and Family Welfare

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Background

- Mandate in Health Economics and Financing OP
- Recommendation from APRs
- Requirement to fulfill DAAR indicators
- To meet efficiency/equity objectives of HCFS

Resource Allocation: what & why Important

- Process by which available resources distributed among the competing users
- One of the key elements of Health Financing
- A means for achieving particular goal e.g. improving access, equity etc.
- An indicator for whether the sector is adopting a pro-poor policy

Major approaches to Resource Allocation

- Negotiation and political compromise
- Incremental budgeting
- Allocation according to health care needs

Resource Allocation: Present Situation

- Incremental budgeting
- Revenue Budget –
  bottom up (top down) and entity/facility based
- Development Budget –
  top down (bottom up) and program based
- Local Level Planning (LLP) –
  Local plan, not related to fund
- Allocation against codes

Rationale for a Need based formula

- A need based formula is required because the health needs vary, mainly due to
  - Population size
  - Age and sex structure
  - Degree of absolute and relative poverty, etc
- Among all proxies, population is by far the most important.

Resource Allocation from Revenue Budget: Present Situation

- Allocations to facilities mainly determined by size (beds, level)
- Does not properly address the need (demography, poverty etc.) of the population

Developing a formula

- **Technical development based on measured needs**
  - **Drawing on recent work in Bangladesh (HEU, World Bank, Dhaka University)**
  - **International experience**
- **Adaptation of the formula based on**
  - **Realities of the budget process**
  - **Broad consensus amongst stakeholders**

What are we trying to introduce?

- Shift in allocation method towards Need based approach
- Incremental implementation and smooth transition
- Improved/synchronized planning at local levels

Developing a Formula: HEU 2010

- Focus on needs of a population, not needs of a facility.
- Components:
  - Size of population (P)
  - Age-sex adjustment (a)
  - Different health needs within each group (n)
  - Cost of care (c)

$$Allocation_i = \frac{P_i(1+a_i)(1+n_i)(1+c_i)}{Total\ Adjusted\ Population} \times Total\ Budget$$

Suggested formula

$$BugtDis_i = \frac{(Demg\ Adj\ in\ Dis_i)[Wgt\ for\ poor\ (\%\ Poor\ in\ Dis_i + \%\ Non\ Poor\ Dis_i)]Pop_i}{Summation\ of\ Adjusted\ Population\ (Numerator)\ for\ each\ District} TotBugt$$

- $BugtDis_i$ - proportion of the budget going to a district
- $DemgAdj\ in\ Dis_i$ - population of a district is adjusted for age and demographic structure in that district and also for age-sex specific service utilization at the national level
- District poverty rate
- weight placed on resources going to the poor relative to the non-poor
- TotBugt - Overall financial allocation for non-pay recurrent (e.g. 4800) for all district covered by the formula

Poverty as a proxy for health need

	Q1 (Low)	Q2	Q3	Q4	Q5 (high)	Ratio Q1 Q5
Difference in need for health care						
Diarrheal diseases (Last week), <5 years	5.5	4.4	6	3	4	1.4
Acute respiratory infections (Last two weeks), < 5 years	7.3	5.4	5.9	4.8	5.1	1.4
Severely underweight children (<3SD)	16.6	11.3	11.5	6.3	3.9	4.3
Underweight children (<2SD)	50.3	41.6	36	27.5	20.9	2.4
Women with adequate micronutrients	19.2	23.4	27.2	30.9	35.3	0.5
Difference in health care						
Infant morality rate (IMR)	50	51	41	38	20	2.5
Neonatal morality rate (NMR)	34	38	32	33	23	1.5
Child morality rate	15	15	9	10	8	1.9
Difference in access to services						
Skilled birth attended at birth	11.5	18.6	28.2	43.2	63.8	5.5
Antenatal care	30.4	39.6	54.2	68.1	87.4	2.9

Begin with a simple formula

- **Initially: keep simple but may introduce more variables as formula is extended**
- **Initial focus on:**
  - **Adjusted Population (P)**
  - **Need (n) proxied by poverty rate**
- **May introduce proxies for cost and more sophisticated need variables later depending on availability of reliable data**

Suggested area of application

- Ideally whole budget
- Initially may be applied to only economic code 4800 (supplies and services) of revenue budget
- It represents around 16% of total fund for districts/upazilas from revenue budget
- Later extend to other codes (e.g. 4900)
- Eventually to be applied to development budget

Structure of Budget

	Code	Upazila	District	MCH	Secretariat	Other	Grand Total
Pay of Officer	4500	1452.5	509.9	356.0	66.7	1752.5	4137.5
Pay of other employee	4600	9214.2	1233.9	870.4	35.3	1268.9	12622.6
Allowances	4700	7441.7	1169.4	1021.5	62.5	2094.8	11789.9
Supplies and Services	4800	2181.7	1243.2	1231.0	1435.0	1653.1	7743.9
Repair and maintenance	4900	18.4	15.5	17.5	1877.8	73.2	2002.5
Other		21.6	11.8	78.4	7250.3	1875.6	9237.7
Pay of Officer	4500	7%	12%	10%	1%	20%	9%
Pay of other employee	4600	45%	29%	24%	0%	15%	27%
Allowances	4700	37%	28%	29%	1%	24%	25%
Supplies and Services	4800	11%	30%	34%	13%	19%	16%
Repair and maintenance	4900	0.1%	0.4%	0.5%	17.5%	0.8%	4.2%
Other		0.1%	0.3%	2.2%	67.6%	21.5%	19.4%
		100%	**100%**	**100%**	**100%**	**100%**	**100%**

Structure of 4800

	District	MCH	Other	Secretariat	Upazila	Total
Contraceptives	0%	0%	24%	0%	0%	5%
Diet	16%	25%	5%	0%	13%	11%
Electricity	6%	9%	10%	0%	4%	6%
Medical & Surgical Supplies	54%	53%	25%	94%	39%	51%
Petrol Oil & Lubricants	5%	1%	2%	1%	4%	3%
Travel Expenses	2%	0%	1%	0%	10%	4%
Other	17%	12%	33%	5%	30%	21%

Process for setting allocations

- Fix total budget for recurrent spending (code 4800) for the year for districts and upazilas
  - Directorate allocation
  - Secretariat allocation
- Compute district-wise allocations for 4800 based on formula
- Allocate to each district as a resource envelope. Local managers decide the allocation by detailed sub-code (MSR, diet etc) for district and upazila facilities.

Transition

- **Options:**
  1. **Radical – shift to new allocations immediately**
  2. **Gradual – phase in allocations over period**
  3. **Incremental – only apply formula to growth in the budget. No district will lose fund but areas to be identified as underfunded will catch up**

- **Given the sensitivity of the issue, option-3 may be tried out through a round of piloting**

Next steps

- Agreement on the prototype formula and pilot districts
- Start piloting and arrange additional funds if needed
- Integrate Local Level Plans with formula based allocation
- Establish working group (reporting to BMC) to monitor formula implementation

Expected changes from formula

- **Simulation exercise**

  C:\Users\Md. Hafizur Rahman\Desktop\RAF\Bangladesh Resource allocation formula - NEW DATA 201013(1).xlsx

- **Some explanations**

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THANKS

Some Questions?

- How LDs currently allocate development budget and 4800 for district and upazilas?
- Could a formula approach work for allocating resources from your OPs (initially for 4800)?
- What are the challenges you envisage in implementing formula based allocation?
- Whether formula based funding is to be piloted only in LLP districts or should also be piloted in non-LLP districts?