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Utilization Trends and Cost Containment Options for Aasandha

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Introduction and Background

In recent years, Maldives has witnessed several major changes in the way in which health is financed in the country. The latest, and probably the largest, of these changes was the introduction of Aasandha, the country's universal health insurance scheme, which commenced on January 1, 2012. The announcement of Aasandha was shortly followed by a Parliamentary Act on Social Health Insurance, and as provided therein, the country's universal health insurance scheme is administered by the National Social Protection Agency (NSPA) under the Ministry of Health and Family. The scheme is implemented through an insurance company, Aasandha Private Ltd[1]., at a contracted price of 2,750 Maldivian Rufiyah (MRF)[2] per person for the first year (2012)[3]. The scheme bears several resemblances to its predecessor, the erstwhile national health insurance scheme Madhana, which covered about 25 percent of the country's population, primarily comprising three large groups - civil service officials, senior citizens, and a growing number of voluntarily enrolled individuals.

Aasandha: Benefit Package and Beneficiaries

The scope of Aasandha benefits is comprehensive; it covers inpatient and outpatient treatment including drugs and diagnostics, though subject to certain specified exclusions and conditions[4], within an overall cap of MRF 100,000 per person per year. In theory, the entire population of the country, comprising over 3,30,000 citizens, is eligible for scheme benefits without any premium contributions. As of December 31, 2012, a total of 2,76,033 citizens, or about 84 percent of the population had already used the scheme at least once during the first year of its implementation.

Trends in Utilization of Aasandha

The quantum of utilization of health services during the first year of Aasandha implementation has been quite high[5]**.** The trends emerging from the amounts billed by the service providers as depicted in Figure 1, indicate that the claims under the scheme grew rapidly in the initial few weeks (until March 2012) and stabilized thereafter at about MRF 20 million per week[6]. The reasons for the observed marginal reduction and subsequent stabilization of utilization and cost patterns seem to be correlated with the discontinuation of coverage for services provided by the two private clinics that existed as part of the network until March 2012[7]. In particular, evidence seems to suggest that the exclusion from the Aasandha network of these two clinics resulted in a sharp decline in the incidence of multiple consultations per patient for treatment of a single episode of illness.

Figure 1: Claimed Amount and Number of Transactions under Aasandha, by Week from January-December 2012

Source: Authors' calculation based on Aasandha administrative records

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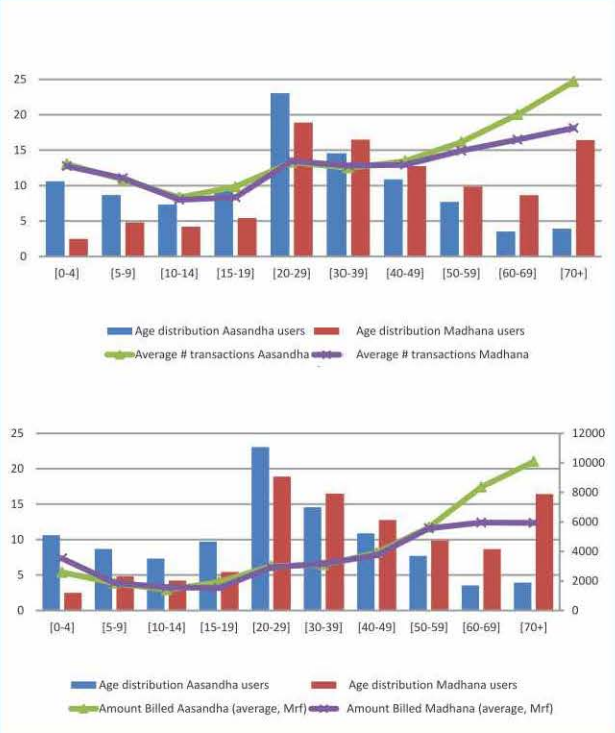
Overall, the first year of Aasandha implementation resulted in about 3.6 million transactions in total, yielding an average of 13.2 transactions per patient[8]. For a country such as Maldives, characterized by a predominantly young population and supply constraints related to access and availability of medical service providers, the number of transactions per patient appears to be very high. In particular, these numbers are significantly higher than the ones reported under the previous health insurance scheme Madhana, where the experience was in the range of six transactions per beneficiary per year during that scheme's first full calendar year of implementation in 2009.

Differences in the utilization patterns between the two health insurance schemes are particularly significant taking their respective age compositions into account. Senior citizens, who are expected to have a higher frequency of health episodes, constituted a much higher proportion of the member base of Madhana. The demographic profile of Aasandha members and their utilization of scheme benefits are shown in Figure 2. As would be expected, higher age groups have a much higher utilization than younger age groups. However, the quantum of healthcare utilization is unexpectedly high in Aasandha across most age groups. A similar trend is visible when comparing the average claim cost per patient in the two schemes. Despite the much higher proportion of senior citizens among Madhana's members, the annualized average cost for a patient in Aasandha is even higher than Madhana. This indicates that the costs in Aasandha are much towards the higher side for its age-group composition, specially in view of the greater proportion of younger and less illness-prone age groups than Madhana.

Outpatient services constitute the bulk of Aasandha transactions and expenditure. The share of outpatient utilization is 92 percent amongst all transactions , while inpatient services are seven percent of all transactions[9]. In terms of costs, the share of outpatient claims is 61 percent while inpatient services constituted 33 percent of all claims made by providers in 2012. Pharmacies accounted for 32 percent of all transaction and 18 percent of the bill amount (Figure 3).

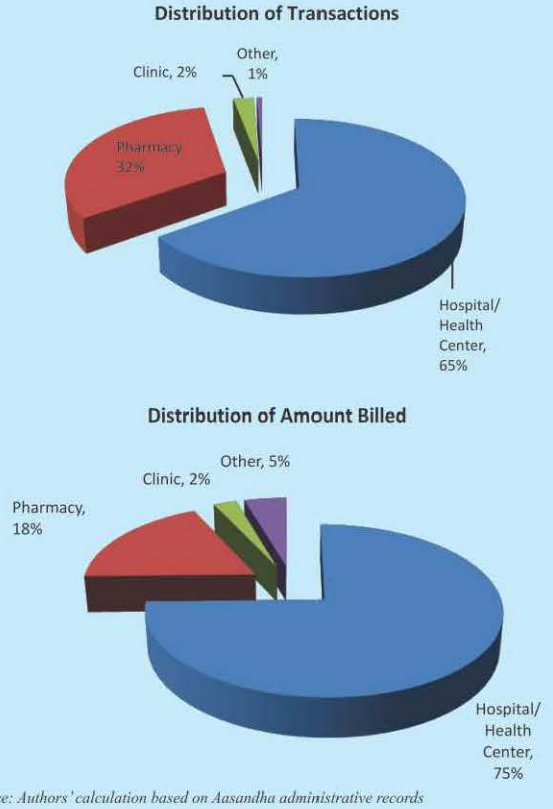
Significantly, and what promises to be an area for future cost containment measures, overseas services for treatment not available in Maldives accounted for 0.3 percent of all claims received by Aasandha, but amounted to 19 percent share of the total claimed amount, by value. As discussed later in this note, drugs (including medicines billed by pharmacies and those billed directly by hospitals) and overseas services together account for about half of Aasandha's current costs, and also appear to be the two areas for focus in the short term for potential cost containment options.

Figure 2: Demographic and Utilization Profiles During First Year of Implementation Under Aasandha (2012) and Madhana (2009)



Source: Authors' calculation based on Aasandha and Madhana administrative records

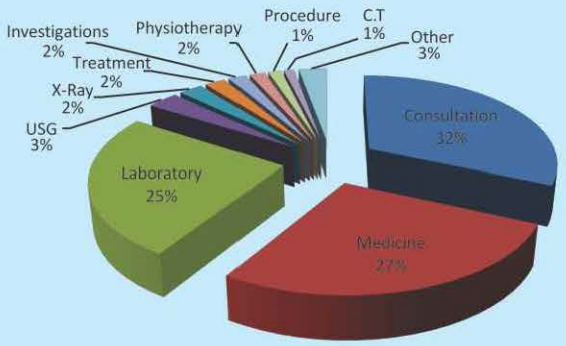
Figure 3: Share of Service Providers in the Number and Amount of Billed Transactions, 2012



Source: Authors' calculation based on Aasandha administrative records

Figure 4 gives a breakup of services rendered in the total amount paid by Aasandha for outpatient services[10].

Figure 4: Outpatient Services in Aasandha — Share of Total Amount Paid by Services Rendered (January 1, 2012- September 15, 2012)



Source: Authors' calculation based on Aasandha administrative records

Thus, laboratory services, radiological diagnostic services (CT, USG and X-Ray) and other investigations together accounted for over 33 percent of all outpatient expenditure under the scheme, while consultations had a similar share at 32 percent. Medicines stood at 27 percent of the total and other procedures/treatment had a share of eight percent in the outpatient claims that had been paid by the scheme in 2012.

Aasandha costs are concentrated in the Male area, where most of the service providers are located. As shown in Table 1, over 51 percent of the total spending occurred at providers located in the Male atoll, which is on expected lines. Most of these transactions (93 percent) were for outpatient care. Less than 30 percent of all spending took place in the atolls. Inpatient care accounted for a small proportion of transactions in all the atolls, but was the predominant expenditure type (58 percent) for expenditure abroad.

The most frequent conditions requiring treatment abroad are listed in Table 2, classified by the International Classification of Diseases (ICD) code. Most of the referrals included in this list pertain to cardiac, cancer and other tertiary conditions. At the same time, the list includes some less complex conditions such as essential hypertension, kidney stones and other urological conditions, and chronic respiratory diseases. Unless associated with complications not reflected in this coding itself, their presence in this list requires further exploration, as these should be conditions which can possibly be treated within Maldives. The common conditions identified through this analysis can also be useful for negotiating close-ended package rates with the overseas providers, reducing the overall costs for Aasandha.

Analysis of data reveals that a small number of patients did exhaust their outpatient cover during the year. A total of 0.18 percent of all transactions, corresponding to 6,089 claims, required out-of-pocket expenditures as a consequence of the coverage limit in Aasandha being exhausted. These were likely to be patients with chronic illnesses who had required frequent clinical attention and were possibly worse off than before as they did spend on some services that were free-of-cost before Aasandha was introduced. Even for other patients, with the mid-year introduction of sub-limits on medicines and consultation fees, some out-of-pocket expenditure was likely even for covered treatment.

Financial Status

Despite some cost containment measures introduced during the first year[11], Aasandha did prove to be costlier than what had been envisaged by the Government and the insurer at the inception of the scheme. The Government had budgeted MRF 720 million for the scheme even though the full year's premium, at MRF 2750 per beneficiary, worked out to over MRF 900 million. Even this premium amount could only be irregularly paid and some of it continued to be in arrears at the beginning of the next year. This could be affecting the insurer's ability to settle the claims and certainly affecting the financial health of the service providers.

The available claims data showed that the insurance company had already received claims amounting to about MRF 943.6 million in the first year of the scheme. If these claims were to be accepted in full, the insurer would report losses (vis-à-vis the premium received) on account of these claim payments and administration thereof. On the other hand, it is also understood that a significant share of claims are being rejected for incomplete documentation, which may reduce the insurer's losses but will certainly impact the finances of the service providers, most of whom are again publicly owned. Until recently, not many cost control measures had been included in the scheme design, though the limitations of supply and also the limited size of the network of service providers had contributed to slowing down Aasandha expenses from rising further. As the Government continues to experience several challenges in the implementation of Aasandha initiatives, it has already made several mid-course corrections in the scheme[12]. For instance, the recent decision to introduce clinics on Aasandha's network - with limits on the fees that Aasandha would pay the clinics but allowing for the difference (often at pre-agreed consultation rates) to be paid by the patients - could result in a share of the cost burden shifting to the patients. However, it may also result in increased utilization of the scheme (and some potential overuse as was being witnessed in the early months of the scheme), as a greater supply of services will now be available through these clinics.

Table 1: Distribution of Amount Billed by Provider Location and Service Type

Atoll	Total Amount Billed	Share to Total Amount Billed	Distribution by Number of Transactions			
			Inpatient (%)	Outpatient (%)	Other (%)	Total (%)
K (Male)	482,000,000	51.1	5.6	92.7	1.7	100
Abroad	180,000,000	19.1	56.7	41.9	1.4	100
HDh	44,200,000	4.7	11.0	88.8	0.2	100
S	38,400,000	4.1	16.8	83.0	0.2	100
GDh	22,200,000	2.4	7.5	92.4	0.2	100
Lh	20,300,000	2.2	5.6	94.4	0.1	100
R	19,500,000	2.1	8.1	91.9	0.0	100
HA	16,400,000	1.7	5.0	94.9	0.2	100
Sh	14,600,000	1.5	4.3	95.5	0.2	100
GA	13,300,000	1.4	5.9	94.0	0.1	100
Gn	13,200,000	1.4	10.8	89.1	0.0	100
L	13,100,000	1.4	5.0	95.0	0.0	100
B	11,100,000	1.2	3.9	95.9	0.2	100
Th	10,700,000	1.1	5.0	94.9	0.1	100
N	10,200,000	1.1	4.9	95.0	0.1	100
ADh	9,860,525	1.0	3.5	96.4	0.1	100
Dh	9,479,372	1.0	4.4	95.6	0.1	100
F	5,623,701	0.6	4.5	95.5	0.1	100
AA	4,509,901	0.5	1.3	98.5	0.3	100
M	4,502,222	0.5	3.2	96.8	0.1	100
V	417,908	0.0	2.9	96.8	0.3	100

Source: Authors' calculation based on Aasandha administrative records

Table 2: Common Causes for Overseas Treatment, by Diagnosis Code

ICD Code	Number of claims	Share (%)	Description of ICD code
I52	148	14.84	Other heart disorders in diseases classified elsewhere
N18	47	4.71	Chronic renal failure
D05	32	3.21	Carcinoma in situ of breast
I24	30	3.01	Other acute ischemic heart diseases
N20	26	2.61	Calculus of kidney and ureter
C73	19	1.91	Malignant neoplasm of thyroid gland
H57	19	1.91	Other disorders of eye and adnexa
G91	18	1.81	Hydrocephalus
Z49	14	1.4	Care involving dialysis
C34	13	1.3	Malignant neoplasm of bronchus and lung
N40	13	1.3	Hyperplasia of prostate
C91	11	1.1	Lymphoid leukemia
I10	11	1.1	Essential (primary) hypertension
J44	11	1.1	Other chronic obstructive pulmonary disease
N39	11	1.1	Other disorders of urinary system
D06	10	1	Carcinoma in situ of cervix uteri
D09	10	1	Carcinoma in situ of other and unspecified sites
N04	10	1	Nephrotic syndrome
N28	10	1	Other disorders of kidney and ureter, not elsewhere classified

Source: Authors' calculation based on Aasandha administrative records

Discussion and Options

Aasandha has many challenges to address and also several reform options to pursue. Cost drivers affecting the scheme include the fee-for-service system that is known to encourage supplier-induced demand, the use of proprietary drugs with no essential drug lists and no cost controls thereupon, lack of monitoring and IT systems with NSPA, a non-existent referral system with patients directly accessing specialized care, significant potential for moral hazard, and lack of incentives to contain costs on the part of the providers and beneficiaries.

Possible reforms that could be considered for implementation in the near future[13], include.

i. *Bulk procurement of essential and generic drugs:* Aasandha currently spends an estimated 30 percent of its costs on drugs (including outpatient utilization at pharmacies, as also inpatient and outpatient drugs billed directly by hospitals). Generics are rarely used, and branded drugs predominate in the market. Thus, the potential for savings, even with a rigorous superimposed quality control system, could be as much as two-thirds of the current expenditure on this account. The detailed prescription information now available in the claims portal can also be used for a prescription audit to understand prescription habits in the country.

ii. *Negotiation with overseas providers for closed-ended rates and other facilities:* Overseas treatment is another large contributor to Aasandha's costs, where the current open-ended design translates into poor internal controls and risks of leakages and cost escalation. Negotiating close-ended package rates with the overseas network of providers can achieve significant cost savings, which is particularly relevant because these high-value transactions add up to very high costs for Aasandha. Thus, negotiating a fixed case-rate with a limited number of hospitals located in cities with air connectivity to Male and other cities in the country, for the commonest procedures for which overseas referrals are required by NSPA, could be a way forward to contain costs on this account. Endeavoring to produce many of these services within Maldives may not always be a feasible option due to the small number of cases, specialized care and equipment, and high level of skill and experience required for these tertiary care ailments. However, arrangements can also be made to ensure that follow-up care, including chemotherapy of oncology cases, is available within Maldives to the extent feasible. Negotiating telemedicine arrangements at fixed time slots with specialists in these contracted hospitals would be another way to reduce costs of overseas referrals for screening or follow-up consultations.

iii. *Improved case management of patients with chronic illnesses at the primary care level*, including better attention and care of chronic disease patients in Primary Health Centre settings using standard treatment guidelines and referral guidelines, will improve the care, financial protection and outcomes of these patients. Tools such as care planning, case management, and counseling can certainly be employed for these patients by the medical practitioners practicing in primary care settings. Improved attention to early detection and secondary prevention will be helpful in slowing down disease progress and delaying the occurrence of complications. This will also reduce the costs for Aasandha while paving the way for more scientific, accessible and standardized quality of care for patients with ailments such as hypertension, diabetes and chronic respiratory disorders. Since these are also the patients who are most likely to exhaust their outpatient care limits very quickly, cost containment would directly reduce the likelihood of them having to spend out-of-pocket after exhaustion of their outpatient coverage under Aasandha. Exploring quarterly sub-limits, rather than a single annual sub-limit, may be another administrative measure aimed at reducing the potential out-of-pocket expenditure by these patients.

In the medium-term, in order to contain costs and ensure sustainability, the scheme may need to move away from its open-ended fee-for-service payment system. While the outpatient services could be moved to a capitation or blended-capitation model, bundled package rates (moving to Diagnosis Related Groups or DRGs in due course) could also be used for in-country secondary and higher care (after the initial focus on high-cost overseas care). Systematic costing, adequate autonomy at the facility level, and appropriate incentive mechanisms being put in place at the design stage, to encourage high productivity and cost containment, would be pre-requisites for such provider payment mechanism reform. Substantial capacity building of NSPA would also be needed to plan, implement and monitor these reforms.

In sum, Aasandha has its plate full in terms of the reform measures that need to be undertaken by the program across a range of areas. These measures will ensure that it achieves economy, efficiency and sustainability. In view of the background preparatory work required, as also the capacity constraints in NSPA, a phased approach to reforms would be inevitable. However, this should not mean a delay in essential steps that need to be undertaken in preparation for medium-term reform, while moving full steam ahead on the immediate reform measures.

[1] Aasandha Private Ltd is a 60:40 joint venture of the Allied Insurance Company of Maldives, with the Government of Maldives. Allied Insurance, in turn, is also a parastatal.

[2] Currently, USD 1= MRF 15.42

[3] As a comparison for reference, the claims cost of Madhana during 2011 was MRF 2,671 per person. However, Madhana had a higher representation of senior citizens and was also prone to adverse selection due to voluntary enrolment. Together, these factors would result in higher average costs for Madhana than a program (such as Aasandha) covering the entire population. The premium amount paid to the insurer also covers the administrative and other costs of the insurance company, over and above the claims costs.

[4] For example, within the overall cap, certain outpatient treatment categories have a specific annual sub-ceiling, namely: (i) medial prescriptions (MRF 10,000); (ii) accident dental treatment (MRF 10,000); (iii) emergency evacuations (MRF 30,000); (iv) overseas travel costs (MRF 15,000); and (v) eyeglasses (MRF 1,000)

[5] The average premium for the beneficiaries was about MRF 16 million per week, as contrasted with the average claims of MRF 20 million per week.

[6] Further reduction of claims registered in August 2012 could be related to the lower utilization of health services during Ramadan. A similar pattern of low utilization during Ramadan was also observed in preceding years from the analysis of Madhana's administrative records. An unexpected spike in both the number of transactions and the amount billed was registered during the last week of December 2012. Such increase in utilization could possibly be caused by providers rushing to file claims before the end of the fiscal year, and/or by beneficiaries consciously 'using' their 2012 entitlement balances before the entitlement was reset to full in the new year.

[7] Central Clinic and Central Medical Center.

[8] A 'transaction' record in Aasandha's database is not the same as an outpatient or inpatient event, as each of these events triggers multiple 'transactions' in the Aasandha system. To put this number in context, the current data shows that one outpatient visit in Aasandha results in about three transactions, roughly one each for consultation, investigation and medicines.

[9] Thirty-two percent of all outpatient transactions are at outpatient pharmacies, while the remaining 68 percent are at hospitals or clinics.

[10] This detailed classification is only available from claims actually paid by the scheme. Due to data limitation, the analysis reflects claims during the first eight months of Aasandha implementation only. Even though the denominator for this figure is smaller than the 'claims made' numbers presented in Figures 2 and 3, the distribution of services rendered within that denominator is not likely to be much different from the distribution within the entire set.

[11] During the year, Aasandha introduced reimbursement caps on medicines, and followed it up with a cap on the consultation fee and certain other services in private clinics and hospitals.

[12] The World Bank has begun to engage with the Government to help ensure these initiatives achieve their desired impact. This Note is an input to that technical engagement, proposing some policy options for consideration.

[13] For additional discussion of these reform options, refer to Nagpal and La Forgia. Maldives Health Policy Notes 2, September 2011

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