



Morbidity patterns among beneficiaries of rajiv aarogyasri community health insurance scheme in khammam district

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Abstract:

Technological advances have advanced Medicare to new heights. This is both a boon and a bane. It is a boon to those who can pay and a bane for poverty riddled families. The private enterprise has initiated health schemes targeting the white collars and premiums that are beyond the reach of Below Poverty Line (BPL). An innovative and first of its kind program, the state of Andhra Pradesh (AP) having its impetus and focus on BPL families.

Key words: Aarogyasri, Health Insurance, Khammam

According to the World Development Report (1995), a comparison of the central government expenditure on health among the South East Asia Region (SEAR) countries revealed that India had the lowest (1.9%) expenditure on health as compared to 7.4% in Myanmar, 5.2% in Sri Lanka and 8.2% in Thailand [1]. This low figure is self explanatory in that the private sector shoulders the lion's share of health expenditure in the country. Moreover with the cost of health and medical care escalating by leaps and bounds, a vast majority of people in need of health care will be unable to utilize it due to poverty, high cost of health and medical care.

An innovative and first of its kind program, the state of Andhra Pradesh (AP) having its impetus and focus on BPL families has evolved the insurance scheme after a lot of deliberation and taking it into confidence the existing system with its merits and lacunae, which will meet the need of those who cannot afford to pay and at the same time without burdening those who are already burdened with various other issues. The total BPL families in Andhra Pradesh is 12.61 million as on 2004 [2].

All encompassing and empowering insurance scheme baptised as *Rajiv Aarogyasri Community Health Insurance Scheme* was launched in three districts as a pilot project on 1st April 2007 [3]. After successful implementation it was expanded to all the districts of A.P in five phases. The district of Khammam is included in fifth phase on 17.07.08 [4]. It has empanelled 367 private and public hospitals as service providers. Protocols are stringent, be it in the selection

The database of beneficiaries and software to track each and every case are in place. Over 940 medical and surgical packages are listed and the costs are fixed by a panel of doctors.

The premium of Rs 270 is being shouldered in its entirety by the State Government. The upper limit is fixed at Rs 2 Lakhs per family per year other than Cochlear implantation which costs up to Rs 6.5 Lakhs. The project chronologically is in its infancy but has come of age in its function and coverage.

The Government of India in its larger perspective of making its citizens healthy is in a transition between a welfare to developmental paradigm. *Rashtriya Swasthya Bhima Yojna (RSBY)* was the scheme of GOI where 75% of premium is being paid by Central Govt and 25% by State Govt (Health being in the concurrent list, the contribution is both from Centre and State) where in the upper limit is for defraying cause up to Rs 30,000 per family per year and the family has to pay Rs 30 for the smart card or for the renewal [5].

As per 2001 census the district population was 25,65,412; males-12,99,245, females-12,66,167, rural-20,57,364, urban-5,08,048. Among them 3,60,154 are SCs and 5,58,958 are STs. About 80% of the population is living in villages. The sex ratio is 974 females for every 1000 male population in villages and about 977 females for 1000 males in the urban areas. The child population of the district in the age group of 0-6 years is 3,37,459. Sex ratio in the child population in the age group 0-6 is 968 females for every 1000 males in rural areas and 971 females for every 1000 males in urban

areas. The Khammam district has ST population of 5,58,958, which is about 13.29% of the total tribal population of the state. Out of the total 46 mandals 29 mandals are populated by tribals groups like, Koyas, Lambadas and Kondareddis [6].

Research Question:

What is the morbidity pattern among beneficiaries of Rajiv Aarogyasri Community Health Insurance Scheme in Khammam District?

Aim/Objective:

To study the socio-demographic and morbidity patterns among the beneficiaries of Rajiv Aarogyasri Community Health Insurance Scheme in Khammam District.

Material and Methods:

The data of beneficiaries from 17.07.08 to 16.07.09 was collected from the District Coordinator of Rajiv Aarogyasri, Khammam District and tabulated considering the objectives of the study.

Results:

Table 1: Distribution of patients on age group and gender

Age group	Male(%)	Female(%)	Total
0-5	330(7.3)	203(4.5)	533(5.9)
6-14	399(8.8)	259(5.8)	658(7.3)
15-29	921(20.4)	824(18.4)	1745(19.4)
30-39	849(18.8)	949(21.1)	1798(20.0)
40-49	807(17.9)	947(21.1)	1754(19.5)
50-59	553(12.3)	633(14.1)	1186(13.2)
>60	650(14.4)	672(15.0)	1322(14.7)
Total	4509	4487	8996

Note: figures in parenthesis show column percentages.

Among the beneficiaries 72.1% are from the age group of 15-59 years and 14.7% are above 60 years and 5.9% below 5 years. It is observed that both males and females have equally utilised the service. (Table 1) Total beneficiaries from Khammam revenue division were 58.5%. Only 10.3% of the beneficiaries were tribals. (Table 2) The 3 key service areas in terms of proportion of beneficiaries are Cardio thoracic surgery-15.1%, Genito urinary surgery-13.7% and Medical oncology-13.5%. The least amount of beneficiary was from among those who utilised Dermatology-0.04%. In terms of expenditure-Cardio thoracic surgery-Rs 11.4 crores ;Genito urinary surgery-Rs 3.41 crores & Neuro surgery - Rs 2.47 crores . (Table 3) It is observed that the proportion of women making use of Oncological services is 35.6% as against 11.5% among men. Among males- Genito urinary surgery-20.01%, Cardio thoracic surgery- 16.7%, poly trauma- 13.4%. (Table 4) Among the ST's the service utilisation of Genito-urinary surgery-18.7%, poly trauma-11.6%, Cardio thoracic surgery- 11.2%. Dermatology, Endocrinology and Cochlear implants drew a blank for STs. (Table 5)

Discussion:

Among the beneficiaries the sex wise distribution for all services taken together is almost equal. This speaks of gender empowerment which has resulted in accessing and utilising of health services. This is remarkable taking into consideration Socio-economic status and low literacy rate. A study conducted in Chandigarh which is an epitome of urbanisation has revealed a clear disparity in the gender wise accessing of health services [7]. (Among OPD visits male-54.6%, females-45.4%). Most women suffer their illnesses in silence. On account of this, complications occur leaving behind permanent disabilities [8]. Our findings are otherwise with Chandigarh experience.

Beneficiaries in the age group <5 years is 5.9% against 10.2% general population estimated by SRS 2006 which indicates that number of people requiring Aarogyasri services are less, where as those >60 years 14.7% have availed the services against estimated population of 7.2% according to SRS 2006 [9]. We are conscious of limitations extrapolating population based statistics to institution centric statistics. If the morbidity pattern is studied in a community those requiring techno-intensive health care shows an age dependent gradient. It is in consance with the present understanding of Health needs.

Table 2: Distribution of Beneficiaries Division and Caste wise

Division		BC	OC	SC	ST	Others	Total
Bhadrachalam	Count	311	82	90	109	12	604
	% within Division	51.5	13.6	14.9	18.0	2.0	100
	% within Caste	6.5	5.7	6.4	11.7	2.6	6.7
	% of Total	3.5	0.9	1.0	1.2	0.1	6.7
Khammam	Count	2788	944	894	323	313	5262
	% within Division	53.0	17.9	17.0	6.1	5.9	100
	% within Caste	58.5	65.6	64.0	34.8	67.3	58.5
	% of Total	31.0	10.5	9.9	3.6	3.5	58.5
Kothagudem	Count	1019	204	225	347	91	1886
	% within Division	54.0	10.8	11.9	18.4	4.8	100
	% within Caste	21.4	14.2	16.1	37.4	19.6	21
	% of Total	11.3	2.3	2.5	3.9	1.0	21
Palvoncha	Count	647	210	188	150	49	1244
	% within Division	52.0	16.9	15.1	12.1	3.9	100
	% within Caste	13.6	14.6	13.5	16.1	10.5	13.8
	% of Total	7.2	2.3	2.1	1.7	0.5	13.8
Total	Count	4765	1440	1397	929	465	8996
	% within Division	53.0	16.0	15.5	10.3	5.2	100

Table 3: Distribution of beneficiaries' service and age wise (yrs)

Code No	Service wise		0-5	6-14	15-29	30-39	40-49	50-59	>60	Total
S1	general surgery	Count	6	54	236	172	130	79	57	734
		%	1.1	8.2	13.5	9.6	7.4	6.7	4.3	8.2
S2	ent surgery	Count	6	21	63	30	16	12	4	152
		%	1.1	3.2	3.6	1.7	0.9	1.0	0.3	1.7
S3	ophthalmology	Count	64	62	24	6	5	5	7	173
		%	12.0	9.4	1.4	0.3	0.3	0.4	0.5	1.9
S4	gynaecology and obstetrics	Count	0	4	58	128	120	46	22	378
		%	0.0	0.6	3.3	7.1	6.8	3.9	1.7	4.2
S5	orthopedics	Count	24	29	43	41	23	12	10	182
		%	4.5	4.4	2.5	2.3	1.3	1.0	0.8	2.0
S6	surgical gastro enterology	Count	0	4	17	20	5	10	4	60
		%	0.0	0.6	1.0	1.1	0.3	0.8	0.3	0.7

S7	cardio thoracic surgery	Count	87	139	240	196	253	225	214	1354
		%	16.3	21.1	13.8	10.9	14.4	19.0	16.2	15.1
S8	pediatric surgery	Count	127	40	1	0	0	0	0	168
		%	23.8	6.1	0.1	0.0	0.0	0.0	0.0	1.9
S9	genito urinary surgery	Count	22	50	327	299	213	130	195	1236
		%	4.1	7.6	18.7	16.6	12.1	11.0	14.8	13.7
S10	neurosurgery	Count	24	32	122	171	111	64	37	561
		%	4.5	4.9	7.0	9.5	6.3	5.4	2.8	6.2
S11	surgical oncology	Count	2	7	34	45	64	53	50	255
		%	0.4	1.1	1.9	2.5	3.6	4.5	3.8	2.8
S12	medical oncology	Count	53	27	109	235	343	192	253	1212
		%	9.9	4.1	6.2	13.1	19.6	16.2	19.1	13.5
S13	radio oncology	Count	5	4	39	115	145	155	185	648
		%	0.9	0.6	2.2	6.4	8.3	13.1	14.0	7.2
S14	plastic surgery	Count	19	40	73	25	7	2	2	168
		%	3.6	6.1	4.2	1.4	0.4	0.2	0.2	1.9
S15	poly trauma	Count	23	64	229	170	123	88	149	846
		%	4.3	9.7	13.1	9.5	7.0	7.4	11.3	9.4
S16	cochlear implantation	Count	11	3	0	0	0	0	0	14
		%	2.1	0.5	0.0	0.0	0.0	0.0	0.0	0.2
M1	critical care	Count	0	5	18	8	13	5	7	56
		%	0.0	0.8	1.0	0.4	0.7	0.4	0.5	0.6
M2	general medicine	Count	0	6	11	7	2	0	3	29
		%	0.0	0.9	0.6	0.4	0.1	0.0	0.2	0.3
M4	pediatrics	Count	53	32	0	0	0	0	0	85
		%	9.9	4.9	0.0	0.0	0.0	0.0	0.0	0.9
M5	cardiology	Count	0	6	17	41	74	35	65	238
		%	0.0	0.9	1.0	2.3	4.2	3.0	4.9	2.6
M6	nephrology	Count	3	16	43	53	69	40	21	245
		%	0.6	2.4	2.5	2.9	3.9	3.4	1.6	2.7
M7	neurology	Count	2	5	19	14	24	28	32	124
		%	0.4	0.8	1.1	0.8	1.4	2.4	2.4	1.4
M8	pulmonology	Count	0	1	3	5	1	1	1	12
		%	0.0	0.2	0.2	0.3	0.1	0.1	0.1	0.1
M9	dermatology	Count	0	0	0	0	2	1	1	4
		%	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0
M10	rheumatology	Count	0	1	4	2	0	2	0	9
		%	0.0	0.2	0.2	0.1	0.0	0.2	0.0	0.1
M11	endocrinology	Count	0	1	1	1	2	0	0	5
		%	0.0	0.2	0.1	0.1	0.1	0.0	0.0	0.1
M12	gastro enterology	Count	2	5	14	14	9	1	3	48
		%	0.4	0.8	0.8	0.8	0.5	0.1	0.2	0.5
Total		Count	533	658	1745	1798	1754	1186	1322	8996

Note: percentages mentioned are for the respective columns

Table 4: Distribution service and sex wise

Code No	Service wise		Male	Female	Total
S1	general surgery	Count	280	454	734
		%.	6.2	10.1	8.2
S2	ent surgery	Count	72	80	152
		%.	1.6	1.8	1.7
S3	ophthalmology	Count	94	79	173
		%.	2.1	1.8	1.9
S4	gynaecology and obstetrics	Count	0	378	378
		%.	0.0	8.4	4.2
S5	orthopedics	Count	135	47	182
		%.	3.0	1.0	2.0
S6	surgical gastro enterology	Count	29	31	60
		%.	0.6	0.7	0.7
S7	cardio thorasic surgery	Count	753	601	1354
		%.	16.7	13.4	15.1
S8	pediatric surgery	Count	115	53	168
		%.	2.6	1.2	1.9
S9	genito urinary surgery	Count	900	336	1236
		%.	20.0	7.5	13.7
S10	neurosurgery	Count	331	230	561
		%.	7.3	5.1	6.2
S11	surgical oncology	Count	85	170	255
		%.	1.9	3.8	2.8
S12	medical oncology	Count	280	932	1212
		%.	6.2	20.8	13.5
S13	radio oncology	Count	155	493	648
		%.	3.4	11.0	7.2
S14	plastic surgery	Count	74	94	168
		%.	1.6	2.1	1.9
S15	poly trauma	Count	602	244	846
		%.	13.4	5.4	9.4
S16	cochlear implantation	Count	9	5	14
		%.	0.2	0.1	0.2
M1	critical care	Count	41	15	56
		%.	0.9	0.3	0.6
M2	general medicine	Count	13	16	29
		%.	0.3	0.4	0.3
M4	pediatrics	Count	64	21	85
		%.	1.4	0.5	0.9
M5	cardiology	Count	159	79	238
		%.	3.5	1.8	2.6

M6	nephrology	Count	182	63	245
		%.	4.0	1.4	2.7
M7	neurology	Count	79	45	124
		%.	1.8	1.0	1.4
M8	pulmonology	Count	8	4	12
		%.	0.2	0.1	0.1
M9	dermatology	Count	c	2	4
		%.	0.0	0.0	0.0
M10	rheumatology	Count	1	8	9
		%.	0.0	0.2	0.1
M11	endocrinology	Count	3	2	5
		%.	0.1	0.0	0.1
M12	gastroenterology	Count	43	5	48
		%.	1.0	0.1	0.5
Total		Count	4509	4487	8996

Note: percentages mentioned are for the respective columns

Table 5: Distribution of service and caste

Code No	Services		BC	OC	SC	ST	Others	Total
S1	general surgery	Count	343	115	162	90	24	734
		%	7.2	8.0	11.6	9.7	5.2	8.2
S2	ent surgery	Count	71	30	31	16	4	152
		%	1.5	2.1	2.2	1.7	0.9	1.7
S3	ophthalmology	Count	63	33	35	37	5	173
		%	1.3	2.3	2.5	4.0	1.1	1.9
S4	gynaecology and obstetrics	Count	198	66	68	33	13	378
		%	4.2	4.6	4.9	3.6	2.8	4.2
S5	orthopedics	Count	61	43	34	33	11	182
		%	1.3	3.0	2.4	3.6	2.4	2.0
S6	surgical gastro enterology	Count	29	6	17	6	2	60
		%	0.6	0.4	1.2	0.6	0.4	0.7
S7	cardio thorasic surgery	Count	679	265	193	104	113	1354
		%	14.2	18.4	13.8	11.2	24.3	15.1
S8	pediatric surgery	Count	95	16	24	18	15	168
		%	2.0	1.1	1.7	1.9	3.2	1.9
S9	genito urinary surgery	Count	653	174	184	174	51	1236
		%	13.7	12.1	13.2	18.7	11.0	13.7
S10	neurosurgery	Count	310	86	79	65	21	561
		%	6.5	6.0	5.7	7.0	4.5	6.2
S11	surgical oncology	Count	165	38	21	21	10	255
		%	3.5	2.6	1.5	2.3	2.2	2.8
S12	medical oncology	Count	745	176	117	93	81	1212
		%	15.6	12.2	8.4	10.0	17.4	13.5

S13	radio oncology	Count	394	114	67	37	36	648
		%	8.3	7.9	4.8	4.0	7.7	7.2
S14	plastic surgery	Count	85	15	34	26	8	168
		%	1.8	1.0	2.4	2.8	1.7	1.9
S15	poly trauma	Count	416	128	175	108	19	846
		%	8.7	8.9	12.5	11.6	4.1	9.4
S16	cochlear implantation	Count	5	7	2	0	0	14
		%	0.1	0.5	0.1	0.0	0.0	0.2
M1	critical care	Count	28	7	13	7	1	56
		%	0.6	0.5	0.9	0.8	0.2	0.6
M2	general medicine	Count	11	1	6	10	1	29
		%	0.2	0.1	0.4	1.1	0.2	0.3
M4	pediatrics	Count	50	5	19	7	4	85
		%	1.0	0.3	1.4	0.8	0.9	0.9
M5	cardiology	Count	123	48	36	14	17	238
		%	2.6	3.3	2.6	1.5	3.7	2.6
M6	nephrology	Count	134	40	46	14	11	245
		%	2.8	2.8	3.3	1.5	2.4	2.7
M7	neurology	Count	64	16	24	9	11	124
		%	1.3	1.1	1.7	1.0	2.4	1.4
M8	pulmonology	Count	5	3	0	3	1	12
		%	0.1	0.2	0.0	0.3	0.2	0.1
M9	dermatology	Count	4	0	0	0	0	4
		%	0.1	0.0	0.0	0.0	0.0	0.0
M10	rheumatology	Count	3	2	2	1	1	9
		%	0.1	0.1	0.1	0.1	0.2	0.1
M11	endocrinology	Count	4	0	0	0	1	5
		%	0.1	0.0	0.0	0.0	0.2	0.1
M12	gastroenterology	Count	27	6	8	3	4	48
		%	0.6	0.4	0.6	0.3	0.9	0.5
Total		Count	4765	1440	1397	929	465	8996

Note: percentages mentioned are for the respective columns

Khammam Revenue Division being an urban area accounted for 58.5% of beneficiaries served in Khammam district. Also seven out of nine Institutions recognised for Aarogyasri services are located in this division and maximum number of educational institutions are in Khammam Revenue Division.

Though the tribals account for 21.8% of the district population, their proportion among beneficiaries is only 10.3% which probably is due to ignorance, illiteracy and barriers in accessing health services. The overall literacy rate in Khammam district is 56.89% when compared to 37.85% in STs. Among the National

Agricultural Innovation Project district Khammam has the highest number of tribals [10].

Services utilised by people above 60 years were Medical oncology- 19.1%, Cardio thoracic surgery-16.2%, and Genito-urinary surgery-14.8%. They reflect three main key areas such as conditions requiring anti neoplastic chemotherapy or cytotoxic drugs, revascularisation procedures and genito-urinary problems. Among the total beneficiaries 35.6% females have utilised Oncology services whereas only 11.5% of men have availed them. This points to for a much greater need for preventive oncology camps to be conducted and

concerted efforts for formalizing Cancer services under District Cancer Control Program.

WHO has appreciated the scheme and advised other states in India and other nations to follow the scheme [11].

Sustainability:

A day may come where it may not be possible to sustain this laudable scheme anymore as priorities may change and may be burdensome on the Exchequer. In order to overcome certain viable strategies /options may be considered.

1. Making specialised services available through the existing Government Health Care Machinery.
2. To create a corpus fund and interest from which will be used towards defraying the costs specialised services.
3. To develop appropriate Machinery, to oversee 10% of charity in all paying hospitals.
4. To encourage clients to contribute a small amount as a token of their participation towards this fund.
5. To consider money donated towards health care after due verification for 100% tax exemption.

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