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Systematic hierarchies and Systemic failures:

Gender and Health Inequities in Koppal District

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1) Introduction

Although Karnataka is among the more socially advanced southern states of India, it lags behind its other southern neighbours, particularly Kerala and Tamilnadu on many dimensions. According to the Karnataka Human Development Report of 1999, Karnataka was in the middle among the 15 major states on many dimensions of human development (GOK 1999). The primary reason for this middling position is that average indicators for the state conceal striking disparities among the districts within it. The northern districts of Karnataka, of which Koppal is one, form a cluster of poorly performing districts that pull down these average indicators[2].

Koppal is one of the poorer districts in Karnataka where drought periodically takes its toll on the agrarian economy. The lack of income and livelihoods security forces people to migrate or undertake work at great risk to their health. Deprivation is widespread. Public services, including for health, exist but are inadequately developed and largely of poor quality. Even private services, because of the widespread poverty of consumers, tend to be thin on the ground, and leave much to be desired in terms of their quality. Belief systems are strongly gender-biased; traditional practices include many that are inimical to women's health and well-being. Poor women's lives are marked by low levels of literacy, inadequate diets, hard labour, below minimum wages, recurring fatigue and illness.

In the midst of these hardships, poor women are also more vulnerable to inferior health outcomes due to denial of their human rights, including their reproductive and sexual rights. Maternal morbidity and mortality are high even as son preference and high infant death rates contribute to repeated childbearing. Reproductive morbidity is common but is often unspoken or taken as a 'natural' part of women's existence. Anaemia is endemic but is only casually – and ineffectively – addressed by public health programmes. Many of these problems have

clearly been present over a long period of time. More recently, the threat of HIV infection looms over the region, and infection rates including among women have been going up sharply due to a combination of poor awareness, weak prevention, cyclical out-migration for work, and the denial of women's sexual and reproductive rights. Koppal shows up poorly in many of the health indicators that health administrators and policy makers use.

Health and health care inequities in Koppal reflect *systematic hierarchies* based on gender, caste, economic class, and life-stage; they also reveal *systemic failures* in health care services, both public and private. Although over the years, the government has implemented many public health programmes, they appear to have made little difference to girls' and women's health status or health care access on the ground. Three main reasons can be attributed. *First*, significant gender biases, low levels of health awareness and lack of acknowledgement of certain health problems by families and by health providers have a negative impact on health–seeking behaviour. *Second*, widespread poverty and, especially recently, rising health costs reduce access even to public health services. *Third*, government health services have tended to be so top-down in their approach, so gender-biased (or at best gender-blind), so poor in quality and so unresponsive that they have been unable to bridge the gap between service providers and their intended beneficiaries. On the other hand, NGO-implemented projects have tended to be difficult to replicate or scale up.

The unfortunate interplay between systematic hierarchies and systemic failures makes it possible for families and communities on the one side and health providers on the other to exonerate themselves and hold the other side responsible for poor health status and outcomes. Families and communities tend to blame health providers for insensitivity, negligence, and the sheer absence of services; health providers typically hold the view that women and their families are ignorant, superstitious, and careless. Our research reveals undoubted elements of truth on both sides. Nonetheless the 'blame game' diverts attention away from the absence of accountability by both, and the low levels of acknowledgement overall of women's health needs. At the same time, however, changes are also occurring. For instance, whether because of government awareness programmes or not, health seeking by women and their families from private and public providers is far higher than one might anticipate, especially for maternal health. Despite this, preventable maternal deaths continue to be high, and women die in unconscionable numbers from causes related to childbearing.

The paper will present empirical evidence and analysis of health inequities in 60 villages[3] in two *talukas* (sub-districts) of Koppal. It draws on insights gained through research, community mobilisation and institution building efforts for the Gender and Health Equity Project. It will argue that both the systemic and the systematic elements need to be tackled if any policy or programme changes are to really take hold. The research to date has had four main components:

- A health survey of 1920 households;
- A census of private health care providers;
- Qualitative research about government service delivery;
- Qualitative enquiry into maternal deaths.

2) Koppal district – human development and gender

Karnataka with its population of 52 million accounts for a little over 5% of the population of India (Census of India, 2001). The present Karnataka state was formed in 1956 by combining Kannada language districts from the then states of Madras, Hyderabad, Bombay and Coorg with the former princely state of Mysore. As was true in other parts of India (e.g. Kerala), the area under the princely state of Mysore was better on social and economic indicators at independence than the districts that had been under direct colonial rule. On the other hand, the Northern part of the state belonging to the old "Hyderabad Karnataka" which was under the Nizam's rule, tended to be much worse off.

These differences have persisted after independence as noted by the Nanjundappa Committee's Report (GOK 2004). While many reasons such as the drought-proneness of agriculture, and semi-aridity can be adduced for the greater poverty of the northern districts, significant gender inequalities and biases seriously hamper social and economic development in this region. These inequalities are a major reason for the poor health and other indicators of the region. They also come in the way of government health programmes and constrain their effectiveness while providing a ready excuse for government functionaries and even NGOs for their own limitations.

Table 1: District-wise selected key indicators of Karnataka

Sl no	Districts	Percent female literacy	Percent girls married below 18 years	Percent current users of FP Method	Percent birth order 3 & above	Percent safe delivery	Percent complete immunization on	Percent decadal population growth rate	Regions
1	Hassan	59.32	15.20	75.10	19.70	69.70	92.80	9.66	Old Mysore
2	Shimoga	67.24	16.50	69.30	22.80	83.00	92.90	12.90	Old Mysore
3	Kodagu	72.53	22.00	70.60	18.80	79.40	94.80	11.64	Old Mysore
4	Dakshina Kannada	77.39	4.50	63.70	32.00	91.50	86.00	14.51	Old Mysore
5	Uttar Kannada	68.48	15.00	66.00	27.20	86.10	89.90	10.90	Bombay Karnataka
6	Udupi	74.02	4.50	63.70	32.00	91.50	86.00	6.88	Old Mysore
7	Mandya	51.62	37.00	71.70	26.10	61.90	88.00	7.14	Old Mysore
8	Mysore	55.81	47.90	65.40	23.90	69.70	92.70	15.04	Old Mysore
9	Bangalore Rural	78.98	21.05	63.00	16.40	79.10	83.70	34.80	Old Mysore
10	Bangalore Urban	78.98	37.00	60.10	26.10	90.60	77.00	34.80	Old Mysore
11	Chitradurga	54.62	30.05	59.90	34.40	53.80	88.40	15.05	Old Mysore
12	Tumkur	57.18	27.10	61.30	27.30	63.50	88.00	11.87	Old Mysore
13	Dharwad	62.20	36.50	61.20	37.40	65.30	74.80	16.65	Bombay Karnataka
14	Chamraj Nagar	43.02	47.90	65.40	23.90	69.70	92.70	9.16	Old Mysore
15	Chikkamagalur	64.47	37.00	71.40	26.10	78.00	83.50	11.98	Old Mysore
16	Kolar	52.81	33.50	57.10	29.70	59.20	90.60	13.83	Old Mysore
17	Gadag	52.58	36.50	61.20	37.40	65.30	74.80	13.14	Bombay Karnataka
18	Belgaum	52.53	55.80	61.80	36.70	68.60	64.80	17.40	Bombay Karnataka
19	Haveri	57.60	36.50	61.20	37.40	65.30	74.80	13.29	Bombay Karnataka
20	Bellary	46.16	44.20	50.40	48.60	54.00	52.60	22.30	Hyderabad Karnataka
21	Davangere	58.45	35.50	59.90	34.40	53.80	53.80	14.78	Old Mysore
22	Bijapur	46.19	64.80	47.10	43.00	50.10	53.20	17.63	Bombay Karnataka
23	Bidar	50.01	67.60	50.60	52.90	52.50	50.30	19.56	Hyderabad Karnataka
24	Raichur	36.84	57.10	45.40	52.80	48.00	37.20	21.93	Hyderabad Karnataka
25	Gulbarga	38.40	47.70	39.20	53.70	47.70	25.30	21.02	Hyderabad Karnataka
26	Bagalkot	44.10	64.80	47.10	43.00	50.10	53.20	18.84	Bombay Karnataka
27	**Koppal**	**40.76**	**57.10**	**45.40**	**52.80**	**48.00**	**37.20**	**24.57**	**Hyderabad Karnataka**

Source: GOK 2003, Pg 10

Koppal, a small northern district carved out of the erstwhile Raichur, is a dry district with four talukas, a population of 1.193 million, and an overall literacy rate of 55% (IIPS forthcoming). Its indicators are near the bottom for the state. Table 1 which includes a number of human development indicators places Koppal at or very near the bottom on many of these. Although not uniformly the lowest on all the sub-indicators, this is cold comfort since it lies fairly close to the worst levels for all. Table 2, drawn from the all-India district level Rapid Household Survey conducted in 1998-99 under the Reproductive and Child Health (RCH) programme corroborates this for a number of specific health-related indicators for women.

Additional data from the same source (IIPS forthcoming p 48-49; Koppal – Key Indicators) reveals the following: age at first cohabitation among currently married women (ages 15-44)

was below 18 in 73.9% of the cases; 41% of them had illiterate husbands; and 51.4% of girls married during 1999 (until the survey) were below 18.

Table 2: Range of RCH indicators in Karnataka

	Indicators	Minimum		Maximum		Koppal
1	Girls married below 18 (%)	2.2	Kodagu	59.4	Raichur	51.4
2	Illiterate eligible women (%)	19.9	B'lr urban	74.9	Raichur	66.8
3	Total fertility rate	1.37	Mandya	2.98	Raichur	2.77
4	Birth order 3 and above (%)	11.9	B'lr urban	51.0	Gulbarga	48.2
5	Infant mortality rate (per1000 live births)	16.3	B'lr urban	88.7	Koppal	
6	Knowledge of any modern family planning methods (%)	97.3	Raichur	99.8	Gulbarga	98.5
7	Current use of modern FP methods (%)	40.3	Gulbarga	73.5	Mandya	42.4
8	Full antenatal check-up (%)	12.8	Gulbarga	49.8	Bangalore rural	24.4
9	Safe delivery (%)	41.2	Gulbarga	95.7	Bangalore urban	52.8
10	Full immunisation (%)	48.1	Gulbarga	95.2	Bangalore urban	50.2
11	Eligible women aware of HIV (%)	37.7	Raichur	89.2	Kodagu	41.4
12	Use of govt health facilities for antenatal care (%)	7.2	Uttar Kannada	60.6	Kodagu	19.4

Source: IIPS forthcoming

For women in Koppal, in addition to a life of hardship shared with poor men, gender power takes the form of curtailed autonomy and domestic violence. Women are married into their in-laws' households while very young, making it harder for them to have a voice of their own. Once married there is tremendous pressure to bear children, especially sons. The health implications of having closely spaced pregnancies at a young age further exacerbate existing malnutrition, anaemia and the risks of future maternal morbidity and mortality.

Apart from son preference, high fertility in northern Karnataka (Sekher et al. 2001), is also a counter to high neonatal and infant mortality with the trade off being women's reproductive well being. It is not considered unusual for a woman to have repeated miscarriages or abortions. The reasoning being that if a pregnancy is lost, a woman can always get pregnant again (Umamani & Yogananda 2003). Yet such attitudes hold significant risks for women's health, especially considering existing levels of unrecognised but high reproductive morbidity. Maternal deaths, however, represent only the extreme end of a continuum of underlying maternal morbidity. Not only are the risks to women of maternal mortality and morbidity undervalued, but so are their direct linkages to neonatal well being and survival.

Such risks to women's and newborn health are heightened by the hazards of poverty as has been documented in various studies in different parts of south India. In Andhra Pradesh, all of

the women dying from pregnancy and obstetric complications were reported to have been working as labourers for subsistence reasons (ANS 2001). In Tamilnadu, many women who had uterine prolapse ascribed their condition to heavy manual labour within a week or fortnight following delivery, possibly explaining why the mean age for developing symptoms was 26 years (Ravindran et al 1999). In southern Karnataka, women continued to undertake strenuous work until late in their pregnancy (Mathews et al. 2001). When pregnant and postnatal women are forced to do heavy manual labour in order to survive, health education messages asking them to "take rest" while pregnant have little relevance to the hard reality of their lives.

3) Methodology

Our research uses both quantitative and qualitative methods to study the patterns of systematic hierarchy and system failures in health-seeking behaviour and access to health care. The quantitative data are based on a cross-sectional survey designed to document intra- and inter-household inequities in health care-seeking during sickness and pregnancy. It also sought to elicit household level attitudes to education of girls, attitudes to gender power, and domestic violence. A household census conducted prior to the survey in 60 villages enumerated 15,358 households and 82,901 individuals. A unistage-stratified sampling design was adopted with households as the sample units. The project villages under each PHC were grouped, and each group treated as a separate stratum. With eight PHCs in the project area, there were thus eight strata. A sample was drawn from each stratum to the extent of 12.5% of all the households within it leading to 1920 households.

4) Systematic hierarchies

Our broad starting hypothesis was that intersecting hierarchies of economic class, caste and gender (as well as the individual'' position in the life cycle) would affect attitudes to her health needs, and health seeking behaviour. In this paper we do not go into the details of all these intersections, but only focus on the ways in which gender affects health seeking behaviour. Nonetheless it is impossible to avoid commenting on the class and caste realities that permeate and define people's lives, their perceptions, and their behaviour because of their possible interactions with gender hierarchies.

a) Economic class and caste

The economic position of a household is largely defined, in this poor and largely unirrigated agricultural district, by relationship to land, which in turn defines the extent of the household's dependence on sending out its members as casual wage labourers. As Koppal is a dry and drought prone region, agricultural productivity depends not merely on the amount of land owned but also on the possibility of ground water irrigation. Bore wells and "pump sets" are important assets for this reason. In our survey, most households (84.1%) owned some land, but only 24.3% owned pump sets. The overall share of landless and small (< 5 acres) unirrigated farm-owning households was as high as 51.8%. 23.9% of households owned unirrigated land equal to or above 5 acres. Households owning irrigated land constituted only 24% of all households.

Our survey did not undertake a detailed study of the quality of irrigation, but this is obviously important in determining the extent to which a household can rely on income from self-employment versus sending out family members as wage labourers. Overall, the major source of income for most households was through self-employment (53.4%), followed by casual wage labour (39.8%). Regular wage employment was rare, as only 5.2% of the households derived their income from it. This picture varied considerably by the household's landholding.

Landless households depended mainly on casual wage labour (61.6%) and artisanal work such as basket or pot making (21.1%). Among unirrigated landholding (< 5 acres) households, only 36.1% managed on self-employment; 57.9% of these also depended on casual wage labour. By contrast, self-employment without resort to casual wage labour characterised the larger unirrigated landholding (equal to or > 5 acres) households (70.1%), as well as the irrigated landholding households whether small (72.8%) or large (91.1%). Nevertheless, it is clear that owning a plot of land larger than 5 acres or owning a small irrigated plot does not insure almost 30% of such households from casual wage labour.

Most families (78.3%) owned the houses they inhabited. However, only 29.1% of the owned houses were *pucca*[4] structures. Around one-fourth (or 22.7%) were semi-*pucca* structures but 48.1% were *kuccha* structures. While electricity was not uncommon, very few of even the *pucca* houses had piped water (15%) or toilets (4.2%). Government-allotted housing was only 14.3% of the total (much less than the 26.7% population share of SC/ST households for

whom such housing is meant), not all of which was *pucca*, and only 57% of which had electricity while none had toilets or piped water supply.

Table 3: Caste, class and landholding

	Percent landless	Percent owning less than 5 acres of unirrigated land	Percent owning 5 or more acres of unirrigated land	Percent owning less than 5 acres of irrigated land	Percent owning 5 or more acres of irrigated land	Percent casual wage earning households	Percent distribution of all households
Upper castes	13.3	28.6	29.1	8.5	20.2	24.7	28.3
Middle castes	11.4	35.2	28.0	9.8	15.6	36.9	37.8
SCs / STs	20.9	45.8	14.3	11.7	7.2	59.2	26.7
Muslims	29.6	31.2	17.1	8.5	13.6	39.9	4.1
All households[1]	15.9	36.0	24.0	9.8	14.3	39.8	100.0

Source: Gender and Health Equity household survey
Note: [1]3% belong to other castes

Caste variations tend to follow the economic class patterns[5] as can be seen from Table 3 above. Upper castes have more large irrigated holdings than the average; while they also have more landless households than the middle castes, this may reflect the fact that almost 9% have regular employment as the major source of income. Middle caste landholding is near the average for all households although they have less irrigated landholding above 5 acres than the average. SC/ST households have higher proportions of landless and casual wage labourers.

How do these variations in the economic and social status of households translate into health-seeking behaviour? Are there significant differences across households and within them by gender, age or life-cycle status?

b) *Health care needs and gendered health seeking*

The survey classified illness by its duration – short-term (lasting < 3 months) or long-term (> 3 months), and by its severity.[6] Self-reported morbidity was high overall, with 82% of households reporting at least one sick person during the reference period. Considerable care was taken in designing probes to overcome the well –known biases in self-reported morbidity, although this may not have been completely successful because our interviewers were local people who were trained by us but were relatively inexperienced. Treatment seeking for

illness was also high – almost 90% of illnesses reported for girls / women, and over 90% for boys / men were treated.[7]

Within this overall picture, health-seeking behaviour varied along a number of dimensions, such as gender within the household, and also by the economic class of the household, and the duration and severity of the illness. Economic class in this analysis is represented by per capita household consumption expenditure quintiles.[8]

The analysis below first presents some cross-tabulated data for short- and long-term illnesses. For short-term illnesses the responses were classified into two categories based on whether the person ever received treatment. For long-term illnesses, the responses were classified into three categories based on whether the person ever received treatment, and whether the treatment was discontinued. Multinomial logit regressions were also run on the data to check for the nature and statistical significance of interactions among economic class and gender[9].

Table 4.1: Health-seeking by gender and economic class

Gender-based groups within per capita consumption expenditure quintiles	**Short-term sicknesses**		**p value**[1]
	Ever treated (%)	***Never treated (%)***	
Quintile 1 (poorest)			
Female	1488 (89.0)	184 (11.0)	0.000
Male	1334 (96.5)	48 (3.5)	
Total	2822 (92.4)	232 (7.6)	
Quintile 2			
Female	1385 (84.5)	255 (15.5)	0.000
Male	1285 (94.1)	80 (5.9)	
Total	2670 (88.9)	335 (11.1)	
Quintile 3			
Female	1587 (89.5)	187 (10.5)	0.000
Male	1201 (94.9)	64 (5.1)	
Total	2788 (91.7)	251 (8.3)	
Quintile 4			
Female	1304 (93.7)	87 (6.3)	0.000
Male	1179 (97.4)	32 (2.6)	
Total	2483 (95.4)	119 (4.6)	
Quintile 5 (richest)			
Female	1170 (89.1)	143 (10.9)	0.000
Male	942 (98.3)	16 (1.7)	
Total	2112 (93.0)	159 (7.0)	

Source: Gender and Health Equity household survey
Notes: Totals are population estimates
Percentages are over the total number of sicknesses within each quintile & sex group
[1]Chi-squared test, degrees of freedom = 1

Table 4.1 shows that, for short-term sickness, the proportions of girls/women who were never treated[10] was significantly higher than the same proportions of boys/men within every expenditure quintile. However, there is not much variation across the expenditure quintiles per se; treatment levels generally appear to be high regardless of household economic class.

Table 4.2 suggests that for long-term sickness, there were both gender and economic class differences (in the expected directions) among those with continued treatment. There were also significant gender differences in all the quintiles for those who were never treated. Girls/women were more likely to never be treated for long-term illness in all households. However, when treatment was discontinued, it appeared to vary both by economic class and by gender. Furthermore, these gender differences are not uniform across the quintiles, indicating the presence of interactions between gender and economic class, which we tested further with the regression analysis.

Table 4.2: Health-seeking by gender and economic class

Gender-based groups within per capita consumption expenditure quintiles	**Long-term sicknesses**			**p value**[1]
	Continued treatment (%)	***Discontinued treatment (%)***	***Never treated (%)***	
Quintile 1 (poorest)				
Female	632 (49.1)	465 (36.1)	190 (14.8)	0.000
Male	494 (59.5)	296 (35.7)	40 (4.8)	
Total	1126 (53.2)	761 (35.9)	230 (10.9)	
Quintile 2				
Female	638 (50.8)	466 (37.1)	151 (12.0)	0.000
Male	654 (71.9)	216 (23.7)	40 (4.4)	
Total	1292 (59.7)	682 (31.5)	191 (8.8)	
Quintile 3				
Female	789 (56.7)	421 (30.3)	181 (13.0)	0.000
Male	631 (70.3)	182 (20.3)	84 (9.4)	
Total	1420 (62.1)	603 (26.4)	265 (11.6)	
Quintile 4				
Female	798 (65.0)	309 (25.2)	120 (9.8)	0.001
Male	543 (67.6)	219 (27.3)	41 (5.1)	
Total	1341 (66.1)	528 (26.0)	161 (7.9)	
Quintile 5 (richest)				
Female	812 (66.9)	283 (23.3)	119 (9.8)	0.000
Male	546 (73.1)	169 (22.6)	32 (4.3)	
Total	1358 (69.3)	452 (23.0)	151 (7.7)	

Source: Gender and Health Equity household survey
Notes: Totals are population estimates
Percentages are over the total number of sicknesses within each quintile & sex group
[1]Chi-squared test, degrees of freedom = 2

The foregoing discussion suggests that the lower and more insecure the household's economic status, the greater the chance that health seeking will be rationed within the household, and

this is borne disproportionately by girls and women. This suggests that greater economic security (and higher income levels) may reduce the rationing phenomenon, and with it some but not all of the health-seeking differences between women and men. However a caveat is in order. While we may be tempted to assume that the improvement is because of income security, economic vulnerability may not be the only reason; other factors such as educational status may play a role as well.

Logit regression analysis with interaction terms for gender and economic class (using two models – Model 1 for the aggregate sample, and Model 2 with dummies for male versus female and poor versus non-poor) presented results that corroborate those above, and extend our understanding[11]. For *short-term illnesses*, Model 1 suggests that the likelihood of not being treated is significantly higher if the person is older, female, or poorer, or if the illness is less severe. Children and the young may be more likely to be treated (in an area with higher than average infant and child mortality rates) because of concerns about their greater vulnerability; it may also be the case that in this poor region, older people are less likely to take time away from work for short-term ailments. This requires further qualitative investigation. Gender bias clearly discriminates against all women whether poor or non-poor. However although the aggregate sample suggested significant economic class differences, Model 2 only showed some economic class differences among men (10% significance level), and not among women.

For *long-term illnesses*, Model 1 showed that the likelihood of continued treatment is higher the more severe the illness, or if the person is male, the head of the household, or belongs to the top two expenditure quintiles. Whether the person was an income earner or not in the household was also highly significant but in an unexpected direction suggesting that income earners were less likely to be continuously treated. Our tentative explanation for this is that there is a trade-off between earning income and receiving treatment (possibly because of the time and distance involved in seeking treatment) and therefore income earners may never be treated or may discontinue treatment.[12] Model 2 showed that gender differences in continued treatment were strong (1% significance level) in the poorer groups but not among the better off. There were also significant differences (1% significance level) between poorer and better-off women, but not between poorer and better off men. Thus poorer women were less likely to receive continuous care for long-term illness than better-off women, and also compared to poorer men. The test for the interaction between gender and economic class showed that

gender differences in the likelihood of continued treatment were also significantly different between the poor and the better off.

There were some differences in the variables affecting complete non-treatment versus discontinuation of treatment. In Model 1 a person was more likely to never be treated for a long-term illness if the illness was less severe, but also if the person was female or from a poorer household (only 10% significance level), or an income earner. Model 2 showed significant gender differences (1% level) within both richer and poorer households. There were significant class differences among women (5% level) but not among men. Gender is clearly a more important discriminator than income when it comes to never being treated and economic class also impacts more strongly among women than among men..

On the other hand, treatment was more likely to be discontinued (Model 1) if the person was from a poorer household, was not the head of the household, and was an income earner. These effects were not however uniform for men versus women. Model 2 with interactions showed some gender differences among poorer households (10% significance level), but no gender differences among richer households. But economic class was a more important discriminator among women than among men as there were no economic differences among men, but strong differences between richer and poorer women.

These results suggest that gender and economic hierarchy operate at different levels and interact in important ways. If we think of being treated at all versus never being treated as the first level, it is gender that discriminates more between people, and even economic class differentiates poor from non-poor women, but does not differentiate between men. Once people begin to receive treatment, it is economic class that seems to be more important than gender per se, but even here class appears to operate specifically for women and not for men. The disaggregated Model 2 provides far more nuance to our understanding of the interactions than the aggregate Model 1. These ‘layered’ interactions are explored further in our ongoing work.

An examination of the reasons given for lack of treatment throws some more light on basic gender power differences. For both females and males, the major reasons for never treating or discontinuing treatment were only a few: either the illness was not considered serious by the patient or the family, or the treatment was too expensive, or the patient felt s/he was not

getting cured. Short-term illness among men was also not treated because they said they didn't have the time for treatment. However the relative importance of the reasons given by women and men varied. Never treating either short or long-term illness because they thought it was not 'serious' was the most important reason for women. For men, expense was the dominant reason for never treating illness. Expense was an important barrier to treatment for women as well but lack of acknowledgement of illness (as reflected in the statement that it was not serious) was the more salient barrier. This barrier has its roots in powerfully ingrained gender norms that instil in women from an early age a lack of confidence or self-worth, a lower recognition of their needs, and a value to suffering in silence. Men have few such internalised norms of behaviour.

Both women and men gave 'not getting cured' as a major reason for discontinuing treatment for long-term illness. More detailed analysis of the evidence shows that women tended to give up treatment more quickly.

Table 6: Percent distribution of main reasons for non-treatment of sicknesses

	Short-term sicknesses		**Long-term sicknesses**			
	Never treated		***Discontinued treatment***		***Never treated***	
	Female	Male	Female	Male	Female	Male
Main reason for no treatment	N = 856	N = 240	N = 1944	N = 1083	N = 760	N = 237
I did not know what to do	6.4	0.0	1.5	0.7	9.6	3.4
I did not think it was serious	39.1	23.3	11.1	12.6	42.6	29.1
Family did not think it was serious	11.9	10.0	1.2	2.2	12.5	6.8
No one to accompany me	2.8	3.3	0.7	0.0	3.2	3.4
I didn't have the time	2.8	10.0	1.6	0.0	0.9	3.4
Too expensive	23.1	46.7	20.0	21.6	17.6	40.5
Health provider unavailable	1.9	3.3	1.6	3.7	0.0	3.4
Health provider unhelpful	0.0	0.0	1.2	0.0	0.0	3.4
Medicines make me ill	0.9	0.0	0.0	0.0	1.1	0.0
Not getting cured	3.6	0.0	43.4	30.0	5.1	6.8
Other	7.4	3.3	4.7	5.8	7.4	0.0
No response	0.0	0.0	13.0	23.4	0.0	0.0
Total (%)	100.0	100.0	100.0	100.0	100.0	100.0

Source: Gender and Health Equity household survey
Notes: Totals are population estimates

Our discussion in this section highlights the fact that systematic hierarchies of economic class and gender play an important role in structuring the health-seeking behaviour of households. While it is noteworthy that the extent of health-seeking overall is high, there are also important ways in which it is distributed across different groups. Such rationing appears to

happen both because of economic constraints, and also on the basis of deeply ingrained gender norms.

5) Systemic failures

The systematic hierarchies within communities and households that limit health-seeking behaviour favouring women, are compounded by major failures of the health system. These failures are discussed in this section with a particular focus on maternal health. Systemic weaknesses have been documented in our research through a census of private health providers that was undertaken in the 60 villages, as well as in the surrounding larger villages and towns within the district. Information was collected about the characteristics of traditional birth attendants, spiritual and traditional healers, provision stores selling tablets, private doctors, rural medical practitioners (RMPs)[13], medical stores and laboratories. Detailed qualitative information of the government health services was also obtained through in-depth observation and interviews.

In addition to this survey research, we documented the experiences of 12 women with obstetric complications, 9 of who died despite seeking care from health providers from primarily one *taluka*. These data provide compelling information that highlights how poor women in need of obstetric services interact with plural, unaccountable, and unregulated health systems in Koppal.[14]

a) Government health provision

The Karnataka Government has established an extensive network of health facilities structured according to a hierarchy of services based in theory on population norms[15]. Facilities have proliferated due to the preference of elected representatives for sanctioning PHCs and hospitals in their own constituencies and due to the availability of budget lines for infrastructural development. Several PHCs had new labour rooms constructed with funding from the Reproductive and Child Health programme and foreign funding supported infrastructural improvements of secondary level hospitals, with the aim of improving referral.

In Koppal, this investment in infrastructure has not translated into comprehensive emergency obstetric care as none of the higher-level government facilities have all the required specialists

or critical supplies. Neither policy makers nor implementers have addressed the lack of technical inputs for emergency obstetric care (including abortion) by ensuring the availability of specialists, upgrading the emergency skills of existing personnel and ensuring their access to critical supplies such as blood, anti-epileptic and haemorrhage drugs.

Even if the logistics of ensuring emergency obstetric care through appropriate inputs, supplies and staffing were addressed, there still remain large managerial barriers to improving the effectiveness of maternal health care services. A key contribution of the Karnataka Task Force on Health and Family Welfare was to highlight the need to address vacancies at the primary health care level (GOK 2001). Medical officers, lab technicians, nurses and male junior health assistants (MHWs) were recruited within the district on a contract basis, while junior female health assistants (ANMs) were selected for training and recruitment at the state level. Although staff postings are biased against equity considerations through corruption, vacancies in primary health care service delivery in Koppal have substantially improved.

However progress on the more systemic problems identified by the Task Force (corruption, neglect of public health, distortions in primary health care, lack of equity, implementation gaps and weak ethical imperatives) has been more difficult to achieve. These cannot be addressed through managerial reforms alone. They require strategies to combat the political pressures that sustain such inequitable features of health systems.

b) Private health providers

In addition to the government health system, a large number of informal providers including spiritual and traditional healers, shopkeepers selling tonics and tablets, traditional birth attendants and RMPs exist at the village level. Our provider survey interviewed 548 providers working in the 60 villages covering a population of about 82,000 people. This included 35 spiritual healers, 133 traditional healers, 178 traditional birth attendants, 47 RMPs, 1 qualified Ayurvedic doctor, 152 provision stores and 2 medical shops. Although there are a few private specialists in the largest towns, the rural reality of Koppal is defined by a health care market dominated by informal providers. The district capital in contrast was where we interviewed 65% of qualified private doctors[16], 41% of medical shops and 50% of laboratories. The 4 largest commercial towns surrounding the project area, including the district capital,

accounted for 36% of 90 RMPs, 93% of 43 private doctors, 84% of the 70 medical shops and all the 8 laboratories interviewed through our census.

The end result of the combination of an unaccountable government health system and an unregulated private health system is that women have few qualified providers who can handle obstetric complications. In an emergency, women and their families are forced to run from one provider to the next, often back and forth between government and private providers, all too often without being assured of the services they desperately need.

This forced pluralism is reflected in health seeking behaviour during delivery. In terms of assistance during childbirth, according to our household survey the main provider who helped women during normal deliveries were: traditional birth attendants (60%), RMPs/private doctors (14%), relatives (18%), ANMs and lady health visitors (6%) and government doctors (0%). When there was a complication during labour some women did seek more 'skilled' providers by turning to RMPs/private doctors (26%) and government doctors (8%). Nonetheless 45% of women with complications still sought the help of traditional birth attendants as a main provider.

Apart from their dominant role in assisting women during delivery, traditional birth attendants, unlike other health providers, play an important role in cleaning, massaging and bathing both mother and child for several days after delivery. Traditional birth attendants also take ritual care of the placenta. They are trusted and familiar village level confidantes, who assist women with home deliveries in the customary squatting positions to which women are accustomed. But, despite being so responsive to women's needs, it is a concern that only 36% of traditional birth attendants in the project area reported following 4 of the 5 "cleans" needed for a safe delivery.

Unlike traditional birth attendants, RMPs are less involved in the time-consuming work of assisting women during the long hours of delivery and the hard work of caring for mothers, their babies and placentas after birth. Yet RMPs are more literate and command more social status than traditional birth attendants. RMPs are perceived by communities to be much more responsive than government health workers, although they have fewer qualifications (or none at all). Unlike government health workers they will make house visits regardless of the time of day, live in the village and can always be relied upon to provide injections and tablets.

Indeed during and after delivery an RMP's primary role is to provide oxytocin, tetanus toxoid and vitamin B injections. However, the irrational use of oxytocin, especially in injection form, can lead to a higher risk of uterine rupture, higher fetal distress and maternal morbidity. In addition to providing and charging for injections, RMPs also seem to play an important role in mediating access to health care for poor, often illiterate families, unfamiliar with larger towns and formal health care institutions.

Women's experiences of child-bearing in Koppal have to be seen in the context of the weaknesses of these plural health systems. Our research shows that women and their families made heroic attempts to seek health care prior to and during delivery. These iterative efforts by families and women result in ineffective outcomes because health systems fail to acknowledge women's requests for help and are not held accountable for the systemic failures that continue to allow women to die. It is our argument that these gendered failures in acknowledgement and accountability are responsible for the multiple delays that prevent women from accessing the effective care that could save their lives.

Family planning, antenatal care and a stress on institutional deliveries are critically important, but when they are not integrated into a continuum of care, they are not sufficient to save women's lives. All the maternal deaths we documented in Koppal did receive antenatal care and live within accessible distance of a subcentre or PHC. And they made serious efforts to seek out health providers, both private and public. Yet despite all their efforts, the women died.

c) Gender biased services

Gender bias serves to devalue, and worse, stigmatise women's experiences, their bodies and biological processes. For example, in southern Karnataka, pregnancy is seen as a time during which 'dirty' or 'bad fluids' are accumulated in the body, bleeding after delivery is considered important as it drains the body of this bad blood. Delivery is also a ritually polluting process, after which a long period of cleansing and penance is required. During this post partum period, elders enforce restricted mobility, diets and fluid intake for newly delivered mothers (Kilaru et. al., 2004). These biases directly interfere with the recognition of obstetric complications, like haemorrhage, as well as inhibit health care seeking in the postnatal period.

Health professionals also de-legitimise women's point of view. One reason why women are not able to get effective care despite physically accessing government facilities is due to the lack of agreement between women and health providers about what their health needs are. Although women seek help for labour pain, medical officers diagnose them with lower back pain or 'false' labour pain. This disjuncture between women's experiences of labour pain and its medical diagnosis indicates several problems in communication and care seeking. Women might be misinterpreting their experiences or health providers may be misunderstanding the situation. Social bias may also be at play by inhibiting women from speaking freely about their intimate reproductive health concerns with health providers from a different gender, class, educational and caste background. At the same time, health providers may have social biases that invalidate women's experiences. Finally, biases may exist in the technical understanding of what constitutes labour pain. Due to these factors, the process of seeking care and advice may be quite complex in practice.

Access to government facilities for institutional delivery once successfully negotiated does not mean an end to marginalising experiences. It is not just that cleanliness is not assured, but that the treatment received by women can be dehumanising. Women and their families are often left in labour rooms by themselves. They have to trust health workers who are strangers, often having to seek them out from other wards or their quarters. Women are expected to deliver in a position that is different from what they are used to at their homes and which helps the health worker more than it helps them. Even for normal deliveries, medical rituals involve shaving the pubic area, administering IV drips, repeated deep vaginal examinations and episiotomies. Health workers learn their skills in hospital wards giving orders to women in labour who are allowed little control over their situation. Yet if complications arise, health workers tell families, who are neither informed nor in control, to be prepared to face the consequences (Caleb Varkey 2004).

Women with poor entitlements within families and in health systems tolerate high levels of pain, discomfort and humiliation. Not only are their rights to protest weakened by their unequal access to resources, including finances, expertise, and authority, but also because of the shame that surrounds women's bodies and the 'normalisation' of many women's reproductive morbidities. Explicit gender bias thus operates to disenfranchise women objectively through unequal status, and also normatively through disempowering normative local traditions and medical frames of knowledge.

6) Conclusion

Our experiences based on the Gender and Health Equity project in Koppal have highlighted the interplay of systematic hierarchies and systemic failures in determining health outcomes for poor women. Government providers of services often blame communities for their ignorance and superstition, while people accuse providers of bias, neglect and irresponsibility. What our research shows is that there is partial validity on each side but neither is true by itself.

A striking finding of our quantitative and qualitative research and field level interactions is that, whether for general illnesses (short or long-term) or maternity, women and their families invest considerable effort and resources in many instances in seeking health care. Yet the combination of poverty, biased gender norms, and unresponsive and unregulated health systems results in this investment going to nought. The result is that disproportionately women suffer illnesses and die from entirely preventable causes.

While our research has focused on two *talukas* of a single district, we can probably extrapolate our findings to much of northern Karnataka. What should be obvious is that these systematic and systemic factors underwritten by gender bias and underpinning gender biased outcomes must be addressed urgently if the state is to fulfil its development potential.

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Annexure 1: Results of logit regressions – estimates of odds ratios

Independent variables[2]	Short-term sicknesses		Long-term sicknesses					
	Logit Regression Non treatment=1 Otherwise=0		*Logit Regression* Continued treatment=1 Otherwise=0		*Multinomial Logit* Continued treatment=1			
					Discontinued treatment=2		***Non-treatment=3***	
	Model 1[1]	Model 2[2]	Model 1[1]	Model 2[2]	Model 1[1]	Model 2[2]	Model 1[1]	Model 2[2]
Age	1.017 ***	1.017 ***						
Sex (dummy: female=1)	2.703 ***		0.667 ***		1.153		4.170 ***	
Income earner (dummy: non-earner=1)			1.668 ***	1.658 ***	0.632 ***	0.636 ***	0.496 ***	0.498 ***
Household head (dummy: others=1)			0.690 **	0.688 **	1.764 ***	1.773 ***	0.714	0.714
Severity	0.811 ***	0.809 ***	1.119 **	1.114 **	0.936	0.939	0.767 ***	0.769 ***
Economic class (dummy: non-poor=1)	0.622 **		1.453 ***		0.696 ***		0.658 *	
Male, Poor (dummy: d1)		2.349 *		0.945		1.041		1.129
Female, Non-poor (dummy: d2)		3.908 ***		0.924		0.817		3.180 ***
Female, Poor (dummy: d3)		5.610 ***		0.528 ***		1.448 *		5.505 ***
Sample Size								
Tests								
Coeff.(d1)=Coeff.(d3)		***		***		*		***
Coeff.(d2)=Coeff.(d3)				***		***		**
Coeff.(d3)-Coeff.(d1) =Coeff.(d2)[3]				**		*		

Notes: Notations: * significance at 10% level, ** significance at 5% level, *** significance at 1% level
Definitions: Economic class: Poor: bottom 3 quintiles, Non-poor: top 2 quintiles
Severity: Number of difficulties due to sickness

[1]Model 1 tested the independent effects of the explanatory variables on treatment-seeking outcomes

[2]Model 2 tested interactions using non-poor men as the reference group, and dummies for poor men, non-poor women and poor women. Economic class and sex were dropped to avoid multi-collinearity.

[3]The test was modified for continued treatment of long-term sicknesses to Coeff.(d1)-Coeff.(d3) =Coeff.(d2) because apriori coeff(d2)>coeff(d1)>coeff(d3)

Endnotes:

[1] This paper is part of work done at the Indian Institute of Management Bangalore under the Gender and Health Equity Project. We would like to especially thank Chandan Mukherjee for his unstinting willingness to provide statistical and econometric advice and Shon John for competent statistical assistance. We also wish to acknowledge our anonymous reviewer for helpful comments on the first draft of this paper.

[2] See the Report of the Nanjundappa Committee (GOK 2004) for a detailed analysis of the historical and contemporary reasons for these intra-state disparities.

[3] 56 villages were selected by MSK, four of which have *tandas* large enough to be considered administratively by MSK as separate villages, which leads to the total of 60 villages. A *tanda* is a sub-group of houses populated, in the project site, by a ST group (*Lambanis).*

[4] Adopting the NSS definition, we defined *pucca* houses as those that had *pucca* roofs and *pucca* walls. *Semi-pucca* houses were those that had *pucca* roofs but *kuccha* walls, or *kuccha* roofs but *pucca* walls. *Kuccha* houses were those that had *kuccha* roofs and *kuccha* walls.

[5] A detailed enumeration and checking of caste groups was undertaken; details are available in Annexure 3 of Iyer (2005).

[6] Severity for short-term sickness was measured in terms of difficulty in eating normally, in doing regular work in – and outside – the house, and being able to go outside the house. For long-term sickness, severity was measured in terms of difficulty in going to school, doing housework or other work, and in income-earning.

[7] The high levels of treatment-seeking in our survey may be affected by two factors: the confounding of illness with treatment, wherein people only acknowledge illness as such if it is treated; second, the fairly broad definition of treatment-seeking used in the survey. Nonetheless, even our qualitative and in-depth inquiry into the circumstances of maternal death reveals the same phenomenon of high-levels of health seeking.

[8] The plausibility of these self-reported consumption expenditure data has been crosschecked by examining the distributions and also comparing the corresponding National Sample Survey data.

[9] There are clearer hypotheses about how and why gender and class might influence health seeking than there are for caste. Caste is likely to affect the choice of provider and quality of care obtained, but not the decision of whether or not to seek treatment. Our analysis of gender and caste vis-à-vis health seeking for short- and long-term sickness shows that caste per se does not discriminate among households when it comes to discontinued-, or non-treatment. Interactions based on caste are part of our ongoing work but not explored in this paper.

[10] We refer to sick persons and sicknesses interchangeably while discussing Tables 4.1 and 4.2, because most persons (73.9%) in fact reported only one sickness.

[11] While the cross tabulations have been presented by quintile, we believe that there is variation even within the poorest and the better-off quintiles. This variability is being explored in our on-going work. For the purposes of this paper, the regressions were run using a fairly standard dichotomy between poor (bottom 3 quintiles) versus better-off (top 2 quintiles).

[12] This runs counter to received wisdom and further exploration is clearly warranted.

[13] RMPs stands for rural medical practitioners. They are also sometimes called registered medical practitioners, although the Medical Council of India no longer registers them. They are usually men who primarily practice allopathy despite not having any formally recognised medical qualifications. We considered all those private doctors who did not hold current formally recognised medical degrees (MBBS, BAMS, BHMS, BUMS, BYNS, BDS) as RMPs.

[14] Detailed analysis is available in George, Iyer and Sen (2005)

[15] CHC, PHCs and sub-centres are supposed to cover populations of 100,000, 30,000 and 5,000 respectively. In 2001, PHCs and sub-centres in Karnataka were catering, on average, to smaller populations than specified by national norms: 20,817 and 4,285 respectively. CHCs, on the other hand, were dealing with larger population loads than envisaged – 1,40,117 persons (GOI 2004).

[16] This includes practitioners with degrees in dental sciences, Ayurveda, Unani, Homepathy and Allopathy. Out of 43 private doctors, 13 (30%) were allopaths.