CHAPTER 7
SUMMARY FINDINGS, SUGGESTIONS AND POLICY IMPLICATIONS

Health is not only the absence of illness, it is the ability of people to develop their potential during the course of their entire lives. Health is of great significance both for the individual and economic development of a country. It is one of the fundamental drivers for economic growth and development. Growing attention towards health is captured in Alma Ata Declaration (1978) and in (1990) Millennium Development Goals (MDGs). Health affects economic development directly. It increases the labour productivity and minimizes economic burden of illness. Therefore, Winston Churchill asserts that healthy citizens are the greatest asset any country can possess. Maintenance of such an asset requires the existence of two things:

- Good environment and
- Good health care system

In India the health care service consists of both the public and the private sector. Since independence, it is the public health system, which has been playing an important role in health care service delivery; but of late, the private sector is emerging as a dominant service provider at all levels of health care; namely, primary and higher care. Another important matter of concern is the disparities in the health status of people living in urban and rural areas of the countries. This can be noticed in almost all the health indicators. In this background the study has attempted a comparative analysis between the public and the private health sector in rural and urban areas on the issues of availability of health services, utilisation of health services and service quality factors.

The study provides a brief health profile of India and Karnataka based on the status of health indicators, status of health related MDGs in Karnataka and India, public health expenditure trends in Karnataka and the availability of public and private health education and service infrastructure in Karnataka. Subsequently, the role of the public and private health sectors is examined in service delivery on the basis of service utilisation with the help of NFHS and NSSO data and primary data both in rural and urban areas. Finally, the service quality of public and private
hospitals has been compared and analyzed to ascertain the reasons for lower utilisation of public health sector for inpatient care.

In the process of fulfilling the study objectives and testing the hypotheses the following statistical and econometric techniques have been employed- chi-square test, logit model, ordered logit model, factor analysis, multivariate and univariate ANOVA, multiple regression model and discriminant analysis.

7.1. Summary Findings of the Study

The major findings of the study are presented as follows:

- In Karnataka, improvements in the health statistics is observed between 2001 and 2011, particularly with respect to Natural Growth Rates (decline from 2.2 to 2.0), Infant Mortality Rates (decline 58 to 35) and Maternal Mortality Rates (decline from 266 to 178). The performance of the state with regard to health statistics is better when compared to national average.

- Within the state a wide disparity in health indicators is observed between rural and urban areas. The rural areas are lagging behind urban areas in health indicators such as Infant Mortality Rate, Maternal Mortality Rate, Death Rate, Birth Rate and Total Fertility Rate.

- With respect to MDG health goals also, the state performance is better when compared to India excepting HIV prevalence (0.75 against 0.49). But, it is not impressive when target under different MDG goals are considered. Thus, Karnataka has to go a long way to reach its target made under MDGs by the year 2015 compared to other southern states, particularly Kerala and Tamil Nadu.

- In Karnataka, the total expenditure on health is about 0.78 percent of the state GSDP, 1.26 percent of the total state expenditure, 5.66 percent of development expenditure and 11.43 percent of social service expenditure in 2012-13. Moreover, the percentage share of health expenditure in state government expenditure, GSDP, development expenditure and social service expenditure has declined over the years.
Share of health expenditure in state GDP has declined by 0.65 percent and the share of health expenditure in state total expenditure is declined from 5.11 to 1.26 percent between 2000-01 to 2012-13.

In state health expenditure the share of medical and public health particularly revenue expenditure has increased from 86 percent to 89 percent and that of family welfare has declined from 14 percent to 12 percent over the period of 2009-2012.

Within medical and public health heads of revenue expenditure gradual shifts are observed in the expenditure made under different levels of care between 2009 to 2012. Major heads of revenue expenditure under Medical and Public health like urban health services (Allopathy and AYUSH), rural health services (Allopathy), medical education, training and research, public health and general, the share of general (29 percent) and medical, training and research (22 percent) heads is seen higher in the year 2011-12. Out of 89 percent of medical and public health expenditure only 5 percent is utilized for public health in 2012. Allocation (share) to public health (5 percent), rural health services (6 percent), urban health services other system of medicine (0.44 percent) and family welfare (12 percent) is still low in total health expenditure in Karnataka.

Share of urban health service including allopathy and other system has declined from 23 percent to 17 percent between 2009-2012.

As on March 2012, Karnataka state has 12 percent of Medical colleges, 16 percent of AYUSH colleges, 15 percent of dental colleges, 9 percent of B.Pharm colleges and 11 percent of nursing colleges in the country. Only 12 percent (except nursing colleges) of the colleges in state are managed by government. Karnataka ranked first in the number of medical colleges (43 colleges) and second in AYUSH colleges (79 colleges) after Maharashtra (116 colleges) in the country.

There are 20 district hospitals with a bed strength of 7859, 12 other hospitals with 2,468 beds, 29 Autonomous and Teaching Hospitals with 17,008 beds and 206 community health centres in the state. At primary level state has 8871 sub-centres, 2355 primary health centres.
The state is in second position after Uttar Pradesh (3692) in the number of PHCs. But, there is a short fall both in numbers of SCs and CHCs.

Along with allopathy hospitals, state has 133 ayurvedic hospitals and 561 dispensaries, 14 unani hospitals and 50 dispensaries, 21 homoeopathy hospitals and 43 dispensaries, 6 nature cure and 5 dispensaries, and 3 yoga hospitals. Ten yoga and nature cure units are functioning on Public-Private Partnership mode across the state. Overall the state has 6 percent of government AYUSH hospitals and 3 percent of AYUSH dispensaries in the country.

In Kodagu, Yadgiri, Chikballapur and Chamarajnagar districts no medical education institutions are found.

Fifty-five percent of state government hospitals are located in rural areas with 9,022 bed strength against 61.43 percent of rural population. The share of this in total rural hospitals in India is only 2 percent. The average population served per government hospital is higher in state (1/76054) than for all-India (1/50689).

Number of SCs and PHCs has significantly increased between sixth and seventh plan period from 4,964 to 7,793 and 365 to 1,142 respectively, and CHCs in seventh and eighth plan period from 98 to 156. But, numbers of CHCs have gradually declined (from 254 to 180) between tenth and eleventh plan period in the state. But, after eighth plan the number of health institutions (SCs, PHCs and CHCs) has steadily increased.

The number of government dispensaries declined from 791 to 659 between 1970-71 and 2011-12 and also slow growth was observed in the number of hospitals (187 hospitals) and beds per lakh population (23 beds).

Bangalore Urban, Belgaum, Gulbarga, Hassan, Mysore and Bellary districts have maximum number of government secondary and tertiary care institutions and; Bangalore rural, Dharwad, Chamarajnagar, Gadag and Chikballapur district have least.

Population served per government hospital bed higher than 1,000 is observed in thirteen districts, majority of them belonging to southern Karnataka.

The public health workforce in the state does not fulfill the norms under Indian Public Health Standards. The highest percentage of shortfall in human
resources is observed in the posts of male health worker at SCs (65 percent), male health assistant (64 percent) and lady health visitor (55 percent) at PHCs, and lab technicians at PHCs and CHCs (58 percent).

- State has 2,571 private hospitals with 53,419 bed capacity, 10,873 private clinics and 15,272 drug shops in private sector.
- The number of private hospitals increased from 38 in 1972-73 to 2,571 in 2011-12 with average growth of 69 per year. And beds in private hospital have gradually increased from 5,106 to 53,489 during the same period with an average growth of 1,783 per year.
- Highest number of private hospitals is in Gadag, Belgaum, Gulbarga, Bagalkot and Dharwad districts and the lowest in Bangalore Rural, Kodagu and Chamarajnagar districts. Like-wise the highest number of clinics (registered) is reported in Dakshina Kannada, Belgaum, Dharwad and Mysore, and Gadag reported lowest number of clinics.
- The private sector found to be better in the case of number of hospitals, doctors, doctors per 10,000 population and hospitals per 10,000 population than the government hospitals.
- Uneven distribution is noticed in both public and private health education and service infrastructure between districts. However, private sector dominance is observed in both health education and service infrastructure (hospitals, number of doctors and clinics) in the state.
- Correlation result conveyed that the districts with higher concentration of public health facilities are also the districts with higher concentration of private primary health facilities. But no significant correlation was observed between the socioeconomic development level of the districts and the availability of health care facilities.
- Both NFHS and NSSO data prove the greater reliance on private sector for medical treatment in both rural and urban areas of India.
- Among the various private medical providers private clinic/doctor is the main provider of health care, serving 46 percent of urban households and 36 percent of rural households. Households of urban areas are the prime users of private clinic than rural ones.
The second most common source of health care is government/municipal hospital among urban households (23 percent) and CHCs/rural hospitals/PHCs (21 percent) among rural households in India.

The use of private sector health services increases with an increase in the household’s standard of living; 72 percent of households with high standard of living use the private medical sector compared with 59 percent of households from low standard of living.

Only 42 percent households with low standard of living used public sector services for their health in 2005-06 at all India level.

Dominance of private institutions was noticed in the case of both inpatients and out-patients treatment at all India level. In 2004-05, about 58 and 62 percent of the hospitalised cases and 78 and 81 percent of non-hospitalised cases in the rural and urban areas respectively were treated by the private medical sector.

The role of public and private health system in treating inpatients has reversed between the periods 1986-87 and 2004-05. A steady decline in the use of public health sources and a corresponding increase in the use of private health sources is evident over three NSSO rounds.

At state level also, wide range of variation was noticed in the use of health care by public and private source. The greater reliance on private health sector for healthcare services were in the states of Bihar, Uttar Pradesh and Punjab, Andhra Pradesh, Haryana, Karnataka etc. and lowest in Himachal Pradesh, Orissa and Rajasthan.

Highest utilisation of private health sector by the low standard of living household is in Bihar (93 percent) and Uttar Pradesh (84 percent) and lowest in Himachal Pradesh (8 percent) and Kerala (17 percent). The reasons for lower utilisation of private health service in Himachal Pradesh and Kerala are extensive and better quality health and medical services offered in the public health sector.

The changes in the share of government institutions in the case of non-hospitalised treatment of ailments varied for different states over three NSSO survey periods both in rural and urban areas. Use of government institutions increased in Orissa (14 percent) followed by Andhra Pradesh, Kerala, Punjab,
West Bengal, Karnataka and Tamil Nadu in rural areas and; Orissa (11 percent), Punjab, Andhra Pradesh, Haryana and Rajasthan in case of urban areas.

- Percentage use of public institutions for outpatient ailments significantly declined between NSSO 42nd round to 60th round in the urban areas of Karnataka (14 percent), Kerala (11 percent) and Tamil Nadu (9 percent). While, Assam, Bihar, Madhya Pradesh and Maharashtra showed decline both in rural and urban areas.

- Reliance on the public sector for hospitalised treatment varied a great deal from state to state. Orissa, West Bengal and Assam had relatively high percentage of hospitalised treatment from public institutions in both areas in 60th round of NSSO survey. But, significant decline is noticed in the percentage utilisation of hospitalised treatments by public provider over the three NSSO periods across all the states. Significant reduction was observed in Bihar, Haryana, Uttar Pradesh and Rajasthan in rural areas, and Madhya Pradesh, Uttar Pradesh, and Assam in urban areas. The reasons for lower utilisation of government institutions for inpatient care were found to be not satisfied with medical treatment by government doctor/facilities, long distance, long waiting, non availability of facilities and specific services.

- Utilisation of public and private health care services in Karnataka indicated that 76 percent of urban and 55 percent of rural households in Karnataka normally use the private medical sector for treatment. Private clinics followed by private hospitals are the most popular source of health care for households in urban areas. Among rural households it was private hospitals, CHCs/rural hospital/PHCs and private clinics. The reasons for lower utilisation of government health facility (overall) in Karnataka were stated as poor quality of care, no nearby facility and too long waiting time. The decrease in the use of public sector for outpatient care in urban Karnataka (from 30 to 16 percent) resulted in higher utilisation of private medical sector especially private clinics/doctors (39 percent).

- In Karnataka, share of public sector in inpatient care has gone down by 18 percent in rural areas and 20 percent in urban areas between 1985 and 2004.
Compared with other southern states Karnataka revealed higher utilisation (46 percent) of private health care by low standard of living households.

Use of public sector for both hospitalised (30 percent) and non-hospitalised (16 percent) treatment is found lower in urban areas of Karnataka than Kerala, Tamil Nadu and Andhra Pradesh in 50th and 60th round of NSSO survey.

Among southern states, Karnataka experienced a significant decline in the use of public hospitalised treatment both in rural and urban areas, 18 and 20 percent decline respectively and minimal increase (2 percent) in the use of public non-hospitalised treatment in rural areas.

Out of the 12 PHCs selected for the study, two rural PHCs had larger population; three had lesser number of subcentres per PHCs as prescribed in the norms.

Majority of the PHCs lagged in hygienic bathroom facility (67 percent) followed by bed management (33 percent). Many PHCs reported vacancies in many posts against sanction.

Posts such as pharmacist (8 percent), nurse mid wives (25 percent), health assistant male (17 percent), lab-technician (17 percent), health educator (58 percent), LDC (50 percent), UDC (58 percent) and driver (75 percent) were not created in most of the PHCs.

Only 42 percent of the PHCs had a lady doctor and none of the study PHCs had ambulance facility.

Out of the 780 respondents, eleven percent (89) of respondents had not visited any kind of health centre for health service during the reference period. Among them, 10 percent reported as suffering from chronic disease. The reason for non-utilisation of health services were good health status (78 percent) followed by self treatment (22 percent).

Utilisation of public health system for primary care in study area was lower than 50 percent. Out of 780 respondents, only 242 (31 percent) respondents reported as having accessed PHCs services in last one year. Of which 185 are rural respondents and 57 are urban respondents. Reasons for not utilizing PHCs services in the last one year were: too far (16 percent); not aware of PHCs (19 percent) and; other reasons (65 percent) such as no good treatment,
non availability of medical personnel, fear, long waiting, rude behaviour, addicted to private clinic and so on.

- Thirty-eight percent of total rural respondents and 19 percent of total urban respondents reported as having accessed PHCs services in last one year. Thus, a significant difference in the utilisation of public primary health services is observed between rural and urban areas (proved by Pearson Chi-Square). Further, the respondents of rural areas have emerged as prime users of PHCs services than urban ones.

- Overall utilisation rate of private health system for primary care was 54 percent (417). Fifty percent of total rural respondents and 59 percent of total urban respondents reported as having accessed private primary health services in the last one year.

- A significant difference is also observed in the utilisation of private primary health services utilisation between rural and urban areas (proved by Pearson Chi-Square). The residents of urban area have high tendency to visit private health system for primary care such as private doctor/clinics than rural ones.

- There is significant difference in the utilisation of primary health care services between private and public sector, and also in rural areas (proved by Pearson Chi-Square). The analysis further revealed that respondents preferred private health system for primary care than public health system both in rural and urban areas.

- Logit regression model indicated the utilisation of public primary health services significantly influenced by a number of factors, namely; sex, place of residence, family type, caste, distance and utilisation of private care service (clinics/drug shop/RMPs).

- Logit result indicated that the respondents belonging to female gender, from ethnic minority group, belong to joint family, residing in rural areas, non-users of private health services and residing closer to PHCs centre are more likely to utilise public health services available in terms of PHCs at primary level (when other variables are held constant).

- Ordered logit model identified a significant influence of service quality items such as, the availability of drugs at PHCs and the treatment quality provided by on the users’ overall satisfaction from PHCs services. It means that, higher
the perceptions of users’ on the availability of drugs and treatment quality higher would be their overall satisfaction from PHCs services and this predicts their perennial utilisation of PHCs services too.

- For higher care, utilisation of private hospitals was little lower than public ones. But, private hospitals are highly accessed by rural respondents and public hospitals by urban respondents though just slightly higher.
- Choice of health care provider for higher care was significantly influenced by five predictors- education, caste, type of treatment, income and place of residence (proved by logit model).
- Logit results indicated that the individuals with higher education, from general category, residence of rural area, having above 20,000 monthly family income are less likely to demand public health services for higher care than others. Further, respondents are less likely to visit public hospitals for inpatient care.
- The factor analysis extracted six important SQFs in health services namely- Physician Behaviour, Supportive Staff Appearance and Behaviour, Treatment Cost, Operational Performance, Atmosphere and Access. These dimensions provide information on the structure, process and outcome of care.
- The high Cronbach’s alpha coefficient of the overall quality perception (0.915) suggested that the items in the final scale measure a common underlying construct.
- The mean scores of SQFs (except doctor behaviour and access) and general patient satisfaction indicated that the ratings are only marginally favorable, leaving much room for improvement in service quality of health services both public and private health sector in Karnataka in general.
- The provider-wise analysis (source of care) of SQFs showed that:
  The access and supportive staff appearance and behaviour are highly perceived SQFs in private hospitals. On the other hand, treatment cost and operational performance accounted least scores. Whereas, in public hospitals the high perception scores were found in the case of access and physician behaviour. The least mean score was observed in operational performance and atmosphere as expected. It can be inferred that operational performance needs to be improved irrespective of whether it is a private or public hospital.
The service quality significantly differs between two types of health care providers with service quality of private hospitals being higher than the public hospitals as indicated by ANOVA results.

- The bivariate simple correlation analysis exhibited a significant positive relationship between patients’ overall satisfaction and SQFs. This indicates that increase in the six service quality factors leads to increase in patient satisfaction.

- The regression results provide guidance about which SQFs have the largest impact on general patient satisfaction. The significant standardized coefficients of three factors namely physician behaviour, treatment cost and atmosphere indicated that the high percentage of variation in overall satisfaction are accounted by these three SQFs.

Further, the multiple regression results indicated that the SQFs (except Access) have positive impact on general patient satisfaction.

  - In public hospital model, a positive impact on overall satisfaction was noticed by all the SQFs with $R^2$ of 33 percent. Two factors in this model- physician behaviour (36 percent) and atmosphere (20 percent) explain high percentage of variation in general patient satisfaction.

  - Whereas, in private hospital model except for two factors (access and Supportive staff appearance and behaviour) all SQFs accounted a positive sign indicating positive impact on dependent variable. Factors namely physician behaviour (58 percent), access (26 percent) and treatment cost (23 percent) accounted greater impact on overall satisfaction; where treatment cost associated with positive sign indicated that a unit increase in the perception on treatment cost is going to increase the general patient satisfaction by 23 percent.

  - In both the models (public and private) the impact of physician behaviour on overall satisfaction was found to be greatest with significance level 0.001; it indicates that patients overall satisfaction from hospital service is highly influenced by physician behaviour irrespective of type of hospital. But the impact is higher in case of private hospitals where a unit increase in the perception on physician
behaviour results in an increase in the perception on overall satisfaction by 58 percent, higher than 37 percent of public hospitals.

- Thus, all the models confirmed that patients’ overall satisfaction from hospital services is significantly influenced by service quality factors.

- The results of discriminant analysis indicated that the choice of hospital for inpatient care is significantly determined by the service quality factors. Treatment cost has emerged as the most significant discriminant factor that discriminates between the two groups of hospitals followed by atmosphere, operational performance, supportive staff appearance and behaviour.

- A detailed look on items in significant discriminant factor revealed the fact that except travel cost, perception on all other variables significantly differed between two types of hospitals. Although, it shows public and private hospitals highly differed in doctor fee followed by room cost, bathroom facility and lab fee.

- The analysis decomposed with respect to place of residence has emerged with following findings:
  - A significant mean difference is identified in the perception of rural patients on access along with earlier four SQFs between types of hospital.
  - Regression analysis identified another two significant SQFs in case of public hospital. It clearly showed that, rural patients overall satisfaction with respect to public hospitals is positively influenced by physician behaviour followed by hospital atmosphere and supportive staff appearance and behaviour. On the other hand, it accounted only by access (62 percent) to public hospital for urban patients.
  - Whereas, the model of private hospital revealed rural patients overall satisfaction from private hospital services is highly influenced by physician behaviour and access. On the other hand it is by physician behaviour and treatment cost for urban patients.
  - Thus, a significant difference is noticed in the service quality factors influencing the overall satisfaction of rural and urban patients from public and private hospitals service.
• Discriminant analysis depicted that, choice of hospital for inpatient care is highly influenced by service quality factors such as treatment cost followed by atmosphere for rural patients, and atmosphere and treatment cost for urban patients.

7.2. Suggestions and Policy Implications

- As the number of PHCs is greater than what is required in Karnataka, there is a need to strengthen and appropriately relocate the existing PHCs to maximize the community utilisation of its services, instead of establishing new PHCs.
- There is an urgent need to equip the SCs, PHCs and CHCs with essential physical and social infrastructure such as building, power supply, running water and ambulance facility in the state.
- The government should take a serious note of the conspicuous shortage of human resources in the public primary health institutions. Because they provide primary health care services to maximum population living in rural areas and vulnerable and poor sections of the society in urban areas.
- There is a need to maintain the Indian Public Health Standard norms in primary health institutions in Karnataka. In this regard, medical and non-medical posts which are not filled against sanction ought to be filled and the posts which are not yet sanctioned should be sanctioned and filled by the government as soon as possible.
- To maximize the community utilisation of primary health centres, there is a need to bring about awareness among the people about the existence and the service availability in the PHCs. Awareness camps should be held recurrently in each PHCs coverage area, especially in urban areas where least utilisation is noticed.
- There is a need to increase the share of health expenditure in state GSDP at least to 2.5 percent as recommended by High Level Expert Committee.
- Equitable proportions of spending should be maintained in the primary (55 percent), secondary (35 percent) and tertiary (10 percent) levels and between rural and urban areas as suggested by National Health Policy-2002.
- Percentage share of public health, rural health services and family welfare in total state health expenditure needs to be increased.
-State has a rich heritage of traditional Indian System of Medicine (ISM & H) and healing. There are large number of practitioners and educational institutions, which should receive sufficient attention in health planning and resource allocation.

- As the behaviour of medical personnel in public hospital influences service utilisation, the government should arrange recurrent behavioral trainings to medical personnel.

- State Institute of Health and Family welfare should be developed into a high quality center for training and continuing education, especially in the fields of public health, management of health services and medical ethics linked with Rajiv Gandhi University of Health Sciences.

- As the demonstration effect influences the utilisation of public health services in study area as indicated by the respondents, there is a need to take community leaders, local leaders and locally named persons in confidence and motivate them to utilise the public health services, so that people of all strata and standard of living utilise public health services.

- The utilisation of PHCs services in study area, especially in rural has gradually declined with increased distance from PHCs, instead of opening new PHCs in rural and remote areas the government can provide health services through mobile clinics (part of telemedicine) which are equipped with doctor and also provide secondary care facility. This will solve the shortage of medical personnel, especially doctors who refuse to serve in rural and remote areas because of lack of basic facilities. By this (mobile clinic) doctors are not required to live in the villages and remote areas.

- There is a need to gear up the telemedicine facility in Karnataka to reach the rural, remote and underserved areas. Though the state opened to this concept in 2002, the state’s performance is lower than Tamil Nadu which adopted telemedicine in 2005.

- There is a need to increase the allocation of funds year by year for drugs purchase in PHCs keeping regional requirements. And, government should strictly direct the PHCs to maintain the stock of essential drugs as per the local requirements.
To avoid the misuse of allocated funds for drugs, the Karnataka government should launch a website consisting of details of drugs and their availability in each PHC and CHC (Tamil Nadu Model). And the details need to be updated at given intervals (month or quarterly). This not only brings in transparency but also increases the accountability. Further, it helps government to take further decisions on drug supply and its procurement.

For the preservation of drugs, each PHC should be supplied with refrigerator along with a generator.

As the community confidence on public health system is weakening day by day, there is urgent need to strengthen the public health system at all levels of care by improving its service quality standards.

Government should open a centre in each PHC that connects to Taluk hospitals, District hospitals and other secondary and tertiary public hospitals through internet or telephone. This helps the medical personnel to take expert advice in shortest time and help in lag treating some special cases (emergency care). And, it also makes the process of referral easier. Further, if the case is referred to secondary and tertiary care referral registration can be complete at the centre itself on the same day and the concerned patients should be given an ID including information on appointment time and date, and doctor to be consulted in the form of a printed card or a smart card at nominal charges. Thus the queues at the hospitals (waiting time) can be reduced and the utilisation of public health centres can be increased.

There is a need to maintain a schedule of doctor availability in each government hospital (primary, and secondary and tertiary care centres) and display it week-wise.

There is a need to link the insurance schemes with public health system (like Karuna trust insurance scheme) to improve the service utilisation and to change the peoples’ mindset or prejudices on public health system.

Taking serious note of the growing influence of the private sector in providing health care specifically primary care in both rural and urban areas of Karnataka, the government should ensure service quality factors in public health service centres. Also this ensures that public resources spent on health system are effectively utilized.
The government hospitals should maintain a good atmosphere such as hygienic bathrooms, water facility and keeping the surroundings clean so that people approach public health centres for their health care needs.

Though the government has made it compulsory to register private medical establishments such as clinics, private hospitals/nursing homes, blood banks, drug shops, dispensaries, consultancy centres under Karnataka Private Medical Establishment Act 2007 (Amended in 2010 and 2012) still many of them have not yet registered as observed while collecting details on private establishments from districts. So the government should strictly direct the district authorities to take serious action against such private establishment by imposing higher fines with time bound for registration or dismissal of establishment. This will help to get a clear picture on the existence of private sector especially at bottom level of care (private clinics) both in rural and urban areas.

The standards (such as atmosphere, human resource, equipments and so on) fixed under Karnataka Private Medical Establishment Act, 2007 for the approval of private medical establishments especially for secondary and tertiary care institutes should be examined strictly while approval. So that private hospitals can maintain good service quality.

The registration authorities should check the brochure or booklets of private medical establishments including information on charges payable for different type of treatments thoroughly as the perception on treatment cost is scored very low for private health hospitals.

As the utilisation rates of public primary and higher care services is found very low government needs to rethink on the imposition of service charges in PHCs and hospitals which is already introduced in many states.

Grievance Redressal System should be set up in both public and private hospitals to solve the problems of patients. And hospitals should make each patient aware of availability of such facility in hospitals. This improves operational performance of the hospitals.

There is need to set up a unit in each public hospital, which should assess the service quality of public hospitals regularly and District Surgeon should also inspect regularly the quality of service rendered by public hospitals.
The findings of the study throw light on an important aspect where the majority users of public health services at all levels are the socially disadvantaged groups of SC, ST, females and people from lower income groups. Since it is unaffordable for such population to access private health services, the public health care system has to be strengthened in terms of access and service quality. As female health plays a major role in economic development, the government must give serious attention in improving the service quality in PHCs along with extending the facilities which helps in the betterment of female health. There is also a need for appointing lady doctors in each and every PHCs.

Indeed, the study points out the need for strengthening public health care system at all levels of care in India and Karnataka both in rural and urban areas. If share of health expenditure in GSDP is increased to 2 percent, public health centres are equipped with essential physical infrastructure and human resource (as per IPHS norms), and good service quality is maintained in public health system then there is no doubt that public health system will emerge as major provider of health care in both rural and urban areas in near future as in Kerala and Himachal Pradesh. The regulations on private medical sector will improve their service quality standards and also make them offer treatments at affordable cost to the poor and vulnerable sections of the society so that none are deprived in any type of health care access. This in turn will help in achieving health commitments made under Alma Ata Declaration and Millennium Development Goals and also in realizing the dream of India becoming super economic power by 2020 in long run by augmenting the demographic advantage of not just having largest youth/working population, but largest healthy youth population.