CHAPTER VI

SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter provides a synopsis of the study—from the objectives to the methodology and data and results. It likewise presents some recommendations generated from the outcomes of the study for future research and for PhilHealth. The limitations of the present study are likewise given.

1. Summary and conclusion

Geographic variations in health care utilization are increasingly being reported in various countries spurring interest and concern among health professionals, academicians and health policy makers alike. The present study explored variation in health care utilization in the Philippines under the National Health Insurance Program, which is the country's social health insurance scheme. A cross-sectional, secondary analysis was performed using the claims data for the year 2003. Health care utilization was measured in three ways—admission rate, reimbursement and length of stay. In the assessment for variation pneumonia cases were chosen in order to control for variation arising from differing disease patterns. Variation was evaluated by extremal ratio, chi-square tests and ANOVA. The factors that influence variation were determined by multiple regression analysis which was performed in different levels of aggregation—individual, membership

number, hospital and provincial levels. The results of the study are summarized as follows:

- There is significant variation in the three measures of utilization used in the study—admission rates, average reimbursement and length of stay.
- Admission rates were observed higher in the more rural regions and/ or regions with higher poverty incidences but do not seem to be correlated with morbidity nor the availability of health care resources.
- The indigent beneficiaries had relatively low admission rates compared to the other sectors in the program and are more likely admitted in the primary or secondary hospitals.
- There is significant in and out migration for health care for the more severe cases (or perceived as severe) among the beneficiaries.
- The major factors influencing variation in reimbursements and length of stay (or average reimbursements or average length of stay across the different levels of aggregation) are similar although to varying extent. They are the health care system variables, type and category of hospital and the need variable, medical case which represents the severity of case. However, the relatively weak ability of these factors to explain length of stay especially at the individual utilization level suggests that there are other variables that can explain for the observed variation but were not covered by the study.

Other information obtained from the study are:

- Variation also exists in the coverage of the population. There is poor membership among the informal sector of the society.
- Accredited health care providers also vary across the regions but the relatively large number of primary hospitals outside the NCR and the higher bed-population and doctor-population ratios in the more rural areas suggest that beneficiaries have potential access to health care regardless of their geographic location.
- Costs of treatment for pneumonia varied significantly across the different regions, the average cost being highest in the NCR. Across the institutional settings private and tertiary hospitals had the greatest cost. Drugs comprise the most expensive of all the components in hospitalization.
- High cost regions usually have high cost beneficiary sharing while the converse is true for low cost regions.
- Length of stay is shorter for private as compared to government hospitals and for primary and secondary than tertiary hospitals which could probably indicate that the private and the lower level of care are more efficient in managing pneumonia.

The variable admission rates, costs, reimbursements and length of stay suggest physician practice patterns as a likely factor for variation which might as well indicate the poor compliance or poor implementation of the clinical practice guidelines in place for pneumonia.

Although it cannot be accurately established whether the existing variation leads to problems in quality of health care being delivered to PhilHealth beneficiaries, the

results have demonstrated issues of efficiency among the accredited health care providers. It also presented some interesting aspects on utilization—admission rates, reimbursements, length of stay as well as the present payment mechanisms that would help PhilHealth to improve its services in order to live up to its thrust of providing an affordable and accessible health service for all Filipinos.

2. Limitations

One major weakness of the study is that it does not measure the actual or the real utilization of household or individuals. Since the study specifically intended to measure utilization of the population covered by the NHIP, it then leaves out the portion of the population who are uninsured. In terms of expenditure, it is basically confined in reimbursements which measure only a portion of the actual hospitalization expenditure of the insured. The study, being an analysis of secondary data, is also limited to the information found in the database. The final result of the study as presented here was a product of countless analyzing and re-analyzing of data until a more suitable and more informative result was achieved.

The difficulties of the said analyses started from data cleaning, recoding to finding appropriate measurement or scale for data analysis. The database structure itself was a challenge, which will be expounded later.

The admission rates were not age adjusted as most variation studies suggest because of the unavailability of the said data. The admission rates cannot be ascertained in a smaller aggregation such as city or province at least, also because of the unavailability of the information on the beneficiaries at the provincial level. Aggregation at a lower level would have facilitated better statistical tools. Incidence rates for the year when admission rates were measured could have provided better comparison than what was performed in this study. Moreover, the use of poverty incidence at the regional level as a proxy variable for the socioeconomic status of the beneficiaries may be considered weak since it is not an individual measure of the socioeconomic status. The results of the study indicated that even while there may be higher admission rate in the poorer regions; it is not necessarily the poor who are using the services.

The accuracy of the data is another limitation. This study primarily relied on the population estimates and health statistics by the NSO, NSCB, DOH and PhilHealth which may also have error margins.

On a final note however, despite the difficulties and limitations involved in this study it provided important aspects and offered some insights regarding the utilization of health care under the country's social health insurance program. These aspects are worth considering as Phil Health continues to embark the challenging task of implementing health insurance and ensuring affordable, acceptable, available and accessible health care services for all.

3. Recommendations

2.1. There is a need for a more vigilant or aggressive action on the part of PhilHealth to fully promote and implement the clinical practice guidelines in place in order to reduce the wide variation in practices.

Clinical practice guidelines are developed in order to reduce variation in key methods of care and thus to improve both the efficiency and the effectiveness of health care (Nathwani *et al.*, 2001). This may also be a considered a mechanism to control the quantity of services (P-Q combination) rendered to the patients. Under the NHIP, clinical guidelines for certain diseases, among them pneumonia, are already in place yet the results of this study suggested that there is poor compliance of these existent guidelines. What could probably explain for this? According to the study conducted by Ateneo Graduate School of Business (AGSB, 2002) regarding the use of CPGs among the physicians in the Philippines, lack of information is one of the major reasons for apprehension towards CPGs. This was also cited as one reason in a systematic review of literature on physicians' non-adherence to the recommendations of practice guidelines (Nathwani *et al.*, 2001). If this is so, then there is a need for a more aggressive information dissemination of the CPGs among the providers. Resistance is to be expected from the physicians who have always been regarded as the legitimate scientists in the field of medicine owing to their unique knowledge in diagnosing and treating disease. It is therefore critical to make physicians understand that the circumscription of their treatment approaches with the imposition of CPGs are meant to improve the efficiency and effectiveness of prevention, care and disability management by reducing the present

wide variation in practice (Liu *et al.*, 2003). In the US, where variation literature abounds thereby undermining the physician's claim to scientific legitimacy, the public and private policy makers and managers have been encouraged to challenge professional autonomy and control in ways that have been inconceivable in the past (Blumenthal, 1994). It has also challenged the medical professionals to evaluate their practice patterns (Detsky, 1995; Wennberg, 2002).

In Liu's study (2003), it was suggested that CPGs should be considered as one important reference frame during its claim evaluation process. Although it might help in promoting the use of CPGs it must be emphasized that if this is to be implemented, PhilHealth should also make sure that non-compliance among the providers will not transfer the burden of payment on the beneficiaries since they pay whatever costs are not covered by the insurance.

2.2. Encourage the use of lower level of care for the more benign cases among the beneficiaries and promote conservative use among the providers when greater care is wasteful if not harmful through the following:

2.2.1. Strengthen quality assurance mechanisms in order to enhance people's trust in the accredited providers without discrimination on the category of the hospital and create incentives or a reward system for providers that are able to deliver a more efficient care.

Accreditation is Phil Health's way of ensuring quality among its providers but obviously the confidence of the people in tertiary hospitals is greater as exemplified by

their higher admissions. Perhaps this greater confidence in tertiary hospitals is exacerbated by the differential payments currently offered by Phil Health where tertiary hospitals have the highest reimbursement rates being translated to higher quality. But do tertiary hospitals really offer better care? This study demonstrated that primary and secondary hospitals appear to be more efficient as implied by shorter length of stay compared with tertiary hospitals. Therefore, there seems to be no evidence that tertiary hospitals offer better care than primary or secondary hospitals. The high cost in the former might mean higher prices and more medical services offered but more services do not necessarily mean better or more effective care services.

2.2.2. Re-design payment mechanism.

It is hypothesized that differential payment creates disincentive to use primary hospitals. The current payment mechanism is fee for service with differential payments according to the category of hospital and severity of case. Caps are set in order to prevent moral hazard among beneficiaries. The modification of the existing payment mechanism is already under study due to problems in the sustainability and should therefore be a good move not only because of the concerns in sustainability but also if this discourages the use of the lower level of care. Furthermore, there are doubts regarding equity under this mechanism. The next question then would be—how should the benefits be paid? There is no single answer to this question. The different payment mechanisms have their own advantages and disadvantages and the choice largely depends on the applicability of these mechanisms given the circumstances in the country. But there is one point that needs to be considered as Phil Health redesigns its payment mechanism. Results of this

study showed varying costs of treatment across regions (the category of hospital being held constant), should differential payments then be introduced across regions based on local area expenses or should there be one uniform payment across regions? And if there would be one uniform rate, which cost of treatment should be adapted for the payment? While differential payments across regions might be logical because of price differences in providing health care and addresses the concern of variable support values, efforts should be done in understanding better the large differences in health spending, i.e. low cost regions should not reflect inadequate access to services otherwise they will be at a loosing end while high cost regions are well compensated (Moon and Boccuti , 2002). If a single rate will be adapted in all regions, careful study should also be conducted in determining which rate is best suited for all.

Furthermore, since PhilHealth currently offers primarily inpatient benefits except for the indigents and a few outpatient packages, this may also encourage beneficiaries to prefer hospitalization over outpatient management so they can avail of their benefits. The data from this study showed that among the top ten medical cases, majority of the cases are ordinary specifically for the infectious diseases. Take for example urinary tract infection, where 99% of the cases are ordinary, and may be easily managed outpatient with effective drugs. For this 99%, PhilHealth spent about 86.6 million pesos (costs involved would reach 142.4 million if the co-payments will be added) where about 38.4% or 33.2 million pesos was spent for drugsTherefore, if instead of being hospitalized, the patients were only treated outpatient by paying for their medicines, then PhilHealth could have saved at least 60% or 52 million of the total amount it spent for hospitalization. Add

to that list the numerous admissions for diarrheal diseases and acute bronchitis where majority of the cases were ordinary and cost savings would even be greater! PhilHealth may introduce some cost sharing with the beneficiaries instead of just paying for the whole drug expenses in order to prevent moral hazard. Although it may be argued that at present PhilHealth's share of health expenditure is at a minimum, about 9.2% in 2002 (Philippine National Health Accounts, 2002), it must be pointed out that this is just not a matter of curbing the present health spending but providing more effective and efficient care for the patients at the same time having more resources to cover for more services.

2.3. Improve the present database structure and include variation studies as one of the quality assurance monitoring activities.

Variation study is an inexpensive way of monitoring health care utilization across individuals or across areas which simply makes use of the information in the existing database. It can assist in understanding how resources are being used and their effects on health. It can help in monitoring the performance of providers as well which was demonstrated by this study. Across areas, it can help identify populations most at need as an aid in targeting health promotions and interventions and to examine health events to identify problems.

An improved database structure will help understand the differences in the costs of treatment better and identify which providers or areas are offering more services, thereby higher cost and whether this translates to better outcomes or similar outcomes

compared to other low cost providers or areas. This means the inclusion of diagnostic or laboratory tests and drugs given to the patients in the data.

It will also help determine who usually crosses borders to seek medical care. In this study, there was difficulty in estimating admission rates accurately because of "border crossing" among the beneficiaries for health care. It was a struggle to determine who among the beneficiaries sought medical care in other places because the patient address is a string variable with inconsistent ways of abbreviating the cities and provinces. It would have been easier if the city and the region where the patients live were in separate columns in order to facilitate easier re-assignment of patients who have migrated or crossed borders to seek medical care. Drop down menus for the fill forms such as what is presented in Figures 6.1 is an easy way of encoding these data. A similar structure for the diagnostic tests and drugs may also be adapted. The identification of the migration of patients and for which particular diseases will provide valuable information on the accessibility of specific medical facilities for an area that may suggest re-allocation of health care resources.

With an improved database structure, re-admission rates will also be easier to estimate which can further aid in identifying the quality of health care delivered to the patients.

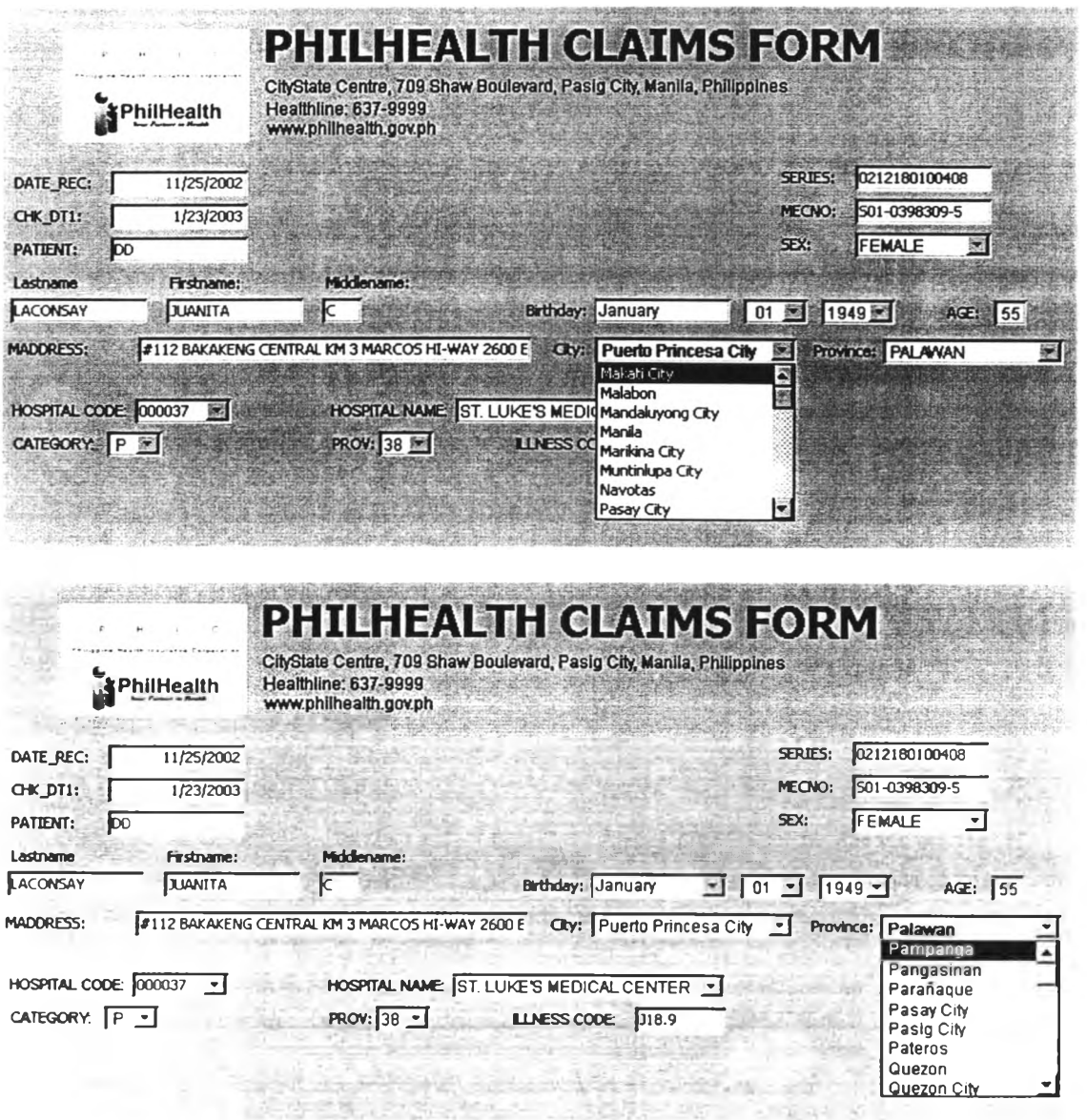

Figure 6. 1. Fill forms with drop down menu

With an improved database, variation studies may also be improved. Admission rates will be more accurately estimated and should be age adjusted in order to control for area differences in health events that can be explained by differing ages of the area populations. They can be computed at a smaller aggregation (like province) and

correlated with illness rates to check if variable admission rates correspond to the need for that particular area or simply supply-induced or a result of variable medical management.

2.4. The following are recommended for further research

2.4.1. Investigate the disproportionately high admission rates for the regions in Mindanao and the low admission rates for the indigents.

The high admission rates for the two regions in Mindanao which cannot seem to be explained by morbidity (as a measure of need) possibly indicates less access to preventive care and less knowledge of health care issues. Ensuring access to these services may then improve health status among the beneficiaries in this region leading to a reduction in hospital admissions.

There is low utilization among the indigent beneficiaries. Since one of the major thrusts of Phil Health is to care for the more marginalized sector of the society, it is fundamental to know the underlying reasons for this poor utilization. It is especially of prime importance to know if accessibility is the major barrier to utilization. The provision of a financing mechanism for health care will be deemed useless if beneficiaries do not have access or when major barriers to health care seeking would be distance or transportation costs involved in reaching these providers.

2.4.2. Explore the differences in the provision of healthcare between government and private hospitals and among the categories of hospital.

Concerning the matter of quality, the longer length of stay in government and tertiary hospitals also warrants further investigation. Does this reflect less efficient or low quality of care as well? Additional measures of efficiency and quality, other than length of stay, should be included. There is also disproportionately high difference in the charges between government and private hospitals. Are there more services offered in private hospitals? And if there are, are these services necessary or simply supply-induced in order to maximize the profit as a consequence of the caps set by PhilHealth?

2.4.3. Conduct actuarial studies for the premium contributions especially of the IPP.

It was earlier discussed (see Chapter V) that the PhP100 premium contribution for the people belonging to the lower socioeconomic classes being targeted by the IPP may be a big financial strain that could discourage membership among them. Studies should be conducted where income range will be identified and perhaps offer choices as well of the premium contributions that are most suitable for them (similar to that of the employed sector).

2.4.4. Conduct studies on the high cost diseases such as ceaserean.

It would be interesting to perform variation studies on high cost medical cases since they comprise a large proportion of PhilHealth expenditure (not to mention its financial strain on the patients). Are the cases rational? Or are they simply a result of demand on the part of the patients or doctors?

In the future, especially for the household surveys conducted by the NSCB, the membership (as well as the type of membership—IPP, SP, employed sector, non-paying) for PhilHealth should be included as one of the information asked. This would assist in determining actual utilization among the different types of membership as well as the uninsured which in turn would help in describing the real utilization of the Philippine population as a whole.