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MEETING ABSTRACT

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Determining the morbidity profile, health-service utilization and health-provider efficiency in the Rejang River Basin, Sarawak, based on TPC® data and the Johns Hopkins ACG® System

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Introduction

The study focused on the application of case-mix in remote regions of the Rejang River basin of the state of Sarawak, Malaysia, to improve the delivery of health care for these less-accessible populations.

The aim of this project was to determine the benefits of applying the ACG® System on available Teleprimary Care® (TPC) data from multiple primary health-care providers in remote regions of Sarawak, Malaysia, to gain a better understanding of the differences in morbidity burden and resource need by various population sub-groups, as compared to those in less-remote settings.

It also focused on how the ACG® System could assist to identify "high-risk" patients, allowing for more targeted interventions, and highlighted how the results established a fairer basis upon which to assess provider performance. In addition, it facilitated profiling on a regional basis to improve efficiency in the delivery of primary health care in these remote regions.

Methods

The primary data was obtained from records of 110,019 patients registered in eight primary care clinics in Sarawak, Malaysia, which used the TPC System from March 1, 2009 until February 28, 2010.

Clinics selected in the Rejang Basin for this study were located in the Sibu, Kapit, Sarikei and Mukah divisions. Clinics selected varied in many aspects, including the level of care, as well as whether they were located in urban or rural settings.

Results

This study has demonstrated the ability of Malaysia to apply readily available diagnostic information to develop state-of-the-art case-mix measures relevant to medical and fiscal management activities using the TPC databases. It has also offered an example of how risk-adjustment tools can be used to monitor the TPC data-collection process.

The results showed that populations do vary in their need for health-care resources, and that urban and rural populations can be successfully compared. Ninety percent (90%) of patients were seen by urban clinics. Thirty-eight percent (38%) of patients were from two age groups: 5-19 years and 40-54 years. Female patients formed fifty-seven percent (57%) of the patients across all clinics.

The majority of the population belonged to the low-morbidity category. However, rural clinics had relatively higher morbidity burdens when compared to urban clinics. This was due to a higher incidence of high-risk, chronic and psychosocial cases. Results also showed a high incidence of chronic medical cases involving cardiac and respiratory systems. The results also indicated that rural clinics spend more resources than would be expected given the morbidity burden of the rural population.

Conclusions

This real-world example of how the application of case mix can better inform policy decisions provided evidence that showed consideration should be made to

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alter resource allocation within Malaysia, including human resources, to rural clinics based on the morbidity of the patient population served. Furthermore, the morbidity patterns of populations served by rural clinics in Malaysia indicate a need for chronic disease management programs. This study demonstrates the need to include case-mix in resource allocation and is applicable to other countries with varied morbidity across rural versus urban settings.

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