

Addressing service demand in blood transfusion service – working at the source level

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Background

Blood supply in developed countries relies solely on voluntary non-remunerated donors. However, ageing population poses a significant stress not only to health care system but also to blood supply. In Hong Kong, the blood demand has recorded an increase of 8.6% from year 2006 to 2008 with 57.3% blood being used in patients aged 60 or above. A projected increase of 25% in demand is forecasted in the next 25 years. Therefore, there is a need in understanding the utilization picture, clinical appropriateness, and thereafter availability of sufficient donors to meet demand. In this study, we analyse their donation's preference in order to identify ideal site for future donor center.

Material and Methods

Demographic information (age, sex, residential address and site of donations) was retrieved from year 2004 to 2007. Donations made at donor centers were made correlation with the donors' residential location. Descriptive statistics of the available data and regression method for hypothetical center were performed.

Results

466,121 donations made at donor centers were studied. Distance from the centers was showed to be a determining factor on the donors' choice. Even in a small city of Hong Kong, reduced donation frequencies were observed with increasing distance from donor centers. Certain donor centers attracted more donors from district far away than other.

When hypothetical center was tested on 5 locations (Chai Wan, Tung Chung, Fan Ling, TYT (Tuen Mun, Yuen Long, and Tin Shui Wai), and Tseung Kwan O), results from regression method found Yuen Long to be of the greatest potential as future donor center.

Conclusion

The study demonstrated analysis of service data could provide valuable information in the service planning. It was recommended to further be validated analysis assisted by geographical information system and supported by public opinion survey.