Estimating growth in the demand for genetic testing as an indicator for the demand of genetic counselling in Malaysia

*Shing Yiing Tiong1, Winnie Peitee Ong2, Zarina Abdul Latiff3, Salwati Shuib4, Yusnita Yakub5 and Bilkis Abd. Aziz3

1Department of Paediatrics, Faculty of Medicine, Universiti Kebangsaan Malaysia (Kuala Lumpur Campus), Jalan Yaacob Latif, Bandar Tun Razak, 56000 Cheras, Kuala Lumpur, Malaysia.
2Department of Genetics, Hospital Kuala Lumpur, 50586 Jalan Pahang, Kuala Lumpur, Malaysia.
3Department of Paediatrics, Universiti Kebangsaan Malaysia Medical Centre, Jalan Yaacob Latif, Bandar Tun Razak, 56000 Cheras, Kuala Lumpur, Malaysia.
4Department of Pathology, Universiti Kebangsaan Malaysia Medical Centre, Jalan Yaacob Latif, Bandar Tun Razak, 56000 Cheras, Kuala Lumpur, Malaysia.
5Molecular Diagnostic and Protein Unit, Institute for Medical Research, 50588 Jalan Pahang, Kuala Lumpur, Malaysia.

tsyiingas@gmail.com

Abstract

Advancement in technologies has increased the understanding towards genetics and genomics of many health conditions. This increases the demand for genetic testing in healthcare and wellness industries. Hence, the demand for genetic counselling is expected to increase as well. The objective of this study is to estimate the Malaysian growth in demand for genetic testing as an estimate of the demand for genetic counselling. This descriptive study was a review on the volume of genetic tests conducted by various centres from year 2012 to 2016. These tests encompassed all human disorders-related genetic tests that were carried out using molecular genetics and cytogenetic techniques. Genetic testing provided for research purpose was excluded. From a total of 25 invited centres, data was collected and analysed from two government centres and five private centres who consented. All the participating centres were located within Klang Valley. The total numbers of genetic testing documented from the seven centres were 21,613 tests from year 2012 to 2016. A total number of 16,147 (75%) genetic tests were molecular genetics whereas 5,466 (25%) tests were either cytogenetic or molecular cytogenetic techniques. There was an increasing demand for genetic testing with the growth rate at 4.4%, 42.5%, 31.8% and 34.5% in year 2013 to year 2016 respectively. Our study has shown a significant growth in the demand for genetic testing in Malaysia throughout the past five years. Hence, the demand for genetic counselling is estimated to be increased too and much higher than expected. Since the number of genetic counsellors in Malaysia is very limited, the needs and development in the profession of genetic counselling is necessary.

Keywords: genetic testing, genetic counselling, growth in demand, Malaysia

*Author for Correspondence