Modelling the Future Dental Therapists Within Malaysian Clinician Dental Workforce Using System Dynamics

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Abstract

Objectives: This workforce modelling research aims to model the future dental workforce in line with the full enactment of the revised Dental Act, which permits dental therapists to practice in private dental sectors. Method: A validated systems dynamics model was used to examine the interaction between the population baseline need, demand for and the supply of dental care services across public and private sectors between 2015 and 2030. Simulations were made based on evidence drawn from previous studies and government data policy. The need/demand and supply sub-models were integrated in relation to clinical hours to explore the potential of over-or undersupply of dentists and therapists, which were then converted to workforce numbers. Results: The model suggests that the demand for Malaysian dentists and dental therapists is expected to increase by over 27.2% and 2.6%, respectively, across the simulation period and the demographic disease trends. This result indicates the need for an expanded dental workforce. However, a potential oversupply of public dental therapists and private dentists was projected by 2025. Furthermore, a potential

undersupply of public dentists was observed throughout the simulation period. Conclusion: There is an apparent mismatch between the population demand and workforce supply across sectors. The model findings indicate the need for additional discussion and scrutiny of regulations allowing dental therapists to operate in the private sector to inform workforce policy and planning.

Author keywords

dental therapists; operational research; system dynamics; workforce modelling; workforce planning

Indexed keywords

MeSH

Dental Auxiliaries; Dental Care; Dentists; Forecasting; Health Services Needs and Demand; Health Workforce; Humans; Malaysia; Private Sector; Public Sector; Workforce

EMTREE medical terms

dental auxiliary; dental procedure; dentist; forecasting; health service; health workforce; human; Malaysia; private sector; public sector; workforce

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