

Using the Fractal Dimension to Generate Parametric Islamic Patterns

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Abstract

Non-communicable diseases (NCDs) are the cause for over 70% of global deaths. Various levels of healthcare delivery from home-care to tertiary care exist for patients where patients with NCDs are treated. Demand for services provided by tertiary level institutions has increased tremendously along with the growth and prevalence of chronic diseases. Few of the other reasons include co-morbidities, greater complexities of diseases, greater public expectations, higher life expectancy, an aging baby-boomer population, identification of diseases at later stages of life and deferral of care among many other complex scenarios.

Globally, rising demand for healthcare services presently sets challenges of under-capacity and understaffed healthcare infrastructure. With the advent of technology in healthcare and by providing tools in the hands of patients, a shift in healthcare delivery is evidenced towards early detection of diseases and prevention as a means of patient-care and for tackling non-communicable diseases. Evidence based delivery models tend to focus on patient experience in the course of treatment. This has consequences on the physical spaces where care is delivered, as the focus shifts from the space to the patient.

This paper explores how greater demand to address prevalence of non-communicable diseases and the advent of technology can create opportunities for development of healing spaces. For patient-centric care, this would entail from inclusion of technologically driven healthcare environment within a home-care setting to improving the functional efficiencies within existing and proposed tertiary level hospitals for patient-centered care.

The notion of bringing hospital (healthcare) to the patient is becoming a necessity to create a future where patients would depend less on the model of in-inefficiently functioning tertiary level hospitals and a greater effort will be required towards home-settings, applying the adage ‘prevention is better than cure.’

Keywords: Healing spaces; Active technology; Passive technology; Patient-centric care; Patient-centered care

Cite this article as: Abdelsalam m., Abdelsalam H., “Using the fractal dimension to generate parametric Islamic patterns”, *International Conference on the 4th Game Set and Match (GSM4Q-2019)*, Doha, Qatar, 6-7 February 2019, <https://doi.org/10.29117/gsm4q.2019.0036>