



ELSEVIER

Available online at www.sciencedirect.com

Public Health

journal homepage: www.elsevier.com/puhe

Short Communication

Overcoming the health system challenges in the 21st century and beyond?



Al-alawy Khamis

ARTICLE INFO

Article history:

Received 14 October 2018

Received in revised form

24 November 2018

Accepted 6 December 2018

Available online 24 January 2019

Keywords:

Health Systems

Health Prevention

Health Protection

Public Health

ABSTRACT

Objective: To highlight how risk factors contribute toward the rising burden of Non-Communicable Diseases (NCD) and Health System challenges.

Study design: This manuscript is a short communication.

Methods: Review of relevant Public Health literature to summarise the risk factors associated with NCDs and impact on the health system.

Results: Health systems are continually being influenced by external factors that supersede its ability to predict, react and adapt to the growing trend of NCDs. The inability to direct efforts toward the root causes will undoubtedly lead us to further failures and economic bankruptcy.

Conclusion: Addressing the risk factors associated with the rising burden NCDs and Health System challenges in the 21st century and beyond is predicated on our ability to lead, adapt new ways of working and measure the extent by which institutions and professionals play toward health prevention and health protection.

© 2018 The Royal Society for Public Health. Published by Elsevier Ltd. All rights reserved.

The problem

It is no secret that many transformational health initiatives in the 21st century are being hindered by the ongoing need to balance access, cost and quality (iron triangle) within the health system.

Health systems are at a peril of solving one problem without the manifestation of another. This presents challenges in prioritisation, budgeting and meeting patient and public expectations. Although progress has been achieved in some areas, they have been dwarfed by the global epidemiological transition between communicable and Non Communicable Disease (NCD) over the past two and half decades.¹ Economic modelling suggests that our inability to reverse the rising burden of NCDs is untenable and will undoubtedly lead us down a path of high morbidity and mortality and certain economic bankruptcy.² The questions

one might ask are, how did we get here and why has the notion of transformational health only propagated into strategic plans resulting in a handful of preventative successes? Health and political sceptics attribute this predicament to a lack of strategy, innovation, evidence-based practice, funding and the inability to maximise efficiencies within the health system per se; however, there is more to this than meets the eye. This short communication is intended to highlight how risk factors lead to rising burden of NCDs and subsequent health system challenges and contribute to the international debate on how this can be addressed in the 21st century and beyond.

Contributing factors

There are indeed many issues that need to be addressed with in today's health system; however, a key concern lies in the

E-mail address: kalalawy2@gmail.com.

<https://doi.org/10.1016/j.puhe.2018.12.005>

0033-3506/© 2018 The Royal Society for Public Health. Published by Elsevier Ltd. All rights reserved.

way the health system is continually being influenced by external factors that supersede its ability to anticipate, react and adapt to problems as they arise. It is no secret that the burden of ill-health is being fuelled by a host of risk factors, for example, lack of education, demographics, genetics, lifestyle choices and a lax approach towards policy which has led us down a path of a bittersweet reality, a reality of economic growth but significant unintended consequences on the health system.² For example, there is good evidence that the use of corn syrup contributes to excessive calorific intake leading to a host of diseases, yet there has been limited effort towards viable healthier alternatives.³ Instead, policy direction has supported the use of (a) sweeteners which remain contentious towards health and estimated to be 200 times sweeter than sugar or (b) the sugar-sweetened beverage tax which remains ineffective in reducing obesity, improving health outcomes or nudging industry to comprehensively transform to newer healthier alternatives.⁴⁻⁶ In part, policymakers have succumbed to accept and reward risk factors and flaws in the manufacturing process which in turn have contributed towards the rise of NCDs and associated health system challenges deemed unacceptable in other regulated sectors.

preventative and public awareness programs.⁸ Second, the health system is being weakened by an increasing emphasis on performance management metrics for a functional health system; however, the majority are geared towards an ideology of how well we manage a problem once it manifests which can be contested rather than a set of metrics that are geared towards how well we prevent the creation of the problem. For example, a patient's cholesterol has more to do with their genetics, lifestyle and age than whether they are being screened or indeed compliance with statins which, in real terms, has a minimal impact on health because of their specificity and effectiveness.⁹ As a result, the promise of managing or curing disease through drugs has manifested to a subset of other problems, that is, drug dependency, side effects, non-compliance and anti-microbial resistance to name a few.^{10,11}

We are reaching a point of performance management saturation and our ability to maximise efficiencies and maintain sufficient investment without going back to the root causes is in a best-case scenario at a plateau. Third, the complexity of the health system suggests the solutions must in turn be complex which in real terms equates to politics, bureaucracy and greater complexity. Strategies and their subsidiary implementation plans are often never fully translated into practice and soon obsolete due to the rapid pace of change. In real terms, the health system becomes engulfed in a perpetual state of being left behind by marked changes in the industry, consumer behaviour, societal preferences, economics, law and politics. Fourth, the economics does not add up, for example, tobacco and alcohol have historically been subjected to regulation and levy but often insufficient to cover the higher than expected dependency on health services, associated annual death toll or the long-term impacts on the labour market for an unproductive workforce.^{12,13} Finally, decision makers fail to prioritise health above everything else. A genuine commitment towards health would transform

The likely effects and implications

The 21st century is riddled with damage control and a never-ending satiety for evidence-based practice which has thus far not had the desired impact to reduce the rising burden of NCDs.⁷ The inability to transform and address the health system challenges in the 21st century has several implications (Fig. 1). First, the health system is no longer a health system but rather a sickness-funded system. Most Organisation for Economic Co-operation and Development (OECD) health systems today spend approximately 3% of their health budget on

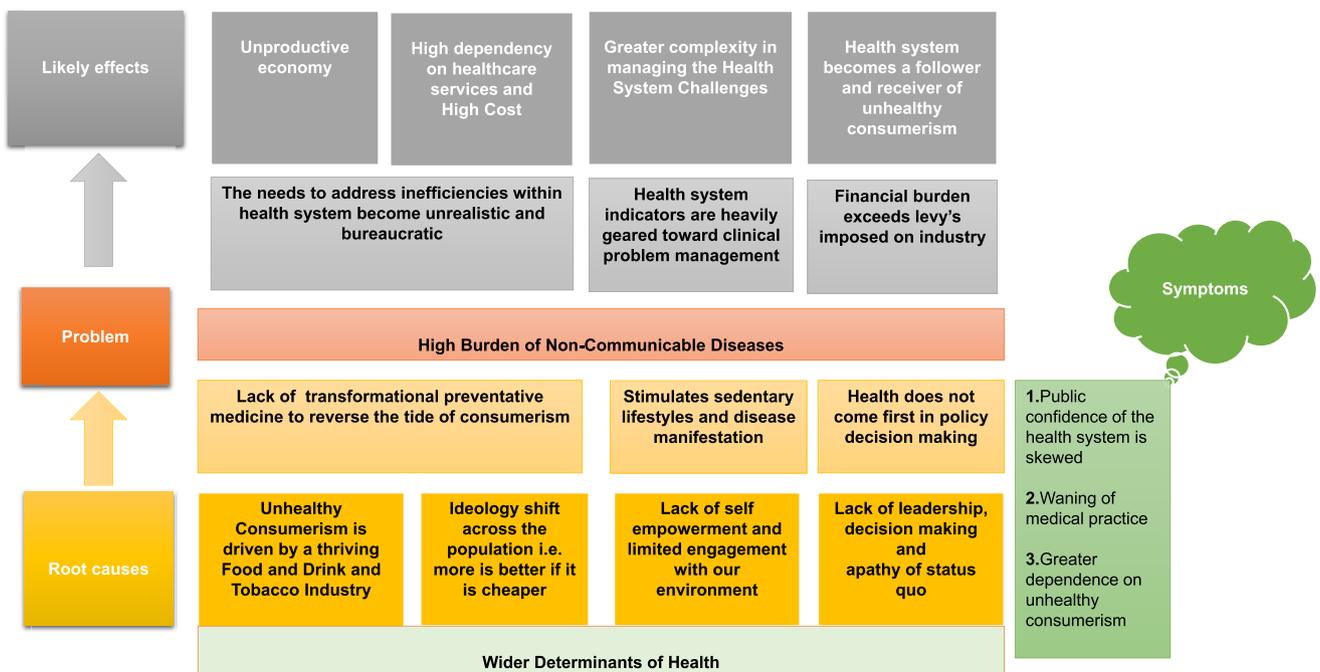


Fig. 1 – A public health perspective on the root causes, symptoms, problems and likely effects on the health system.

current thinking and spend and significantly drive our efforts towards disease prevention and as such ‘diseases like diabetes would not manifest into the global epidemic we see today’. The health system has shifted from a position of leadership and decision making to a follower and receiver of problems with limited influence on the very factors that influence it. Problem management and, to a greater extent, mismanagement will not solve the health system challenges in the 21st century and beyond.

Where do we go from here—the bottom line?

Addressing the risk factors associated with the rising burden NCDs and health system challenges in the 21st century and beyond is predicated on our ability to lead, adapt new ways of working and measure the extent by which institutions and professionals play towards health prevention and health protection. Greater investment is needed towards public health if we are to succeed. Additional funding sources should not rule out industrial ‘health protection and prevention tariffs’ adjusted by market share. Greater emphasis and weighting should be placed on preventative performance to measure the extent by which our health system prevents and protects the population against NCDs. Decision makers must learn to shift away from playing political football and blaming management for poor patient outcomes and instead change the way in which the game is being played. This means greater effort and focus should be directed towards solving the risk factors associated with NCDs at their source. Policy decision makers must put forth a mandate for industry to align towards a National Public Health Framework of ‘putting prevention and protection first’. This will undoubtedly fuel the pace and demand for a preventative, protective and innovative industry that aligns more toward an effective and efficient health system. In addition, mandatory collaboration and transparency is needed with industry to include a public consultative approach, health and economic impact assessment followed by honest and practical discussions on the way forward between government and health experts.

Author statements

Ethical approval

Ethical approval was not required for this work as no new empirical data were collected.

Funding

No funding was received to support the writing of this paper.

Competing interests

The author has no competing or conflicting interests.

REFERENCES

1. Institute for Health Metrics and Evaluation (IHME). *Rethinking development and health: findings from the global burden of disease study*. Seattle, WA: IHME; 2016.
2. Maresso Anna, Mladovsky Philipa, Thomson Sarah, Sagan Anna, Karanikolos Marina, Richardson Erica, et al. *Economic crisis, health systems and health in Europe*. Country experience. Observatory Studies Series; 2015. ISBN 9789289050340. Available on: http://www.euro.who.int/_data/assets/pdf_file/0010/279820/Web-economic-crisis-health-systems-and-health-web.pdf?ua=1. [Accessed 1 October 2018].
3. Ferder L, Ferder MD, Insera F. The role of high-fructose corn syrup in metabolic syndrome and hypertension. *Curr Hypertens Rep* 2010 Apr;12(2):105–12. <https://doi.org/10.1007/s11906-010-0097-3>.
4. Sathyapalan T. *The effect of aspartame on self-reported aspartame sensitive individuals compared to controls – a double blind randomised placebo-controlled study*. The Foods Standards Agency; 2015.
5. Azad Meghan B, Abou-Setta Ahmed M, Chauhan Bhupendrasinh F, Rabbani Rasheda, Lys Justin, Copstein Leslie, et al. Nonnutritive sweeteners and cardiometabolic health: a systematic review and meta-analysis of randomized controlled trials and prospective cohort studies. *Can Med Assoc J* 2017;189(28):E929. <https://doi.org/10.1503/cmaj.161390>.
6. Andreyeva Tatiana, Long Michael W, Brownell Kelly D. The impact of food prices on consumption: a systematic review of research on the price elasticity of demand for food. *Am J Public Health* 2010 February;100(2):216–22. <https://doi.org/10.2105/AJPH.2008.151415>. PMID: PMC2804646.
7. Jonas WB. Scientific evidence and medical practice: the "Drunkard's Walk". *Arch Intern Med* 2009 Apr 13;169(7):649–50. <https://doi.org/10.1001/archinternmed.2009.4>.
8. Economic Co-operation and Development. *OECD countries spend only 3% of healthcare budgets on prevention, public awareness*. 2005. Available on: <https://www.oecd.org/general/oecdcountriespendonly3ofhealthcarebudgetsonpreventionpublicawareness.htm>. [Accessed 10 October 2018].
9. Diamond David M, Ravnskov Uffe. How statistical deception created the appearance that statins are safe and effective in primary and secondary prevention of cardiovascular disease. *Expert Rev Clin Pharmacol* 2015;8(2):201. <https://doi.org/10.1586/17512433.2015.1012494>.
10. Drug Watch. *Prescription drug side effects*. Available on: https://www.drugwatch.com/search/?query=Prescription+Drug+Side+Effects&search_nonce=bff8511a50&search_nonce=bff8511a50. [Accessed 11 October 2018].
11. The Pharmaceutical Journal. *Category list: adverse drug reaction, side effects and toxicity*. 2019. Available on: <https://www.pharmaceutical-journal.com/adverse-drug-reaction-side-effects-and-toxicity/104285.subject?firstPass=false>. [Accessed 11 October 2018].
12. Goodchild M, Nargis N, Tursan d'Espaignet E. Global economic cost of smoking-attributable diseases. *Tob Control* 2018 Jan;27(1):58–64. <https://doi.org/10.1136/tobaccocontrol-2016-053305>. Epub 2017 Jan 30.
13. Bockerman P, Hyytinen A, Maczulskij T. Alcohol consumption and long-term labor market outcomes. *Health Econ* 2017;26(3):275–91.