Part IV
Person-Centred, Equitable, and Sustainable Health Systems: Achieving the Goal

Paraphrasing Max Plank, ***changing the way we look at the health system allows us to see the issues affecting health systems—their contexts and behaviours—in a different light***.

Part I described the foundational elements to understand the complex adaptive nature of health systems:

- The key features of complexity sciences
- Understanding the structure and dynamics of complex adaptive systems through visualisation
- Understanding the nature of health as an "adaptive subjective experiential state"

Part II introduced the principles of systems-based health system redesign based on:

- Shared understanding of purpose, goals, and values
- Committed leadership that translates the shared understandings into "simple (operating) rules"
- Provided examples that illustrated the application of these principles to "real world" health system and healthcare system problems

Part III linked the theory of complex adaptive systems approaches to its praxis. These challenges included:

- Understanding the strength and weaknesses of various analytic tools
- The role of modelling in system redesign
- Maintaining the focus on the person/patient to allow the emergence of "best" adapted health systems in different contexts

The final part of this book will look at **health system redesign** from a **design thinking** perspective. Design is concerned with resolving problems *between the state of affairs as it is and the state it ought to be* [1]; design thinking thus applies the principles of design to the way people *see things working*.

As a strategy, design thinking deliberately engages all affected stakeholders in an iterative process to solve, i.e. help them **make sense**, of the wicked problems that stand in the way of *how things ought to be*.

Design thinking is now widely regarded *as an essential tool for simplifying and humanising* [2] the way we live, work, and engage with our environment. It offers a way to involve the diverse stakeholders of the health and healthcare system to work towards a health and healthcare system that *meets the needs of our people/patients*.

As argued throughout this book we need a health care system that focuses on *health* rather than healthcare [3–5]. McGinnes [3] eloquently refers to the interdependencies of our personal and social circumstances and their effects on our health and healthcare needs:

> Ultimately, the health fate of each of us is determined by factors [genes, social, environment, behaviour and medical care] acting not mostly in isolation but by our experience where domains interconnect. Whether a gene is expressed can be determined by environmental exposures or behavioral patterns. The nature and consequences of behavioral choices are affected by our social circumstances. Our genetic predispositions affect the health care we need, and our social circumstances affect the health care we receive.

We need a redesigned health and healthcare system that focuses on *health*, the *status quo of disease management systems* is no longer acceptable or sustainable. The principle focus of redesign is the enhancement of *users' experiences, especially their emotional ones* [2]. The literature, economic reality, and political necessity point to three key parameters for changing the way we look at health and healthcare systems; they *ought to be*:

<div align="center">

Person-centred
Equitable
Sustainable

</div>

Design thinking allows us collectively to envision person-centred, equitable, and sustainable health and healthcare systems. The emphasis here is on the pleural as the emerging outcomes will initially be *local health and healthcare system prototypes*. Over time they will develop into "best adapted" systems given their local constraints and reflect the best local way to maintain and restore the health of people and communities.

Sceptics must confront the well-documented misconceptions (Table 1) that it is the biomedical approach that results in better health and longer life [3]. The design thinking process should allow their engagement and *change the way they look at things so they can appreciate things from a changed perspective*.

Table 1 Issues, perceptions, and misperceptions about the health system, compiled from McGinnis JM, Williams-Russo P, Knickman JR. The Case For More Active Policy Attention To Health Promotion [3] [emphasis added]

Issue	Fact	Additional comments
Health improve-ments over time	• The major contributions to improved health in England over the previous 200 years came more from *changes in food supplies, sanitary conditions, and family size* than from medical interventions [6]	
Effect of medicine on life expectancy	• Since 1950 medicine has accounted for about *three of the total of seven years* by which life expectancy has increased [7]	• Participants in the study rarely attributed increased life expectancy to public health measures or improvements in social health determinants. In contrast, subjects believed that medical care, by far, played the predominant role and attributed medical care for causing 80% of the life expectancy increase [8]
Leading Determi-nants of Health	• Drawing on the power of the exten-sive studies [9] of the past genera-tion, we can now speak about our health prospects as being shaped by our experiences in five domains: • **Genetic and gestational endow-ments**—only about 2% of deaths in the USA may be attributed to purely genetic diseases • **Social circumstances**—health is powerfully influenced by education, employment, income disparities, poverty, housing, crime, and social cohesion	• Socially isolated persons have a death rate *two to five times higher* than that of those who maintain close ties to friends, family, and community [11] • …each *1% rise in income inequality* (the income differential between rich and poor) is associated with something on the order of a *4% increase in deaths among persons on the low end*, which prods us to sort out the pecuniary ele-ments of deprivation from the biolog-ical, behavioural, and psychological consequences of place [12]

Table 1 (continued)

Issue	Fact	Additional comments
	• **Environmental conditions**—The places where we live and work can present hazards in the form of toxic agents, microbial agents, and structural hazards • **Behavioural choices**—The daily choices we make with respect to diet, physical activity, and sex; the substance abuse and addictions to which we fall prey; our approach to safety; and our coping strategies in confronting stress are all important determinants of health • **Medical care**—Improvements in the quality or use of medical care have a relatively limited ability to reduce deaths. Over the course of the twentieth century, about five of the thirty years of increased life expectancy could be attributable to better medical care [10]	• The Institute of Medicine (IOM), for example, suggests that *medical errors* alone may account for 44,000–98,000 deaths annually, or about 2–4% of all deaths [13]
The interconnected factors of health and illness/disease	• The health of populations is the product of the *intersecting influences* from these different domains [genes, social, environment, behaviour and medical care], *influences that are dynamic* and that *vary in their impact depending upon* when in the life course they occur and upon the effects of preceding and subsequent factors [14]	• On a population basis, using the best available estimates, the impacts of various domains on early deaths in the USA distribute roughly as follows: *genetic predispositions, about 30%; social circumstances, 15%; environmental exposures, 5%; behavioural patterns, 40%; and shortfalls in medical care, 10%*
The current drivers of health policy	• Quite distinct from the issues of evidence and complexity is *old-fashioned interest-group dynamics*. The interest groups that make health their highest priority and thus lobby hard for resources are those focused on research and treatment related to specific chronic diseases	• The result is a vacuum of political accountability for maintaining population health—in effect, a *diffusion of responsibility for health*

Table 1 (continued)

Issue	Fact	Additional comments
Barriers to health system redesign	• **Redistributive investments in health**—Interest-group dynamics, of course, play large roles in considerations of ways to change social conditions and the physical environment. Changing social inequalities and even investing tax dollars in social and community programs always represent zero-sum activities where those with more resources need to share with those with few resources. It takes more than just evidence that social change would improve health to convince the general public that such redistributive investments should be undertaken. *These choices are very much about ideology and social values* • **Social preferences**—In comparing investments in behavioural change to investments in medical care, the added issue of lifestyle and habits comes into play. *The public clearly wants medical care when illness occurs; this is a well-articulated social preference*. However, many people do not want to change their health-threatening behaviour even when they are quite aware of the risks they are taking. In these cases, arguments to invest in public programs to encourage behavioural change need to consider *what social factors predispose people to choose health-threatening behaviour*	• Often, careful consideration indicates that people are induced to adopt unhealthy behaviour in subtle and not so subtle ways. Simple examples include eating unhealthy foods *because of the absence of supermarkets in low-income neighbourhoods*, adopting sedentary lifestyles *because of unsafe neighbourhoods or environments* that make walking dangerous or unappealing, and smoking cigarettes or overusing alcohol *because of the influence of advertisements*
Shifting the emphasis of the healthcare system	• In 2010, the Healthy People goals were broadened to issues of *functional status* and *quality of life* and placed particular emphasis on *reducing disparities* among groups [15]	

Table 1 (continued)

Issue	Fact	Additional comments
The need for public engagement	• A focused, engaged public needs to understand the payoffs to *healthier lifestyles* and *improved social conditions* that *reduce stress* and *improve well-being*	• …people need to be convinced that interventions to change lifestyles and social conditions are available and not too burdensome
Drivers for a people-centred health policy approach	• …we [need to] build [incentives] into policy initiatives for healthier lifestyles, environments, and social conditions	• An array of legal and public policy interventions is available to improve population health: economic incentives and disincentives, information interventions, direct regulation, indirect regulation through the tort system, and deregulation [16]

References

1. Rittel HWJ, Webber MM (1973) Dilemmas in a general theory of planning policy sciences. Pol Sci 4(2):155–169
2. Kolko J (2015) Design thinking comes of age. Harv Bus Rev 93(9):66–69
3. McGinnis JM, Williams-Russo P, Knickman JR (2002) The case for more active policy attention to health promotion. Health Aff (Millwood) 21(2):78–93
4. Sturmberg JP, O'Halloran DM, Martin CM (2010) People at the centre of complex adaptive health systems reform. Med J Aust 193(8):474–478
5. Sturmberg JP (2015) If you want health, have a HEALTH system: changing the agendum. Eur J Pers Cent Healthc 3(2):175–181
6. McKeown T (1976) The modern rise of population. Edward Arnold, London
7. Bunker JP (2001) The role of medical care in contributing to health improvements within societies. Int J Epidemiol 30(6):1260–1263
8. Lindsay GB, Merrill RM, Hedin RJ (2014) The contribution of public health and improved social conditions to increased life expectancy: an analysis of public awareness. J Community Med Health Educ 4:5
9. McGinnis JM (2001) United States. In: Koop CE, Pearson CE, Schwarz MR (eds) Critical issues in global health. Jossey-Bass, San Francisco, pp 80–90
10. U.S. Department of Health and Human Services (1994) Public Health Service. For a healthy nation: returns on investments in public health. Washington: U.S. Government Printing Office, Contract No.: 0-16-045143-4
11. Berkman LF, Glass T (2000) Social integration, social networks, social support, and health. In: Berkman LF, Kawachi I (eds) Social epidemiology. Oxford University Press, New York, pp 137–173
12. Wolfson M, Gravelle H, Wilkinson RG, Kaplan G, Lynch J, Ross N et al (1999) Relation between income inequality and mortality: empirical demonstration diminishing returns to aggregate level studies. Two pathways, but how much do they diverge? Br Med J 319(7215):953–957
13. Smedley BD, Syme SL (eds) (2000) Promoting health: intervention strategies from social and behavioral research. National Academy Press, Washington
14. Institute of Medicine (2001) Health and behavior: the interplay of biological, behavioral, and societal influences. National Academy Press, Washington

15. McGinnis J, Richmond JB, Brandt EN Jr, Windom RE, Mason JO (1992) Health progress in the United States: results of the 1990 objectives for the nation. JAMA J Am Med Assoc 268(18):2545–2552
16. Gostin JD (2000) Legal and public policy interventions to advance the population's health. In: Smedley BD, Syme SL (eds) Promoting health: intervention strategies from social and behavioral research. National Academy Press, Washington, pp 390–416