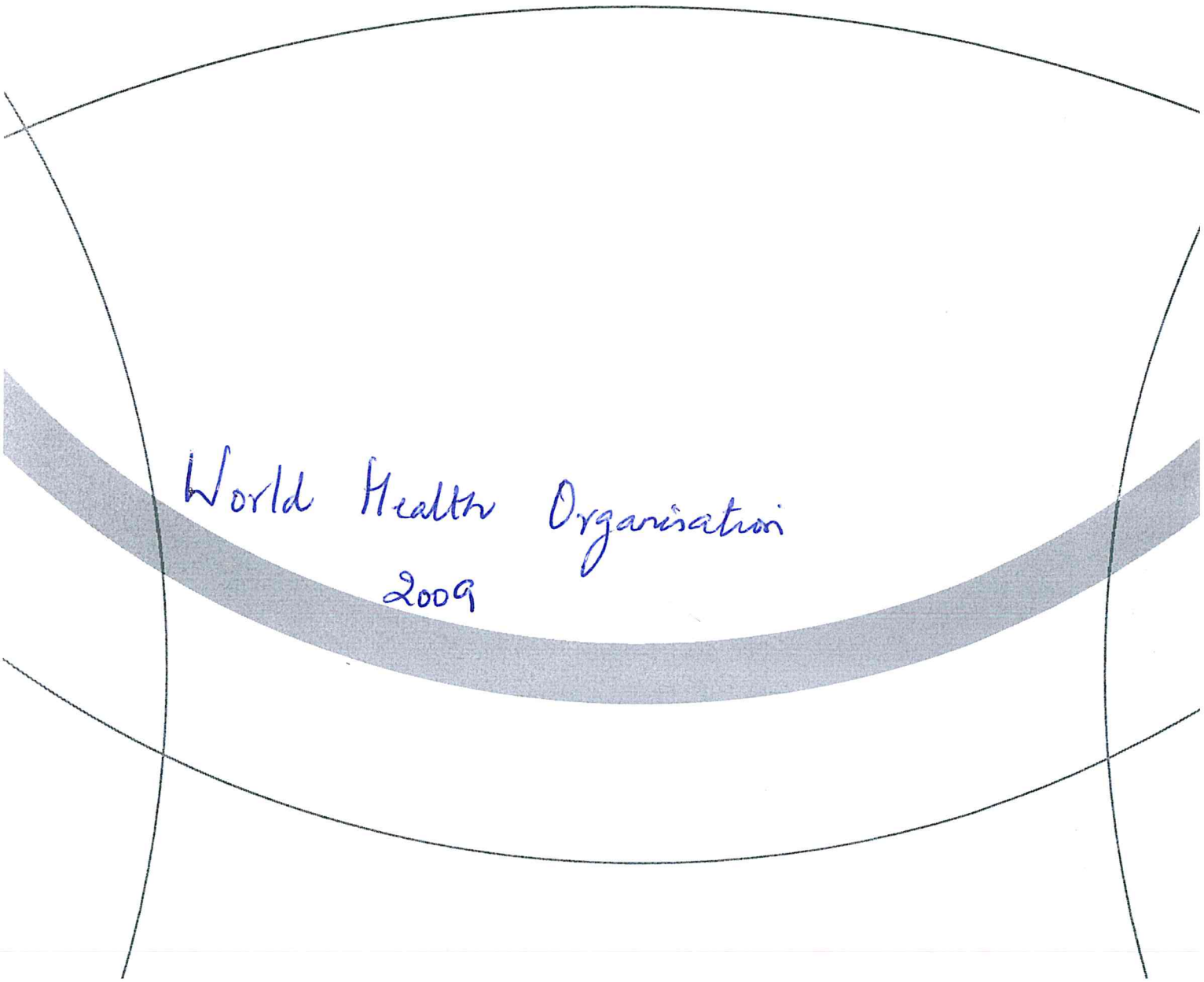
SYSTEMS THINKING

for Health Systems Strengthening



World Health Organisation
2009

WHO Library Cataloguing-in-Publication Data

Systems thinking for health systems strengthening / edited by Don de Savigny and Taghreed Adam.

1.Delivery of health care – organization and administration. 2.Delivery of health care – trends. 3.Systems theory. 4.Health services research. 5.Cooperative behavior. 6.Health policy. I.de Savigny, Donald. II.Adam, Taghreed. III.Alliance for Health Policy and Systems Research. IV.World Health Organization.

ISBN 978 92 4 156389 5 (NLM classification: W 84)

Printed in France
Designed by Capria
Design Consultant: James B. Williams
Suggested citation: Don de Savigny and Taghreed Adam (Eds). Systems thinking for health systems strengthening. Alliance for Health Policy and Systems Research, WHO, 2009.

Systemic factors and their effects are poorly studied and evaluated. Few health systems have the capacity to measure or understand their strengths and weaknesses, especially in regard to equity, effectiveness and their respective determinants. Without this broader understanding of a system's capacity, the research and development community struggles to design specific interventions that optimize the health system's ability to deliver essential health interventions. And – crucially – all too often there is another poorly appreciated phenomenon: *every health intervention, from the simplest to the most complex, has an effect on the overall system*. Presumably simple interventions targeting one health system entry point have multiple and sometimes counter-intuitive effects elsewhere in the system. Even when we anticipate the system-wide effects of multi-faceted and complex interventions, our approaches to charting, evaluating and understanding them are often weak and sometimes entirely absent. It is increasingly clear that no intervention – with a particular emphasis on system-level or system-wide interventions – ought to be considered "simple".

It is imperative that we understand the complex effects, synergies[1] and emergent behaviour of system interventions in order to capitalize on the current momentum of building stronger health systems (8). As investments in health are expanded and as funders increasingly support broader initiatives for health system strengthening, we need to know not only what works but for whom, and under what circumstances (9-17).

How we design interventions and evaluate effects, for both health systems strengthening interventions and for interventions targeting specific diseases or conditions, are the challenges at the heart of this Report.

How we design interventions and evaluate effects, for both health systems strengthening interventions and for interventions targeting specific health diseases or conditions are the challenges at the heart of this Report. We argue throughout that a systems thinking approach can greatly benefit overall health-sector development. It has huge potential, first in decoding the complexity of a health system, and then in using this understanding to design and evaluate interventions that maximize health and health equity. System thinking can provide a way forward for operating more successfully and effectively in complex, real-world settings. It can open powerful pathways to identifying and resolving health system challenges, and as such is a crucial ingredient for any health system strengthening effort.

Key terms and terminology

Arriving first at a clear set of concepts and terminology is essential, and to that end we discuss below the key terms used throughout this Report: the health system, health system building blocks, "people," systems thinking, system-level interventions, and evaluation.

The Health System. Following the definition of the World Health Organization, a health system *"consists of all organizations, people and actions whose primary intent is to promote, restore or maintain health"* (5). Its goals are *"improving health and health equity in ways that are responsive, financially fair, and make the best, or most efficient, use of available resources"* (5).

In referring to the individual components of health systems, this Report uses the current WHO "Framework for Action" on health systems, which describes six clearly defined **Health System Building Blocks** that together constitute a complete system (5). Throughout this Report, these building blocks serve as a convenient device for exploring the health

[1] A "synergy" is a situation where different entities combine advantageously – where the whole becomes greater than the sum of the individual parts.

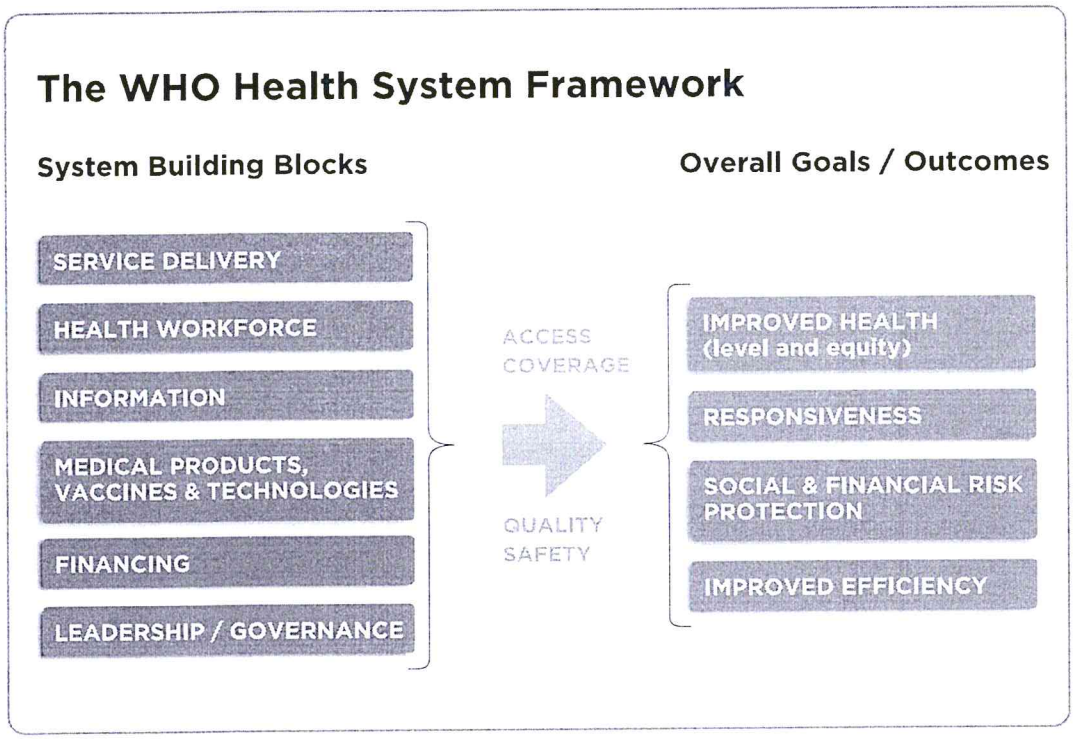
system and understanding the effects of interventions upon it. These building blocks are:

- *Service delivery:* including effective, safe, and quality personal and non-personal health interventions that are provided to those in need, when and where needed (including infrastructure), with a minimal waste of resources;
- *Health workforce:* responsive, fair and efficient given available resources and circumstances, and available in sufficient numbers;
- *Health information:* ensuring the production, analysis, dissemination and use of reliable and timely information on health determinants, health systems performance and health status;
- *Medical technologies:* including medical products, vaccines and other technologies of assured quality, safety, efficacy and cost-effectiveness, and their scientifically sound and cost-effective use;
- *Health financing:* raising adequate funds for health in ways that ensure people can use needed services, and are protected from financial catastrophe or impoverishment associated with having to pay for them;
- *Leadership and governance:* ensuring strategic policy frameworks combined with effective oversight, coalition building, accountability, regulations, incentives and attention to system design.

The building blocks alone do not constitute a system, any more than a pile of bricks constitutes a functioning building (Figure 1.1). It is the multiple relationships and interactions among the blocks – how one affects and influences the others, and is in turn affected by them – that convert these blocks into a system (Figure 1.2). As such, a health system may be understood through the arrangement and interaction of its parts, and how they enable the system to achieve the purpose for which it was designed (5).

The building blocks alone do not constitute a system, any more than a pile of bricks constitutes a functioning building. It is the multiple relationships and interactions among the blocks – how one affects and influences the others, and is in turn affected by them – that convert these blocks into a system.

Figure 1.1 The building blocks of the health system: aims and attributes (5)



The health system building blocks are sub-systems of the health system that function – and therefore must be understood – together in a dynamic architecture of interactions and synergies.

Health systems are often seen as monolithic, as a macro system with little attention paid to the interaction among its component parts, when in fact they are a dynamo of interactions, synergies and shifting sub-systems. If we see the building blocks as sub-systems of the health system, we see that within every sub-system is an array of other systems. All systems are contained or "nested" within larger systems (18;19). Within the heath system is the sub-system for service delivery; within that system may be a hospital system, and within that a laboratory system; and among all of these sub-systems are reactions, synergies and interactions to varying degrees with all of the health system's other building blocks.

People. It is critical that the role of people is highlighted, not just at the centre of the system as mediators and beneficiaries but as actors in driving the system itself. This includes their participation as individuals, civil society organizations, and stakeholder networks, and also as key actors influencing each of the building blocks, as health workers, managers and policy-makers. Placing people and their institutions in the centre of this framework emphasizes WHO's renewed commitment to the principles and values of primary health care – fairness, social justice, participation and inter-sectoral collaboration (20;21).

Figure 1.2 The dynamic architecture and interconnectedness of the health system building blocks