Contents

Message from the Director-General	xi
Acknowledgements	xiii
Executive Summary	XV
Chapter 1	
Learning to Improve Health	1
Key Messages	1
1.1 Why this report?	2
1.2 A historical perspective: two sides of the coin	3
1.3 The problem: current state of global health	5
1.4 Health systems and health research systems	14
1.5 Taking stock of health research	15
1.6 The process: how was this report developed?	29
1.7 Reorienting health research to strengthen health systems	32
Chapter 2	
Towards a Scientific Basis for Health Systems	37
Key Messages	37
2.1 Bottlenecks and constraints in health systems	38
2.2 Health systems research	44
2.3 What are the knowledge gaps in health systems?	48
2.4 Future challenges	55
Chapter 3	
Strengthening Health Research Systems	59
Key Messages	59
3.1 What is commonly known about health research activities?	60
3.2 What is a system for health research and why is it important?	63
3.3 Stewardship: what can good leadership do?	67
3.4 Financing: more funds or better use of existing funds?	73
3.5 Resources: people and organizations matter	76
3.6 Producing, synthesizing, and using research	84
3.7 What else is needed to improve health research systems?	91

CHAPTE LINKIN		
	g Research to Action	
Kev	Messages	97
		97
4.2	Links between research, policy, practice and public opinion Challenges and barriers to the use of research	98
4.3 1	How can researchers effectively communication	101
4.4 9	How can researchers effectively communicate research results? strengthening the use of evidence in decision-making	
4.5 I	Bringing together the producers and users of research	109
4.6 I	mproving public health programmes in developing countries	115
4.7 \$	ummary	120 128
Снартен	5	
	MENDATIONS AND ACTION PLAN	121
5.1 F	ecommendations	131
	ction plan	131
7	* s	132
GLOSSA	ry of Terms	139
	ATION SOURCES	143
	ground documents	143
Relat	ed publications	144
Abbrev	IATIONS	145
Tables		
TABLES Table 1.1	Regional disparities in selected health indicates	
	Regional disparities in selected health indicators Suggested topics for health systems research and their	6
Table 1.1	Suggested topics for health systems research and their	
Table 1.1	Suggested topics for health systems research and their potential to affect MDGs	30
Table 1.1 Table 1.2	Suggested topics for health systems research and their potential to affect MDGs Research priorities in noncommunicable diseases	
Table 1.1 Table 1.2 Table 1.3 Table 2.1	Suggested topics for health systems research and their potential to affect MDGs Research priorities in noncommunicable diseases Out-of-pocket health payments, catastrophic payments and impoverishment, 59 countries, various years 1991–2000	30 31
Table 1.1 Table 1.2 Table 1.3 Table 2.1 Table 2.2	Suggested topics for health systems research and their potential to affect MDGs Research priorities in noncommunicable diseases Out-of-pocket health payments, catastrophic payments and impoverishment, 59 countries, various years 1991–2000 Availability of death registration data in WHO regions	30 31 41
Table 1.1 Table 1.2 Table 1.3 Table 2.1	Suggested topics for health systems research and their potential to affect MDGs Research priorities in noncommunicable diseases Out-of-pocket health payments, catastrophic payments and impoverishment, 59 countries, various years 1991–2000 Availability of death registration data in WHO regions Barriers and challenges to improving service delivery	30 31
Table 1.1 Table 1.2 Table 1.3 Table 2.1 Table 2.2 Table 2.3	Suggested topics for health systems research and their potential to affect MDGs Research priorities in noncommunicable diseases Out-of-pocket health payments, catastrophic payments and impoverishment, 59 countries, various years 1991–2000 Availability of death registration data in WHO regions Barriers and challenges to improving service delivery identified in reviews of major initiatives	30 31 41 42
Table 1.1 Table 1.2 Table 1.3 Table 2.1 Table 2.2 Table 2.3 Table 2.4	Suggested topics for health systems research and their potential to affect MDGs Research priorities in noncommunicable diseases Out-of-pocket health payments, catastrophic payments and impoverishment, 59 countries, various years 1991–2000 Availability of death registration data in WHO regions Barriers and challenges to improving service delivery identified in reviews of major initiatives Some reasons for neglect of health systems research	30 31 41 42 45
Table 1.1 Table 1.2 Table 1.3 Table 2.1 Table 2.2 Table 2.3 Table 2.4 Table 2.5	Suggested topics for health systems research and their potential to affect MDGs Research priorities in noncommunicable diseases Out-of-pocket health payments, catastrophic payments and impoverishment, 59 countries, various years 1991–2000 Availability of death registration data in WHO regions Barriers and challenges to improving service delivery identified in reviews of major initiatives Some reasons for neglect of health systems research Research priorities in health systems financing	30 31 41 42
Table 1.1 Table 1.2 Table 1.3 Table 2.1 Table 2.2 Table 2.3 Table 2.4	Suggested topics for health systems research and their potential to affect MDGs Research priorities in noncommunicable diseases Out-of-pocket health payments, catastrophic payments and impoverishment, 59 countries, various years 1991–2000 Availability of death registration data in WHO regions Barriers and challenges to improving service delivery identified in reviews of major initiatives Some reasons for neglect of health systems research Research priorities in health systems financing Summary of the functions and operational components	30 31 41 42 45 47
Table 1.1 Table 1.2 Table 1.3 Table 2.1 Table 2.2 Table 2.3 Table 2.4 Table 2.5 Table 3.1	Suggested topics for health systems research and their potential to affect MDGs Research priorities in noncommunicable diseases Out-of-pocket health payments, catastrophic payments and impoverishment, 59 countries, various years 1991–2000 Availability of death registration data in WHO regions Barriers and challenges to improving service delivery identified in reviews of major initiatives Some reasons for neglect of health systems research Research priorities in health systems financing Summary of the functions and operational components of health research systems	30 31 41 42 45 47
Table 1.1 Table 1.2 Table 1.3 Table 2.1 Table 2.2 Table 2.3 Table 2.4 Table 2.5 Table 3.1 Table 4.1	Suggested topics for health systems research and their potential to affect MDGs Research priorities in noncommunicable diseases Out-of-pocket health payments, catastrophic payments and impoverishment, 59 countries, various years 1991–2000 Availability of death registration data in WHO regions Barriers and challenges to improving service delivery identified in reviews of major initiatives Some reasons for neglect of health systems research Research priorities in health systems financing Summary of the functions and operational components of health research systems Conflicting interests of policy-makers and researchers	30 31 41 42 45 47 52
Table 1.1 Table 1.2 Table 1.3 Table 2.1 Table 2.2 Table 2.3 Table 2.4 Table 2.5 Table 3.1	Suggested topics for health systems research and their potential to affect MDGs Research priorities in noncommunicable diseases Out-of-pocket health payments, catastrophic payments and impoverishment, 59 countries, various years 1991–2000 Availability of death registration data in WHO regions Barriers and challenges to improving service delivery identified in reviews of major initiatives Some reasons for neglect of health systems research Research priorities in health systems financing Summary of the functions and operational components of health research systems Conflicting interests of policy-makers and researchers Potential barriers to the uptake of evidence by health	30 31 41 42 45 47 52
Table 1.1 Table 1.2 Table 1.3 Table 2.1 Table 2.2 Table 2.3 Table 2.4 Table 2.5 Table 3.1 Table 4.1	Suggested topics for health systems research and their potential to affect MDGs Research priorities in noncommunicable diseases Out-of-pocket health payments, catastrophic payments and impoverishment, 59 countries, various years 1991–2000 Availability of death registration data in WHO regions Barriers and challenges to improving service delivery identified in reviews of major initiatives Some reasons for neglect of health systems research Research priorities in health systems financing Summary of the functions and operational components of health research systems Conflicting interests of policy-makers and researchers	30 31 41 42 45 47 52

Figures		
Figure 1.1	Under-5 mortality rates by income groups of countries	7
Figure 1.2	Under-5 mortality rates by socioeconomic quintile of the	
	household for selected countries	7
Figure 1.3	Maternal mortality per 100,000 live births	8
Figure 1.4	Health research can save lives	9
Figure 1.5	Actual and preventable under-5 deaths by country profiles	
	for 42 countries with 90% of under-5 deaths, 2000	10
Figure 1.6	Mortality attributable to 20 leading risk factors, 2001	12
Figure 1.7	Linkages between functions and goals of health systems	16
Figure 1.8	Linkages between functions and goals of health research	
	systems	16
Figure 1.9	Linkages between the health, health research and research	
	systems and the broader macro-environment	17
Figure 1.10	Triangle that moves the mountain	19
Figure 1.11	Membership of WHO expert advisory panels by gender,	
	1996–2002	21
Figure 1.12	Number of authors from regions and countries publishing	
	or co-publishing papers on chronic diseases or their major	
	risk factors, 1990-1993 and 2000-2003	22
Figure 1.13	Articles indexed in PubMed, 1950–1999	23
Figure 1.14	Global Internet access, 2002	23
Figure 1.15	Value and impact of systematic reviews	25
Figure 1.16	Number and proportion of systematic reviews in	
	developed and developing countries	25
Figure 2.1	Relationship between mortality and health workforce	38
Figure 2.2	Health workforce by region	39
Figure 3.1	Proportion of scientific publications addressing health	
	topics from different regions in the world, 2001	61
Figure 3.2	A view of strategic research	63
Figure 3.3	Key stakeholders within Malaysia's national health	
	research system	68
Figure 3.4	Perspectives on research priority setting processes	71
Figure 3.5a	Percentage of researchers by types of science and tech-	
20000	nology personnel in selected Latin American countries	76
Figure 3.5b	Proportion of women within each class of science and	
	technology personnel in selected Latin American countries	77
Figure 3.5c	Percentage of researchers by sector of employment in	
	selected Latin American countries compared to the USA	77
Figure 3.5d	Percentage of science and technology personnel by field	
	of science in selected Latin American countries	78
Figure 3.6	Collaboration in health research production for WHO	
	Regions, 2001	84
Figure 3.7	Publications in journals addressing health topics by field,	<u>.</u>
	1992–2001	87

Figure 3.8	Analysis of systematic reviews for selected health	
	interventions	87
Figure 3.9	Bona Simanjuntak gives a Wi-Fi demonstration to	
	students in Jakarta, Indonesia	91
Figure 4.1	Research to policy and practice pathway	100
Figure 4.2	Experience matters: links between mortality rate and	
	volume of surgical procedures	101
Figure 4.3	Simple solutions: treating diarrhoea in Bangladesh	127

Boxes		
Box 1.1	Health system constraints in Uniti	1.1
Box 1.1	Health system constraints in Haiti	11
Box 1.2	Policing disease: Hong Kong's rapid response to SARS	13
Box 1.3 Box 1.4	The first global health treaty is based on research	14
DOX 1.4	Important lessons for governments on developing	
D 1 5	better risk communications	18
Box 1.5	Implementing good clinical practice guidelines in	
D 1 C	developing countries	28
Box 1.6	Promoting health equity	32
Box 2.1	How Tanzania is using research to reform its health system	49
Box 2.2	Lao national drug policy	50
Box 2.3	INDEPTH	54
Box 2.4	Studying how societies optimize human health and well-being	56
Box 3.1	Evaluating biomedical research in the United States	66
Box 3.2	Creating a national health research system in the Philippines	69
Box 3.3	New Zealand: health research for Maori by Maori	70
Box 3.4	Public-private partnerships for research and development	72
Box 3.5	Innovative financing schemes for health research	75
Box 3.6	Building research capacity in South Africa	79
Box 3.7	Technology transfer to developing countries	80
Box 3.8	Creating an enabling working environment	82
Box 3.9	Brain drain or science gain?	83
Box 3.10	Fostering international collaboration	85
Box 3.11	A new social contract: HINARI bridges the digital divide	89
Box 3.12	WHO's Health Evidence Network	90
Box 3.13	Essential evidence for better practice in reproductive health	90
Box 3.14	Collective benchmarking of health research systems	93
Box 4.1	Research to policy: a contrarian's view	103
Box 4.2		106
Box 4.3		110
Box 4.4	A decade of diabetes research in Cameroon and its	
	10-1-1-1	111

Box 4.5	INCLEN's Knowledge Plus Project	114
Box 4.6	Translating research findings into practice	115
Box 4.7	Case study: the Equity Gauge Three Pillar Model	116
Box 4.8	Research to policy: views of senior policy-makers	117
Box 4.9	European Observatory on Health Systems and Policies	119
Box 4.10	Improving care during pregnancy and delivery	122
Box 4.11	Field research influences health policy	123
30x 4.12	Why research fails? A letter from an anthropologist	125
30x 4.13	Community participation in health research: an example	
	from Nepal	126
30x 4.14	Research for control: the onchocerciasis experience	128