Contents

	Foreword Preface	
	Contributors	xiii
	Acknowledgements	xvii
Chapter 1.	Introduction	xix
	The fundamentals	
	Introduction	3
	A public health concern	3
	Road deaths, disability and injury	3
	The social and economic costs of road traffic injuries	5
	Changing fundamental perceptions	7
	The predictability and preventability of road crash injury	7
	The need for good data and a scientific approach	8
	Road safety as a public health issue	8
	Road safety as a social equity issue	10
	Systems that accommodate human error	10
	Systems that account for the vulnerability of the human body	11
	Technology transfer from high-income countries	11
	The new model	12
	A systems approach	12
	Developing institutional capacity	13
	Achieving better performance	18
	Shared responsibility	18
	Setting targets	22
	Partnerships in the public and private sectors	23
	Conclusion	25
	References	25
Chapter 2.	The global impact	31
	Introduction	33
	Sources of data	33
	Magnitude of the problem	33
	Global estimates	33
	Regional distribution	34

	Country estimates	35
	Trends in road traffic injuries	36
	Global and regional trends	36
	Trends in selected countries	36
	Projections and predictions	37
	Motorization, development and road traffic injury	39
	Profile of people affected by road traffic injuries	41
	Types of road user	41
	Occupational road traffic injuries	44
	Sex and age	44
	Socioeconomic status and location	46
	Other health, social and economic impacts	47
	Health and social impacts	48
	Economic impact	50
	Data and evidence for road traffic injury prevention	52
	Why collect data and build evidence on road traffic injuries?	52
	Sources and types of data	52
	Data linkages	55
	Analysis of data	56
	Data issues and concerns	56
	Other issues	59
	Limitations of the data sources used in this chapter	59
	Conclusion	60
	References	61
Chapter 3.	Risk factors	69
	Introduction	71
	Factors influencing exposure to risk	72
	Rapid motorization	72
	Demographic factors	74
	Transport, land use and road network planning	74
	Increased need for travel	75
	Choice of less safe forms of travel	75
	Risk factors influencing crash involvement	76
	Speed	76
	Pedestrians and cyclists	78
	Young drivers and riders	79
	Alcohol	80
	Medicinal and recreational drugs	83
	Driver fatigue	84
	Hand-held mobile telephones	85
	Inadequate visibility	85
	Road-related factors	86
	Vehicle-related risk factors	88

	Risk factors influencing injury severity	88
	Lack of in-vehicle crash protection	88
	Non-use of crash helmets by two-wheeled vehicle users	90
	Non-use of seat-belts and child restraints in motor vehicles	91
	Roadside objects	93
	Risk factors influencing post-crash injury outcome	93
	Pre-hospital factors	94
	Hospital care factors	94
	Conclusion	94
	References	95
Chapter 4.	Interventions	107
	A road traffic system designed for safe, sustainable use	109
	Managing exposure to risk through transport and land-use policies	109
	Reducing motor vehicle traffic	109
	Encouraging use of safer modes of travel	111
	Minimizing exposure to high-risk scenarios	111
	Shaping the road network for road injury prevention	113
	Safety-awareness in planning road networks	113
	Incorporating safety features into road design	114
	Remedial action at high-risk crash sites	118
	Providing visible, crash-protective, "smart" vehicles	119
	Improving the visibility of vehicles	119
	Crash-protective vehicle design	120
	"Intelligent" vehicles	124
	Setting and securing compliance with key road safety rules	126
	Setting and enforcing speed limits	127
	Setting and enforcing alcohol impairment laws	128
	Medicinal and recreational drugs	131
	Drivers' hours of work in commercial and public transport	131
	Cameras at traffic lights	132
	Setting and enforcing seat-belt and child restraint use	132
	Setting and enforcing mandatory crash helmet use	135
	The role of education, information and publicity	137
	Delivering post-crash care	138
	Chain of help for patients injured in road crashes	138
	Pre-hospital care	139
	The hospital setting	140
	Rehabilitation	141
	Research	142
	Conclusion	143
	References	143

Chapter 5.	Conclusions and recommendations	155
	Main messages from the report	157
	Recommended actions	160
	Conclusion	164
	Statistical annex	165
	Glossary	199
	Index	203