

Table of contents

List of abbreviations	7
List of figures	9
List of boxes	10
List of tables	11
Summary.....	13
Zusammenfassung	15
Chapter 1.....	17
<i>Introduction</i>	<i>17</i>
1.1 Health system resources and the COVID-19 pandemic.....	19
1.2 Theory and definitions.....	21
1.2.1 Central functions of health systems: resource generation and service provision	21
1.2.2 Definition of human and physical resources	23
1.2.3 Investment in human and physical resources	25
1.3 Resources and provision of services: the role of efficiency.....	26
1.3.1 The concept of technical and allocative efficiency	26
1.3.2 Cross-country comparison of health system resources.....	27
1.3.3 Health care performance: health resources and health outcomes.....	30
1.4 Contextual challenges for distribution, deployment, and mobilisation of health resources ...	30
1.4.1 Health system challenges	30
1.4.2 Relevance of the research	33
1.5 Research questions and structure of the dissertation.....	33
References Chapter 1.....	37
Chapter 2.....	43
<i>Gesundheitssysteme weltweit: beschreiben, verstehen, verbessern [Describing, understanding and improving health systems worldwide]</i>	<i>43</i>
2.1 Einleitung	46
2.1.1 Bedeutung von Gesundheitssystemen weltweit: früher und heute	47
2.1.2 Definition von Gesundheitssystemen	49
2.1.3 Ziele.....	50
2.1.4 Funktionen	51
2.1.5 Akteure.....	52
2.2 Finanzierung von Gesundheitssystemen	53
2.2.1 Finanzierungsquellen und Kostenträger.....	53
2.2.2 Gesundheitsausgaben.....	55

2.2.3 Finanzierungsmodelle	57
2.3 Leistungserbringung in Gesundheitssystemen	59
2.3.1 Ebenen der Gesundheitsversorgung.....	59
2.3.2 Öffentliche, freigemeinnützige und private Leistungserbringer	63
2.4 Leistungsfähigkeit von Gesundheitssystemen.....	65
2.4.1 Gesundheit.....	66
2.4.2 Finanzielle Absicherung und gerechte Finanzierung	68
2.4.2 Responsiveness	69
2.5 Ausblick	70
2.5.1 Stärkung von Gesundheitssystemen im Kontext globaler Gesundheitspolitik.....	70
2.5.2 Welche Rolle spielen Beitrag und Austausch von Wissenschaft und Politik?	71
References Chapter 2.....	74
Chapter 3.....	77
<i>Time trends in the regional distribution of physicians, nurses and midwives in Europe</i>	77
3.1 Background	80
3.2 Methods.....	81
3.2.1 Availability of national and regional level data.....	81
3.2.2 Outcome measure	82
3.2.3 Country selection	82
3.2.4 Data analysis	82
3.3 Results.....	83
3.3.1 Density of physicians.....	83
3.3.2 Growth of the physician workforce at national and regional level, 2005 - 2017	89
3.3.3 Density of nurses and midwives	95
3.3.4 Growth of the nurse and midwife workforce at national & regional level, 2005 - 2015 ..	96
3.4 Discussion.....	99
3.4.1 Density of health professionals within and across countries	99
3.4.2 Geographical distribution over time	100
3.4.3 Limitations	101
3.5 Conclusions	101
References Chapter 3.....	103
Chapter 4.....	107
<i>Methods applied in Chapter 5 and Chapter 6.....</i>	107
4.1 Qualitative interviews exploring 24-hours care and dualised labour markets (Chapter 5)....	109
4.2 An overview of systematic reviews: Skill-mix in chronic care & multimorbidity (Chapter 6).114	

Annex Chapter 4: Interview guidelines I – IV	118
References Chapter 4	130
Chapter 5.....	131
<i>Regulating migrants as a low-cost solution for long-term care: The formalisation of a dual care labour market in Austria</i>	<i>131</i>
5.1 Introduction	135
5.2 Health and social care as dualised labour markets.....	138
5.3 Dual labour markets as a result of long-term care policies: The case of Austria	140
5.4 The experience of migrant carers in dual labour markets: Professional standards, working conditions and social protection.....	143
5.4.1 Professional standards: access, qualification and responsibilities	143
5.4.2 Wages and social protection.....	145
5.4.3 Working conditions	146
5.5 Persistent dualised structures of the labour market in long-term care	148
References Chapter 5.....	153
Chapter 6.....	157
<i>Chronic conditions and multimorbidity: skill-mix innovations for enhanced quality and coordination of care</i>	<i>157</i>
6.1 Introduction	160
6.2 Evidence on outcomes of skill-mix interventions for chronic conditions & multimorbidity ..	161
6.2.1 Pharmacist-delivered interventions	163
6.2.2 Nurse-delivered skill-mix interventions	170
6.2.3 Skill-mix interventions delivered by professions other than pharmacists and nurses for single chronic conditions	179
6.2.4 Skill-mix interventions delivered by multiprofessional teams.....	186
6.3 Country developments and trends in skill-mix innovation for chronic care and multimorbidity across Europe.....	195
6.3.1 The expansion of existing roles of nurses, pharmacists and other health professionals	196
6.3.2 Collaboration and multiprofessional team-based care	200
6.3.3 New care coordinating roles to improve the care trajectory of patients with chronic and multimorbid conditions	202
6.4 Conclusions	204
References of Chapter 6	206
Chapter 7.....	215
<i>European countries' responses in ensuring sufficient physical infrastructure and workforce capacity during the first COVID-19 wave</i>	<i>215</i>
7.1 Introduction	218

7.2 Methods.....	219
7.3 Results.....	220
7.3.1 Space: Creating acute and intensive care capacity for COVID-19 patients	221
7.3.2 Supplies: Limited availability of personal protective and medical equipment.....	225
7.3.3 Systems: Monitoring system to manage surge capacity of beds, PPE and medical equipment.....	227
7.3.4 Staff: Strategies to increase workforce capacity	230
7.4 Discussion.....	235
7.4.1 Strategies developed to create surge capacity provide important lessons for public health crises	235
7.4.2 Coordination and contingency planning are key to ensure sufficient infrastructure and workforce.....	236
7.4.3 Health systems' responses to create surge capacity require evaluation	237
7.4.4 Creating agile health systems informed by real-time monitoring is a key challenge.....	238
7.5 Conclusion.....	239
References Chapter 7.....	240
Chapter 8.....	245
<i>A country-level analysis comparing hospital capacity and utilization during the first COVID-19 wave across Europe.....</i>	245
8.1 Introduction	248
8.2 Materials and methods	249
8.2.1 Type of study and data collection	249
8.2.2. Data description.....	250
8.2.3 Analysis	250
8.3 Results.....	251
8.4 Discussion.....	259
8.5 Conclusions	262
References Chapter 8.....	263
Annex Chapter 8. Supplementary tables	266
Chapter 9.....	291
<i>Summary, discussion and conclusion</i>	291
References Chapter 9.....	302