

How to build resilient health systems?

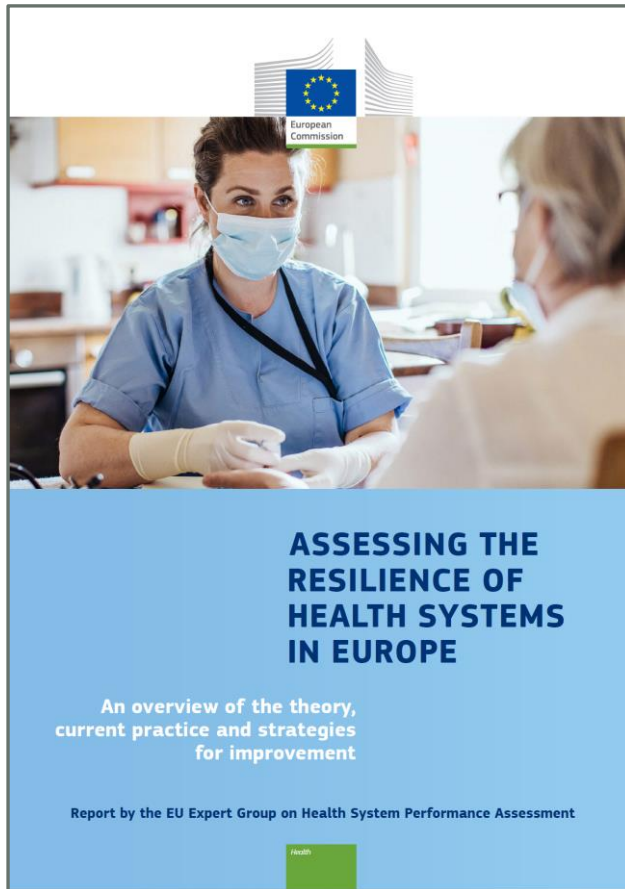
Science for Resilience – Learnings from the Pandemic | 23 May 2022

Herwig Ostermann^{1,2}

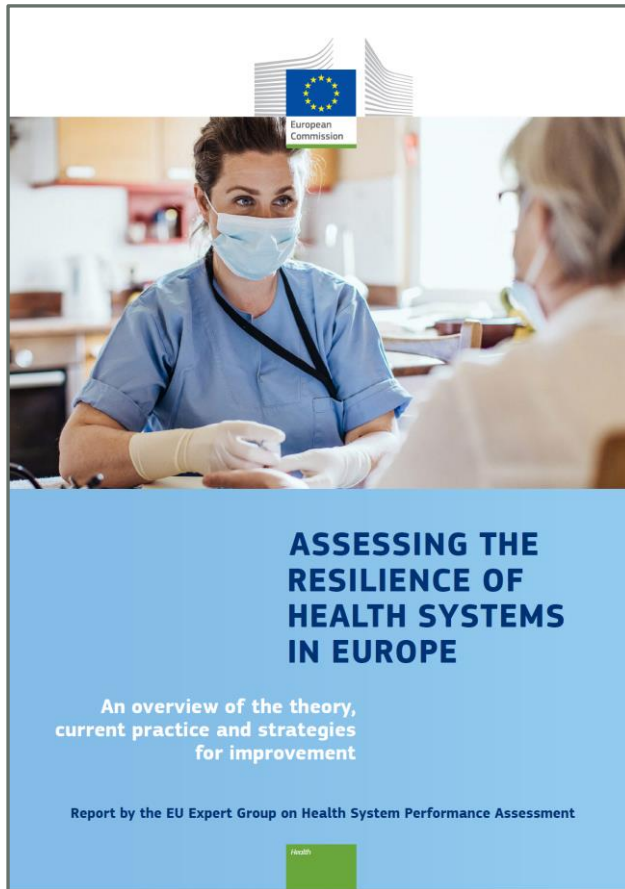
1 Executive Director, Austrian National Public Health Institute, Vienna, Austria

2 Associate Professor, Department of Public Health, Health Systems Research & HTA, University for Health Sciences, Medical Informatics and Technology, Hall/Tyrol, Austria

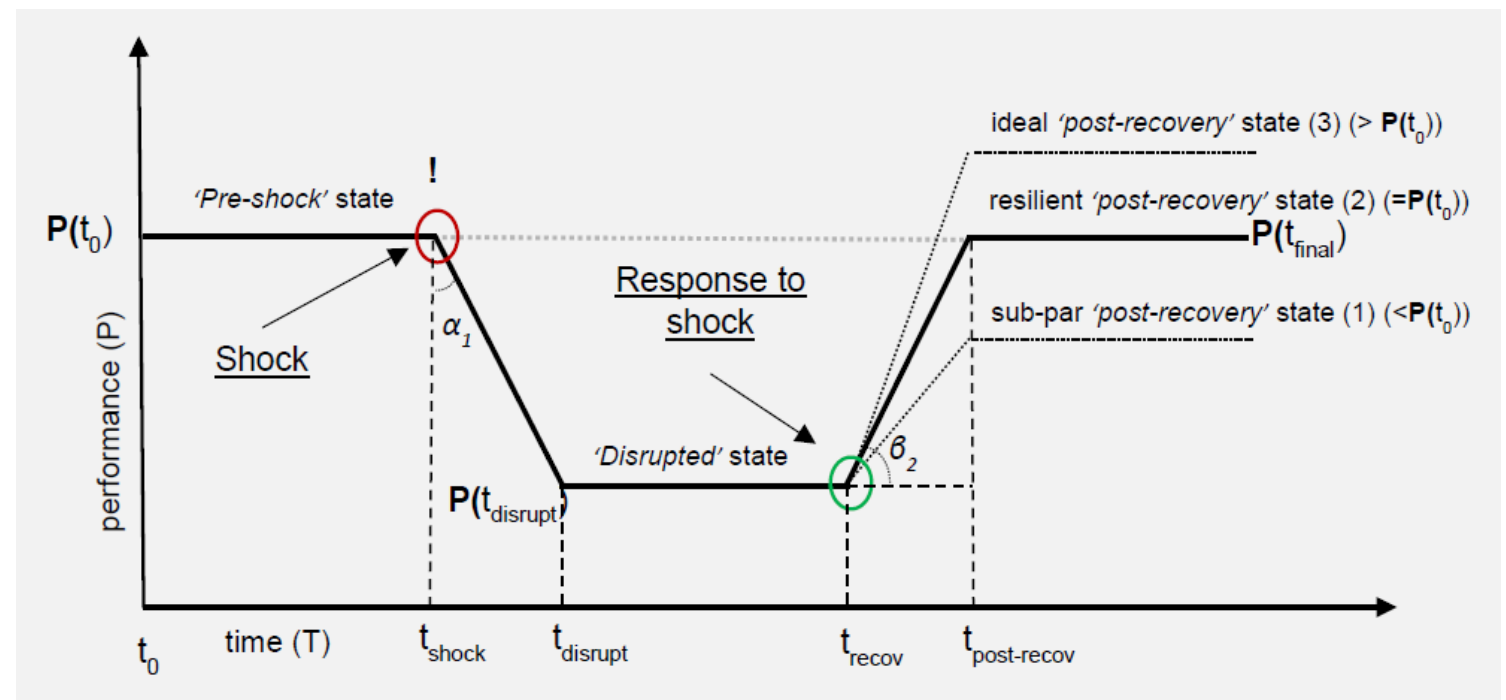
How to build resilient health systems? Conceptual Framework



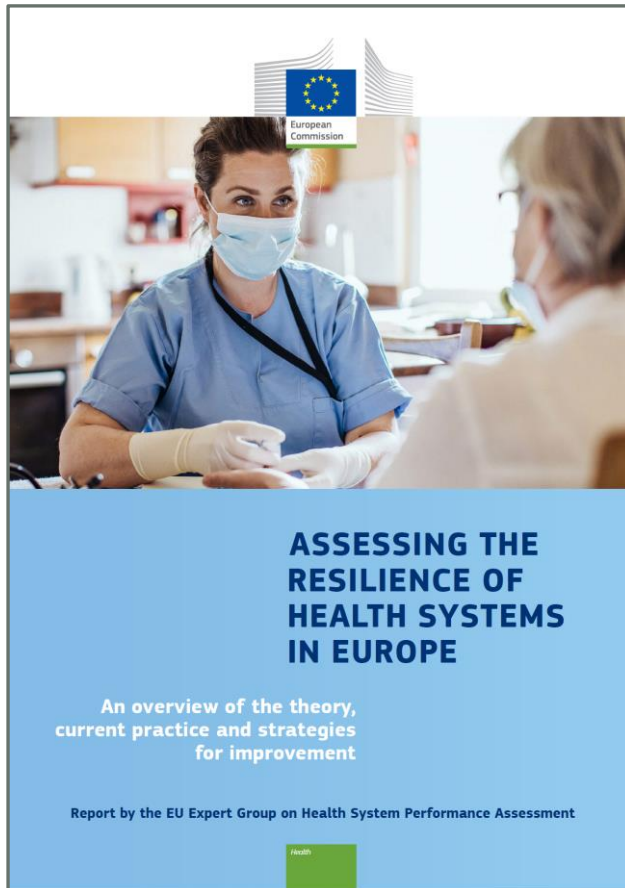
How to build resilient health systems? Conceptual Framework



» The concept of resilience



How to build resilient health systems? Conceptual Framework

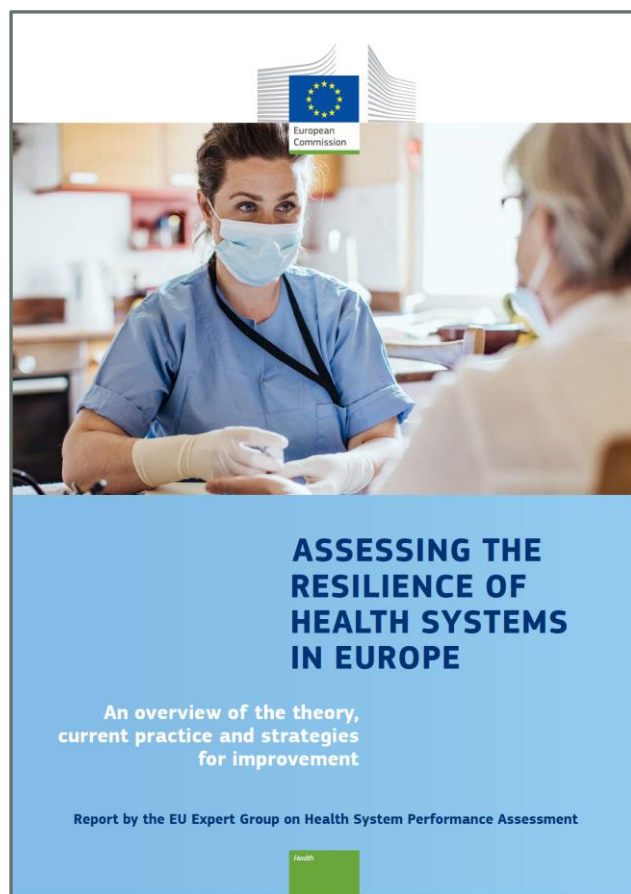


» Elements of resilience

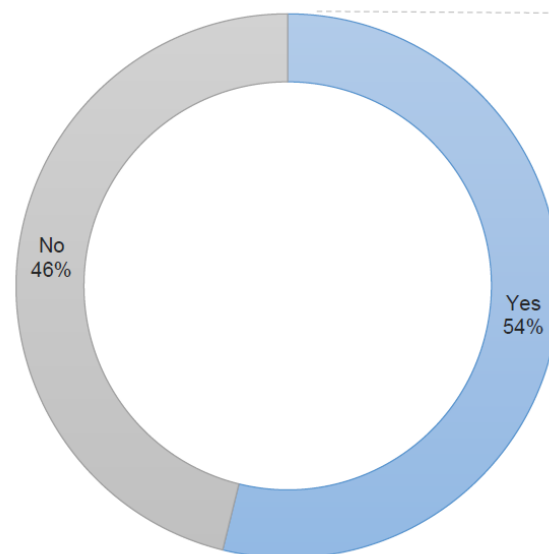
Box 2. A (non-exhaustive) list of health system resilience-enhancing elements

- Protected and diversified health system revenue generation/financing mechanism;
- Adequate buffers/rapidly deployable reserve capacity (material and financial resources);
- Regularly revised and updated risk management plans;
- Built-in redundancies/alternative ways to deliver care;
- Existence of a high-quality (i.e. sufficiently sensitive and specific) epidemiological surveillance system;
- Easy access to detailed and timely health information by health system managers and policymakers;
- High level of 'social capital' (institutional trust, cooperation capacity, public awareness of health risks);
- Effective communication and coordination across government entities and other relevant stakeholders;
- Explicitly defined public/statutory health insurance health benefit basket;
- Universal health coverage;
- Well-functioning health system performance monitoring and forecasting practices;
- Well-motivated and supported health workforce of appropriate size;
- Strong and transparent health system leadership;
- Existence of an organisational learning culture/'learning from failure' within the health system.

How to build resilient health systems? Conceptual Framework



» Resilience assessment –> ICU capacity



Emergency / crisis management system:

- 1
 - Capacity of emergency departments to receive victims of a **chemical, biological, radiological, nuclear or explosive incident**
 - Capacity to meet sudden surges in the **demand for blood in emergency wards**
 - Capacity to provide **psychosocial support to casualties**

Resource assessment

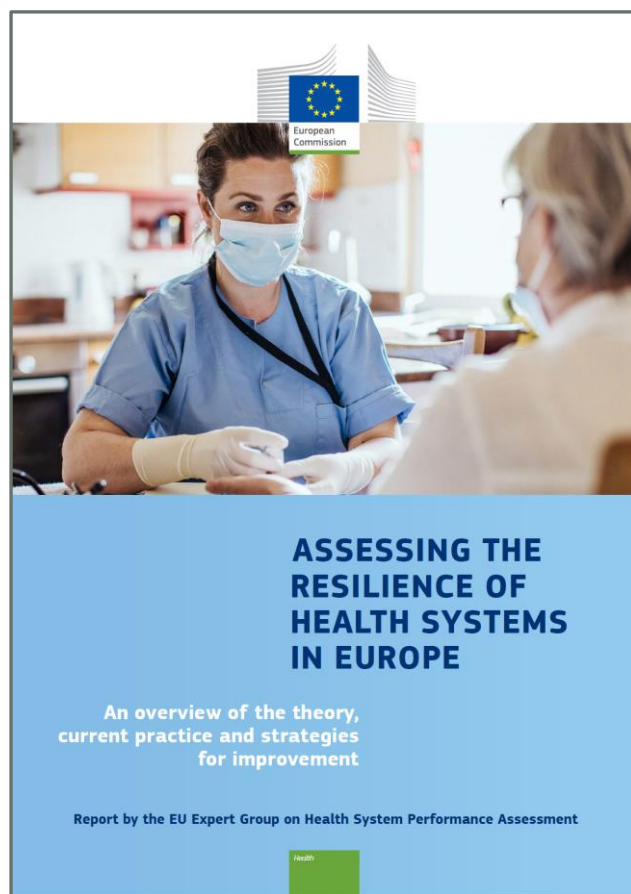
- 2
 - **Institutional capacity** (leadership, culture, operational processes)
 - **Type of workforce** available in emergency departments
 - **Infrastructure**
 - **Availability of medicines / equipment** in emergency wards

Regularly monitored indicators

- 3
 - **'Appropriate use'** of emergency care
 - **Patient flow** (discharges, admissions)
 - **Waiting times** for emergency care
 - **Bed occupancy rates**

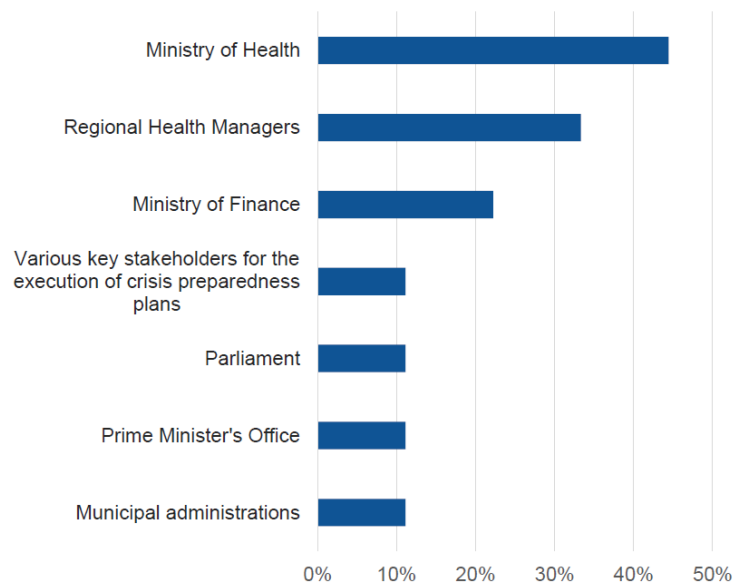
How to build resilient health systems?

Conceptual Framework

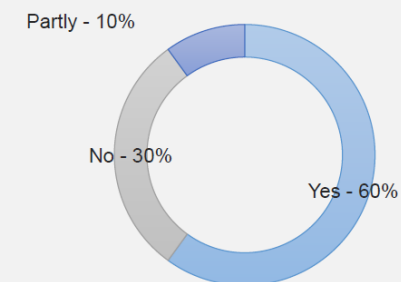


» Target audience and transparency

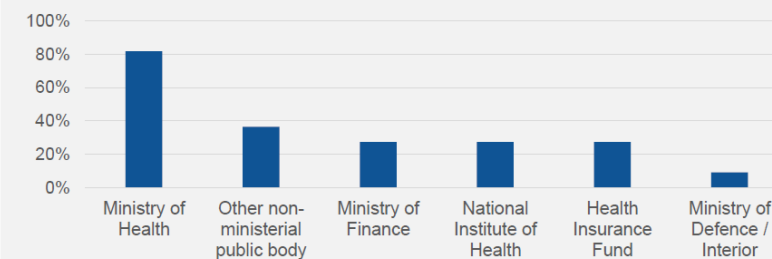
- Who is the intended **target audience for the results of the resilience assessment**?



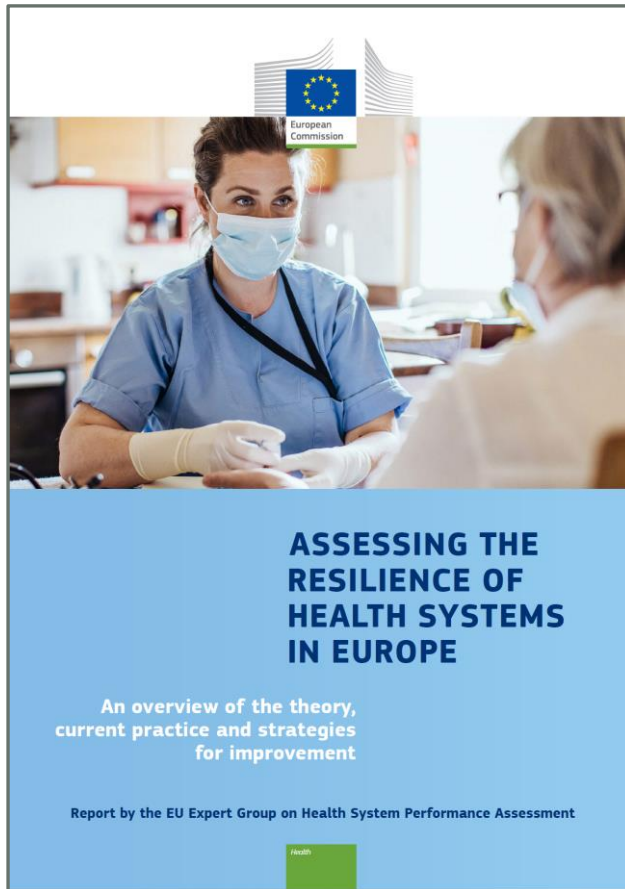
- Are the results of the resilience assessment **publicly available**?



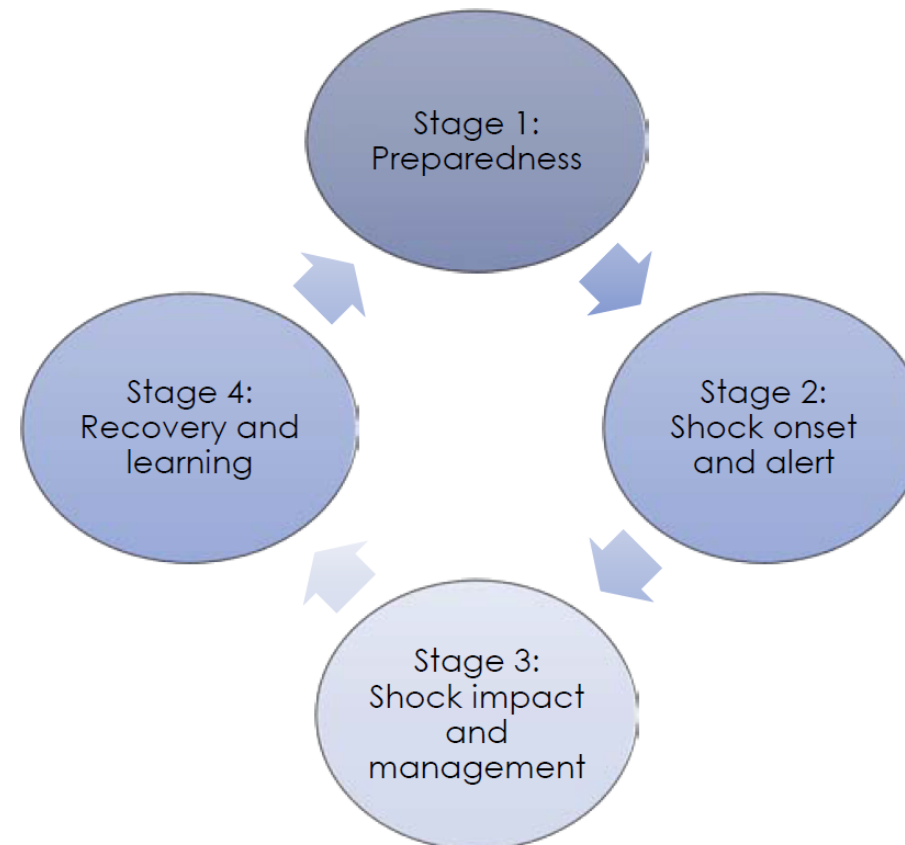
- Who carries out the resilience assessment?



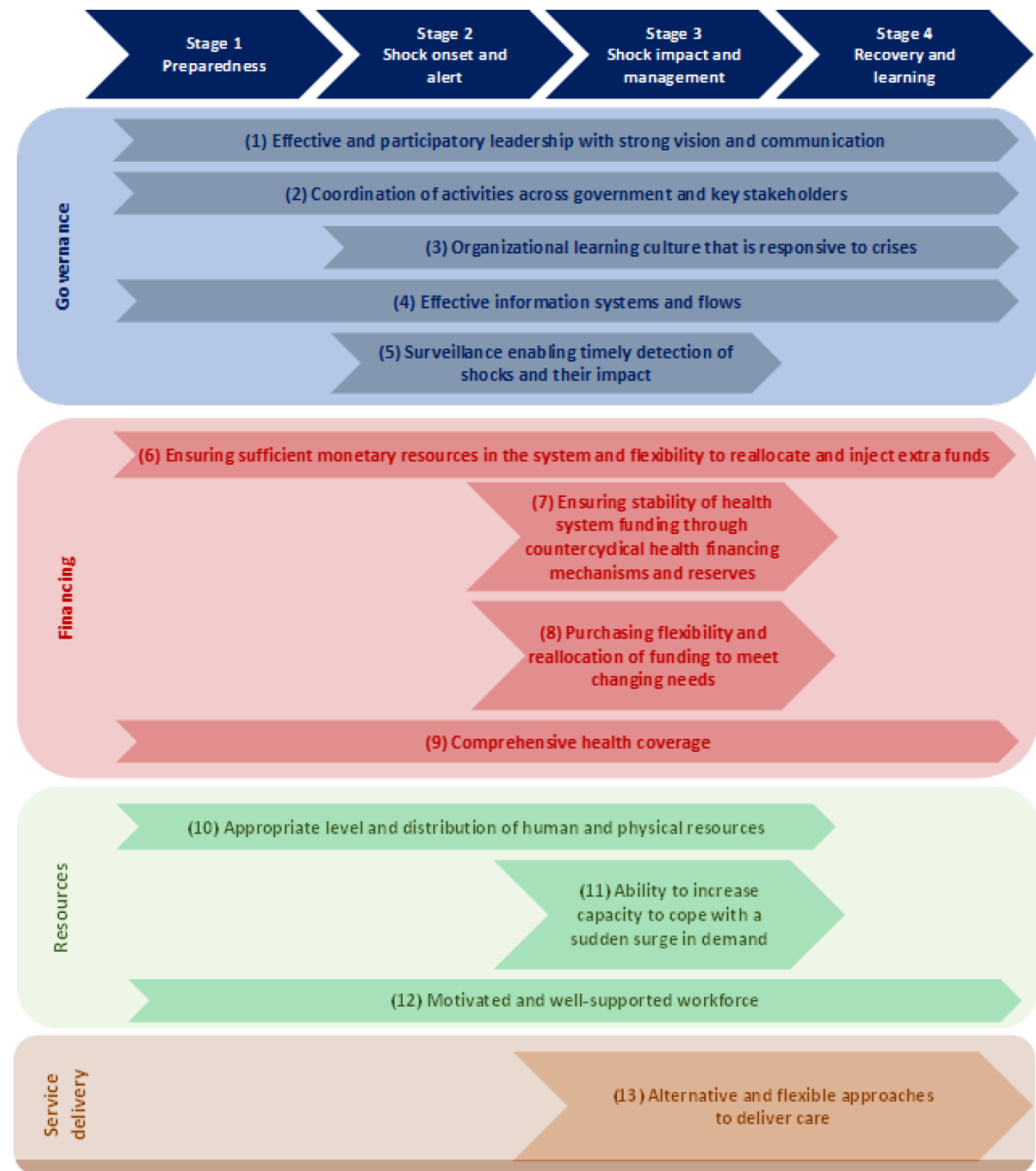
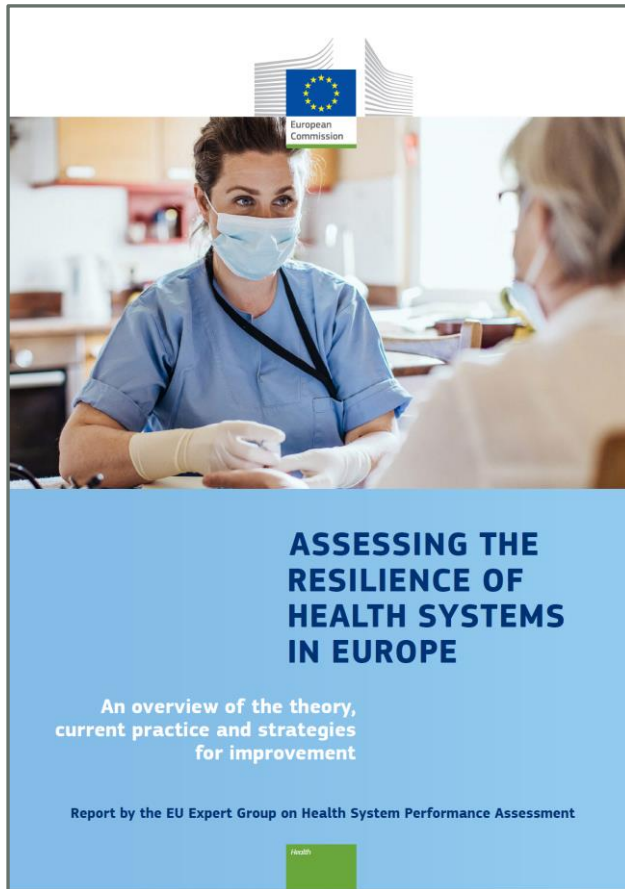
How to build resilient health systems? Conceptual Framework



» Stages of crisis response



How to build resilient health systems? Conceptual Framework



How to build resilient health systems?

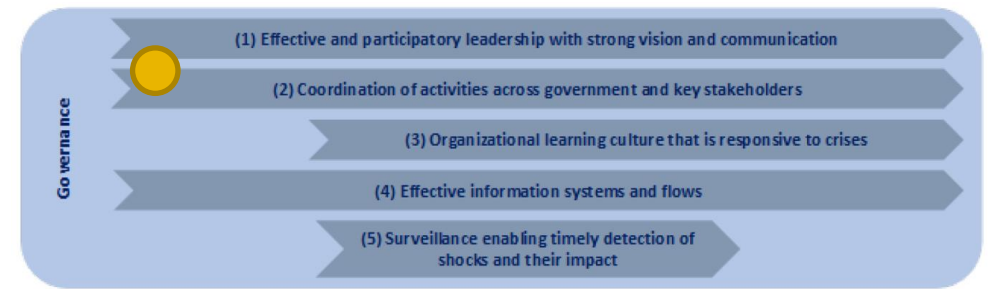
Governance



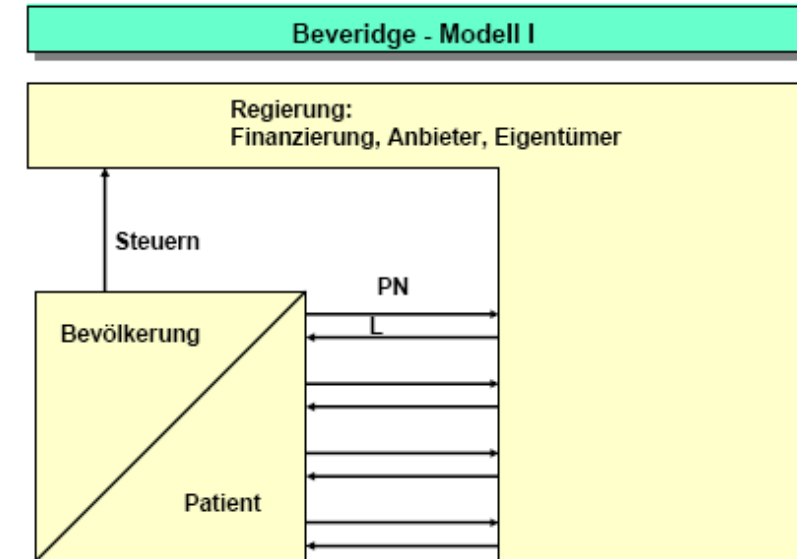
» The challenge of appropriate governance

How to build resilient health systems?

Governance



» The challenge of appropriate governance

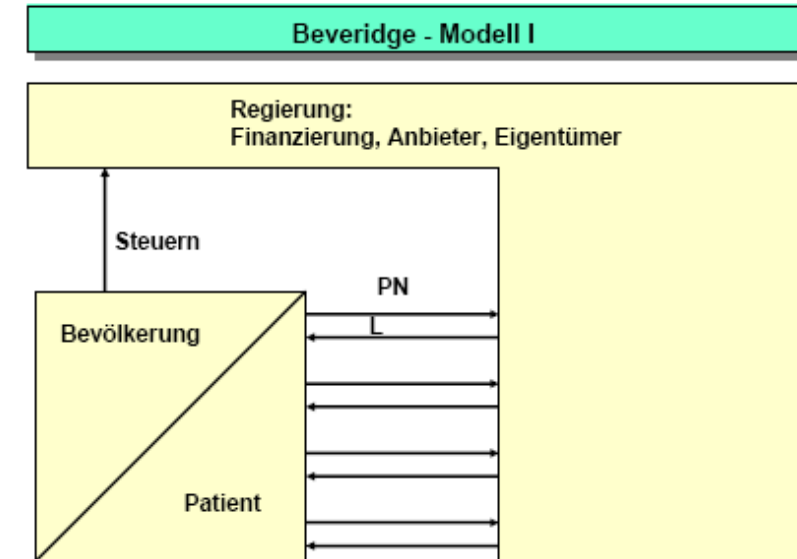


How to build resilient health systems?

Governance



» The challenge of appropriate governance



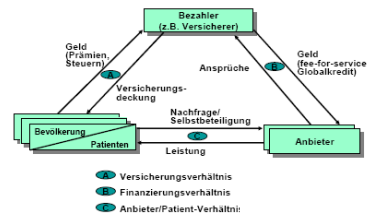
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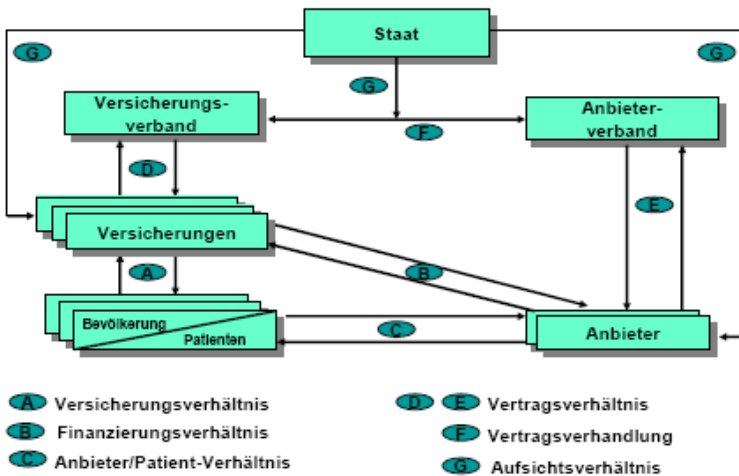


» The challenge of appropriate governance

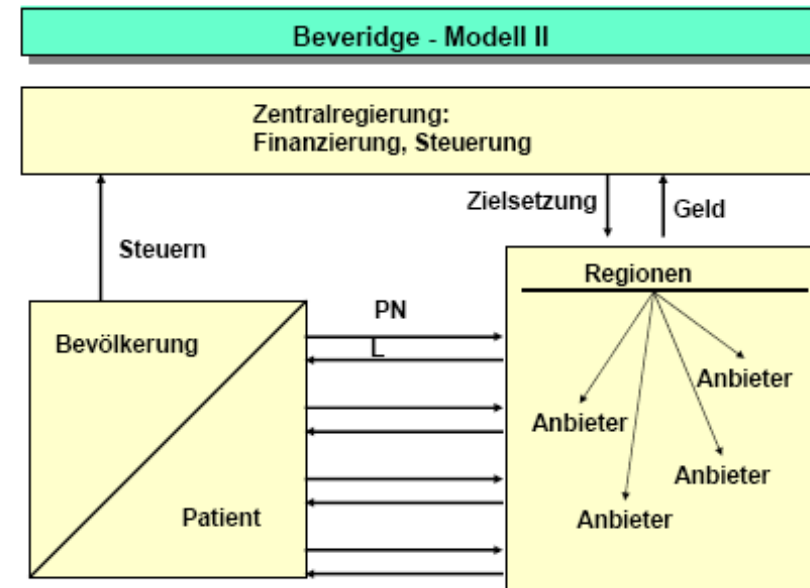
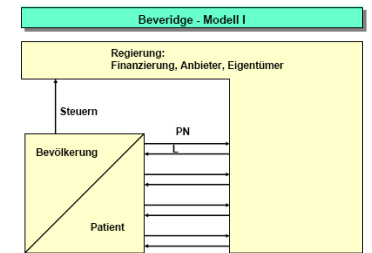
Oekonomische Beziehungen in der Gesundheitsversorgung I (generisches Modell)



Oekonomische Beziehungen in der Gesundheitsversorgung II (Bismarck-Modell)



Governance
Information

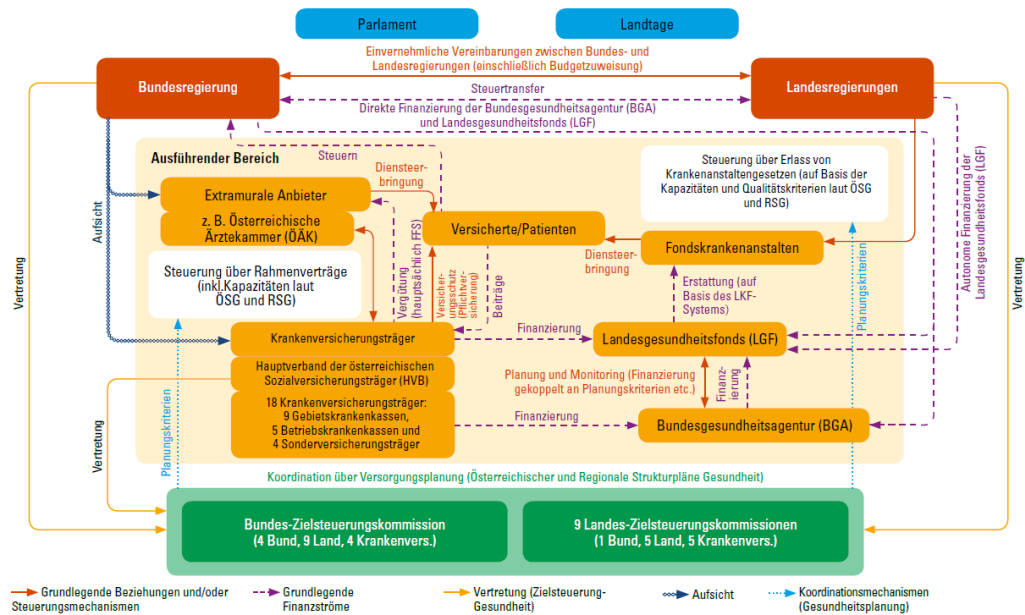


How to build resilient health systems?

Governance



» The challenge of appropriate governance



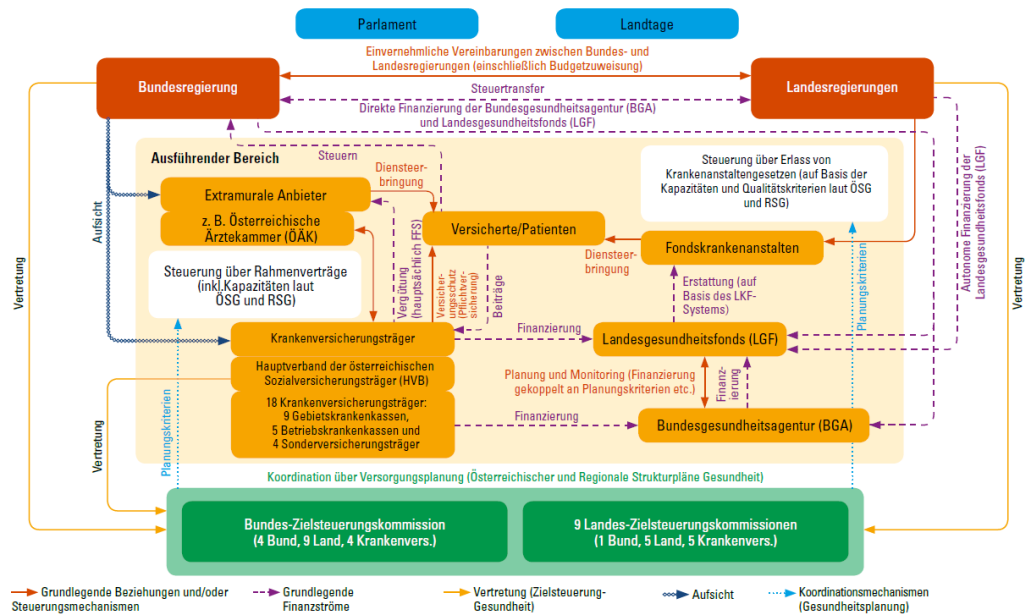
„Bargaining and cooperation“

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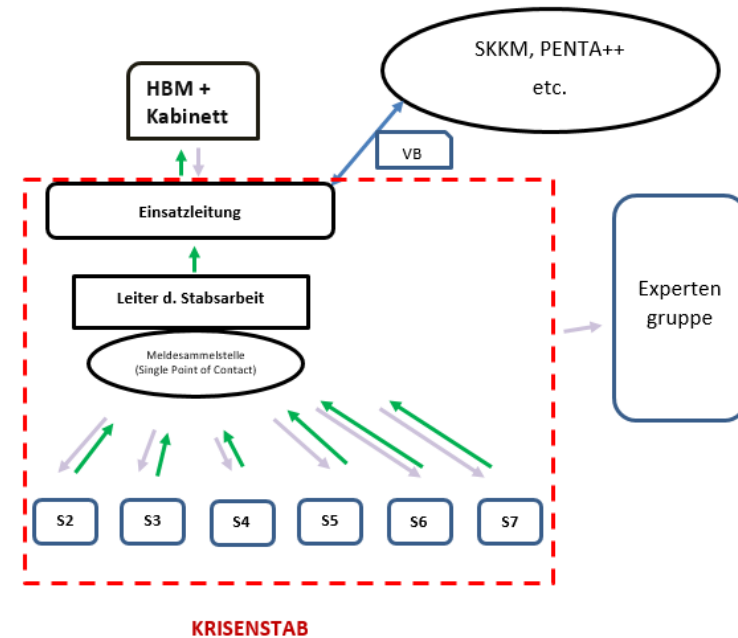
Governance



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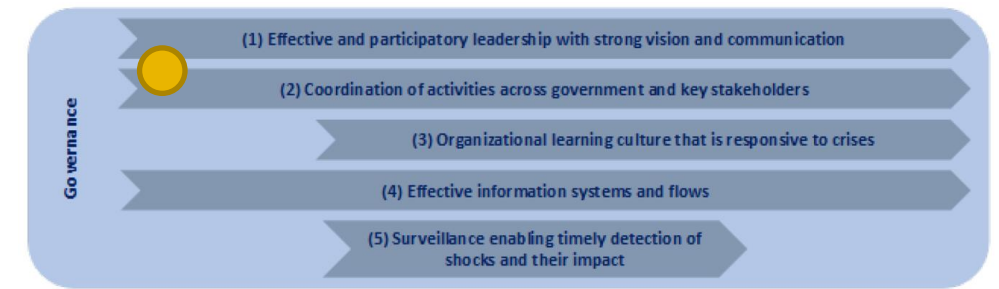
„Bargaining and cooperation“



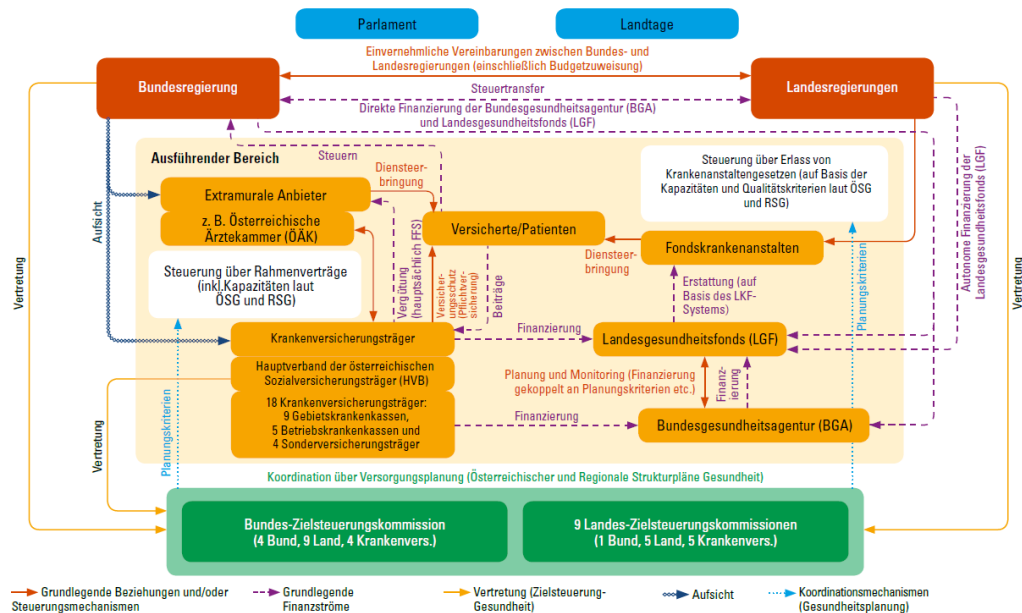
„Decision-making and execution“

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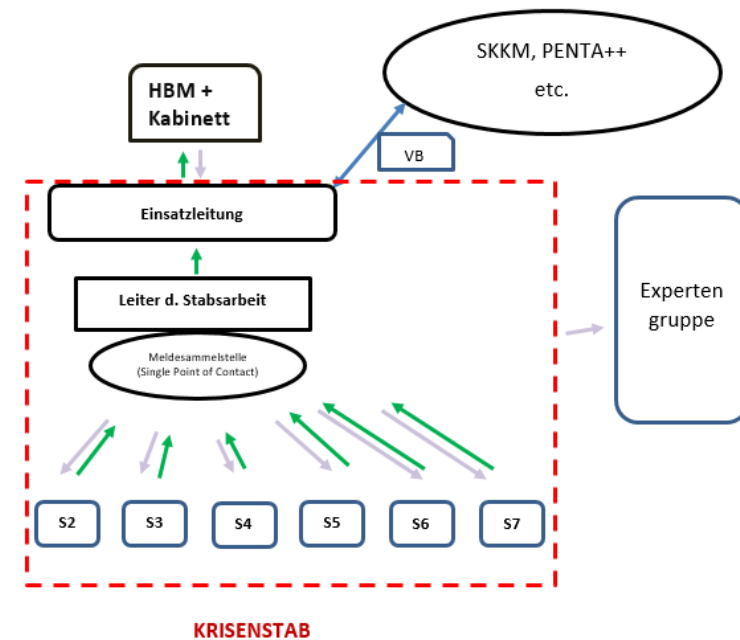
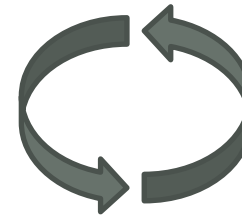
Governance



» The challenge of appropriate governance



„Bargaining and cooperation“



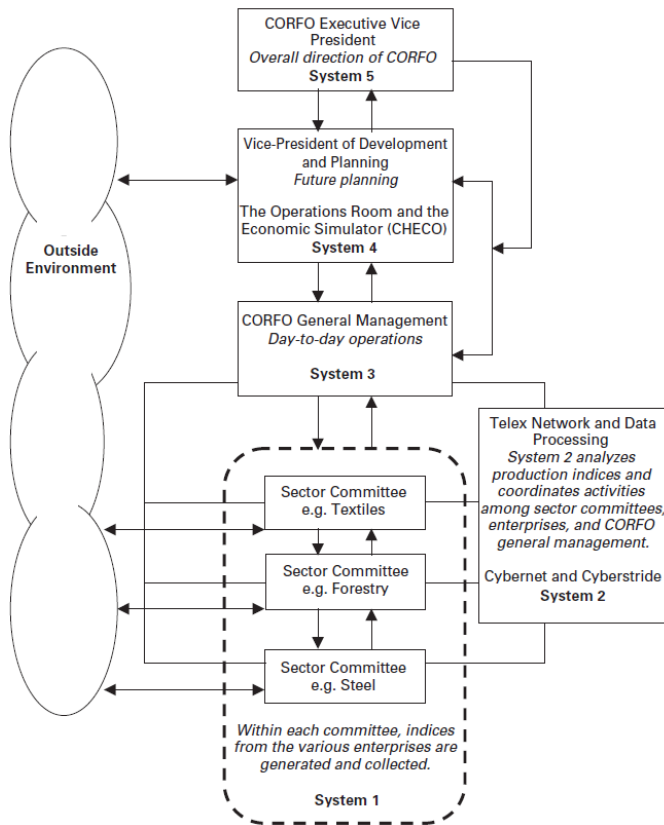
„Decision-making and execution“

How to build resilient health systems?

Governance



» The challenge of effective information systems

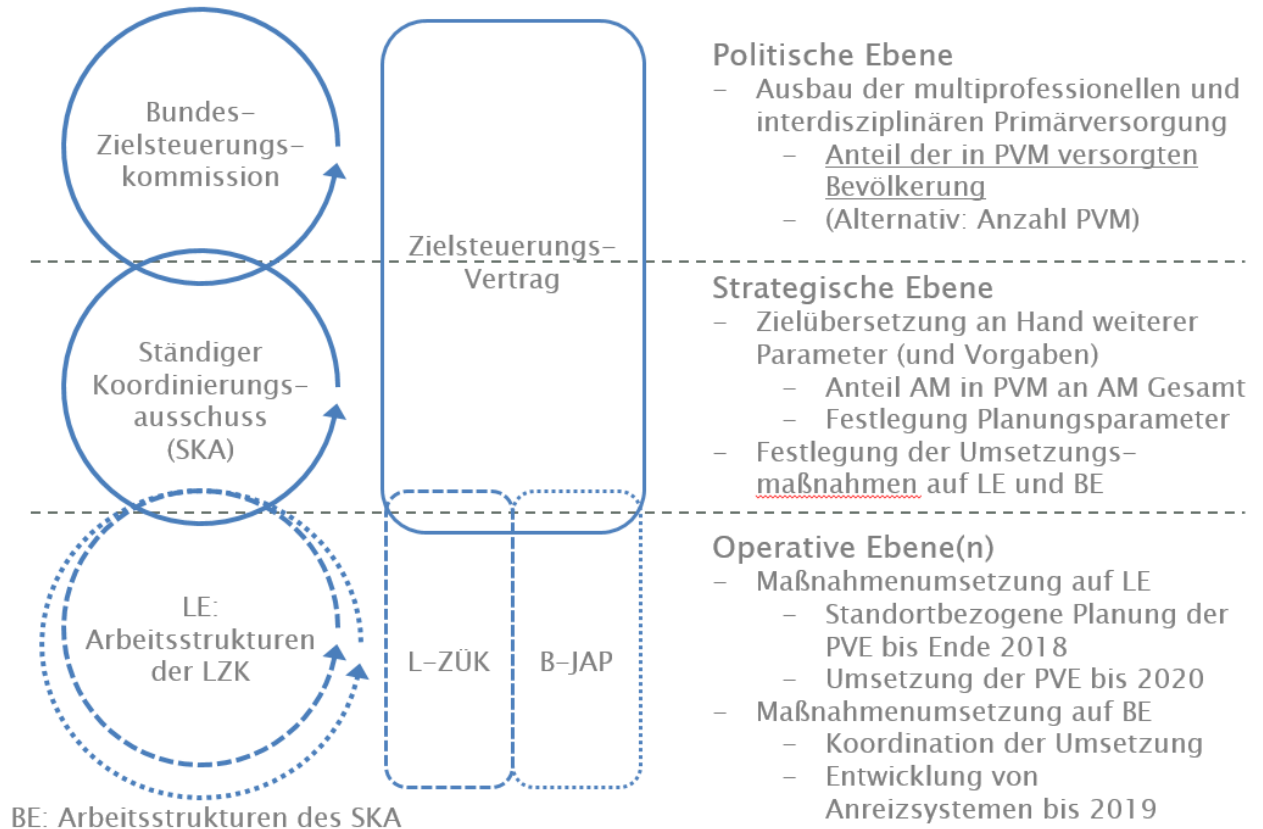
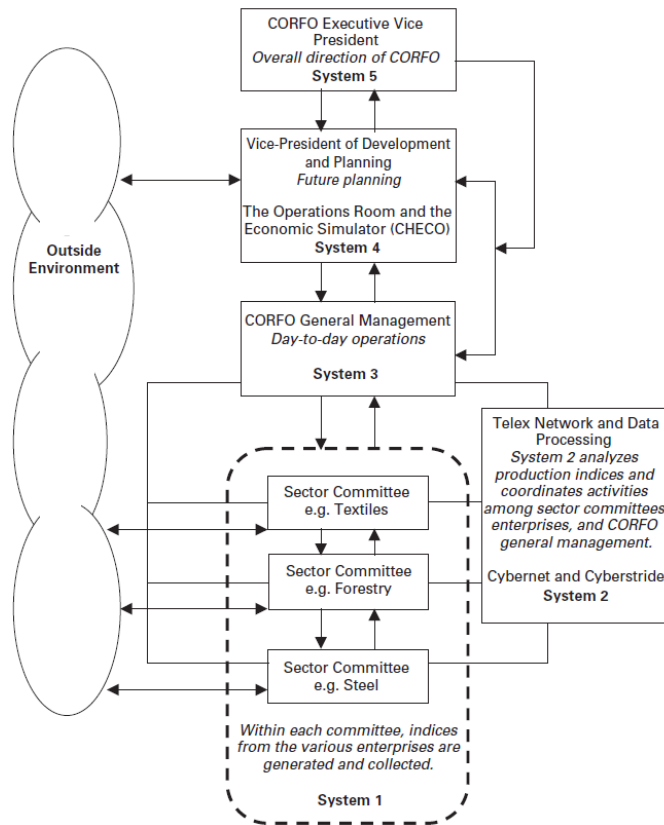


How to build resilient health systems?

Governance



» The challenge of effective information systems



How to build resilient health systems?

Governance



» The challenge of effective information systems (institutional perspective)

- Market-based and/or decentralized health sector reform is likely to be associated with an increased requirement for staffing and labour cost data for performance management requirements within the organization and for national monitoring; the irony is that the actual implementation of the reforms may erode the available centralized data sources.

Source: Buchan, 2000

The infographic features a vertical blue bar on the left with the word "Governance" written vertically. To the right of this bar are five horizontal grey arrows pointing to the right, each containing a numbered list item. A yellow circle is positioned to the left of the fourth arrow.

- (1) Effective and participatory leadership with strong vision and communication
- (2) Coordination of activities across government and key stakeholders
- (3) Organizational learning culture that is responsive to crises
- (4) Effective information systems and flows
- (5) Surveillance enabling timely detection of shocks and their impact

- Source: Buchan, 2000

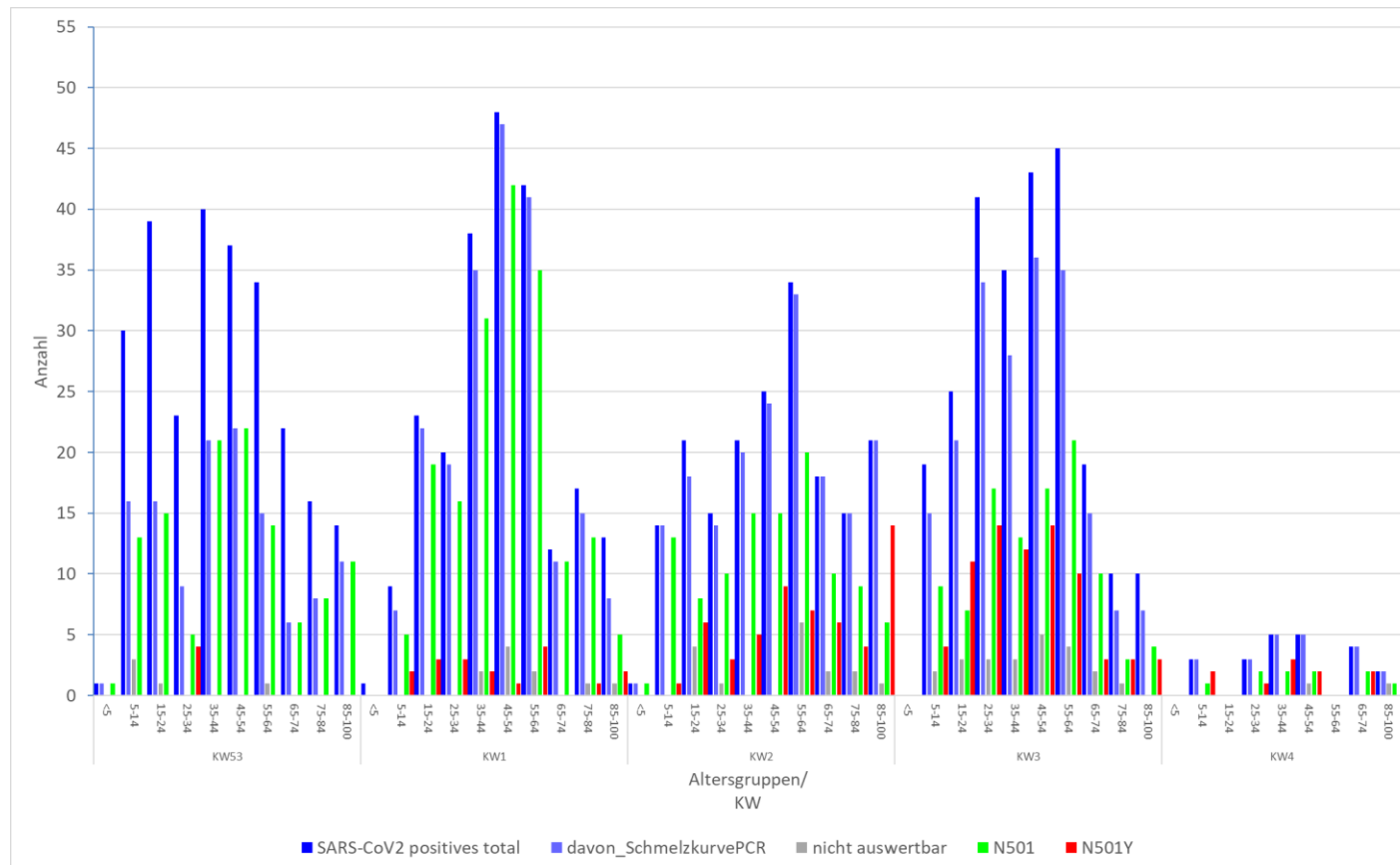
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Governance



» The challenge of appropriate surveillance

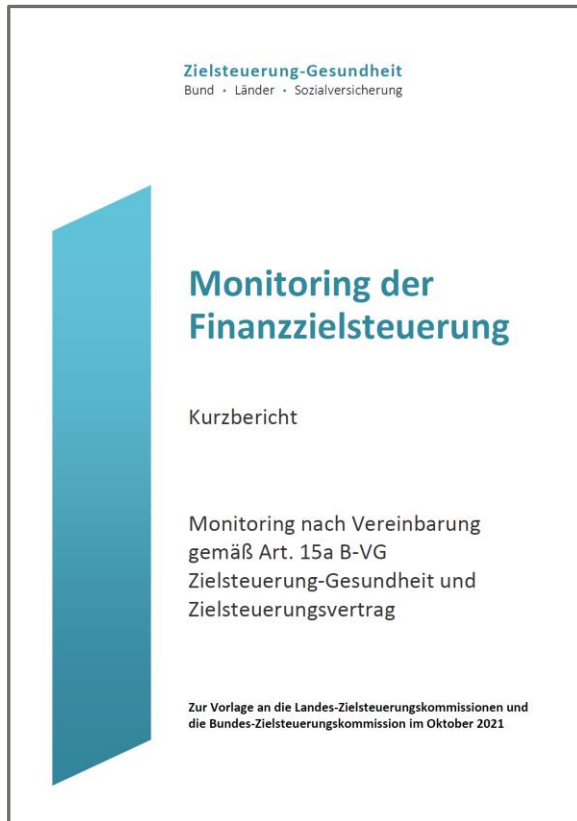


How to build resilient health systems?

Financing



» Monetary resources

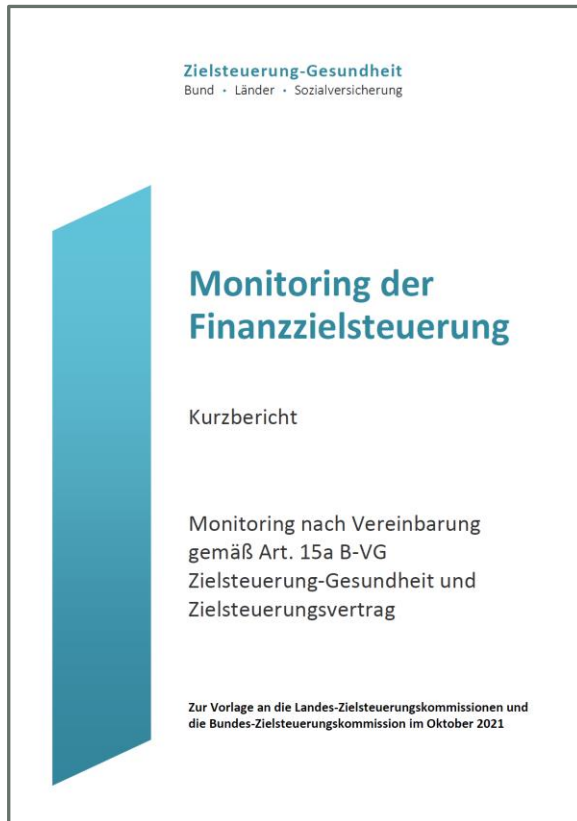


How to build resilient health systems?

Financing



» Monetary resources



Um die ZSG-relevanten GHA bestmöglich und vollständig zu erfassen, erfolgte vor dem Hintergrund der COVID-19-Pandemie zum aktuellen Monitoringzeitpunkt (September 2021) eine Zusatzerhebung bei den Ländern zu den ZSG-relevanten COVID-19-Aufwendungen und ZSG-relevanten Refundierungen seitens des Bundes. Die gewonnenen Zusatzinformationen lieferten vor allem folgende zentrale Erkenntnisse:

- » COVID-19-Aufwendungen der Krankenanstalten (z. B. für Schutzausrüstungen, Testungen, Sicherheit und Hygiene, Barackenspitäler, COVID-Prämien, zusätzliches Personal etc.) werden in einem Großteil der Bundesländer über die Betriebsabgangsdeckungen von den Ländern (und Gemeinden) beglichen. Meist handelt es sich hierbei um einen Restbetrag, der aus einer Gegenverrechnung der Refundierungen seitens des Bundes resultiert.
- » Mindererträge der Krankenanstalten (z. B. Einnahmen aus BGA-Mitteln, von ausländischen Gastpatientinnen/-patienten, Sonderklassegeelder etc.) werden teilweise über die Betriebsabgangsdeckungen oder im Rahmen zeitnaher Zuschüsse kompensiert.
- » Bei der Finanzierung über die Betriebsabgangsdeckung muss bei der Interpretation der einzelnen Bundesländer jeweils unterschieden werden, ob sie periodenrein erfolgt oder erst in den darauffolgenden Jahren vom Land (und von den Gemeinden) beglichen wird.
- » Die gemeldeten Werte zu den Refundierungen seitens des Bundes für ZSG-relevante Aufwendungen sind teilweise noch nicht vollständig und umfassen nur die bereits ausbezahlten Refundierungen. Zusätzlich erfolgen die Refundierungen aufgrund der unterschiedlichen Zeitpunkte der Einreichung und der folgenden Auszahlung nicht immer periodenrein, sondern erst in den darauffolgenden Jahren.

How to build resilient health systems?

Financing



» Monetary resources

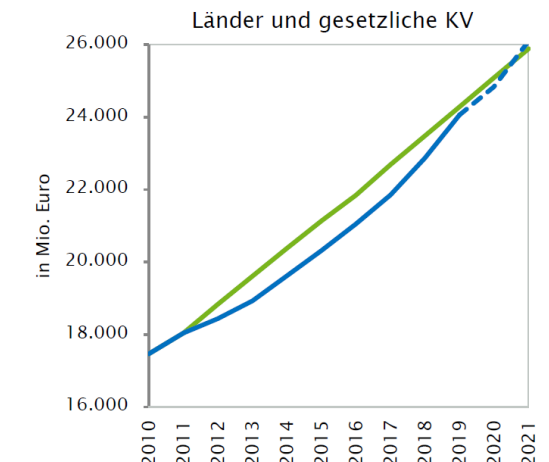
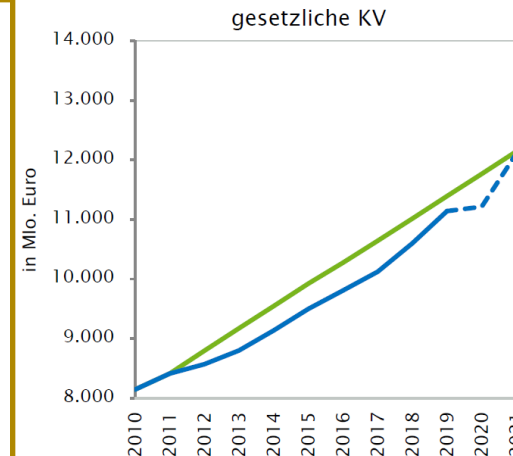
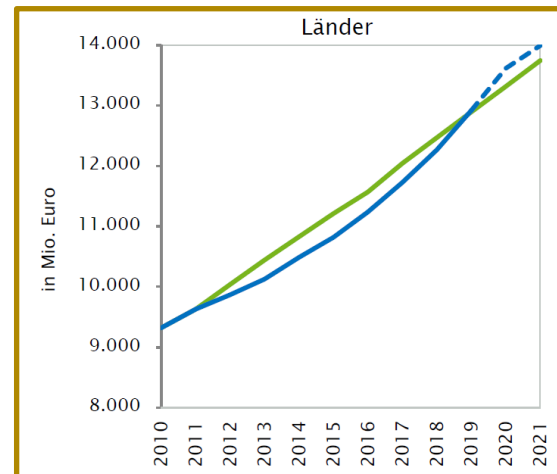
Zielsteuerung-Gesundheit
Bund • Länder • Sozialversicherung

Monitoring der Finanzzielsteuerung

Kurzbericht

Monitoring nach Vereinbarung gemäß Art. 15a B-VG
Zielsteuerung-Gesundheit und Zielsteuerungsvertrag

Zur Vorlage an die Landes-Zielsteuerungskommissionen und die Bundes-Zielsteuerungskommission im Oktober 2021

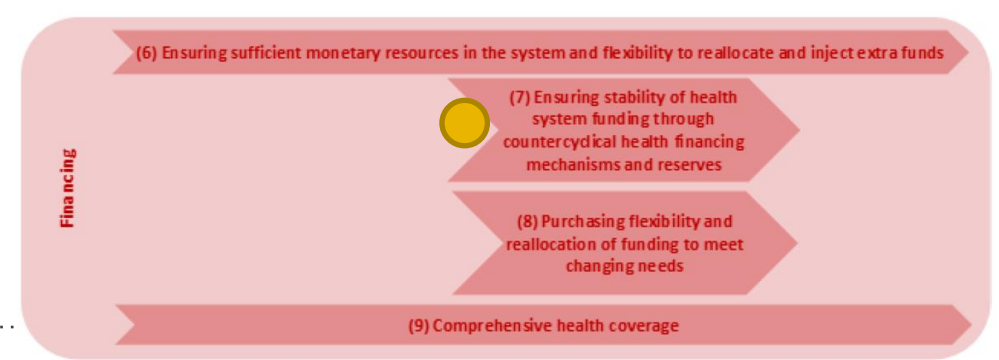


Länder und gesetzliche KV		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
—	Ausgabenobergrenze	17.466	18.042	18.834	19.615	20.377	21.153	21.843	22.691	23.485	24.284	25.085	25.887
—	Ausgaben gem. Abschlussmonitoring	17.466	18.042	18.435	18.930	19.624	20.318	21.048	21.854	22.868	24.061		

Bei der Summenbildung wurde auf die ursprünglichen nichtgerundeten Ausgangswerte zurückgegriffen, dadurch kann es zu geringfügigen Abweichungen aufgrund von Rundungs-
differenzen kommen. Die Ausgaben für das Jahr 2019 (*kursiv*) beziehen sich auf das vorläufige Abschlussmonitoring.

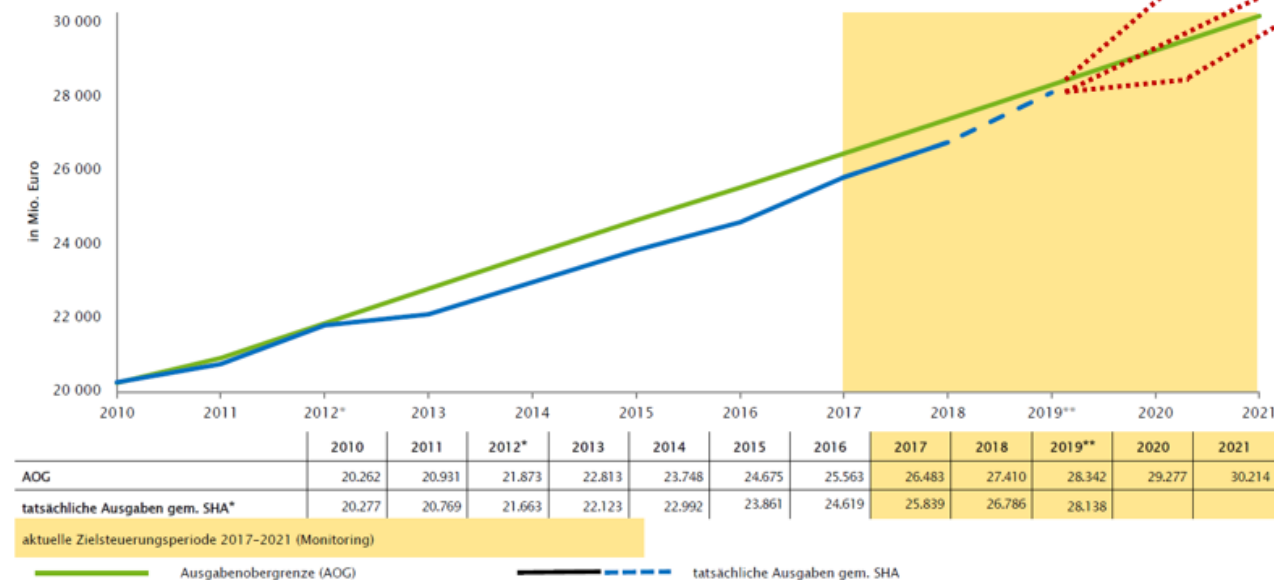
How to build resilient health systems?

Financing



» Fiscal sustainability short-term (and program budgeting)

Abbildung 2.1:
Öffentliche Gesundheitsausgaben ohne Langzeitpflege 2010–2021 in Mio. Euro

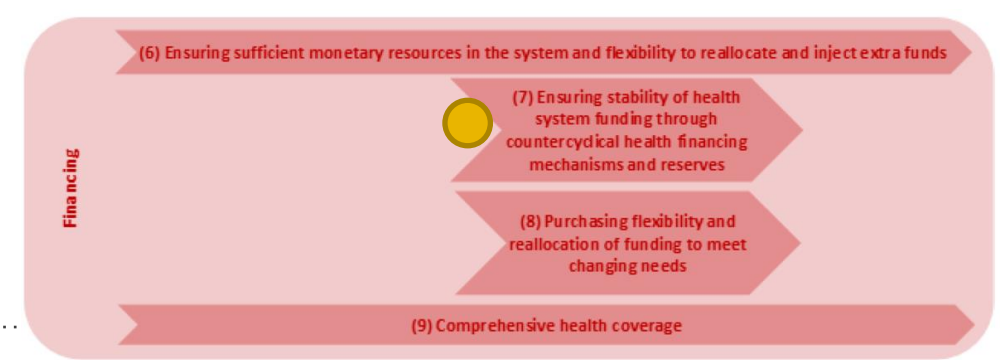


*für das Jahr 2012 nach Bereinigung des GSBG-Effekts (siehe auch Monitoringbericht II/2014)

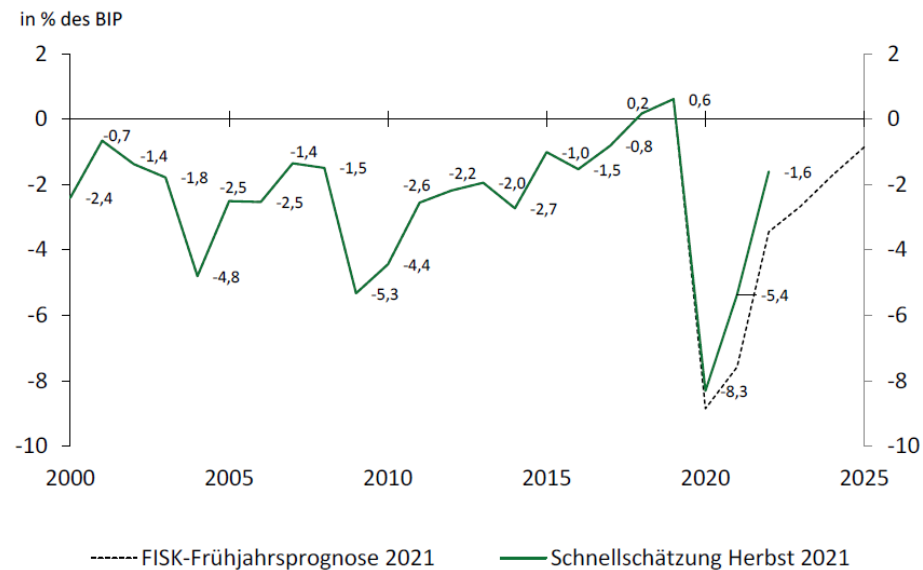
**Stand Juni 2020. Für das Jahr 2019 handelt es sich um vorläufige Daten (*kursiv*), basierend auf der Schnellschätzung der Statistik Austria.

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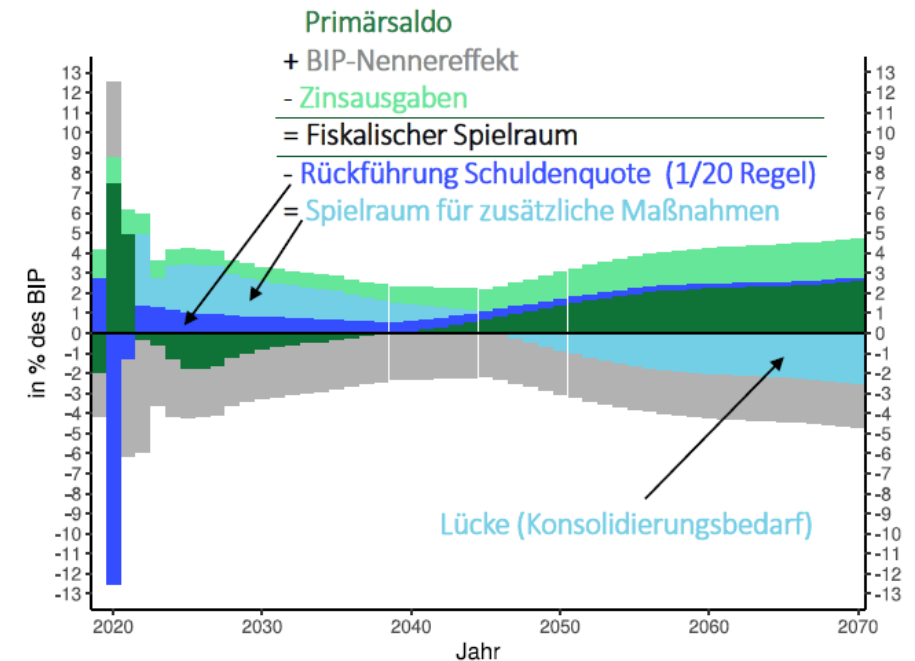
Financing



» Fiscal sustainability long-term



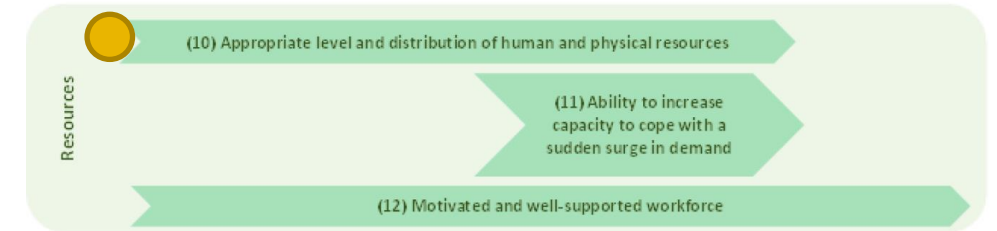
Quelle: FISK-Frühjahrsprognose und aktuelle Schnellschätzung des FISK-Büros.



CAVEAT: Impact of IR

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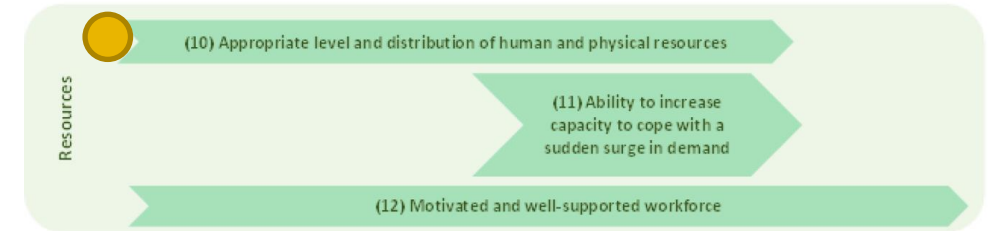
Resources



- » Depending on the (assumed) duration of the shock / crisis
 - » The shorter, the more a question of distribution
 - » The longer, the more a question of structural adaption

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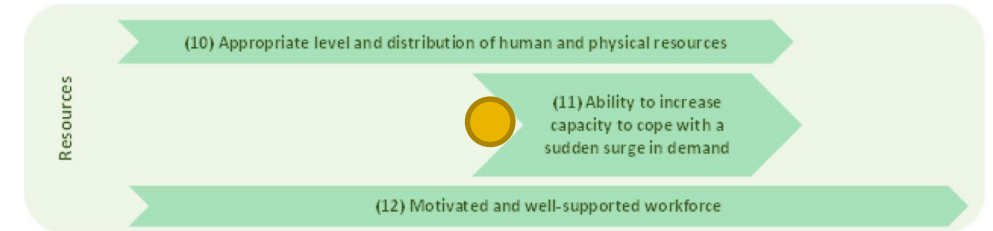
Resources



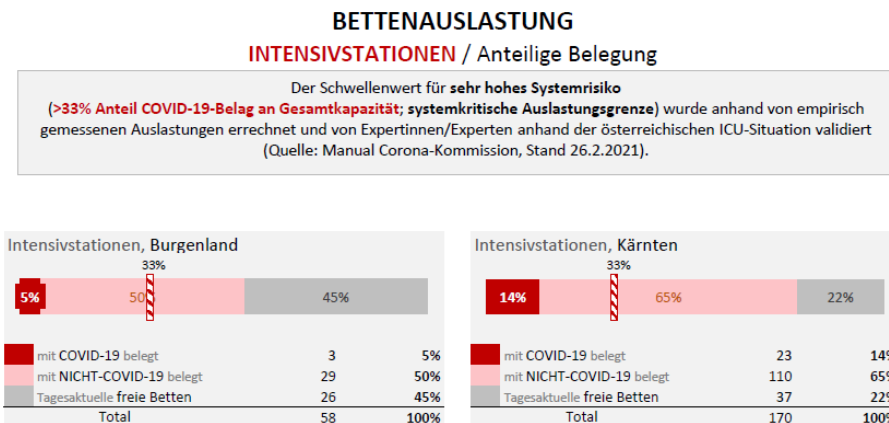
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How to build resilient health systems?

Resources



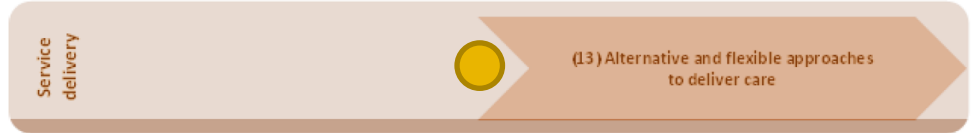
- » Depending on the (assumed) duration of the shock / crisis
 - » The shorter, the more a question of distribution
 - » The longer, the more a question of structural adaption
- » Creation of appropriate structures and provision/development of human resources
- » Generally: From emergency mode towards COVID standard care
 - » In order to avoid rivalry between COVID- and non-COVID-patients



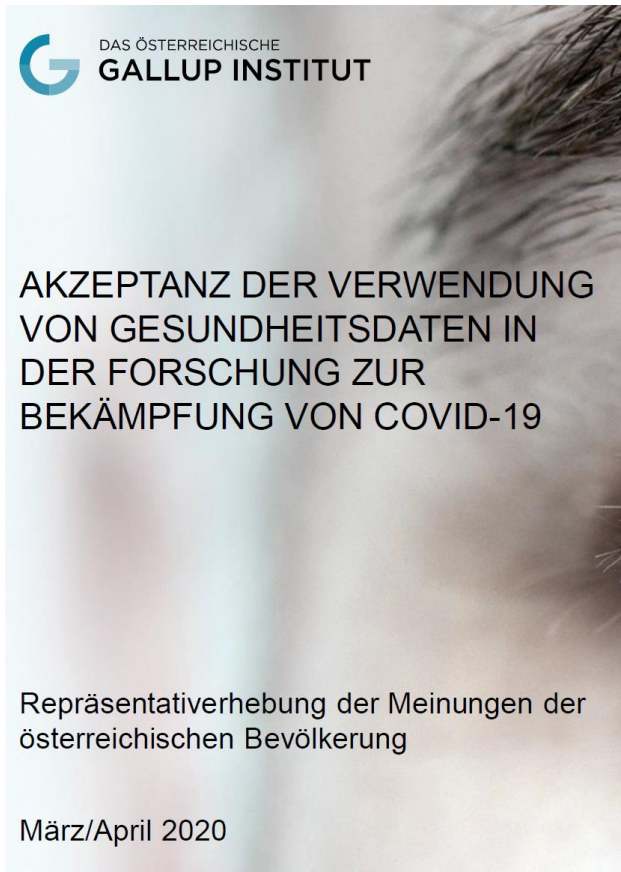
Source:
<https://www.tagesspiegel.de/gesellschaft/panorama/coronavirus-in-wuhan-so-entstand-in-rekordzeit-das-krankenhaus-mit-1000-betten/25501950.html>

How to build resilient health systems?

Service delivery



» Digitization, digitization, digitization



How to build resilient health systems?

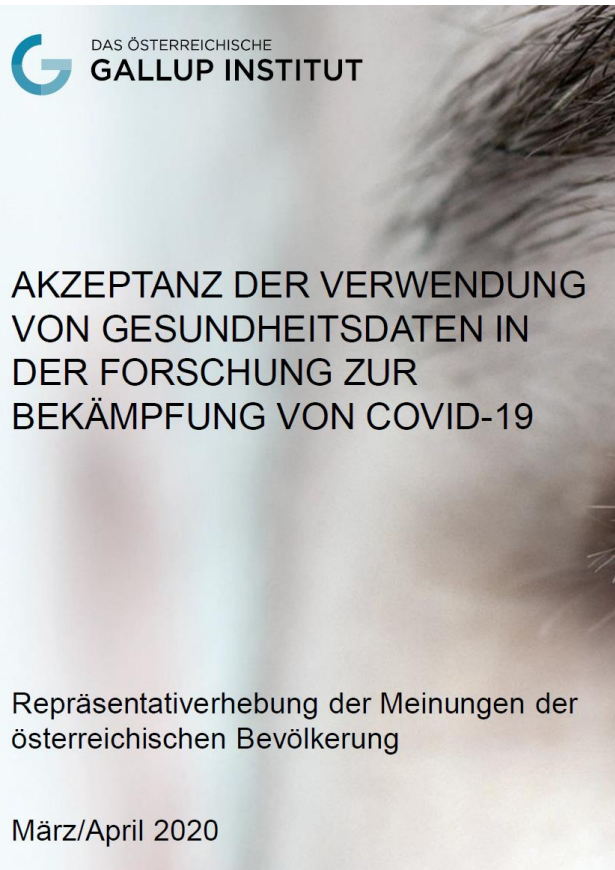
Service delivery

Service
delivery



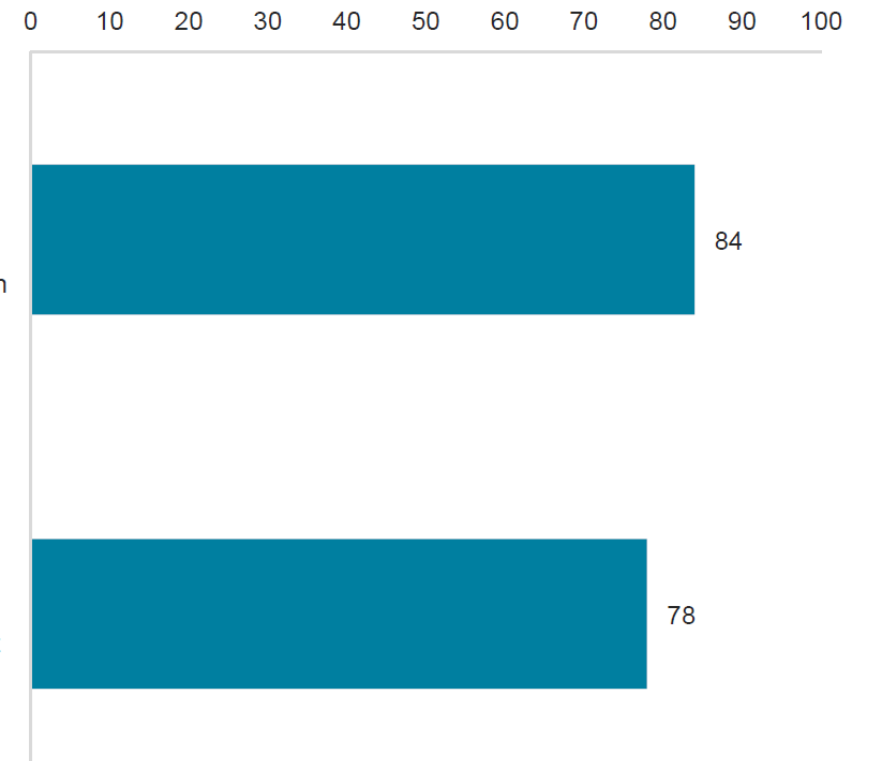
(13) Alternative and flexible approaches
to deliver care

» Digitization, digitization, digitization



Zur Bekämpfung von COVID-19 (Coronavirus) sollten die e-Medikationsdaten (Informationen über verschriebene und abgegebene Medikamente in ELGA) der ÖsterreicherInnen für Forschungszwecke durch Medizinische Universitäten in Österreich verwendet werden dürfen

Zur Bekämpfung von COVID-19 (Coronavirus) sollten e-Befunddaten (Spitals-Entlassungsbriefe, Labor- und Radiologiebefunde in ELGA) der ÖsterreicherInnen für Forschungszwecke durch Medizinische Universitäten verwendet werden?




How to build resilient health systems?

Service delivery

Service
delivery

(13) Alternative and flexible approaches
to deliver care

» Digitization, digitization, digitization



DAS ÖSTERREICHISCHE
GALLUP INSTITUT

AKZEPTANZ DER VERWENDUNG
VON GESUNDHEITSDATEN IN
DER FORSCHUNG ZUR
BEKÄMPFUNG VON COVID-19

Repräsentativerhebung der Meinungen der
österreichischen Bevölkerung

März/April 2020

Source: Gallup, 2020



How to build resilient health systems?

Service delivery

Service
delivery

(13) Alternative and flexible approaches
to deliver care

» Digitization → Teleconsultation



Source: <https://www.epiphan.com/blog/best-video-conferencing-software/>

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Service delivery

Service
delivery

(13) Alternative and flexible approaches
to deliver care

» Digitization → Teleconsultation



Source: <https://www.epiphan.com/blog/best-video-conferencing-software/>



	01439 Betreuung eines Patienten im Rahmen einer Videosprechstunde
Pauschale von 9,27€	
Beschreibung	
Betreuung eines Patienten im Rahmen einer Videosprechstunde gemäß Anlage 31b zum Bundesmantelvertrag-Ärzte (BMV-Ä)	
Obligater Leistungsinhalt	
<ul style="list-style-type: none">- Arzt-Patienten-Kontakt im Rahmen einer Videosprechstunde gemäß Anlage 31b zum BMV-Ä bei Kontaktaufnahme durch den Patienten zum Zweck der Beratung und der Verlaufskontrolle bei einem Patienten bei mindestens einem der nachfolgenden Anlässe- visuelle postoperative Verlaufskontrolle einer Operationswunde- visuelle Verlaufskontrolle einer/von akuten, chronischen und/oder offenen Wunde(n)- visuelle Verlaufskontrolle einer/von Dermato(n), auch nach strahlentherapeutischer Behandlung- visuelle Beurteilung von Bewegungseinschränkungen/-störungen des Stütz- und Bewegungsapparates, auch nervaler Genese, als Verlaufskontrolle- Beurteilung der Stimme und/oder des Sprechens und/oder der Sprache als Verlaufskontrolle- anästhesiologische, postoperative Verlaufskontrolle,- Überprüfung des Vorliegens einer schriftlichen Einwilligung des Patienten in die Datenerhebung, -verarbeitung und -nutzung,	

Source: https://www.kvno.de/downloads/kvno_aktuell/telemedizin_ebm-ziffern.pdf

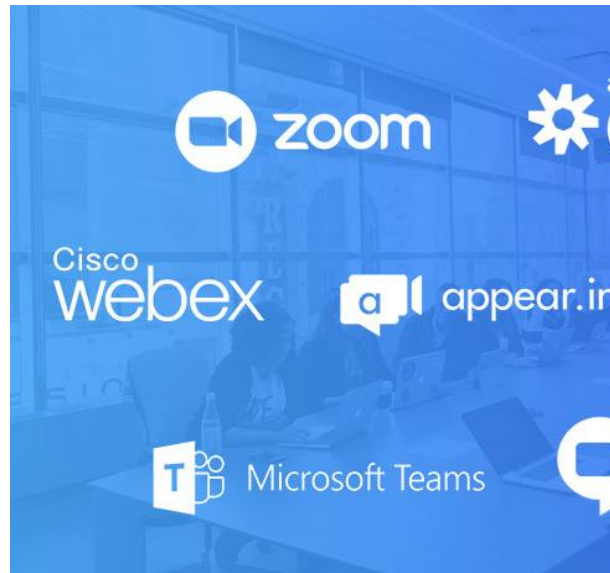
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delivery

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» Digitization → Teleconsultation



Source: <https://www.epiphany.com/blog/best-video-c>

An advertisement for the 'Ask NHS' app. The background is blue with a white heartbeat line. The text reads: 'Download the FREE 'Ask NHS' App Today', 'Check your symptoms', 'Digital access to NHS 111', 'Book GP appointments', 'Get trusted self-care advice', and 'Available 24/7'. On the right, a smartphone displays the app's interface, which includes a photo of a healthcare professional and buttons for 'BOOK APPOINTMENT', 'SYMPTOM CHECKER', 'SELF CARE', 'LOCATIONS', 'CONTACT US', and 'ABOUT ASK NHS'. At the bottom, it says 'POWERED BY SENSELY'. Below the phone, there are logos for the App Store and Google Play, with the text 'Search Ask NHS in the app store' and 'Download on the App Store' and 'GET IT ON Google Play'. The bottom left corner of the ad has the text '833 x 694'.

ten im Rahmen einer Videosprechstunde

Pauschale von 9,27€

ner Videosprechstunde gemäß Anlage 31b zum

sprechstunde gemäß Anlage 31b zum BMV-Ä bei
eck der Beratung und der Verlaufskontrolle bei einem
nden Anlässe

Operationswunde
chronischen und/oder offenen Wunde(n)
e(n), auch nach strahlentherapeutischer Behandlung
kungen/-störungen des Stütz- und
als Verlaufskontrolle

ens und/oder der Sprache als Verlaufskontrolle
ontrolle,

Einwilligung des Patienten in die Datenerhebung, -

kvno_aktuell/telemedizin_ebm-ziffern.pdf

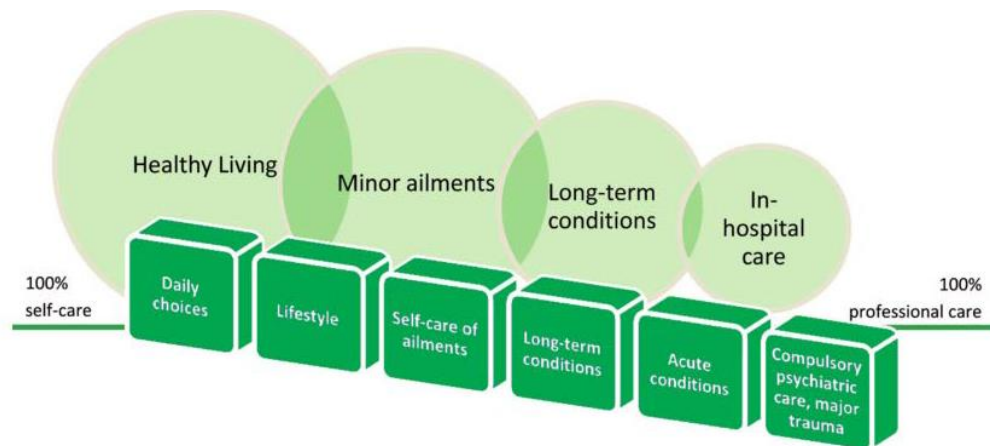
How to build resilient health systems?

Service delivery

Service
delivery

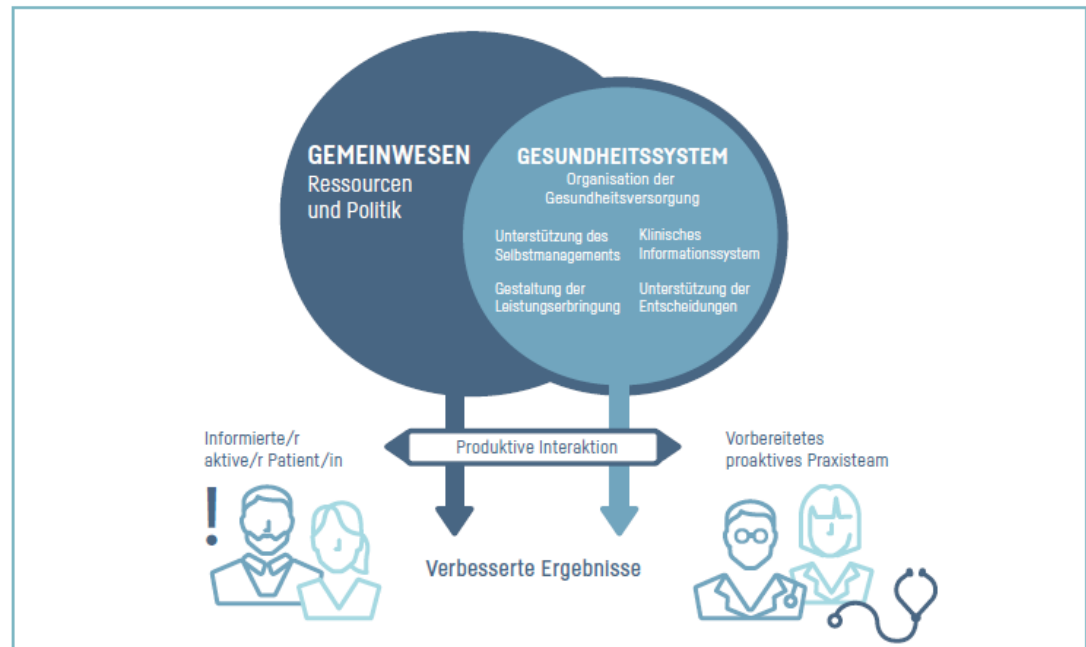
(13) Alternative and flexible approaches
to deliver care

» Digitization → The way ahead (Integration, Integration, Integration)



Source: (Yiangou 2011)

ABBILDUNG 8: CHRONIC CARE MODEL NACH ED WAGNER (2006)



Source: http://www.provinz.bz.it/gesundheitswesen/download/Landesgesundheitsplan_2016-2020_definitiv.pdf

Outlook

- » The impact of the pandemic on the future transition of health systems cannot be assessed yet, but the areas of action are quite obvious
 - » Governance (including data governance)
 - » Financing
 - » Resources
 - » Service delivery

Outlook

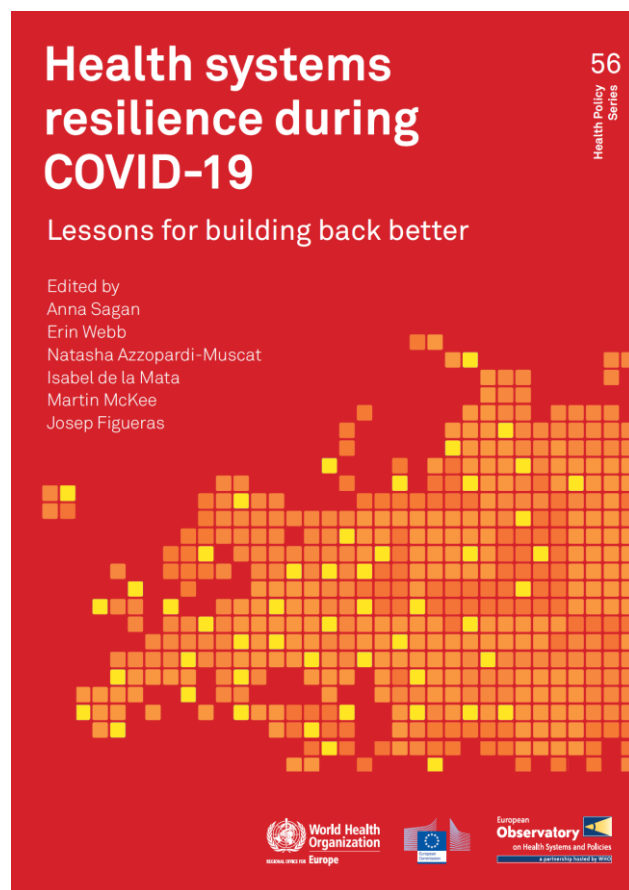
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 - » Scenario planning
 - » „The next normal“

Outlook

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 - » Scenario planning
 - » „The next normal“
- » Pro futuro
 - » How do we foster (single-loop and double-loop) learning?
 - » In a society (and also scientific community) that is driven by bias
 - » How do we measure success ?
 - » How do we set up functional institutions for (comprehensive and transparent) decision-support?

More „food for thought...”



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Publications

Health systems resilience during COVID-19: Lessons for building back better

Health Policy Series 56

11 November 2021 | Publication

[Download \(4.5 MB\)](#)

Overview

The COVID-19 pandemic represents a health system shock of unprecedented scale. Health systems resilience – defined as the ability to absorb, adapt, and transform to cope with shocks – is needed to ensure sustained performance of the health system functions (governance, financing, resource generation, and service delivery) so that the ultimate health system goals, especially that of improving health of the population, can be achieved. As we have witnessed, few countries could achieve this goal and even fewer could do so in a sustained way – leaving all countries with important lessons to learn. The lessons derived in this study can inform both the ongoing efforts, while countries are still grappling with the pandemic, as well as help ensure these efforts also incorporate a longer-term perspective, thus improving preparedness to any future health system shocks.

While there is no ‘one-size-fits-all’ response that all countries could replicate, the study identifies 20 key strategies, grouped according to the health systems functions, that have been found as enhancing health systems resilience in the face of COVID-19. They have strong interlinkages and do not work in isolation, and this book also considers how the health system operates in the context of other systems, and broader political and governance structures.

The strategies describe how to secure and (re)allocate financing while leaving no one behind. They emphasize the need for more health workers who are fit for the job and well supported. They demonstrate the importance of strong public health systems and safety nets. They show how providers surged capacity and adapted care pathways for both COVID-19 and non-COVID-19 patients. While the relative importance of the various strategies and their configurations will depend on the specific country contexts, governance emerges as the foundation and lever for health system functioning and resilience. It plays a crucial role in enabling all other functions to work in unison to ensure adequately financed and otherwise well-resourced health service delivery to promote improved health.

WHO TEAM
European Observatory on Health Systems and Policies

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NUMBER OF PAGES
136

REFERENCE NUMBERS
ISBN: 9789289051873

Thank you for you attention!