Gesundheit Österreich GmbH

Health Workforce Planning – Demand in Austria

Utilisation, Services, Quality Criteria

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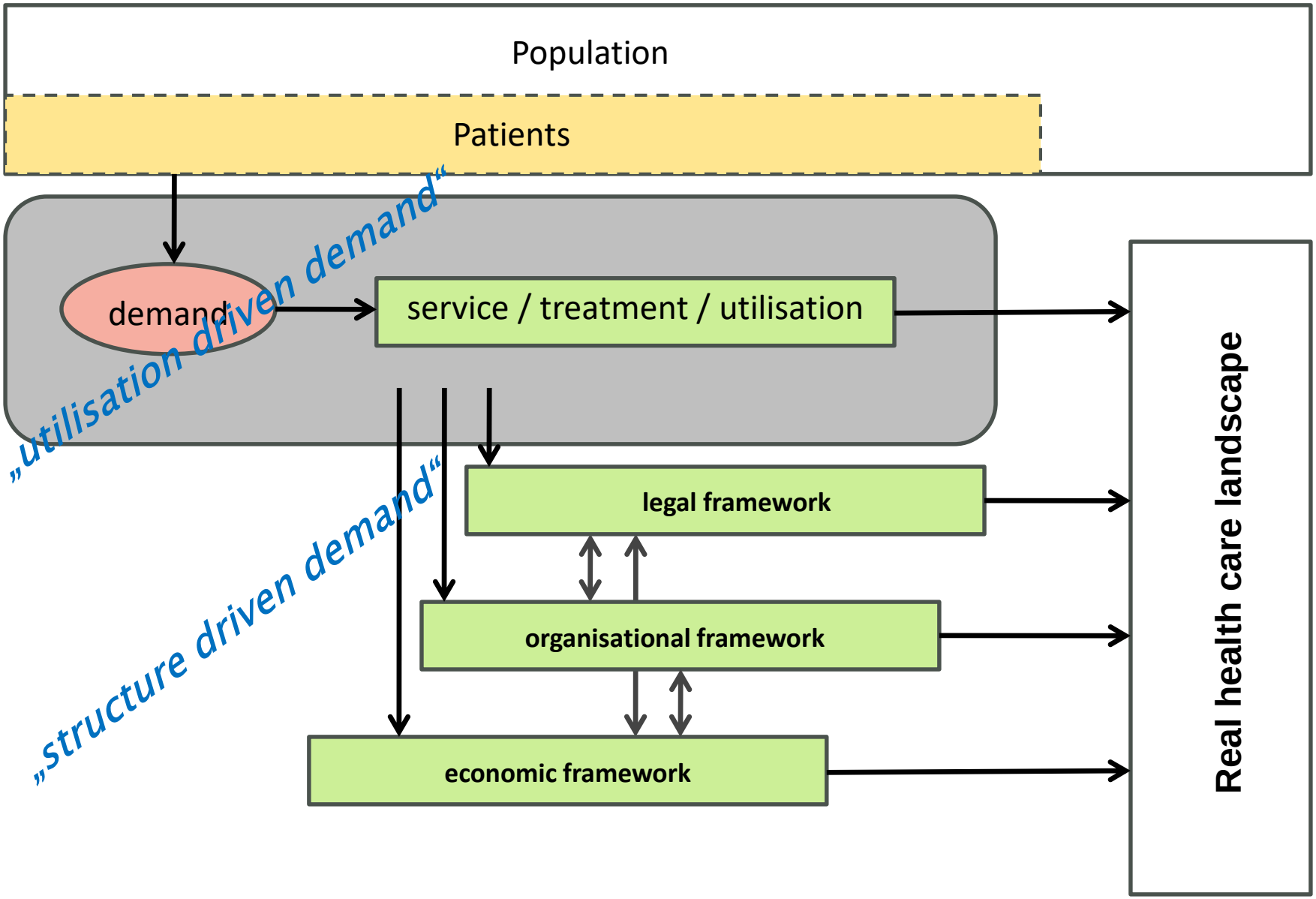
Content

- Health Workforce Planning – Demand
  - utilisation driven demand
  - structure driven demand
- Health Work Force Planning – Demand: Utilisation Driven Approach
  - Austrian Method: Planning–Steps 1 to 5
- Health Work Force Planning – Demand: Structural Driven Approach
  - Austrian Method (until year 2000)
  - current possibilities in Austria
- Consolidation

Health Workforce Planning – Demand

Gesundheit Österreich GmbH



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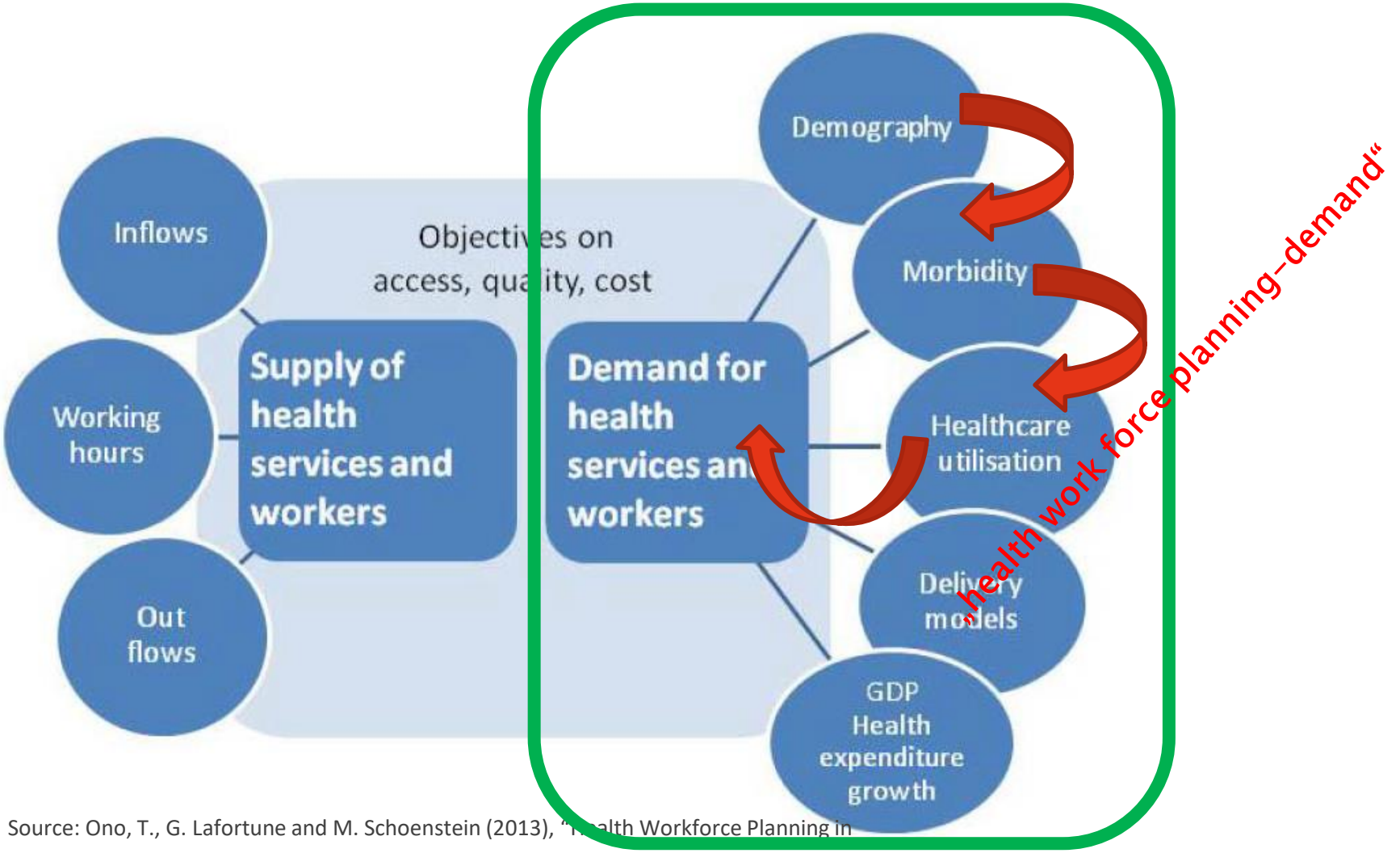
Health Workforce Planning – Demand
Utilisation Driven Approach



Source: Ono, T., G. Lafortune and M. Schoenstein (2013), "Health Workforce Planning in OECD Countries: A Review of 26 Projection Models from 18 Countries", OECD Health Working Papers, No. 62, OECD Publishing. http://dx.doi.org/10.1787/5k44t787zcwb-en

HWFP-Demand: Utilisation Driven Approach (Physicians)
Current Method in Austria

Step 1:

» status quo FTE (hospital sector), ÄAVE (~ FTE; non hospital sector)

» „heads“ (hospital and non hospital sector)

Step 2:

» demographic extrapolation of FTE/ÄAVE with age- and gender-specific utilisation-rates

Step 3:

» conversion of the projected FTE/ÄAVE into „heads“ based on „part-time-factors“

Step 4:

» taking into account physicians in other health sectors (perpetuation of heads)

Step 5:

» taking into account existing or expected shortfall and other demand-determining factors (as far as known)

HWFP-Demand: Current Method in Austria (Physicians)

Step 2

Demographic extrapolation of FTE/ÄAVE with age- and gender-specific utilisation-quotes

- utilisation:
  - „hospital sector“: hospital discharges
  - „non hospital sector“: outpatient contacts
- utilisation-rate:
  - utilisations per inhabitant (gender and 5 year-agegroups)
  - possibility for scenarios (perpetuation status quo, in- or decreasing rates)
- demographic extrapolation of utilisation:
  - „hospital discharges“ and „outpatient contact“ in target year
- work-intensity:
  - hospital discharges/FTE; outpatient contacts/ÄAVE
  - possibility for scenarios (perpetuation status quo, in- or decreasing rates)
- extrapolation of FTE and ÄAVE for target year:
  - extrapolation based on extrapolated utilisation and work intensity

HWFP-Demand: Current Method in Austria (Physicians)

Example with fictional numbers (hospital sector) (1)

STEP 1

FTE 2017	**50**	Austrian-wide hospital statistics and physician statistics
Head 2017	**55**	

STEP 2

	Inhabitants 2017			hospital discharges 2017			utilisation rate	
age groups	**female**	**male**	**total**	**female**	**male**	**total**	**female**	**male**
0 to 20	5.000	5.000	10.000	5	5	10	0,001	0,001
21- 40	5.000	5.000	10.000	10	10	20	0,002	0,002
41-65	5.000	5.000	10.000	10	10	20	0,002	0,002
65 and older	5.000	5.000	10.000	30	30	60	0,006	0,006
total	20.000	20.000	40.000	55	55	110	0,00275	0,00275

	population forecast 2030			demographic extrapolation of utilisation rate hospital discharges 2030		
age groups	**female**	**male**	**total**	**female**	**male**	**total**
0 to 20	4.500	4.500	9.000	5	5	9
21- 40	5.500	5.500	11.000	11	11	22
41-65	6.000	6.000	12.000	12	12	24
65 and older	6.500	6.500	13.000	39	39	78
total	22.500	22.500	45.000	67	67	133

hospital discharges /FTE (work intensity)

2017	**2,2**	
2030	**2,0**	**scenario assumption**

FTE 2030 **66,5**

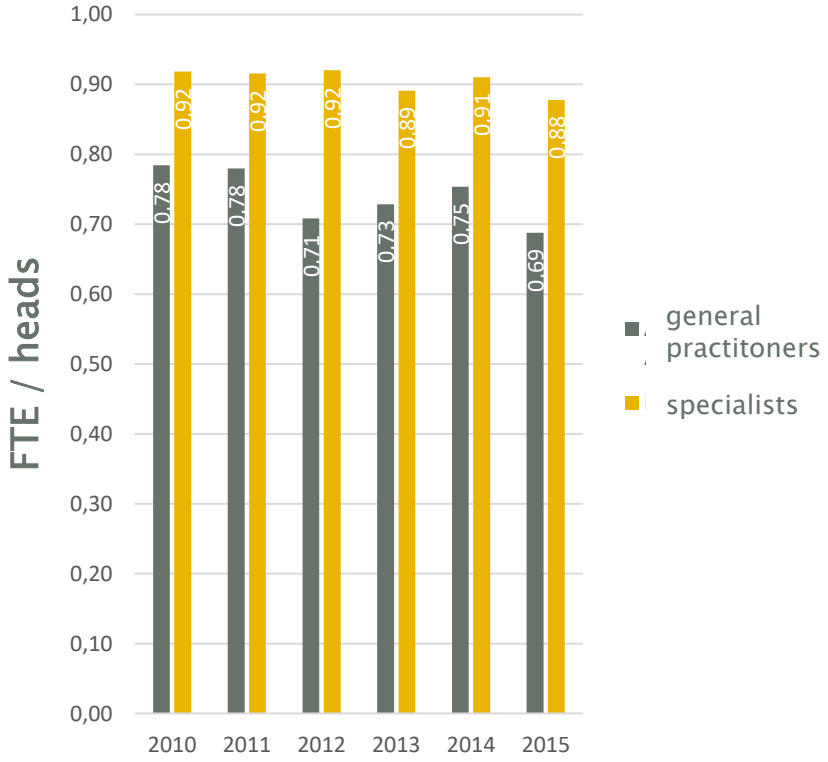
HWFP-Demand: Current Method in Austria (Physicians)

Step 3

Conversion of the projected FTE/ÄAVE into „heads“ based on „part-time-factors“

- part-time factors:
  - differentiation:
    - „hospital“ and „non hospital“ sector
    - disciplines (e.g. general practitioners, specialists)
  - possibility for scenarios (perpetuation status quo, in- or decreasing factors)
- conversion in „heads“ – target year
  - multiplication of FTE, ÄAVE in target year with expected part-time factor

Example „part-time factors“: hospital sector in an Austrian region



HWFP-Demand: Current Method in Austria (Physicians)
Step 4 and 5

Step 4:

taking into account physicians in other health sectors (perpetuation of heads)

- » employed physicians in autonomous ambulatories
- » employed physicians in other health related institutions
- » …

Step 5:

taking into account existing or expected shortfall and other demand-determining factors (as far as known), e.g.

- » existing lack
- » changes in working time acts in hospital sector
- » optimization measures
- » structural changes
- » …

HWFP-Demand: Current Method in Austria (Physicians)

Example with fictional numbers (hospital sector) (2)

Result Step 2	
FTE 2030	66,5

STEP 3

part-time factor

	FTE	Head	part time factor	
2017	50,0	55	91%	
2030	66,5	83	80%	**scenario assumption**

Head 2030	83

STEP 4

physicians in other health sectors

2017	3	**other sources**
2030	3	**scenario assumption (perpetuation)**

Head 2030	86

STEP 5

expected additional demand because of changing working time act (hospital)

head 2030	10%

optimizing measures

head 2030	-5%

Head 2030	90

Head 2017	58
Head 2030	90

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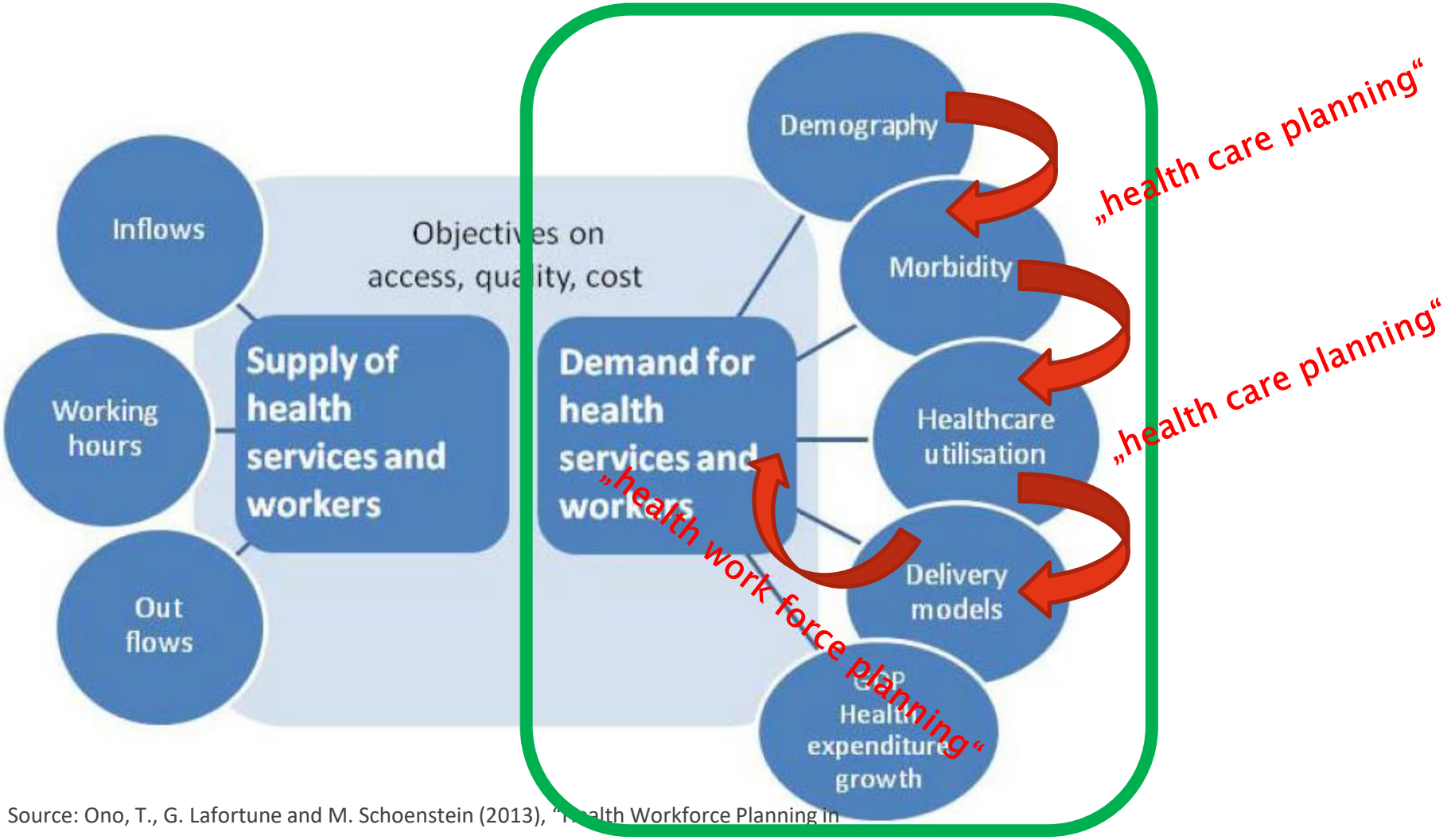
- Conclusion

Health Workforce Planning – Demand (Structure Driven Approach)



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HWFP-Demand: Structure Driven Approach (Physicians) Method in Austria (hospital sector) until the year 2000

Basics:

- legal basics (esp. hospital act, working time acts)
- regulations of the Austrian DRG-System (e.g. staff per hospital bed)
- general detailed hospital plan for the target year (Austrian hospital plan – ÖKAP, last version from 2005)
- regulations for staffing in different classifications of hospitals (standard hospital, regional central hospital, central hospital)
- regulation for physical presence of physicians (depending on discipline, form of organisation, grade/rank, daytime, weekend, etc.)
- regulations of „call out services“
- ….

HWFP–Demand: Structure Driven Approach (Physicians)
Method in Austria (hospital sector) until the year 2000

Method:

- For each hospital location
  - for each kind of hospital (standard, regional central, central)
  - for each discipline
  - for each kind and size of organisational unit

- calculation of minimum staff in applying the relevant laws and regulations

HWFP-Demand: Structure Driven Approach (Physicians)
Current Possibilities in Austria for using this Approach

Integrated Health Care Planning in Austria (since 2006)

- **Austrian Health Care Master Plan 2017 – ÖSG 2017**
  - Integrated Health Care Planning – Framework
- **Regional Health Care Masterplan (RSG)**: 9 integrated health care plans for each of the 9 Austrian provinces – detailed plan

HWFP-Demand: Structure Driven Approach (Physicians)
Current Possibilities in Austria for using this Approach

Austrian Health Care Master Plan 2017 – ÖSG 2017

- hospital sector – framework "inpatient care"
  - quantitative and qualitative service provision **planning framework**
    - **"Supply Matrix"** (amount of DRG per 32 health regions in target year)
    - **"Services Matrix"** (quality criteria for each single medical procedure)
    - **quality criteria**
      - by discipline,
      - form of organization (week or day surgery, standard wards specialized reference centers, etc.)
- other sectors

Supply Matrix (Versorgungsmatrix)

„quantitativ planning base“

VMMHG = Aggregated DRG

Health Regions and Provinces

Health Zones

hospital stays of regional inhabitants:
- status quo 2014
- plan values 2020, 2025 (range: +/- 25%)

VMMHG (Aufenthalte)	Jahr	VR 11 Burgenland-Nord	VR 12 Burgenland-Süd	Burgenland	Burgenland - Saldo inländ. Gastpat.*)	Burgenland - davon ausländ. Gastpat.**)	VZ 1 Ost	VZ 2 Süd	VZ 3 Nord	VZ 4 West	Summe Aufenthalte (für 2020/2025: Exkl. spitalsambulantes Verlagerungspotenzial gemäß letzter Spalte)	%-Anteil NTA 2014 bzw. %-Anteil TK (LKF) 2020/2025 ***)	Anzahl (spitals)ambulante Besuche 2020/2025 (Verlagerungspotenzial aus dem vollstationären Bereich) ****)
(H01.a) Infektiöse Erkrankung des Gehirns/Rückenmarks und seiner Häute	2014	34	16	50	-11	0	565	504	644	353	2066	3%	-
	2020	46	23	69	n.v.	0	860	450	482	284	2076	0%	109
	2025											0%	113
(H01.b) Maligne Neoplasien - Nervensystem	2014											38%	-
	2020											0%	1662
	2025											0%	1735
(H01.c) Benigne Neoplasien und Abszesse - Nervensystem	2014	49	26	75	-28	2	867	455	733	267	2322	24%	-
	2020	44	23	67	n.v.	2	789	417	425	244	1875	0%	624
	2025			69		2	821	427	441	256	1945	0%	647

Services Matrix (Leistungsmatrix-stationär)

„part of quantitativ planning base“

auf Basis LKF-Modell 2018

MEL	Medizinische Einzelleistung	BV	QK Mindestversorgungsstruktur						LB-Code	MFS
			ORG	VS	KTyp KOZ	INT KJ	INT E	HP		
AA040	Akute Schlaganfallbehandlung auf einer Schlaganfalleinheit (Stroke Unit) (LE=je Aufenthalt)	N	ABT		n. d.					
AA050	Durchtrennung funktioneller Bahnen (LE=je Sitzung)	N	ABT		1	IS	IS			
AA06		N	ABT		1	IS	IS			
AA07		N	ABT		1	IS	IS	X		
	Sitzung)									
DG190	Rekonstr Sitzung)	N	RFZ	GCHZ	1	IS			AOR	
D		N	ABT		1	IS				
D	LE=je	J	dTK		2					
D		N	RFZ	GCHZ	1		IS			
HE110	Resektion des Ösophagus – offen (LE=je Sitzung)	N	ABT		1	IS	IS	X	OES	10
HE120	Resektion des Ösophagus – laparoskopisch/thorakoskopisch (LE=je Sitzung)	N	ABT		1	IS	IS	X	OES	10
HE130	Resektion des Ösophag	N	ABT		1	IS	IS	X	OES	10
HE140	Korrektur angeborener Fehlbildungen des Ösophagus (LE=je Sitzung)	N	ABT		1	IS	IS			
HE150	Implantation einer Ösophagus-Endoprothese – offen (LE=je Sitzung)	N	ABT		n. d.		UE		OES	10

single medical procedures (DRG-Model 2018)

Basic Care
Yes / No

required minimum structure
ABT – ward
RFZ – reference center
dTK – stand alone day surgery
…

kind of reference center

Other qualitiy criteria

HWFP-Demand: Structure Driven Approach (Physicians)
Current Possibilities in Austria for using this Approach

Method:

- Starting Point „ÖSG“ (framework plan für RSG)
  - supply matrix (quantity)
  - service matrix and quality criteria (quality)
  - but no Austrian wide detailed hospital plan!
- Next step „RSG“ (Regional Health Care Masterplan: integrated health care plan for each of 9 provinces)
  - more detailed hospital plan
  - but more creative leeway for planning (than ÖKAP)
  - in more and more instable environment (need for flexibility)
  - provincial hospital plans are not sufficiently detailed to calculate a minimum staff in applying the relevant laws and regulations for each hospital

Conclusion:

- method is not practicable on the macrolevel in the current situation

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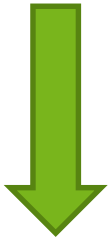
Consolidation – Next Steps

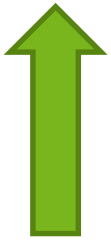
Macro Level – Top Down Approach

medium and long term perspective



tuning the planning results on the

medium term perspective



short and medium term perspective

Micro Level – Bottum Up Approach

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