Co-funded by the Erasmus+ Programme of the European Union

Public Health SEEEPHI
harmonization, employability, leadership and outreach

REPORT OF WP3:
Mapping the Competency Profiles of Israeli Schools & Programmes of Public Health

SEEEPHI Partners Meeting
Krakow, Poland
September 20-22, 2022

THE HEBREW UNIVERSITY OF JERUSALEM

ASPHER
The Association of Schools of Public Health in the European Region

University College Cork

What's New?

New Analysis by Competence (Rather than Domain)

New Analysis by EPHOs

New Analysis to Match Educational Output with Workforce Needs

Preliminary Mapping of WP2 on WP3 via EPHOs

Overall Findings – Previously Presented

- Most Addressed Domains: Methods and SES
- Least Addressed Domains: Environment and Policy & Econ
- Ethics Domain – well addressed, not uniform
- Differences in program structure between HEIs
- Wide heterogeneity in competences toolbox of graduates

Aggregated Results by Domain
Results by Competences – Not Previously Available
Individual Competences better suited to mapping on EPHOs

Competence Heat Map:

Competences Addressed by Core Courses – All HEIs(%)

0-24%	25-49%	50-74%	75%-100%

Methods (85.5%)	SES (90.1%)	Environment (52.2%)	Policy (46.5%)	Promotion (59.3%)	Ethics (72.6%)
Definitions of Health & Public Health	Basic Population Health Definitions & Concepts	Basic Environ. Health Definitions & Concepts	Basic Economic Theory and Concepts	Definitions of Health Promotion, Protection, & Disease Prevention	Basic Ethical Theories and Concepts
Disease Classification Systems	Population Health Indicators	Environmental Health Exposures – Risk Factors	Basic Organizational Theory; Leadership and Management Concepts	Basic Health Promotion Concepts	Ethical Aspects of Public Health Strategies, Interventions, and Policies
Basic Epidemiologic/ Demographic Concepts	Socioeconomic Determinants - Concepts	Environmental Measurement / Surveillance	Evaluation Strategies and Designs – Impact Evaluations	Major Theories and Models	Ethical Aspects of Public Health Research
Epidemiologic Study Designs: Observational	Socioeconomic Determinants - Indicators	Governance and Stakeholders	Evaluation Strategies and Designs – Health Economic Evaluations	Principles of Health Communication	Data Protection and Storage
Epidemiologic Study Designs: Experimental	Health Behavior - Indicators	Food Security / Food Safety	Evaluation Strategies and Designs – Organizational/ Program Evaluations	Health Promotion Program Design & Methods	Ethics Committee Systems
Qualitative Research Methods	Models and Theories of Social Determinants of Health	Emergency Planning/ Management	Evaluation Strategies and Designs – Policy Evaluations	Emergency Planning and Management	
Questionnaire Design & Scaling	Develop a Population Health Research Protocol	Preventing and Controlling Hazards	Disaster Management	Health Promotion Program Research Design	
Statistical Concepts	Conduct a Population Health Research Project	Conduct Risk and Health Impact Assessments	Program Implementation and Analysis Strategies	Program Implementation and Analysis Strategies	
IT & Data Handling		Develop Environmental Health Strategies	Develop a PH Policy/ Strategy/Intervention Project	Develop a Health Promotion Policy Proposal	
Scientific Writing & Reading		Develop an Environ. Health Research Protocol	Implement a PH Policy/ Strategy/Intervention Project	Develop a Health Promotion Project	
Develop a PH Research Protocol		Conduct an Environ. Health Research Project		Implement a Health Promotion Project	
Conduct a PH Research Project					

Competence Heat Map:

Competences Addressed by Any Course – All HEIs(%)

0-24%	25-49%	50-74%	75%-100%

Methods (87.7%)	SES (92.1%)	Environment (61.7%)	Policy (62.0%)	Promotion (74.6%)	Ethics (96.8%)
Definitions of Health & Public Health	Basic Population Health Definitions & Concepts	Basic Environ. Health Definitions & Concepts	Basic Economic Theory and Concepts	Definitions of Health Promotion, Protection, & Disease Prevention	Basic Ethical Theories and Concepts
Disease Classification Systems	Population Health Indicators	Environmental Health Exposures – Risk Factors	Basic Organizational Theory; Leadership and Management Concepts	Basic Health Promotion Concepts	Ethical Aspects of Public Health Strategies, Interventions, and Policies
Basic Epidemiologic/ Demographic Concepts	Socioeconomic Determinants - Concepts	Environmental Measurement / Surveillance	Evaluation Strategies and Designs – Impact Evaluations	Major Theories and Models	Ethical Aspects of Public Health Research
Epidemiologic Study Designs: Observational	Socioeconomic Determinants - Indicators	Governance and Stakeholders	Evaluation Strategies and Designs – Health Economic Evaluations	Principles of Health Communication	Data Protection and Storage
Epidemiologic Study Designs: Experimental	Health Behavior - Indicators	Food Security / Food Safety	Evaluation Strategies and Designs – Organizational/ Program Evaluations	Health Promotion Program Design & Methods	Ethics Committee Systems
Qualitative Research Methods	Models and Theories of Social Determinants of Health	Emergency Planning/ Management	Evaluation Strategies and Designs – Policy Evaluations	Emergency Planning and Management	
Questionnaire Design & Scaling	Develop a Population Health Research Protocol	Preventing and Controlling Hazards	Disaster Management	Health Promotion Program Research Design	
Statistical Concepts	Conduct a Population Health Research Project	Conduct Risk and Health Impact Assessments	Program Implementation and Analysis Strategies	Program Implementation and Analysis Strategies	
IT & Data Handling		Develop Environmental Health Strategies	Develop a PH Policy/ Strategy/Intervention Project	Develop a Health Promotion Policy Proposal	
Scientific Writing & Reading		Develop an Environ. Health Research Protocol	Implement a PH Policy/ Strategy/Intervention Project	Develop a Health Promotion Project	
Develop a PH Research Protocol		Conduct an Environ. Health Research Project		Implement a Health Promotion Project	
Conduct a PH Research Project					

PH Education Meeting Workforce Needs

Unweighted Data

- Educational options offered
- Uses
  - Students choosing programs
  - HEIs comparing education of different tracks/ specializations

Weighted Data

- Graduates = Educational Output ≈ Workforce Input
- Weighted based on number of graduates
- Uses
  - How is Public Health Education meeting workforce needs?
  - Identifying admissions needs

Graduates (5 year) - Reported

Specialization	AAC (2017-2021)	BGU (2017-2021)	HUJI (2017-2021)	UoH (2016-2020)	Total
Health Systems	N/A	6	77	122	205
Environmental Health	N/A	4	4	40	48
Epidemiology & Biostatistics	N/A	N/A	9	41	50
Health Promotion	N/A	22	55	100	177
Other	80	208**	15***	43	346
Total	**80**	**240**	**160**	**346**	**826***

*TAU graduation figures not available

** 97 Research Track (no specialization), 48 Mother & Child Health, 63 Infectious Disease Prevention

***MD-MPH track, no specialization

746 MPH Graduates
(not including TAU)

80 BA in Public Health Graduates

Graduates (5 year) – Including Estimated TAU

Specialization	AAC (2017-2021)	BGU (2017-2021)	HUJI (2017-2021)	TAU	UoH (2016-2020)	Total
Health Systems	N/A	6	77	*42**	122	247
Environmental Health	N/A	4	4	*N/A*	40	48
Epidemiology & Biostatistics	N/A	N/A	9	*N/A*	41	50
Health Promotion	N/A	22	55	*42**	100	219
Other	80	208**	15***	*42**	43	388
Total	**80**	**240**	**160**	***126****	**346**	**952**
Total MPH	**N/A**					**872**

*TAU graduation figures not available; estimated via median MPH graduation figures

** 97 Research Track (no specialization), 48 Mother & Child Health, 63 Infectious Disease Prevention

***MD-MPH track, no specialization

Response Weight Calculation

$$\text{Data Weight} = \frac{\text{(Reported Number of Graduates of Specialization} \div \text{Total Number of Graduates)}}{\text{(1} \div \text{Total Number of Academic Specializations/Tracks)}}$$

Graduates:
80 BPH
857 MPH

Total Academic Specializations/Tracks:
BA: 1
MPH: 20

Analysis by HEI Output (All Graduates)

*No Graduation Figures; Based on Median

		All Domains Except Policy				Policy Domain			
HEI	Specialization	Graduates	Target	Current	Data Weight	Graduates	Target	Current	Data Weight
AAC	N/A	80	9%	5%	1.71	80	9%	5%	1.80
BGU	Environmental Health	4	0%	5%	0.09	4	0%	5%	0.09
BGU	Health Promotion	22	2%	5%	0.47	22	2%	5%	0.49
BGU	Health Systems	N/A	N/A	N/A	N/A	6	1%	5%	0.13
BGU	Infectious Disease Prevention	63	7%	5%	1.34	63	7%	5%	1.42
BGU	Mother & Child Health	49	5%	5%	1.05	48	5%	5%	
BGU	Research Track	102	11%	5%	2.18	97	10%		
HUJI	Environmental Health	4	0%	5%	0.09				
HUJI	Epidemiology	9	1%	5%					
HUJI	Health Promotion	55							
HUJI	Health Syste								
TAU*									0.92
TAU*							4%	5%	0.92
TAU*						41*	4%	5%	0.92
UoH				5%	0.00	0	0%	5%	0.00
UoH			5%	5%	0.92	43	5%	5%	0.97
UoH	Environmental Health	40	4%	5%	0.85	40	4%	5%	0.90
UoH	Epidemiology	41	4%	5%	0.88	41	4%	5%	0.92
UoH	Health Promotion	100	11%	5%	2.13	100	11%	5%	2.25
UoH	Health Systems	122	13%	5%	2.60	122	13%	5%	2.74
UoH	Mental Health	0	0%	5%	0.00	0	0%	5%	0.00
Total		937	100%	100%	20	934	100%	100%	21

HUJI Env. Health = (4 Graduates ÷ 937 Total Graduates) / (1 Specialization ÷ 20 Specializations) = 0.004 (Target) / 0.05 (Current) = 0.09

Analysis by HEI Output (MPH Graduates)

*No Graduation Figures; Based on Median

		All Domains Except Policy				Policy Domain			
HEI	Specialization	MPH Graduates	Target	Current	Data Weight	MPH Graduates	Target	Current	Data Weight
BGU	Environmental Health	4	0%	5%	0.09	4	0%	5%	0.09
BGU	Health Promotion	22	3%	5%	0.49	22	3%	5%	0.52
BGU	Health Systems	N/A	N/A	N/A	N/A	6	1%	5%	0.14
BGU	Infectious Disease Prevention	63	7%	5%	1.40	63	7%	5%	1.48
BGU	Mother & Child Health	49	6%	5%	1.09	48	6%	5%	1.12
BGU	Research Track	102	12%	5%	2.26	97	11%	5%	2.27
HUJI	Environmental Health	4	0%	5%	0.09	4	0%	5%	0.09
HUJI	Epidemiology	9	1%	5%	0.20	9	1%	5%	0.21
HUJI	Health Promotion	55	6%	5%	1.22	55	6%	5%	1.29
HUJI	Health Systems	77	9%	5%	1.71	77	9%	5%	1.80
TAU	General	42*	5%	5%	0.93	41*	5%	5%	0.96
TAU	Health Promotion	42*	5%	5%	0.93	41*	5%	5%	0.96
TAU	Health Systems	42*	5%	5%	0.93	41*	5%	5%	0.96
UoH	Biostatistics	0	0%	5%	0.00	0	0%	5%	0.00
UoH	Community Health	43	5%	5%	0.95	43	5%	5%	1.01
UoH	Environmental Health	40	4%	5%	0.85	40	5%	5%	0.94
UoH	Epidemiology	41	5%	5%	0.89	41	5%	5%	0.96
UoH	Health Promotion	100	12%	5%	2.22	100	12%	5%	2.34
UoH	Health Systems	122	14%	5%	2.70	122	14%	5%	2.86
UoH	Mental Health	0	0%	5%	0.00	0	0%	5%	0.00
Total		857	100%	100%	19	854	100%	100%	20

Competences Addressed within Core Courses – Environment Domain

HEI	Specialization	Graduates	Data Weight	Definitions	Env. Health Risk Factors	Environmental Measurement/ Surveillance	Governance & Stakeholders	Food Security/Food Safety	Emergency Planning/ Management	Preventing & Controlling Hazards	Conduct Risk and Health Impact Assessments	Develop Env Health Strategies	Develop Env Health Research Protocol	Conduct Env Health Research Project	Total (n=11)	Percent (%)
BGU	Environmental Health	4	0.09	1 (0.09)	1 (0.09)	1 (0.09)	0 (0.00)	0 (0.00)	1 (0.09)	1 (0.09)	1 (0.09)	1 (0.09)	0 (0.00)	0 (0.00)	7	64%
HUJI	Environmental Health	4	0.09	1 (0.09)	1 (0.09)	1 (0.09)	1 (0.09)	1 (0.09)	1 (0.09)	1 (0.09)	1 (0.09)	1 (0.09)	1 (0.09)	0 (0.09)	10	91%
UoH	Environmental Health	40	0.85	1 (0.85)	1 (0.85)	1 (0.85)	1 (0.85)	0 (0.00)	1 (0.85)	1 (0.85)	1 (0.85)	0 (0.00)	1 (0.85)	1 (0.85)	9	82%
⋮																
Total Academic Programs (n=20)				16	16	10	11	7	11	10	14	6	5	3	109	
Total Educational Output (n=20)				14.88	14.88	8.35	10.16	5.78	9.26	7.56	13.17	5.23	3.95	2.22	95.43	
Percent of Academic Programs				80%	80%	50%	55%	35%	55%	50%	70%	30%	25%	15%	49.55%	
Percent of Educational Output (Weighted by Graduates)				74%	74%	42%	51%	29%	46%	38%	66%	26%	20%	11%	43%	

THE HEBREW UNIVERSITY OF JERUSALEM

University College Cork

ASPHER
The Association of Schools of Public Health in the European Region

Report of Work Package 3:
Mapping the Competency Profiles of Israeli Schools & Programmes of Public Health

Public Health SEEEPHI
harmonization, employability, leadership and outreach

Co-funded by the Erasmus+ Programme of the European Union

HEI	Specialization	Data Weight	Definitions	Env. Health Risk Factors	Environmental Measurement/ Surveillance	Governance & Stakeholders	Food Security/Food Safety	Emergency Planning/ Management	Preventing & Controlling Hazards	Conduct Risk and Health Impact Assessments	Develop Env Health Strategies	Develop Env Health Research Protocol	Conduct Env Health Research Project	Total (n=11)	Percent (%)
AAC	N/A	1.71	1 (1.71)	1	1	0	0	1	0	0	0	0	0	4	36%
BGU	Environmental Health	0.09	1 (0.09)	1	1	0	0	1	1	1	1	0	0	7	64%
	Health Promotion	0.47	0 (0.00)	0	0	0	0	0	0	0	0	0	0	0	0%
	Infectious Disease Prevention	1.34	0 (0.00)	0	0	0	0	0	0	0	0	0	0	0	0%
	Mother & Child Health	1.05	0 (0.00)	0	0	0	0	0	0	0	0	0	0	0	0%
	Research Track**	2.18	0 (0.00)	0	0	0	0	0	0	0	0	0	0	0	0%
HUJI	Environmental Health	0.09	1 (0.09)	1	1	1	1	1	1	1	1	1	0	10	91%
	Epidemiology	0.19	1 (0.19)	1	1	1	1	1	1	1	1	1	1	11	100%
	Health Promotion	1.17	1 (1.17)	1	1	1	1	1	1	1	1	1	1	11	100%
	Health Systems	1.64	1 (1.64)	1	1	1	1	1	1	1	1	1	0	10	91%
TAU	General	0.90	1 (0.90)	1	1	1	1	1	1	1	0	0	0	8	73%
	Health Promotion	0.90	1 (0.90)	1	1	1	1	1	1	1	0	0	0	8	73%
	Health Systems	0.90	1 (0.90)	1	1	1	1	1	1	1	0	0	0	8	73%
UoH	Biostatistics	0.00	1 (0.00)	1	0	0	0	0	0	1	0	0	0	3	27%
	Community Health	0.92	1 (0.92)	1	0	1	0	1	1	1	0	0	0	6	55%
	Environmental Health	0.85	1 (0.85)	1	1	1	0	1	1	1	0	1	1	9	82%
	Epidemiology	0.88	1 (0.88)	1	0	0	0	0	0	1	0	0	0	3	27%
	Health Promotion	2.13	1 (2.13)	1	0	0	0	0	0	1	1	0	0	4	36%
	Health Systems	2.60	1 (2.60)	1	0	0	0	0	0	1	1	0	0	4	36%
	Mental Health	0.00	1 (0.00)	1	0	1	0	0	0	0	0	0	0	3	27%
Total Academic Programs (n=20)			16	16	10	11	7	11	10	14	6	5	3	109	
Total Educational Output (n=20)			14.88	14.88	8.35	10.16	5.78	9.26	7.56	13.17	5.23	3.95	2.22	95.43	
Percent of Academic Programs			80%	80%	50%	55%	35%	55%	50%	70%	30%	25%	15%	49.55%	
Percent of Educational Output (Weighted by Graduates)			74%	74%	42%	51%	29%	46%	38%	66%	26%	20%	11%	43%	

Competence Heat Map:

Competences Addressed by Core Courses (%)

0-24%	25-49%	50-74%	75%-100%

Methods	SES	Environment	Policy	Promotion	Ethics
Definitions of Health & Public Health	Basic Population Health Definitions & Concepts	Basic Environ. Health Definitions & Concepts	Basic Economic Theory and Concepts	Definitions of Health Promotion, Protection, & Disease Prevention	Basic Ethical Theories and Concepts
Disease Classification Systems	Population Health Indicators	Environmental Health Exposures – Risk Factors	Basic Organizational Theory; Leadership and Management Concepts	Basic Health Promotion Concepts	Ethical Aspects of Public Health Strategies, Interventions, and Policies
Basic Epidemiologic/ Demographic Concepts	Socioeconomic Determinants - Concepts	Environmental Measurement / Surveillance	Evaluation Strategies and Designs – Impact Evaluations	Major Theories and Models	Ethical Aspects of Public Health Research
Epidemiologic Study Designs: Observational	Socioeconomic Determinants - Indicators	Governance and Stakeholders	Evaluation Strategies and Designs – Health Economic Evaluations	Principles of Health Communication	Data Protection and Storage
Epidemiologic Study Designs: Experimental	Health Behavior - Indicators	Food Security / Food Safety	Evaluation Strategies and Designs – Organizational/ Program Evaluations	Health Promotion Program Design & Methods	Ethics Committee Systems
Qualitative Research Methods	Models and Theories of Social Determinants of Health	Emergency Planning/ Management	Evaluation Strategies and Designs – Policy Evaluations	Emergency Planning and Management	
Questionnaire Design & Scaling	Develop a Population Health Research Protocol	Preventing and Controlling Hazards	Disaster Management	Health Promotion Program Research Design	
Statistical Concepts	Conduct a Population Health Research Project	Conduct Risk and Health Impact Assessments	Program Implementation and Analysis Strategies	Program Implementation and Analysis Strategies	
IT & Data Handling		Develop Environmental Health Strategies	Develop a PH Policy/ Strategy/Intervention Project	Develop a Health Promotion Policy Proposal	
Scientific Writing & Reading		Develop an Environ. Health Research Protocol	Implement a PH Policy/ Strategy/Intervention Project	Develop a Health Promotion Project	
Develop a PH Research Protocol		Conduct an Environ. Health Research Project		Implement a Health Promotion Project	
Conduct a PH Research Project					

Competence Heat Map:

Percent of Competences Graduates are Exposed to via Core Courses (%)

0-24%	25-49%	50-74%	75%-100%

Methods	SES	Environment	Policy	Promotion	Ethics
Definitions of Health & Public Health	Basic Population Health Definitions & Concepts	Basic Environ. Health Definitions & Concepts	Basic Economic Theory and Concepts	Definitions of Health Promotion, Protection, & Disease Prevention	Basic Ethical Theories and Concepts
Disease Classification Systems	Population Health Indicators	Environmental Health Exposures – Risk Factors	Basic Organizational Theory; Leadership and Management Concepts	Basic Health Promotion Concepts	Ethical Aspects of Public Health Strategies, Interventions, and Policies
Basic Epidemiologic/ Demographic Concepts	Socioeconomic Determinants - Concepts	Environmental Measurement / Surveillance	Evaluation Strategies and Designs – Impact Evaluations	Major Theories and Models	Ethical Aspects of Public Health Research
Epidemiologic Study Designs: Observational	Socioeconomic Determinants - Indicators	Governance and Stakeholders	Evaluation Strategies and Designs – Health Economic Evaluations	Principles of Health Communication	Data Protection and Storage
Epidemiologic Study Designs: Experimental	Health Behavior - Indicators	Food Security / Food Safety	Evaluation Strategies and Designs – Organizational/ Program Evaluations	Health Promotion Program Design & Methods	Ethics Committee Systems
Qualitative Research Methods	Models and Theories of Social Determinants of Health	Emergency Planning/ Management	Evaluation Strategies and Designs – Policy Evaluations	Emergency Planning and Management	
Questionnaire Design & Scaling	Develop a Population Health Research Protocol	Preventing and Controlling Hazards	Disaster Management	Health Promotion Program Research Design	
Statistical Concepts	Conduct a Population Health Research Project	Conduct Risk and Health Impact Assessments	Program Implementation and Analysis Strategies	Program Implementation and Analysis Strategies	
IT & Data Handling		Develop Environmental Health Strategies	Develop a PH Policy/ Strategy/Intervention Project	Develop a Health Promotion Policy Proposal	
Scientific Writing & Reading		Develop an Environ. Health Research Protocol	Implement a PH Policy/ Strategy/Intervention Project	Develop a Health Promotion Project	
Develop a PH Research Protocol		Conduct an Environ. Health Research Project		Implement a Health Promotion Project	
Conduct a PH Research Project					

Competence Heat Map:

Competences Addressed by Any Course (%)

0-24%	25-49%	50-74%	75%-100%

Methods (87.7%)	SES (92.1%)	Environment (61.7%)	Policy (62.0%)	Promotion (74.6%)	Ethics (96.8%)
Definitions of Health & Public Health	Basic Population Health Definitions & Concepts	Basic Environ. Health Definitions & Concepts	Basic Economic Theory and Concepts	Definitions of Health Promotion, Protection, & Disease Prevention	Basic Ethical Theories and Concepts
Disease Classification Systems	Population Health Indicators	Environmental Health Exposures – Risk Factors	Basic Organizational Theory; Leadership and Management Concepts	Basic Health Promotion Concepts	Ethical Aspects of Public Health Strategies, Interventions, and Policies
Basic Epidemiologic/ Demographic Concepts	Socioeconomic Determinants - Concepts	Environmental Measurement / Surveillance	Evaluation Strategies and Designs – Impact Evaluations	Major Theories and Models	Ethical Aspects of Public Health Research
Epidemiologic Study Designs: Observational	Socioeconomic Determinants - Indicators	Governance and Stakeholders	Evaluation Strategies and Designs – Health Economic Evaluations	Principles of Health Communication	Data Protection and Storage
Epidemiologic Study Designs: Experimental	Health Behavior - Indicators	Food Security / Food Safety	Evaluation Strategies and Designs – Organizational/ Program Evaluations	Health Promotion Program Design & Methods	Ethics Committee Systems
Qualitative Research Methods	Models and Theories of Social Determinants of Health	Emergency Planning/ Management	Evaluation Strategies and Designs – Policy Evaluations	Emergency Planning and Management	
Questionnaire Design & Scaling	Develop a Population Health Research Protocol	Preventing and Controlling Hazards	Disaster Management	Health Promotion Program Research Design	
Statistical Concepts	Conduct a Population Health Research Project	Conduct Risk and Health Impact Assessments	Program Implementation and Analysis Strategies	Program Implementation and Analysis Strategies	
IT & Data Handling		Develop Environmental Health Strategies	Develop a PH Policy/ Strategy/Intervention Project	Develop a Health Promotion Policy Proposal	
Scientific Writing & Reading		Develop an Environ. Health Research Protocol	Implement a PH Policy/ Strategy/Intervention Project	Develop a Health Promotion Project	
Develop a PH Research Protocol		Conduct an Environ. Health Research Project		Implement a Health Promotion Project	
Conduct a PH Research Project					

Competence Heat Map:

Graduates Exposed to Competences by Any Courses (%)

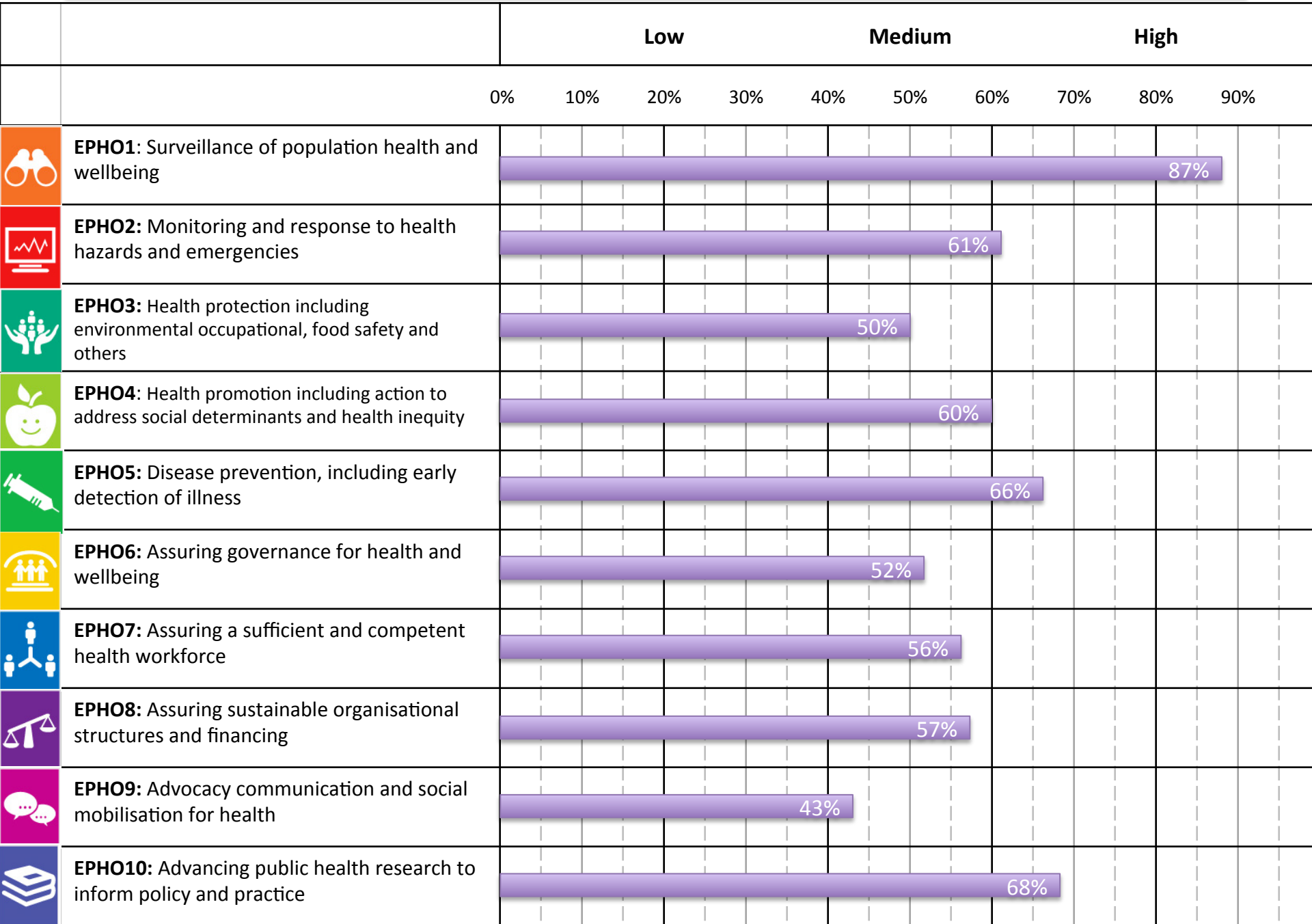
0-24%	25-49%	50-74%	75%-100%

Methods	SES	Environment	Policy	Promotion	Ethics
Definitions of Health & Public Health	Basic Population Health Definitions & Concepts	Basic Environ. Health Definitions & Concepts	Basic Economic Theory and Concepts	Definitions of Health Promotion, Protection, & Disease Prevention	Basic Ethical Theories and Concepts
Disease Classification Systems	Population Health Indicators	Environmental Health Exposures – Risk Factors	Basic Organizational Theory; Leadership and Management Concepts	Basic Health Promotion Concepts	Ethical Aspects of Public Health Strategies, Interventions, and Policies
Basic Epidemiologic/ Demographic Concepts	Socioeconomic Determinants - Concepts	Environmental Measurement / Surveillance	Evaluation Strategies and Designs – Impact Evaluations	Major Theories and Models	Ethical Aspects of Public Health Research
Epidemiologic Study Designs: Observational	Socioeconomic Determinants - Indicators	Governance and Stakeholders	Evaluation Strategies and Designs – Health Economic Evaluations	Principles of Health Communication	Data Protection and Storage
Epidemiologic Study Designs: Experimental	Health Behavior - Indicators	Food Security / Food Safety	Evaluation Strategies and Designs – Organizational/ Program Evaluations	Health Promotion Program Design & Methods	Ethics Committee Systems
Qualitative Research Methods	Models and Theories of Social Determinants of Health	Emergency Planning/ Management	Evaluation Strategies and Designs – Policy Evaluations	Emergency Planning and Management	
Questionnaire Design & Scaling	Develop a Population Health Research Protocol	Preventing and Controlling Hazards	Disaster Management	Health Promotion Program Research Design	
Statistical Concepts	Conduct a Population Health Research Project	Conduct Risk and Health Impact Assessments	Program Implementation and Analysis Strategies	Program Implementation and Analysis Strategies	
IT & Data Handling		Develop Environmental Health Strategies	Develop a PH Policy/ Strategy/Intervention Project	Develop a Health Promotion Policy Proposal	
Scientific Writing & Reading		Develop an Environ. Health Research Protocol	Implement a PH Policy/ Strategy/Intervention Project	Develop a Health Promotion Project	
Develop a PH Research Protocol		Conduct an Environ. Health Research Project		Implement a Health Promotion Project	
Conduct a PH Research Project					

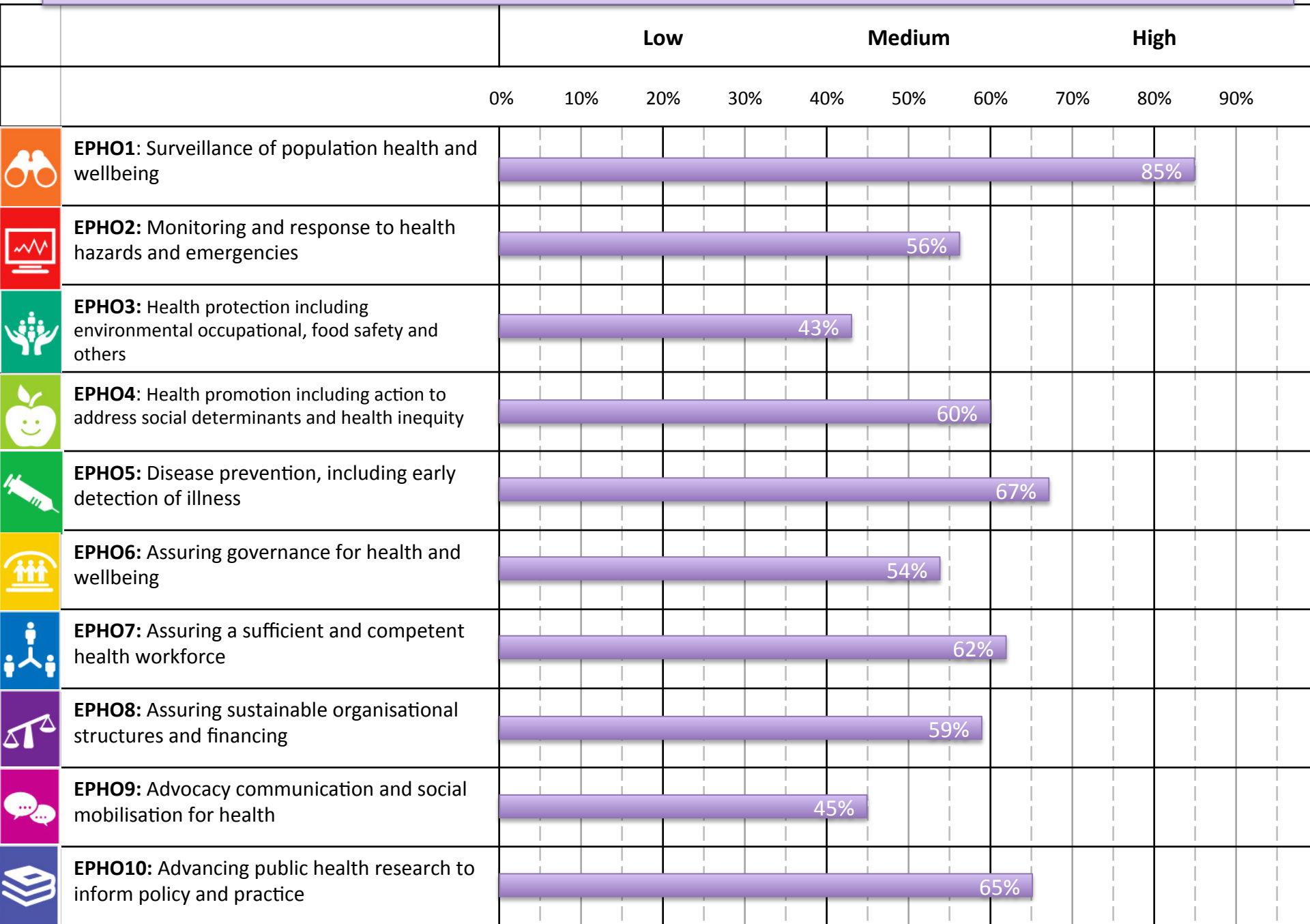
Mapping WP3 to EPHOs - Example

	Domain	Competence					
EPHO 1	Methods	Definitions of Health & Public Health	Disease Classification Systems	Basic Epidemiologic / Demographic Concepts	Epidemiologic Study Designs: Observational	Epidemiologic Study Designs: Experimental	Qualitative Research Methods
		Questionnaire Design & Scaling	Statistical Concepts	IT & Data Handling	Scientific Writing & Reading	Develop a PH Research Protocol	Conduct a PH Research Project
	SES	Basic Population Health Definitions & Concepts	Population Health Indicators	Socioeconomic Determinants - Concepts	Socioeconomic Determinants - Indicators	Health Behavior - Indicators	Models and Theories of Social Determinants of Health
		Develop a Population Health Research Protocol	Conduct a Population Health Research Project				

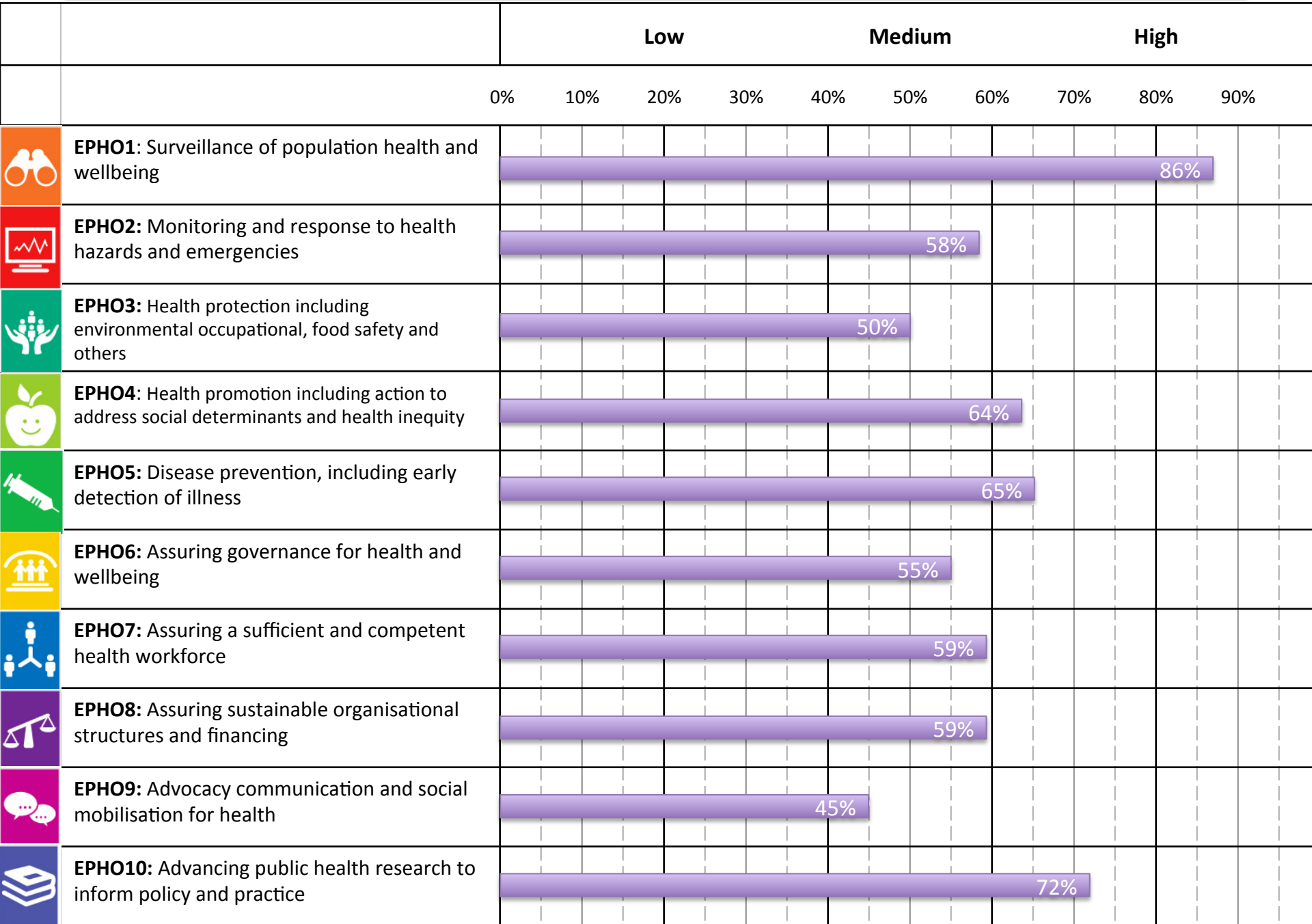
Percent of Competences Addressed by Core Curricula (%) – All Programs



Percent of EPHOs Competences Graduates are Exposed to within Core Curricula (%) – All HEIs

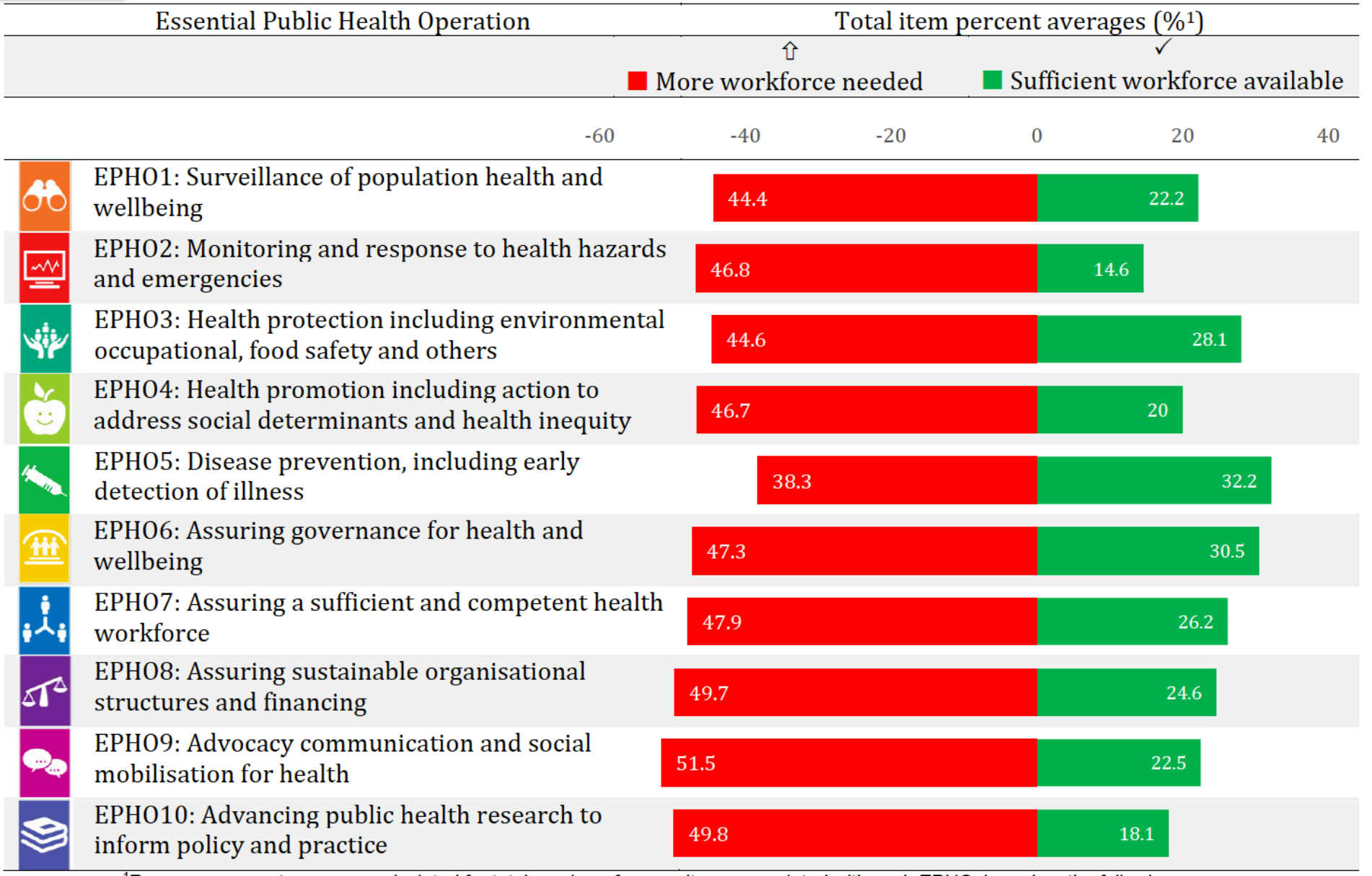


Percent of Competences Addressed by Core Curricula (%) – MPH Programs

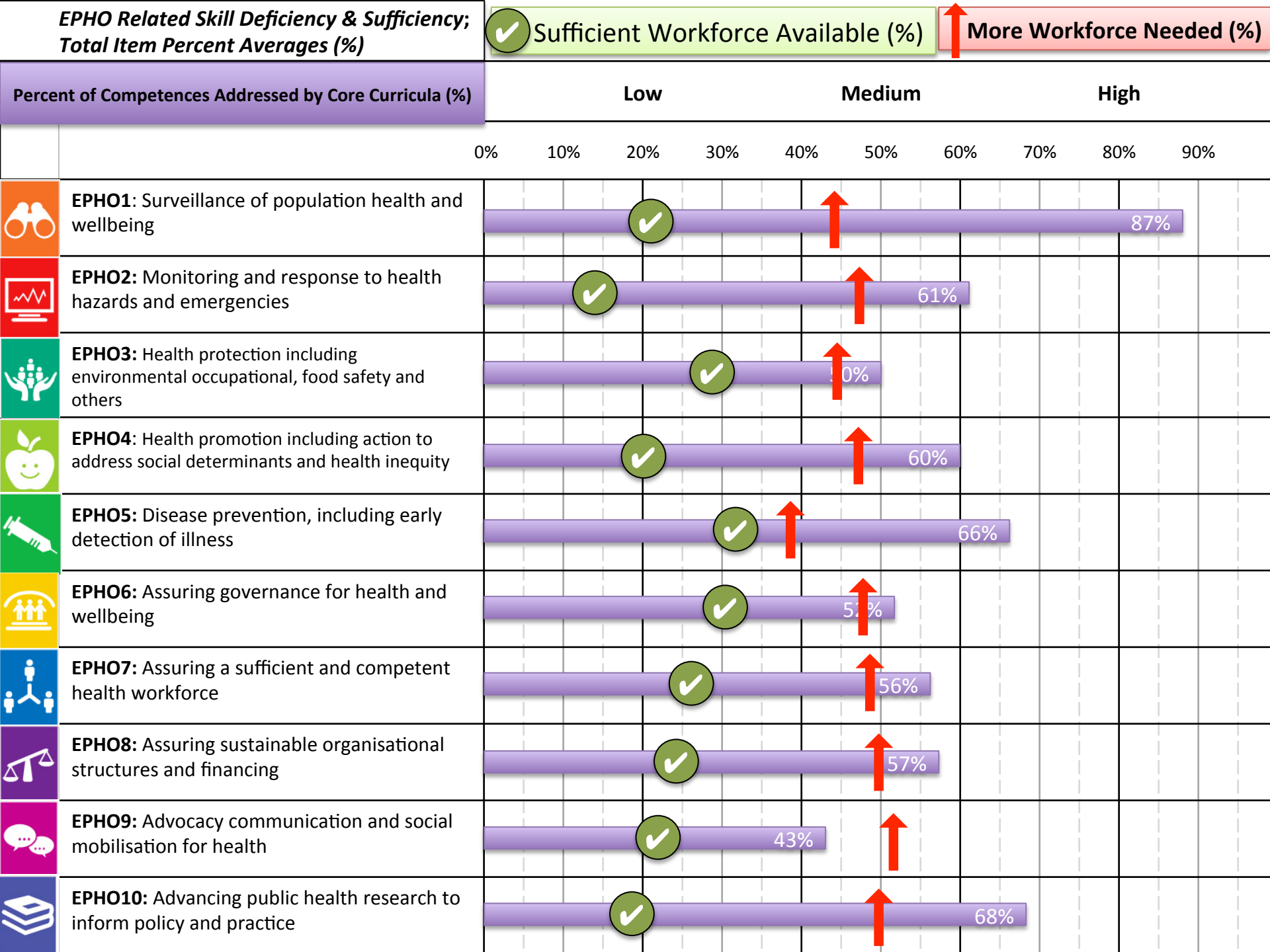


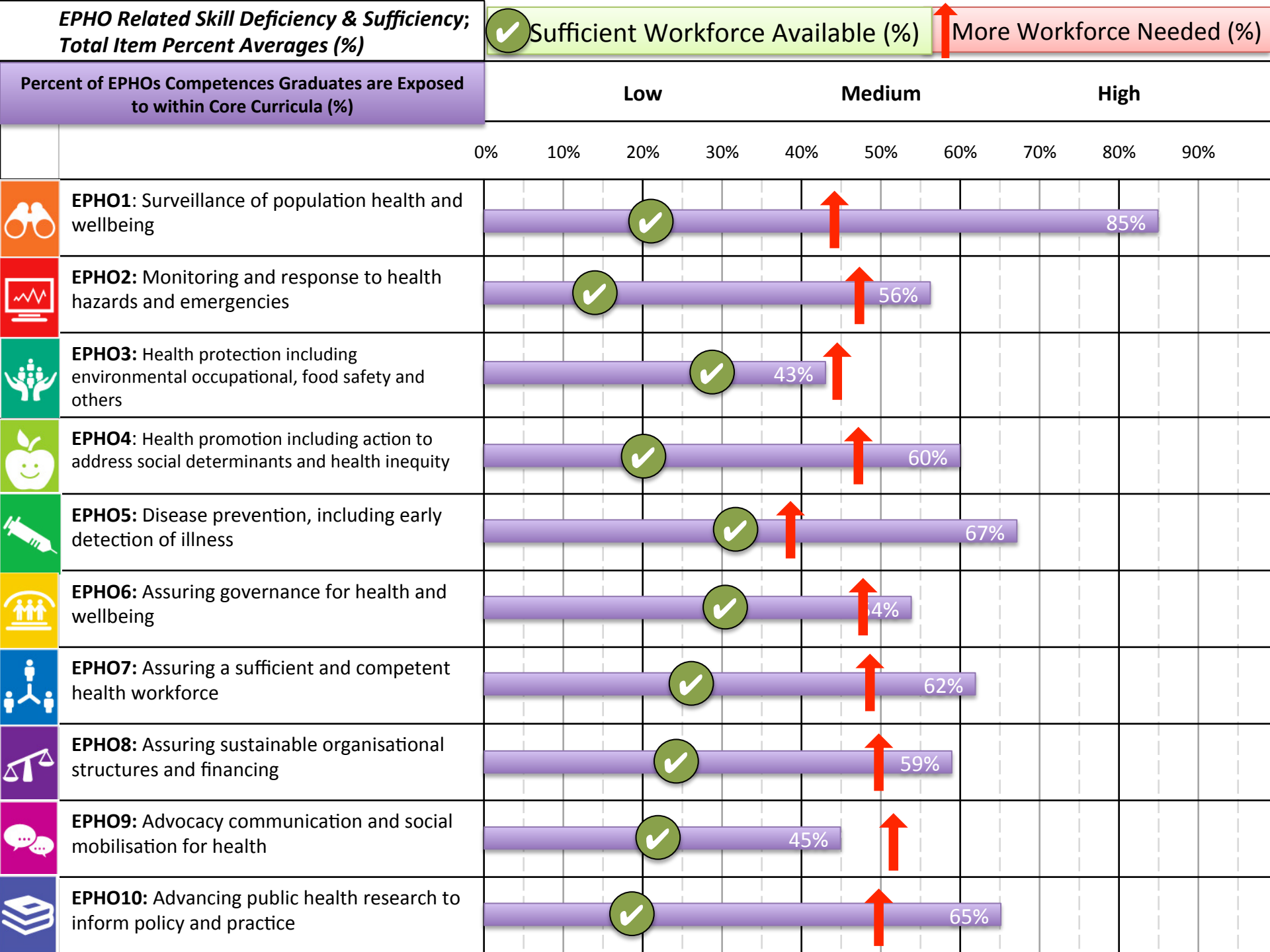
WP2 Findings

Chart 2: Essential Public Health Operations (EPHOs) Related Skill Deficiency and Sufficiency



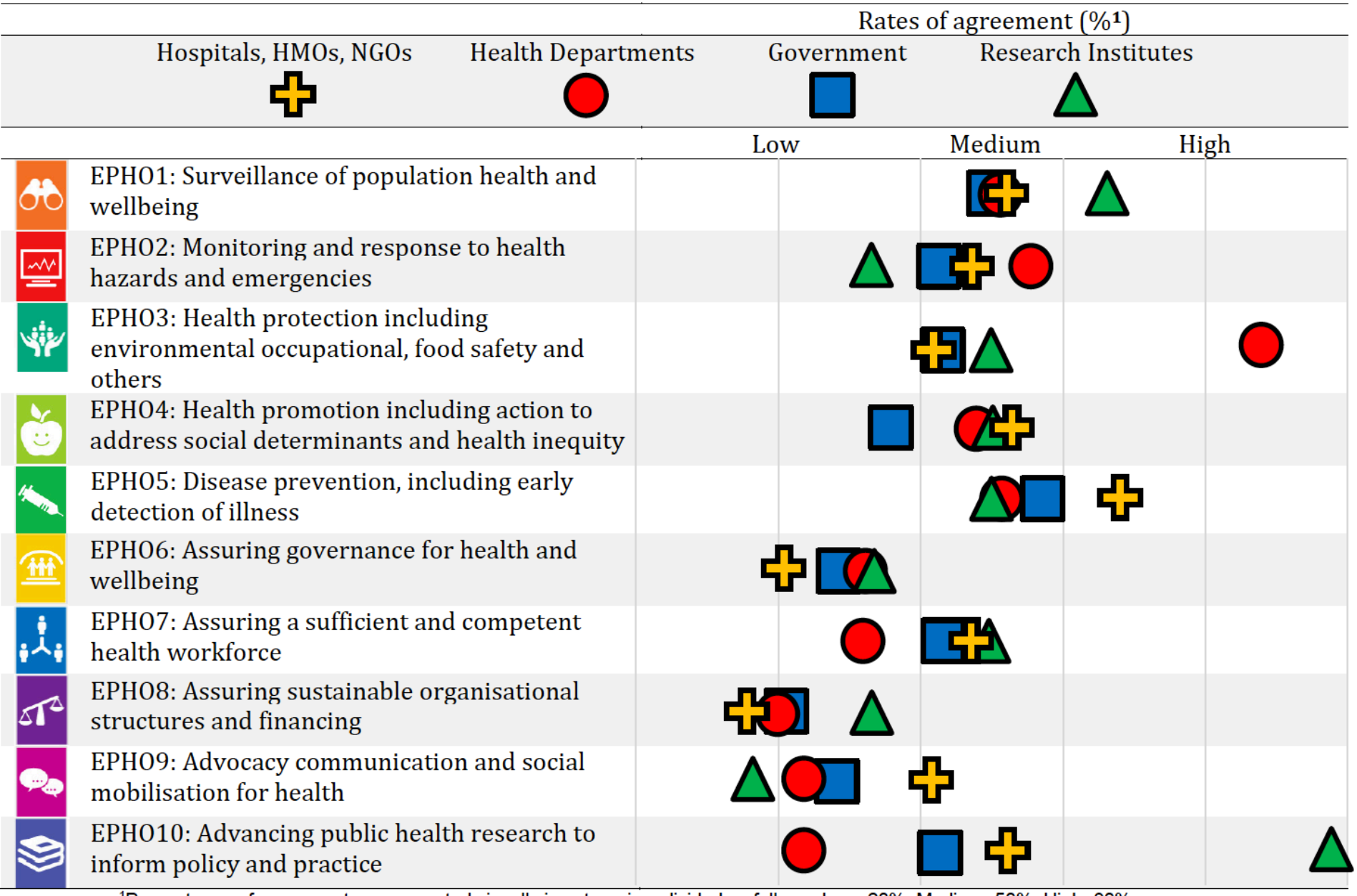
[1]Response percent averages calculated for total number of survey items associated with each EPHO, based on the following categorization: EPHO1: 1.1, 1.2, 1.3, 1.4, 2.2, 2.3; EPHO2: 4.1, 4.2, 4.3; EPHO3: 3.1, 4.1, 4.4, 4.5, 4.6, 4.7, 4.8; EPHO4: 2.1, 2.4, 3.3, 5.4; EPHO5: 2.4, 4.4, 4.7; EPHO6: 3.1, 3.2, 3.3, 6.2, 9.1, 10.3; EPHO7: 1.7, 1.8, 5.1, 5.2, 5.3, 8.2, 8.3, 9.2, 10.2; EPHO8: 1.6, 3.2, 8.4, 8.5, 10.1, 10.4; EPHO9: 2.1, 6.1, 6.2, 6.3, 7.1, 7.2, 7.3; EPHO10: 1.3, 1.5, 2.3.


EPHO Related Skill Deficiency & Sufficiency; Total Item Percent Averages (%)
Sufficient Workforce Available (%)
More Workforce Needed (%)
Percent of Competences Addressed by Core Curricula (%)
Low
Medium
High
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
EPHO1: Surveillance of population health and wellbeing
87%
EPHO2: Monitoring and response to health hazards and emergencies
61%
EPHO3: Health protection including environmental occupational, food safety and others
EPHO4: Health promotion including action to address social determinants and health inequity
60%
EPHO5: Disease prevention, including early detection of illness
66%
EPHO6: Assuring governance for health and wellbeing
EPHO7: Assuring a sufficient and competent health workforce
56%
EPHO8: Assuring sustainable organisational structures and financing
57%
EPHO9: Advocacy communication and social mobilisation for health
43%
EPHO10: Advancing public health research to inform policy and practice
68%


EPHO Related Skill Deficiency & Sufficiency; Total Item Percent Averages (%)
Sufficient Workforce Available (%)
More Workforce Needed (%)
Percent of EPHOs Competences Graduates are Exposed to within Core Curricula (%)
Low
Medium
High
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
EPHO1: Surveillance of population health and wellbeing
85%
EPHO2: Monitoring and response to health hazards and emergencies
56%
EPHO3: Health protection including environmental occupational, food safety and others
43%
EPHO4: Health promotion including action to address social determinants and health inequity
60%
EPHO5: Disease prevention, including early detection of illness
67%
EPHO6: Assuring governance for health and wellbeing
4%
EPHO7: Assuring a sufficient and competent health workforce
62%
EPHO8: Assuring sustainable organisational structures and financing
59%
EPHO9: Advocacy communication and social mobilisation for health
45%
EPHO10: Advancing public health research to inform policy and practice
65%

WP2 Findings

Chart 1: Responses to "*Which Essential Public Health Operations (EPHOs) are most relevant to your organization?*"



[1]Percentages of agreement are presented visually in categories, divided as follows: Low~20%, Medium~50%, High~80%.

Responses to: *Which EPHOs are most relevant to your organization? (Percentage Agreement %)*
Hospitals, HMOs, NGOs
Health Departments
Government
Research Institutions
Percent of Competences Addressed by Core Curricula (%)
Low
Medium
High
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
EPHO1: Surveillance of population health and wellbeing
EPHO2: Monitoring and response to health hazards and emergencies
EPHO3: Health protection including environmental occupational, food safety and others
EPHO4: Health promotion including action to address social determinants and health inequity
EPHO5: Disease prevention, including early detection of illness
EPHO6: Assuring governance for health and wellbeing
EPHO7: Assuring a sufficient and competent health workforce
EPHO8: Assuring sustainable organisational structures and financing
EPHO9: Advocacy communication and social mobilisation for health
EPHO10: Advancing public health research to inform policy and practice

Responses to: *Which EPHOs are most relevant to your organization? (Percentage Agreement %)*
Hospitals, HMOs, NGOs
Health Departments
Government
Research Institutions
Percent of EPHOs Competences Graduates are Exposed to within Core Curricula (%)
Low
Medium
High
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
EPHO1: Surveillance of population health and wellbeing
EPHO2: Monitoring and response to health hazards and emergencies
EPHO3: Health protection including environmental occupational, food safety and others
EPHO4: Health promotion including action to address social determinants and health inequity
EPHO5: Disease prevention, including early detection of illness
EPHO6: Assuring governance for health and wellbeing
EPHO7: Assuring a sufficient and competent health workforce
EPHO8: Assuring sustainable organisational structures and financing
EPHO9: Advocacy communication and social mobilisation for health
EPHO10: Advancing public health research to inform policy and practice

Uses

- Identifies areas of strength and/or need
- Identifies anomalies
- Identifies curriculum and programme structure
- Identifies HEI output

Caveats

- Does not reflect the depth or quality of education
- Differences in scoring relative coverage
- Reflects what's being taught, not graduates' skills

Strengths

- 1st comprehensive mapping of Israeli public health training
- Provides basis for harmonizing public health training and development of inter-institutional courses
- Allows for direct comparison of workforce needs & educational output

Limitations

- Reluctance to answer for entirety of programme
- Differences in scoring relative coverage
- Only MPH and BA programs
- May not capture applied learning opportunities (especially thesis/capstone)
- Sustainability?

Moving Forward - Possibilities

- Continued integration of WP2-WP3 via EPHOs
- Different Weighing Strategies – students vs. graduates
- Long term usability & sustainability of tool
  - Snapshot in Time vs. Living Tool
  - Israel vs. Europe
  - Define User and Purpose: Students? HEIs? Policy?
  - APHEA Curriculum Validation model

Agency for Public Health Education Accreditation
APPLICATION | Curriculum Validation

APHEA Validated Curriculum

APPENDIX A: Core Competences Framework (Section 4)

Matrix to be filled in by applicant:
This matrix, may have already been completed as part of application stage. If so copy and paste from that document.

	Methods in public health	Population health and its determinants	Health policy, economics and management	Health education and promotion	Other/cross-disciplinary themes	'X' Other	Total number of credits
CORE / Compulsory							
Module* 1							
Module 2							
Module 3							
Module X etc							
Integrating experience							
ELECTIVE / Optional							
Module 4							
Module 5							
Module 6							
Module X etc							
Integrating experience							

(*Replace "Module" with the proper title of your modules. "Module" is often expressed as, for example, as course, block or unit).
Copy and paste table for specialisations / tracks / pathways.

APHEA Validated Curriculum

The University Of Sheffield.

APPENDIX A: Core Competences Framework

	Methods in public health	Population health and its determinants	Health policy, economics and management	Health education and promotion	Other/cross-disciplinary themes	UoS credits	ECTS credits
CORE MODULES							
Key issues in national and global public health HAR675	B1. Epidemiological methods	C1.Environmental sciences (including physical, chemical and biological factors) C2.Communicable disease C3. Non- communicable disease C4.Occupational health C5.Social and behavioural sciences C6.Health risk assessment C7. Health inequalities along social gradient	D1.Economics D2. Healthcare systems planning D3.Organisation and management D4. Health policy D5.Financing health services D7. Health targets	E1. Health education E2. Health promotion E3.Health protection and regulation E4. Disease prevention	A1. Introduction and / or essentials in public health F1.Biology for public health F2.Law F3. Ethics F4.Ageing F5.Nutrition F6.Maternal and child health F7. Mental health F8.Demography F9. IT use F11.Leadership and decision- making F12.Social psychology F13.Global public health F15. Communication and advocacy F16.Health anthropology F17.Human rights	15	7.5