

**eTable 1. Number of participants per country**

Country	Number
Albania	1
Austria	3
Azerbaijan	1
Belgium	3
Bulgaria	1
Croatia	3
Czech Republic	1
Cyprus	2
Denmark	2
Estonia	1
Finland	1
France	3
Germany	3
Greece	3
Hungary	3
Ireland	3
Israel	1
Italy	3
Kosovo	3
Latvia	3
Lithuania	2
Luxembourg	1
Malta	1
Netherlands	2
Norway	2
Poland	3
Portugal	3
Republic of Northern Macedonia	1
Romania	3
Serbia	1
Slovakia	1
Slovenia	2
Spain	3
Sweden	3
Switzerland	2
Turkey	3
Ukraine	1
United Kingdom	3

**eTable 2. Presence of national professional societies and trainee associations for Clinical Microbiology, Infectious Diseases, Infection Prevention and Control, and Clinical Pharmacy, in the 38 surveyed European countries**

Country	National professional societies					Formal and/or informal trainee associations			
	CM	ID	IPC	CP	Other	CM	ID	IPC	CP
Albania	X	X				No	Only informal	No	No
Austria		X		X	CM+IPC	Only informal	No	No	Both
Azerbaijan	X					Yes, formal	Yes, formal	No	No
Belgium			X	X	CM+ID	Yes, formal	No	No	No
Bulgaria	X	X	X	X		No	No	No	No
Croatia	X	X				No	Both	No	Yes, formal
Czech Republic	X	X	X			Both	No	No	No
Cyprus	X	X	X			Only informal	No	Only informal	No
Denmark	X	X	X	X		No	Only informal	No	No
Estonia		X		X		No	No	No	No
Finland	X	X	X			No	Only informal	No	No
France	X	X	X	X		Only informal	Both	No	No
Germany		X		X	CM+IPC	No	Both	No	No
Greece	X	X	X			Only informal	Yes, formal	Only informal	Only informal
Hungary			X	X	CM+ID	Both	Both	Both	Yes, formal
Ireland	X	X	X	X		Both	Both	Yes, formal	Both
Israel		X				No	Both	Only informal	No
Italy	X	X	X	X		No	No	No	No
Kosovo	X	X				No	No	No	No
Latvia		X				No	No	No	No
Lithuania		X		X		No	No	No	No
Luxembourg		X	X	X		Only informal	No	No	Both
Malta				X		Only informal	Only informal	No	Both
Netherlands	X		X	X		Both	No	No	Yes, formal
Norway	X	X	X	X		No	No	No	Only informal
Poland	X	X				No	No	No	No
Portugal					CM+ID	No	No	No	No
Republic of Northern Macedonia		X	X	X		No	Only informal	Only informal	No
Romania	X	X			CM+ID	No	No	No	Only informal
Serbia	X	X				No	No	No	No
Slovakia		X				Yes, formal	Yes, formal	No	No
Slovenia		X				No	Only informal	No	No
Spain			X	X	CM+ID	No	No	No	No
Sweden	X	X	X	X		Yes, formal	Yes, formal	Only informal	No
Switzerland	X	X	X	X		No	No	No	No
Turkey	X	X	X			Yes, formal	Yes, formal	No	No
Ukraine	X	X	X	X		No	Only informal	Yes, formal	No
United Kingdom	X	X	X	X		Both	Both	Both	Only informal

CM, Clinical Microbiology; ID, Infectious Diseases; IPC, Infection Prevention and Control; CP, Clinical Pharmacy.

eTable 3. Web addresses of national societies of specialties involved in AMS/IPC activities

Country		URL			
Category	CM	ID	IPC	CP	Other
Albania	NP	www.shshi.al	NP	NP	
Austria		http://www.oegit.eu		www.kh-pharmazie.at; https://oephg.eu/	<a href="http://www.oegach.at">http://www.oegach.at</a> <a href="http://www.oegkh.ac.at">http://www.oegkh.ac.at</a> (CM+IPC)
Azerbaijan	NP	NP	NP	NP	
Belgium			<a href="http://www.belgianinfectioncontrol.society.be/v2/home/startpage/">http://www.belgianinfectioncontrol.society.be/v2/home/startpage/</a>	<a href="http://www.hospitalpharmacistbelgium.eu">http://www.hospitalpharmacistbelgium.eu</a>	<a href="http://www.bvikm.org/">http://www.bvikm.org/</a> (CM+ID)
Bulgaria	<a href="http://www.bam-bg.net">www.bam-bg.net</a>	<a href="http://bsid-bg.org/">http://bsid-bg.org/</a>	<a href="http://www.bulnoso.org">www.bulnoso.org</a>	NP	
Croatia	<a href="http://www.hdkm.hr">http://www.hdkm.hr</a>	<a href="http://hdib.hr">http://hdib.hr</a>	NP	NP	<a href="http://www.iskra.bfm.hr">www.iskra.bfm.hr</a>
Czech Republic	<a href="http://www.sem-cls.cz">www.sem-cls.cz</a>	<a href="http://www.infekce.cz">www.infekce.cz</a>	<a href="http://www.sneh.cz">www.sneh.cz</a>	NP	
Cyprus	NP	NP	NP	NP	
Denmark	<a href="http://www.dskm.dk">www.dskm.dk</a>	<a href="http://www.infemed.dk">www.infemed.dk</a>	NP	NP	
Estonia	NP	<a href="http://www.esid.com">www.esid.com</a>	NP	NP	
Finland	<a href="https://kliinisetmikrobiologit.fi">https://kliinisetmikrobiologit.fi</a>	<a href="https://infektiolaakarit.yhdistysvain.fi">https://infektiolaakarit.yhdistysvain.fi</a>	<a href="http://www.sshy.fi">www.sshy.fi</a>	NP	
France	<a href="http://www.sfm-microbiologie.org">http://www.sfm-microbiologie.org</a>	<a href="http://www.infectiologie.com">http://www.infectiologie.com</a>	<a href="https://sf2h.net">https://sf2h.net</a>	<a href="http://sfpc.eu/fr">http://sfpc.eu/fr</a>	
Germany		<a href="http://www.dgi-net.de">www.dgi-net.de</a>		<a href="http://www.adka.de">www.adka.de</a>	<a href="http://www.dghm.org">www.dghm.org</a> (CM+IPC) <a href="http://www.antibiotic-stewardship.de">www.antibiotic-stewardship.de</a> <a href="http://www.krankenhaushygiene.de">www.krankenhaushygiene.de</a>
Greece	<a href="https://hms.org.gr/en/">https://hms.org.gr/en/</a>	<a href="http://www.loimoxeis.gr">www.loimoxeis.gr</a>	<a href="http://www.eeel.gr">www.eeel.gr</a>	NP	
Hungary			<a href="http://www.infekciokontroll.hu">www.infekciokontroll.hu</a>	<a href="https://www.mgyt-kgysz.hu/">https://www.mgyt-kgysz.hu/</a>	<a href="http://www.infektologia.hu">www.infektologia.hu</a> (CM+ID)
Ireland	<a href="http://www.iscm.ie/website/">http://www.iscm.ie/website/</a>	<a href="https://www.idsociety.ie">https://www.idsociety.ie</a>	<a href="http://www.ipcireland.ie">www.ipcireland.ie</a>	<a href="https://hpai.ie/">https://hpai.ie/</a>	<a href="http://www.hpssc.ie/">http://www.hpssc.ie/</a>
Israel	NP	NP	NP	NP	
Italy	<a href="http://www.amcli.it/">http://www.amcli.it/</a>	<a href="http://www.simit.org">http://www.simit.org</a>	<a href="http://www.societaitalianaigiene.org">http://www.societaitalianaigiene.org</a>	<a href="http://www.sifoweb.it">http://www.sifoweb.it</a>	<a href="http://www.simplos.it">www.simplos.it</a>
Kosovo	NP	NP	NP	NP	
Latvia	NP	NP	NP	NP	
Lithuania	NP	<a href="https://www.lid.lt/">https://www.lid.lt/</a>	NP	<a href="https://www.lkfd.lt/">https://www.lkfd.lt/</a>	
Luxembourg	NP	NP	NP	NP	<a href="http://www.conseil-scientifique.lu">www.conseil-scientifique.lu</a>
Malta	NP	NP	NP	<a href="http://www.mahp.org.mt">http://www.mahp.org.mt</a>	
Netherlands	<a href="https://www.nvmm.nl/">https://www.nvmm.nl/</a>	<a href="http://www.infectieziekten.org">www.infectieziekten.org</a>	<a href="https://www.vhig.nl/">https://www.vhig.nl/</a>	<a href="https://nvza.nl/">https://nvza.nl/</a>	<a href="https://www.rivm.nl/">https://www.rivm.nl/</a>
Norway	<a href="https://legeforeningen.no/Fagmed/Norsk-forening-for-medisinsk-mikrobiologi/">https://legeforeningen.no/Fagmed/Norsk-forening-for-medisinsk-mikrobiologi/</a>	<a href="http://legeforeningen.no/Fagmed/Norsk-forening-for-infeksjonsmedisin/">http://legeforeningen.no/Fagmed/Norsk-forening-for-infeksjonsmedisin/</a>	<a href="http://www.smittevernforum.no/">http://www.smittevernforum.no/</a>	<a href="http://www.sykehusfarmasi.org">www.sykehusfarmasi.org</a>	
Poland	<a href="http://www.microbiology.pl">http://www.microbiology.pl</a>	NP	NP	NP	<a href="http://www.antybiotyki.edu.pl">http://www.antybiotyki.edu.pl</a>
Portugal			<a href="https://www.dgs.pt/">https://www.dgs.pt/</a>	NP	<a href="http://spdmc.org">http://spdmc.org</a> (CM+ID)
Republic of Northern Macedonia	NP	<a href="http://www.infektivnaklinika.mk/Zdruzenie/Zazdruzenieto.htm">http://www.infektivnaklinika.mk/Zdruzenie/Zazdruzenieto.htm</a>	<a href="http://www.mzkihi.mk/index-en">http://www.mzkihi.mk/index-en</a>	<a href="http://www.mfd.org.mk">http://www.mfd.org.mk</a>	
Romania	<a href="http://www.srm.ro">http://www.srm.ro</a>	<a href="http://www.infectiologie.ro">http://www.infectiologie.ro</a>	<a href="http://www.srepi.ro">http://www.srepi.ro</a>	NP	
Serbia	<a href="http://www.mikrobiologija.org">http://www.mikrobiologija.org</a>	NP	NP	NP	
Slovakia	NP	<a href="https://www.infektologia.sk">https://www.infektologia.sk</a>	NP	NP	
Slovenia	<a href="http://www.imi.si">http://www.imi.si</a>	<a href="http://www.szdsi.si">http://www.szdsi.si</a>	NP	<a href="http://www.sfd.si">http://www.sfd.si</a>	<a href="http://www.szpz.info">http://www.szpz.info</a>
Spain			<a href="http://www.seimc.org">http://www.seimc.org</a> <a href="http://www.seimc.org">http://www.seimc.org</a>	<a href="https://www.sefh.es">https://www.sefh.es</a>	<a href="http://www.seimc.org">www.seimc.org</a> (CM+ID)
Sweden	<a href="http://www.mikrobiologi.net">http://www.mikrobiologi.net</a>	<a href="http://www.infektion.net">www.infektion.net</a>	<a href="https://sfvh.se/">https://sfvh.se/</a> <a href="https://slf.se/svenska-hygienlakarforeningen/">https://slf.se/svenska-hygienlakarforeningen/</a>	<a href="https://www.apotekarsocieteten.se">https://www.apotekarsocieteten.se</a>	
Switzerland	<a href="https://www.swissmicrobiology.ch">https://www.swissmicrobiology.ch</a>	<a href="http://www.sginf.ch">http://www.sginf.ch</a>	<a href="https://www.sgsh.ch">https://www.sgsh.ch</a>	NP	
Turkey	<a href="https://www.klimud.org">https://www.klimud.org</a>	<a href="http://www.enfeksiyon.org.tr">http://www.enfeksiyon.org.tr</a>	<a href="http://www.hider.org.tr">http://www.hider.org.tr</a>	NP	<a href="https://www.klimik.org.tr">https://www.klimik.org.tr</a> (CM+ID)

Ukraine	NP	NP	<a href="http://www.infectioncontrol.org.ua">http://www.infectioncontrol.org.ua</a>		
United Kingdom	<a href="https://microbiologysociety.org">https://microbiologysociety.org</a>	<a href="https://www.britishinfection.org">https://www.britishinfection.org</a>	<a href="http://www.infectioncontrol.org.ua">http://www.infectioncontrol.org.ua</a> ; <a href="https://www.ips.uk.net">https://www.ips.uk.net</a>	<a href="http://ukclinicalpharmacy.org">http://ukclinicalpharmacy.org</a>	<a href="http://www.bsac.org.uk">www.bsac.org.uk</a> ; <a href="https://www.his.org.uk">https://www.his.org.uk</a>

AMS, Antimicrobial Stewardship; IPC, Infection Prevention and Control; URL, Uniform Resource Locator; CM, Clinical Microbiology; ID, Infectious Diseases; CP, Clinical Pharmacy; NP, not provided (or absent)

eTable 4. Organization of CM/ID/IPC specialties (official university track) across Europe

Country	General CM and ID as separated specialties	Clinical Microbiology				Infectious Diseases				Infection Prevention and Control				
		Type of specialty	Open only to MD	Years of PG training	Mandatory clinical rotations during PG training	Type of specialty	Open only to MD	Years of PG training	Mandatory clinical rotations during PG training	Type of specialty <sup>a</sup>	Open only to MD	Years of PG training	Mandatory clinical rotations during PG training	Possibility for nurses to specialize in IPC
Albania	Yes	SA	Yes	4	NP	SA	Yes	4	Yes	NA	NA	NA	NA	No
Austria	Yes	SA	Yes	6	Yes	SB	Yes	6	Yes	SA	Yes	6	Yes	Yes
Azerbaijan	Yes	SB	Yes	2	Yes	SB	Yes	4	Yes	SA	Yes	NP	No	No
Belgium	Yes	SB	No	5	Yes	SB	Yes	5	Yes	SB	No	1	Yes	Yes
Bulgaria	Yes	SA	Yes	4	Yes	SA	Yes	4	Yes	SB	No	2	Yes	Yes
Croatia	Yes	SA	Yes	5	Yes	SA	Yes	5	Yes	SB	Yes	NP	Yes	Yes
Czech Republic	Yes	SA	No	5	Yes	SA	Yes	4	Yes	SA	No	4	Yes	Yes
Cyprus	Yes	SB	Yes	5	Yes	SB	Yes	7	Yes	NA	NA	NA	NA	Yes
Denmark	Yes	SA	Yes	6	Yes	SA	Yes	6	Yes	NA	NA	NA	NA	Yes
Estonia	Yes	SB	Yes	4	Yes	SA	Yes	4	Yes	Other	Yes	4	NA	No
Finland	Yes	SA	No	5	Yes	SA	Yes	6	Yes	Other	Yes	4	Yes	Yes
France	Yes	SB	No	4	Yes	SA	Yes	5	Yes	Other	No	5	Yes	No
Germany	Yes	SA	Yes	5	Yes	SB	Yes	7	Yes	SB	Yes	5	Yes	Yes
Greece	Yes	SB	Yes	2	Yes	SB	Yes	2	Yes	NA	NA	NA	NA	Yes
Hungary	Yes	SA	No	5	Yes	SA	Yes	5	Yes	SA	No	4	Yes	Yes
Ireland	Yes	SA	Yes	8	Yes	SB	Yes	9	Yes	NA	NA	NA	NA	Yes
Israel	Yes	SB	Yes	6	Yes	SB	Yes	6	Yes	NA	NA	NA	NA	Yes
Italy	Yes	SA	No	4	Yes	SA	Yes	4	Yes	NA	NA	NA	NA	Yes
Kosovo	Yes	SA	Yes	4	Yes	SA	Yes	5	Yes	NA	NA	NA	NA	No
Latvia	NA	NA	NA	NA	NA	SA	Yes	5	Yes	NA	NA	NA	NA	No
Lithuania	Yes	SB	No	4	Yes	SA	Yes	4	Yes	NA	NA	NA	NA	No
Luxembourg	Yes	SB	No	NP	NP	SB	Yes	NP	NP	NA	NA	NA	NP	No
Malta	Yes	SA	Yes	5	Yes	SB	Yes	5	Yes	SB	Yes	5	Yes	Yes
Netherlands	Yes	SA	Yes	5	No	SB	Yes	6	Yes	NA	NA	NA	NA	Yes
Norway	Yes	SA	Yes	5	Yes	SB	Yes	7	Yes	NA	NA	NA	NA	Yes
Poland	Yes	SA	Yes	4	Yes	SA	Yes	5	Yes	NA	NA	NA	NA	Yes
Portugal	Yes	NA	NA	NA	NA	SA	Yes	5	Yes	NA	NA	NA	NA	No
Republic of Northern Macedonia	Yes	SB	Yes	NP	Yes	SB	Yes	NP	Yes	NA	NA	NA	NA	Yes
Romania	Yes	SA	Yes	4	Yes	SA	Yes	5	Yes	NA	NA	NA	NA	Yes
Serbia	Yes	SA	Yes	4	Yes	SA	Yes	4	Yes	SA	No	3	Yes	No
Slovakia	Yes	SA	No	4	Yes	SA	Yes	4	Yes	NA	NA	NA	NA	No
Slovenia	Yes	SA	Yes	5	Yes	SA	Yes	6	Yes	NA	NA	NA	NA	Yes
Spain	NA	SA	No	4	Yes	NA	NA	NA	NA	SA	Yes	4	Yes	No
Sweden	Yes	SA	Yes	5	Yes	SA	Yes	5	Yes	SA	Yes	8	Yes	Yes
Switzerland	Yes	SA	No	4	No	SA	Yes	6	Yes	NA	NA	NA	NA	Yes
Turkey	No	SA	Yes	5	Yes	SA	Yes	5	Yes	NA	NA	NA	NA	Yes
Ukraine	Yes	SA	No	NP	No	SA	No	NP	No	NA	NA	NA	NA	Yes
United Kingdom	No	SA	Yes	9	Yes	SB	Yes	9	Yes	NA	NA	NA	NA	Yes

<sup>a</sup> Question only referring to medical doctors.

CM, Clinical Microbiology; ID, Infectious Diseases; IPC, Infection Prevention and Control; SA, stand-alone; SB, sub-specialty; MD, medical doctor; PG, postgraduate; NA, not applicable; NP, answer not provided/I do not know; Other, no acknowledgment as official specialty/sub-specialty, but existence of specific courses that allow some people to act as IPC professionals.

eTable 5. Organization of AMS/IPC hospital activities at national level across Europe

Country	Collaboration		AMS programmes			IPC programmes		
	AMS and IPC activities under the same dpt/team/leader	Routine interactions between IPC and AMS professionals	National guidance or requirements on AMS implementation	Nationals staffing standards for AMS teams	National requirements for formal PG training to become an AMS team member <sup>a</sup>	National guidance or requirements on IPC implementation	Nationals staffing standards for IPC teams	National requirements for formal PG training to become an IPC team member <sup>a</sup>
Albania	Yes	NA	No	No	No	No	No	No
Austria	No	Yes	Only guidance	No	No	Yes, both	Yes	Yes
Azerbaijan	No	No	Only guidance	No	No	Only guidance	No	Yes
Belgium	No	Yes	Yes, both	Yes	No	Yes, both	Yes	Yes
Bulgaria	Yes	Yes	Only guidance	No	Yes	Yes, both	Yes	Yes
Croatia	Yes	Yes	No	No	No	Yes, both	Yes	Yes
Czech Republic	No	Yes	Only guidance	NP	No	Yes, both	Yes	Yes
Cyprus	No	NA	No	No	No	Only guidance	Yes	No
Denmark	No	NA	Yes, both	No	No	Yes, both	No	No
Estonia	Yes	NA	No	No	No	No	No	No
Finland	Yes	Yes	Only guidance	Yes	No	Yes, both	Yes	No
France	No	Yes	Only requirements	Yes	Yes	Only guidance	Yes	Yes
Germany	No	Yes	Only guidance	Yes	No	Yes, both	Yes	Yes
Greece	Yes	Yes	Only guidance	No	No	Only guidance	Yes	No
Hungary	Yes	Yes	Only guidance	Yes	No	Yes, both	Yes	Yes
Ireland	Yes	Yes	Yes, both	Yes	No	Yes, both	Yes	No
Israel	No	Yes	Yes, both	No	No	Yes, both	Yes	No
Italy	No	Yes	Only guidance	No	No	Only guidance	No	No
Kosovo	No	No	Only guidance	No	No	Yes, both	Yes	No
Latvia	Yes	NA	No	Yes	No	Yes, both	Yes	No
Lithuania	No	Yes	No	No	No	Yes, both	Yes	No
Luxembourg	Yes	Yes	Only guidance	No	No	Yes, both	No	No
Malta	Yes	Yes	No	No	No	Only guidance	No	Yes
Netherlands	No	Yes	Yes, both	Yes	No	Yes, both	Yes	No
Norway	Yes	Yes	Yes, both	No	No	Only guidance	No	No
Poland	Yes	Yes	Yes, both	No	No	No	Yes	No
Portugal	Yes	Yes	Only guidance	No	No	Only guidance	Yes	No
Republic of Northern Macedonia	Yes	Yes	Yes, both	No	No	Yes, both	No	No
Romania	No	No	No	No	No	Yes, both	Yes	No
Serbia	Yes	Yes	Only guidance	Yes	No	Only guidance	Yes	Yes
Slovakia	No	NA	NP	No	No	NP	No	No
Slovenia	No	Yes	Yes, both	No	No	Yes, both	Yes	No
Spain	No	Yes	Yes, both	No	No	No	No	Yes
Sweden	No	NA	Only guidance	No	No	Yes, both	No	Yes
Switzerland	Yes	Yes	Only guidance	No	No	No	No	No
Turkey	Yes	Yes	Only guidance	No	No	Yes, both	Yes	No
Ukraine	NP	Yes	Yes, both	No	Yes	Yes, both	NP	NP
United Kingdom	Yes	Yes	Yes, both	No	No	Yes, both	Yes	No

<sup>a</sup> Question only referring to medical doctors.

AMS, Antimicrobial Stewardship; IPC, Infection Prevention and Control; DPT, department; Only PG, postgraduate; NA, not applicable; NP, answer not provided/I do not know.

eTable 6. Web links to national guidance and requirements documents on AMS implementations in hospitals

Country	URL
Albania	Documents under development
Austria	Documents under development
Azerbaijan	NP
Belgium	<a href="http://overlegorganen.gezondheid.belgie.be/sites/default/files/documents/nationale_raad_voor_ziekenhuisvoorzieningen/2007_01_11_-_nrzv_d_286-2_nl.pdf">http://overlegorganen.gezondheid.belgie.be/sites/default/files/documents/nationale_raad_voor_ziekenhuisvoorzieningen/2007_01_11_-_nrzv_d_286-2_nl.pdf</a> ; <a href="http://consultativebodies.health.belgium.be/sites/default/files/documents/2012_guide_belge_traitement_anti_infectieux_pratique_ambulatoire_antibioticagids_fr.pdf">http://consultativebodies.health.belgium.be/sites/default/files/documents/2012_guide_belge_traitement_anti_infectieux_pratique_ambulatoire_antibioticagids_fr.pdf</a> <a href="http://organesdeconcertation.sante.belgique.be/sites/default/files/documents/bapcoc_guidelineshospi_2017_sbimc-bvikm_fr_v1.pdf">http://organesdeconcertation.sante.belgique.be/sites/default/files/documents/bapcoc_guidelineshospi_2017_sbimc-bvikm_fr_v1.pdf</a>
Bulgaria	Documents under development
Croatia	Documents under development
Czech Republic	<a href="http://www.szu.cz/narodni-antibioticky-program">http://www.szu.cz/narodni-antibioticky-program</a>
Cyprus	NP
Denmark	<a href="https://sum.dk/~media/Filer%20-%20Publikationer_i_pdf/2017/Antibiotika-handlingsplan-frem-mod-2020/DK-Handlingsplan-05072017.pdf">https://sum.dk/~media/Filer%20-%20Publikationer_i_pdf/2017/Antibiotika-handlingsplan-frem-mod-2020/DK-Handlingsplan-05072017.pdf</a>
Estonia	NP
Finland	<a href="https://stm.fi/julkaisu?pubid=URN:ISBN:978-952-00-3955-4">https://stm.fi/julkaisu?pubid=URN:ISBN:978-952-00-3955-4</a>
France	<a href="https://www.has-sante.fr/portail/upload/docs/application/pdf/2016-04/2016_has_grille_de_recueil__icatb_2.pdf">https://www.has-sante.fr/portail/upload/docs/application/pdf/2016-04/2016_has_grille_de_recueil__icatb_2.pdf</a> This indicator is currently being reevaluated by the national health agency
Germany	<a href="http://www.awmf.org/uploads/tx_szleitlinien/092-001I_S3_Antibiotika_Anwendung_im_Krankenhaus_2013-verlaengert.pdf">http://www.awmf.org/uploads/tx_szleitlinien/092-001I_S3_Antibiotika_Anwendung_im_Krankenhaus_2013-verlaengert.pdf</a> ; <a href="http://www.rki.de/DE/Content/Kommissi1n/ART/ART_node.html">www.rki.de/DE/Content/Kommissi1n/ART/ART_node.html</a>
Greece	NP
Hungary	<a href="http://www.oek.hu/oekfile.pl?fid=6619">www.oek.hu/oekfile.pl?fid=6619</a>
Ireland	NP
Israel	NP
Italy	<a href="http://www.salute.gov.it/portale/documentazi1/p6_2_2_1.jsp?lingua=italiano&amp;id=2660">http://www.salute.gov.it/portale/documentazi1/p6_2_2_1.jsp?lingua=italiano&amp;id=2660</a>
Kosovo	NP
Latvia	Documents under development
Lithuania	NP
Luxembourg	<a href="http://www.sante.public.lu/fr/index.php">http://www.sante.public.lu/fr/index.php</a>
Malta	NP
Netherlands	<a href="http://www.ateams.nl">www.ateams.nl</a>
Norway	<a href="https://www.regjeringen.no/contentassets/915655269bc04a47928fce917e4b25f5/handlingsplan-antibiotikaresistens.pdf">https://www.regjeringen.no/contentassets/915655269bc04a47928fce917e4b25f5/handlingsplan-antibiotikaresistens.pdf</a> ; <a href="https://www.antibiotika.no/antibiotikastyringsprogram-2/">https://www.antibiotika.no/antibiotikastyringsprogram-2/</a>
Poland	NP
Portugal	<a href="https://www.dgs.pt/programa-nacional-de-controlo-da-infeccao/despachos.aspx">https://www.dgs.pt/programa-nacional-de-controlo-da-infeccao/despachos.aspx</a>
Republic of Northern Macedonia	NP
Romania	<a href="https://www.srm.ro/pdf/protoco_MRSA_final%20mediere%20(2).pdf">https://www.srm.ro/pdf/protoco_MRSA_final%20mediere%20(2).pdf</a> ; <a href="http://www.srm.ro/pdf/ghid%20carbapenemaze_final_23.09.2015.pdf">http://www.srm.ro/pdf/ghid%20carbapenemaze_final_23.09.2015.pdf</a>
Serbia	NP
Slovakia	NP
Slovenia	<a href="http://www.pisrs.si/Pis.web/pregledPredpisa?id=PRAV10625">http://www.pisrs.si/Pis.web/pregledPredpisa?id=PRAV10625</a> <a href="http://www.pisrs.si/Pis.web/pregledPredpisa?id=PRAV2033">http://www.pisrs.si/Pis.web/pregledPredpisa?id=PRAV2033</a>
Spain	<a href="https://www.sciencedirect.com/science/article/pii/S0213005X11003259?via%3Dihub">https://www.sciencedirect.com/science/article/pii/S0213005X11003259?via%3Dihub</a> <a href="http://www.resistenciaantibioticos.es/es/publicaciones/programas-de-optimizacion-del-uso-de-antibioticos-proa">http://www.resistenciaantibioticos.es/es/publicaciones/programas-de-optimizacion-del-uso-de-antibioticos-proa</a>
Sweden	<a href="http://strama.se">http://strama.se</a>
Switzerland	Documents under development
Turkey	<a href="http://www.akilciilac.gov.tr">ttp://www.akilciilac.gov.tr</a>
Ukraine	NP
United Kingdom	<a href="https://www.gov.uk/government/publications/the-health-and-social-care-act-2008-code-of-practice-on-the-prevention-and-control-of-infections-and-related-guidance#history">https://www.gov.uk/government/publications/the-health-and-social-care-act-2008-code-of-practice-on-the-prevention-and-control-of-infections-and-related-guidance#history</a> ; <a href="https://www.nice.org.uk/guidance/ng15">https://www.nice.org.uk/guidance/ng15</a>

AMS, Antimicrobial Stewardship; URL, Uniform Resource Locator; NP, not provided (or absent).

eTable 7. Details on national staffing standards for AMS hospital-based activities

Country	AMS
Albania	NP
Austria	NP
Azerbaijan	NP
Belgium	Minimal staff in hospital with minimum 150 beds: 1 FTE hospital hygiene nurse and 0.5 FTE hospital hygienist . <a href="http://overlegorganen.gezondheid.belgie.be/sites/default/files/documents/belgische_commissie_voor_de_coördinatie_van_het_antibioticabeleid/15174562.pdf">http://overlegorganen.gezondheid.belgie.be/sites/default/files/documents/belgische_commissie_voor_de_coördinatie_van_het_antibioticabeleid/15174562.pdf</a>
Bulgaria	NP
Croatia	NP
Czech Republic	NP
Cyprus	NP
Denmark	NP
Estonia	NP
Finland	NP
France	The appointed person should have the following dedicated time for AMS activities (not enforced in practice usually): 0,1 FTE / 400 rehabilitation or long-term care beds and 0,3 FTE / 400 acute care beds <a href="https://www.has-sante.fr/portail/upload/docs/application/pdf/2016-04/2016_has_grille_de_recueil_icatb_2.pdf">https://www.has-sante.fr/portail/upload/docs/application/pdf/2016-04/2016_has_grille_de_recueil_icatb_2.pdf</a>
Germany	At least 1 FTE per 500 acute care bed <a href="http://www.awmf.org/uploads/tx_szleitlinien/092-001I_S3_Antibiotika_Anwendung_im_Krankenhaus_2013-verlaengert.pdf">http://www.awmf.org/uploads/tx_szleitlinien/092-001I_S3_Antibiotika_Anwendung_im_Krankenhaus_2013-verlaengert.pdf</a>
Greece	NP
Hungary	<a href="http://njt.hu/cgi_bin/njt_doc.cgi?docid=124091">http://njt.hu/cgi_bin/njt_doc.cgi?docid=124091</a>
Ireland	<a href="https://www.hpsc.ie/a-z/microbiologyantimicrobialresistance/infectioncontrolandhai/guidelines/File,4116,en.pdf">https://www.hpsc.ie/a-z/microbiologyantimicrobialresistance/infectioncontrolandhai/guidelines/File,4116,en.pdf</a> <a href="https://www.hiqa.ie/sites/default/files/2017-01/Antimicrobial-Stewardship-Review.pdf">https://www.hiqa.ie/sites/default/files/2017-01/Antimicrobial-Stewardship-Review.pdf</a>
Israel	NP
Italy	NP
Kosovo	NP
Latvia	1 ID specialist and 2 nurses to 500 acute care beds
Lithuania	NP
Luxembourg	NP
Malta	NP
Netherlands	<a href="http://www.swab.nl">www.swab.nl</a>
Norway	NP
Poland	NP
Portugal	NP
Republic of Northern Macedonia	NP
Romania	NP
Serbia	NP
Slovakia	NP
Slovenia	NP
Spain	NP
Sweden	NP
Switzerland	NP
Turkey	NP
Ukraine	NP
United Kingdom	NP

AMS, Antimicrobial Stewardship; IPC, Infection Prevention and Control; FTE, full-time equivalent; ID, Infectious Diseases; NP, not provided (or absent).



eTable 8. Web links to national guidance and requirements documents on IPC implementations in hospitals

Country	URL
Albania	NP
Austria	<a href="https://www.sozialministerium.at/site/Gesundheit/Gesundheitssystem/Gesundheitssystem_Qualitaetsicherung/Qualitaetsstandards/QS_Krankenhaushygiene_nbsp_Qualitaetsstandard_Organisation_und_Strategie_der_Krankenhaus_Hygiene">https://www.sozialministerium.at/site/Gesundheit/Gesundheitssystem/Gesundheitssystem_Qualitaetsicherung/Qualitaetsstandards/QS_Krankenhaushygiene_nbsp_Qualitaetsstandard_Organisation_und_Strategie_der_Krankenhaus_Hygiene</a>
Azerbaijan	NP
Belgium	<a href="http://www.ejustice.just.fgov.be/cgi_loi/change_lg.pl?language=nl&amp;la=N&amp;table_name=wet&amp;cn=2007042667;">http://www.ejustice.just.fgov.be/cgi_loi/change_lg.pl?language=nl&amp;la=N&amp;table_name=wet&amp;cn=2007042667;</a> <a href="http://overlegorganen.gezondheid.belgie.be/sites/default/files/documents/belgische_commissie_voor_de_coordinatie_van_het_antibioticabeleid/15174562.pdf">http://overlegorganen.gezondheid.belgie.be/sites/default/files/documents/belgische_commissie_voor_de_coordinatie_van_het_antibioticabeleid/15174562.pdf</a>
Bulgaria	<a href="https://www.mh.government.bg/media/filer_public/2015/11/18/prevenciq-control-vutrebolnichni-infekcii.pdf">https://www.mh.government.bg/media/filer_public/2015/11/18/prevenciq-control-vutrebolnichni-infekcii.pdf</a>
Croatia	NP
Czech Republic	<a href="https://www.mzcr.cz/obsah/program-prevence-a-kontroly-infekci-v-zdravotnickych-zarizenich_2917_5.html">https://www.mzcr.cz/obsah/program-prevence-a-kontroly-infekci-v-zdravotnickych-zarizenich_2917_5.html</a>
Cyprus	<a href="https://www.moh.gov.cy/moh/moh.nsf/All/6B4121829D8502A5C2257C210026E74C">https://www.moh.gov.cy/moh/moh.nsf/All/6B4121829D8502A5C2257C210026E74C</a>
Denmark	<a href="https://www.ssi.dk/">https://www.ssi.dk/</a>
Estonia	NP
Finland	<a href="https://thl.fi/fi/web/infektiaudit/ohjeet-ja-saadokset/saadokset/kansalliset/uusi-tartuntatautilaki-1.3.2017-alkaen-muutoksia-aiempan/hoitoon-liittyvien-infektioiden-seuranta-ja-torjuntaveloitteet">https://thl.fi/fi/web/infektiaudit/ohjeet-ja-saadokset/saadokset/kansalliset/uusi-tartuntatautilaki-1.3.2017-alkaen-muutoksia-aiempan/hoitoon-liittyvien-infektioiden-seuranta-ja-torjuntaveloitteet</a>
France	<a href="http://nosobase.chu-lyon.fr/Reglementation/2000/Circulaire/291200.pdf">http://nosobase.chu-lyon.fr/Reglementation/2000/Circulaire/291200.pdf</a> <a href="http://solidarites-sante.gouv.fr/IMG/pdf/2015_202to.pdf">http://solidarites-sante.gouv.fr/IMG/pdf/2015_202to.pdf</a> ; <a href="http://solidarites-sante.gouv.fr/IMG/pdf/infections_nosocomiales_-_annexe_4_-_indicateur_optionnel.pdf">http://solidarites-sante.gouv.fr/IMG/pdf/infections_nosocomiales_-_annexe_4_-_indicateur_optionnel.pdf</a>
Germany	<a href="https://www.rki.de/DE/Content/Infekt/Krankenhaushygiene/Kommission/kommission_node.html">https://www.rki.de/DE/Content/Infekt/Krankenhaushygiene/Kommission/kommission_node.html</a> ; <a href="https://www.rki.de/DE/Content/Kommissi1n/KRINKO/krinko_node.html">https://www.rki.de/DE/Content/Kommissi1n/KRINKO/krinko_node.html</a>
Greece	<a href="http://www.eeel.gr/articlefiles/nomothesia/fek_388_2013_peri_enl.pdf">http://www.eeel.gr/articlefiles/nomothesia/fek_388_2013_peri_enl.pdf</a>
Hungary	<a href="http://njt.hu/cgi_bin/njt_doc.cgi?docid=1240">http://njt.hu/cgi_bin/njt_doc.cgi?docid=1240</a> ; <a href="https://net.jogtar.hu/jogszabaly?docid=A0900020.EUM">https://net.jogtar.hu/jogszabaly?docid=A0900020.EUM</a>
Ireland	<a href="https://www.hpsc.ie/a-z/microbiologyantimicrobialresistance/infectioncontrolandhai/guidelines/File,4116,en.pdf">https://www.hpsc.ie/a-z/microbiologyantimicrobialresistance/infectioncontrolandhai/guidelines/File,4116,en.pdf</a> ; <a href="https://www.hiqa.ie/sites/default/files/2017-05/2017-HIQA-National-Standards-Healthcare-Association-Infections.pdf">https://www.hiqa.ie/sites/default/files/2017-05/2017-HIQA-National-Standards-Healthcare-Association-Infections.pdf</a>
Israel	NP
Italy	<a href="http://www.salute.gov.it/imgs/C_17_pagineAree_4621_listaFile_itemName_0_file.pdf">http://www.salute.gov.it/imgs/C_17_pagineAree_4621_listaFile_itemName_0_file.pdf</a>
Kosovo	NP
Latvia	<a href="http://www.vi.gov.lv/lv/veselibas-aprupe/arstniecibas-iestades/info-arstn-iest-par-higieniska-un-pretepidemiska-rezima-plana-izstradi">http://www.vi.gov.lv/lv/veselibas-aprupe/arstniecibas-iestades/info-arstn-iest-par-higieniska-un-pretepidemiska-rezima-plana-izstradi</a>
Lithuania	NP
Luxembourg	NP
Malta	NP
Netherlands	NP
Norway	<a href="https://lovdata.no/dokument/SF/forskrift/2005-06-17-610?q=smittevern">https://lovdata.no/dokument/SF/forskrift/2005-06-17-610?q=smittevern</a>
Poland	NP
Portugal	<a href="https://www.dgs.pt/programa-nacional-de-controlo-da-infeccao/despachos.aspx">https://www.dgs.pt/programa-nacional-de-controlo-da-infeccao/despachos.aspx</a>
Republic of Northern Macedonia	NP
Romania	<a href="http://www.oamr.ro/wp-content/uploads/2016/09/Ord-MS-1101-2016.pdf">http://www.oamr.ro/wp-content/uploads/2016/09/Ord-MS-1101-2016.pdf</a>
Serbia	NP
Slovakia	NP
Slovenia	<a href="http://www.uradni-list.si/1/objava.jsp?urlid=200633&amp;stevilka=1348">http://www.uradni-list.si/1/objava.jsp?urlid=200633&amp;stevilka=1348</a> <a href="http://www.uradni-list.si/1/objava.jsp?urlid=199974&amp;stevilka=3597">http://www.uradni-list.si/1/objava.jsp?urlid=199974&amp;stevilka=3597</a> ; <a href="http://www.uradni-list.si/1/objava.jsp?urlid=200692&amp;stevilka=3969">http://www.uradni-list.si/1/objava.jsp?urlid=200692&amp;stevilka=3969</a>
Spain	NP
Sweden	<a href="http://www.socialstyrelsen.se/english">http://www.socialstyrelsen.se/english</a> <a href="https://www.varhandboken.se/om/om-varhandboken/in-english/">https://www.varhandboken.se/om/om-varhandboken/in-english/</a> <a href="https://www.folkhalsomyndigheten.se/the-public-health-agency-of-sweden/">https://www.folkhalsomyndigheten.se/the-public-health-agency-of-sweden/</a>
Switzerland	NP
Turkey	<a href="http://www.ttb.org.tr/mevzuat/index.php?option=com_content&amp;view=article&amp;id=333:yatakli-tedavkurumlari-enfekson-kontrol-yetmel&amp;catid=2:yelik&amp;Itemid=33">http://www.ttb.org.tr/mevzuat/index.php?option=com_content&amp;view=article&amp;id=333:yatakli-tedavkurumlari-enfekson-kontrol-yetmel&amp;catid=2:yelik&amp;Itemid=33</a>
Ukraine	NP
United Kingdom	<a href="https://www.nice.org.uk/guidance/ph36">https://www.nice.org.uk/guidance/ph36</a> ; <a href="https://www.gov.uk/government/publications/review-of-the-infection-prevention-and-control-nurse-workforce">https://www.gov.uk/government/publications/review-of-the-infection-prevention-and-control-nurse-workforce</a>

IPC, Infection Prevention and Control; URL, Uniform Resource Locator; NP, not provided (or absent).

**eTable 9. Details on national staffing standards for IPC hospital-based activities**

Country	IPC
Albania	NP
Austria	<a href="https://www.bmgf.gv.at/home/Gesundheit/Gesundheitssystem_Qualitaetssicherung/Qualitaetsstandards/QS_Krankenhaushygiene_nbsp_">https://www.bmgf.gv.at/home/Gesundheit/Gesundheitssystem_Qualitaetssicherung/Qualitaetsstandards/QS_Krankenhaushygiene_nbsp_</a> <a href="https://www.sozialministerium.at/site/Gesundheit/Gesundheitssystem/Gesundheitssystem_Qualitaetssicherung/Qualitaetsstandards/-QS_Krankenhaushygiene_nbsp_Qualitaetsstandard_Organisation_und_Strategie_der_Kranken">https://www.sozialministerium.at/site/Gesundheit/Gesundheitssystem/Gesundheitssystem_Qualitaetssicherung/Qualitaetsstandards/-QS_Krankenhaushygiene_nbsp_Qualitaetsstandard_Organisation_und_Strategie_der_Kranken</a> 1 FTE IPC-MD/400-800 beds and 1 FTE nurse/150-400 beds depending on type of hospital
Azerbaijan	NP
Belgium	1 FTE MD-IPC/1000 beds and 1 FTE nurse-IPC/400 beds
Bulgaria	1 FTE CM specialist plus 1 FTE IPC nurse per 500 care beds for the IPC team
Croatia	1 FTE nurse /250 beds
Czech Republic	Minimal personal standards for hospital hygiene departments 1000 beds: 1 MD + 2 nonMDs every other 300 beds: + 1 nonMD
Cyprus	here is a FTE nurse for every 250 acute care beds
Denmark	NP
Estonia	NP
Finland	NP
France	1 FTE IPC nurse for 400 beds 1 FTE IPC MD or PharmD for 800 beds <a href="http://nosobase.chu-lyon.fr/Reglementation/2000/Circulaire/291200.pdf">http://nosobase.chu-lyon.fr/Reglementation/2000/Circulaire/291200.pdf</a>
Germany	At least 1 FTE per 400 acute care bed, also depending on the region <a href="http://www.awmf.org/uploads/tx_szleitlinien/092-001l_S3_Antibiotika_Anwendung_im_Krankenhaus_2013-verlaengert.pdf">http://www.awmf.org/uploads/tx_szleitlinien/092-001l_S3_Antibiotika_Anwendung_im_Krankenhaus_2013-verlaengert.pdf</a>
Greece	<a href="http://www.eeel.gr/articlefiles/nomothesia/fek_388_2013_peri_enl.pdf">http://www.eeel.gr/articlefiles/nomothesia/fek_388_2013_peri_enl.pdf</a>
Hungary	<a href="http://njt.hu/cgi_bin/njt_doc.cgi?docid=124091">http://njt.hu/cgi_bin/njt_doc.cgi?docid=124091</a>
Ireland	1 full-time IPC nurse for 150-200 patients <a href="https://www.hpsc.ie/a-z/microbiologyantimicrobialresistance/infectioncontrolandhai/guidelines/File,4116,en.pdf">https://www.hpsc.ie/a-z/microbiologyantimicrobialresistance/infectioncontrolandhai/guidelines/File,4116,en.pdf</a>
Israel	NP
Italy	NP
Kosovo	1 IPC nurse in 500 beds
Latvia	1 ID and 2 nurses to 500 acute care beds.
Lithuania	1 IPC doctor for 400 hospital beds, or 100 000 ambulatory consultations in polyclinic 1 IPC nurse for 100 hospital beds, or 50 000-100 000 ambulatory consultations in polyclinic <a href="https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/TAIS.332026">https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/TAIS.332026</a>
Luxembourg	NP
Malta	NP
Netherlands	1 nurse per 5000 admissions, 1 MD per 25000 admissions <a href="http://www.igj.nl">www.igj.nl</a>
Norway	NP
Poland	Just for nurses: 1 FTE of IPC nurse per 200 beds
Portugal	1 FTE nurse per 250 beds 1 FTE physicians per hospital with more than 250 beds
Republic of Northern Macedonia	NP
Romania	1 epidemiologist and 1 ID specialist for every 400 beds and 1 nurse for every 250 beds <a href="http://www.oamr.ro/wp-content/uploads/2016/09/Ord-MS-1101-2016.pdf">http://www.oamr.ro/wp-content/uploads/2016/09/Ord-MS-1101-2016.pdf</a>
Serbia	NP
Slovakia	NP
Slovenia	NP
Spain	NP
Sweden	NP
Switzerland	NP
Turkey	Each 150 occupied beds, 1 FTE IPC nurse is required; <a href="http://www.resmigazete.gov.tr/eskiler/2005/08/20050811-6.htm">http://www.resmigazete.gov.tr/eskiler/2005/08/20050811-6.htm</a>
Ukraine	NP
United Kingdom	<a href="https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/449049/Code_of_practice_280715_acc.pdf">https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/449049/Code_of_practice_280715_acc.pdf</a>

AMS, Antimicrobial Stewardship; IPC, Infection Prevention and Control; FTE, full-time equivalent; MD, Medical Doctor; CM, Clinical Microbiology; ID, Infectious Diseases; NP, not provided (or absent).

**eTable 10. Educational national requirements regarding AMS and IPC during postgraduate training across Europe (all questions only referring to medical doctors)**

Country	Antimicrobial stewardship						Infection Prevention and Control					
	Mandatory formal training on AMS implementation during training			Mandatory involvement in AMS activities during training			Mandatory formal training on IPC implementation during training			Mandatory involvement in IPC activities during training		
<i>Trainee category</i>	CM	ID	IPC	CM	ID	IPC	CM	ID	IPC	CM	ID	IPC
Albania	No	No	NA	No	No	NA	No	No	NA	No	No	NA
Austria	Yes	Yes	Yes	No	No	No	Yes	No	Yes	Yes	No	Yes
Azerbaijan	Yes	No	NP	Yes	No	NP	No	No	NP	No	No	NP
Belgium	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bulgaria	Yes	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	NA	Yes
Croatia	No	No	No	No	Yes	No	Yes	No	Yes	Yes	Yes	Yes
Czech Republic	Yes	No	No	Yes	No	No	No	No	Yes	No	No	Yes
Cyprus	No	NP	NA	No	No	NA	No	NP	NA	No	No	NA
Denmark	No	No	NA	No	No	NA	No	No	NA	No	No	NA
Estonia	No	No	No	NP	Yes	Yes	No	No	No	No	Yes	Yes
Finland	No	No	No	No	No	No	No	No	No	No	Yes	NP
France	No	Yes	Yes	No	Yes	No	No	No	Yes	No	No	Yes
Germany	No	No	No	No	No	No	No	No	Yes	Yes	Yes	Yes
Greece	No	Yes	NA	No	No	NA	Yes	Yes	NA	Yes	Yes	NA
Hungary	No	No	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
Ireland	Yes	Yes	NA	Yes	Yes	NA	Yes	No	NA	Yes	Yes	NA
Israel	No	Yes	NA	No	Yes	NA	No	No	NA	No	No	NA
Italy	No	No	NA	No	No	NA	No	No	NA	No	No	NA
Kosovo	No	No	NA	No	No	NA	No	No	NA	No	No	NA
Latvia	NA	No	NA	NA	Yes	NA	NA	Yes	NA	NA	Yes	NA
Lithuania	No	No	NA	No	No	NA	No	No	NA	NP	NP	NA
Luxembourg	No	No	NA	No	No	No	NP	NP	NP	NP	NP	NA
Malta	NP	NP	NP	Yes	No	Yes	NP	NP	NP	Yes	No	Yes
Netherlands	No	No	NA	Yes	Yes	NA	Yes	No	NA	Yes	No	NA
Norway	No	No	NA	No	No	NA	Yes	Yes	NA	No	No	NA
Poland	Yes	No	NA	Yes	No	NA	Yes	No	NA	Yes	No	NA
Portugal	NA	No	NA	NA	No	NA	NA	No	NA	NA	No	NA
Republic of Northern Macedonia	NP	NP	NA	NP	NP	NA	Yes	Yes	NA	Yes	Yes	NA
Romania	No	No	NA	No	No	NA	Yes	Yes	NA	Yes	Yes	NA
Serbia	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Slovakia	No	No	NA	No	No	NA	No	No	NA	No	No	NA
Slovenia	No	No	NA	No	Yes	NA	Yes	Yes	NA	No	No	NA
Spain	No	NA	No	No	NA	No	No	NA	Yes	No	NA	Yes
Sweden	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Switzerland	No	No	NA	No	No	No	No	Yes	No	No	No	NA
Turkey	No	No	NA	No	No	NA	No	No	NA	No	Yes	NA
Ukraine	Yes	Yes	NA	Yes	Yes	NA	Yes	Yes	NA	Yes	Yes	NA
United Kingdom	No	No	NA	No	No	NA	Yes	Yes	NA	Yes	Yes	NA

AMS, Antimicrobial Stewardship; IPC, Infection Prevention and Control; PG, postgraduate; CM, Clinical Microbiology; ID, Infectious Diseases; IPC, Infection Prevention and Control; NA, not applicable; NP, answer not provided/I do not know.

**eTable 11. Professionals usually in charge of running AMS and IPC activities in European hospitals**

Country <i>Category</i>	Antimicrobial stewardship					Infection Prevention and Control				
	CM	ID	Pharmacist	Nurse	Other	CM	ID	Pharmacist	Nurse	Other
Albania	X	X	X			X	X		X	
Austria	X	X	X		X	X	X		X	X
Azerbaijan	X					X	X			
Belgium	X	X	X		X	X			X	X
Bulgaria	X		X			X			X	X
Croatia	X	X			X	X	X		X	X
Czech Republic	X	X							X	X
Cyprus					X		X		X	
Denmark	X	X	X			X	X		X	
Estonia		X					X		X	
Finland		X				X	X		X	
France	X	X	X		X	X		X	X	X
Germany	X	X	X	X	X	X				X
Greece		X	X			X	X	X	X	X
Hungary		X					X		X	X
Ireland	X	X	X	X		X			X	X
Israel		X					X		X	
Italy		X	X						X	X
Kosovo	X	X	X			X	X		X	
Latvia		X	X	X					X	
Lithuania	X		X		X					
Luxembourg	X	X	X			X	X	X		
Malta	X	X	X						X	
Netherlands	X	X	X			X			X	
Norway	X	X	X	X		X	X		X	
Poland	X	X	X			X	X		X	
Portugal		X	X	X			X		X	
Republic of Northern Macedonia				X	X				X	X
Romania		X			X		X		X	X
Serbia		X	X				X	X		
Slovakia			X				X			
Slovenia	X	X	X			X	X		X	X
Spain	X		X		X	X			X	X
Sweden	X	X	X	X		X	X		X	X
Switzerland		X					X		X	
Turkey	X	X				X	X		X	
Ukraine	X			X	X				X	X
United Kingdom	X	X	X			X	X		X	

CM, Clinical Microbiology; ID, Infectious Diseases

eTable 12. Other aspects of usual practice of professionals involved in AMS/IPC in European countries

Country	Miscellaneous		
	CM & ID specialists work exclusively in hospitals (only referring to MD)	CM usually do clinical rounds on hospital wards	IPC specialists usually do clinical rounds on hospital wards
Albania	No	No	NA
Austria	No	Yes	Yes
Azerbaijan	Yes for both	No	Yes
Belgium	No	Yes	Yes
Bulgaria	Yes for both	Yes	Yes
Croatia	Only ID	Yes	Yes
Czech Republic	Yes for both	Yes	Yes
Cyprus	No	No	NA
Denmark	Yes for both	No	NA
Estonia	No	No	Yes
Finland	Yes for both	No	Yes
France	No	No	Yes
Germany	No	Yes	Yes
Greece	Only ID	No	NA
Hungary	Only ID	No	Yes
Ireland	Yes for both	Yes	NA
Israel	Yes for both	No	NA
Italy	No	No	NA
Kosovo	Only ID	Yes	NA
Latvia	No	NA	NA
Lithuania	Yes for both	Yes	NA
Luxembourg	Only ID	Yes	NA
Malta	Yes for both	Yes	No
Netherlands	Only ID	Yes	NA
Norway	Yes for both	Yes	NA
Poland	Only CM	Yes	NA
Portugal	No	NA	NA
Republic of Northern Macedonia	No	NP	NA
Romania	Only ID	No	NA
Serbia	Only ID	No	No
Slovakia	Only ID	Yes	NA
Slovenia	Only ID	No	NA
Spain	Only CM	No	No
Sweden	No	No	Yes
Switzerland	Yes for both	No	NA
Turkey	Yes for both	Yes	NA
Ukraine	No	Yes	NA
United Kingdom	Only ID	Yes	NA

AMS, Antimicrobial Stewardship; IPC, Infection Prevention and Control; CM, Clinical Microbiology; ID, Infectious Diseases; MD, medical doctor; IPC, Infection Prevention and Control; NA, not applicable; NP, answer not provided/I do not know.