

Appendices

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Appendix 1. GMC categorised speciality (n=71) & sub-speciality curricula

All sourced from the GMC website(67) and analysed on 31/05/17. PDF binder of all curricula downloaded and analysed on this date is available upon request.

Royal College of Anaesthetists

- Anaesthetics
 - ↳ Pre-hospital emergency medicine
- Intensive care medicine
 - ↳ Pre-hospital emergency medicine

Royal College of Emergency Medicine

- Emergency medicine
 - ↳ Paediatric emergency medicine
 - ↳ Pre-hospital emergency medicine

Royal College of General Practitioners

- General practice

Royal College of Obstetricians and Gynaecologists

- Obstetrics and gynaecology
 - ↳ Gynaecological oncology
 - ↳ Maternal and fetal medicine
 - ↳ Reproductive medicine
 - ↳ Urogynaecology

Faculty of Occupational Medicine

- Occupational medicine

Royal College of Ophthalmologists

- Ophthalmology

Royal College of Paediatrics and Child Health

- Paediatrics
 - ↳ Child mental health
 - ↳ Community child health
 - ↳ Neonatal medicine
 - ↳ Paediatric allergy, immunology and infectious diseases
 - ↳ Paediatric clinical pharmacology and therapeutics
 - ↳ Paediatric diabetes and endocrinology
 - ↳ Paediatric emergency medicine
 - ↳ Paediatric gastro-enterology, hepatology and nutrition
 - ↳ Paediatric inherited metabolic medicine
 - ↳ Paediatric intensive care medicine
 - ↳ Paediatric nephrology
 - ↳ Paediatric neurodisability
 - ↳ Paediatric neurology
 - ↳ Paediatric oncology
 - ↳ Paediatric palliative medicine
 - ↳ Paediatric respiratory medicine
 - ↳ Paediatric rheumatology

Royal College of Pathologists

- Chemical pathology
 - ↳ Metabolic medicine
- Diagnostic neuropathology
- Forensic histopathology
- Histopathology
 - ↳ Cytopathology
- Medical microbiology
- Medical virology
- Paediatric and perinatal pathology

Faculty of Pharmaceutical Medicine

- Pharmaceutical medicine

Joint Royal Colleges of Physicians Training Board

- Acute internal medicine
 - ↳ Pre-hospital emergency medicine
 - ↳ Stroke medicine
- Allergy
- Audio vestibular medicine
- Aviation and space medicine
- Cardiology
 - ↳ Stroke medicine
- Clinical genetics
- Clinical neurophysiology
- Clinical pharmacology and therapeutics
 - ↳ Stroke medicine
- Dermatology
- Endocrinology and diabetes mellitus
- Gastro-enterology
 - ↳ Hepatology
- General (internal) medicine
 - ↳ Metabolic medicine
 - ↳ Stroke medicine
- Genito-urinary medicine
- Geriatric medicine
 - ↳ Stroke medicine
- Haematology
- Immunology
- Infectious diseases
- Medical oncology
- Medical ophthalmology
- Neurology
 - ↳ Stroke medicine
- Nuclear medicine
- Paediatric cardiology
- Palliative medicine
- Rehabilitation medicine
 - ↳ Stroke medicine
- Renal medicine
- Respiratory medicine
- Rheumatology
- Sport and exercise medicine
- Tropical medicine

Royal College of Psychiatrists

- General psychiatry
 - ↳ Liaison psychiatry
 - ↳ Rehabilitation psychiatry
 - ↳ Substance misuse psychiatry
- Child and adolescent psychiatry
- Forensic psychiatry
- Old age psychiatry
 - ↳ Liaison psychiatry
- Psychiatry of learning disability
- Medical psychotherapy

Faculty of Public Health

- Public health medicine

Royal College of Radiologists

- Clinical oncology
- Clinical radiology
 - ↳ Interventional radiology

Faculty of Sexual and Reproductive Healthcare

- Community sexual and reproductive health

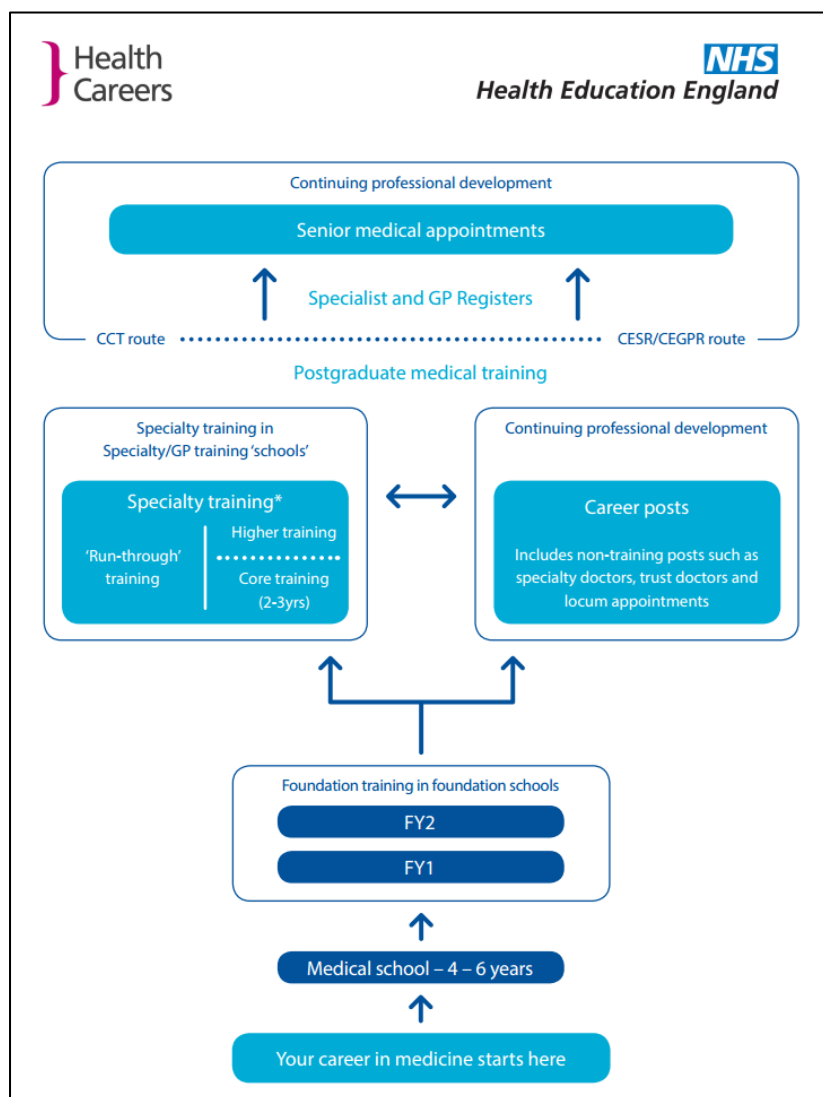
Joint Committee on Surgical Training

- Cardio-thoracic surgery
 - ↳ Congenital cardiac surgery
- General surgery
- Neurosurgery
- Oral and maxillo-facial surgery
- Otolaryngology
- Paediatric surgery
- Plastic surgery
- Trauma and orthopaedic surgery
- Urology
- Vascular surgery

Additional Curricula Identified via the GMC Website:

- Foundation program (A1)
- Broad Based Training (A2)
- Core Medical Training (A3)
- Core Psychiatry Training (A4)
- Core Surgical Training (A5)
- Acute Care Common Stem (A6)

Training structure for UK based clinicians[A7]



Appendix 1 References

- A1. The Foundation Programme. FP Curriculum 2016. 2017.<http://www.foundationprogramme.nhs.uk/pages/curriculum-eportfolio/curriculum-assessment/fp-2016> (accessed 14 Jul 2017).
- A2. GMC. Broad Based Training. 2017.<http://www.gmc-uk.org/education/14310.asp> (accessed 14 Jul 2017).
- A3. GMC. Core Medical Training (CMT). 2017.<http://www.gmc-uk.org/education/24936.asp> (accessed 14 Jul 2017).
- A4. GMC. General psychiatry curriculum. 2017.http://www.gmc-uk.org/education/general_psychiatry.asp (accessed 14 Jul 2017).
- A5. ISCP. The Syllabus. 2017.https://www.iscp.ac.uk/curriculum/surgical/surgical_syllabus_list.aspx (accessed 14 Jul 2017).
- A6. GMC. Acute Care Common Stem (ACCS). 2017.<http://www.gmc-uk.org/education/24935.asp> (accessed 14 Jul 2017).
- A7. Health Careers. UK medical education and training framework.

Appendix 2. Scoping review competency mapping

KEY

PG: postgraduate. UG: undergraduate. In the mapping process, a tick symbol (✓) indicates that the document maps to an IMIA domain with no specification of skill level. Umbrella terms such as 'core informatics skills' were not mapped as they provided no specifics of their included contents. Competencies were annotated with a 'C' to indicate a 'core' skill where the curricula made specific mention to a baseline knowledge level or indicated healthcare IT professional skill levels. Where competencies described domains as 'fundamental', e.g. the fundamentals of computer science, this was not deemed to be a core skill unless explicitly stated. Annotation with an 'S' indicates a 'specialist' skill e.g. artificial intelligence systems. If the document indicated a mix of skill levels that appeared in one IMIA domain it was mapped with () e.g. (S) indicates that in the document standard and specialist skills were identified in the corresponding IMIA domain. If the competencies included aspects of computer science such as programming or software design it was assumed that basic IT skills were a required core competency.

Reference		(42)	(47)	(45)	(24)	(44)	(41)	(48)	(46)	(32)	(34)	(49)
Curriculum Aim		Whole: Generic workforce skills	Whole: PG HI Degree	Whole: PG HI Degree	Whole: Generic workforce skills	CHI competency categories: Generic workforce skills	Whole: PG HI Degree	Whole: PG HI Degree	Whole: PG HI Degree	Whole: PG HI Degree	Whole: PG HI Degree	HI User: Generic workforce skills
IMIA+ Domain	Skill Level											
1	+		✓			✓	✓			✓C		
2	++	✓		✓	✓C	✓		✓			✓	
3	++	✓	✓	✓C	✓C	✓	✓	✓	✓	✓	✓C	
4	++	✓	✓	✓C	✓C	✓	✓	✓	✓	✓C		✓C
5	++	✓	✓	✓C	✓C	✓	✓	✓	✓	✓C	✓C	✓C
6	+	✓	✓	✓C	✓C	✓	✓	✓	✓	✓C	✓	✓C
7	+++		✓(S)	✓(C)	✓C	✓	✓	✓	✓(S)	✓(C/S)	✓C	✓C
8	+		✓	✓	✓C	✓	✓	✓	✓(S)	✓C	✓	✓
9	+	✓	✓	✓C	✓C	✓	✓	✓	✓	✓C	✓C	✓C
10	+	✓	✓	✓	✓C	✓(S)	✓		✓	✓S	✓(C)	✓(S)
11	+		✓	✓C	✓C	✓		✓	✓(S)	✓C	✓C	✓C
12	+	✓	✓(S)	✓(C)	✓C	✓	✓	✓	✓(S)	✓C	✓(C)	✓C
13	+		✓		✓C	✓S	✓	✓		✓C	✓	✓S
14	+		✓		✓C	✓(S)		✓	✓	✓(C/S)	✓(C)	✓C
15	+++					✓S	✓	✓		✓S	✓C	✓S
16	+		✓S		✓C	✓	✓	✓		✓S	✓C	✓C
17	+				✓C	✓	✓			✓C	✓C	
18	+++	✓	✓		✓C	✓				✓C	✓	
19	+++	✓	✓(S)	✓(C)	✓C	✓	✓	✓	✓(S)	✓(C/S)	✓(C)	✓(C)
20	+		✓	✓		✓	✓	✓	✓	✓	✓C	✓C
21	+			✓C	✓C	✓		✓	✓	✓C	✓(C)	✓
22	+++				✓C	✓				✓	✓	✓S
23	+	✓			✓C	✓	✓			✓S		✓C
24	+		✓S	✓	✓C	✓	✓	✓	✓(S)	✓S	✓	✓(C)
25	+		✓	✓C	✓C	✓	✓	✓	✓	✓C	✓C	
26	++	✓C	✓	✓	✓C	✓	✓	✓	✓	✓C	✓C	✓C
27	+++		✓	✓	✓C	✓(S)	✓	✓	✓(S)	✓C	✓(C)	✓(S)
28	+++			✓		✓S		✓	✓S	✓C	✓C	✓S
29	+++		✓	✓		✓S	✓	✓	✓	✓S	✓	✓S
30	+++		✓(S)	✓	✓C	✓	✓	✓	✓(S)	✓C	✓C	✓
31	+			✓		✓	✓	✓	✓(S)	✓C	✓C	✓
32	+		✓S		✓C	✓		✓	✓	✓(S)	✓(C)	✓(S)
33	+++	✓	✓S	✓			✓		✓	✓C	✓C	✓S
34	+++			✓(S)		✓	✓		✓(S)	✓C		✓(C)
35	+	✓	✓(S)	✓	✓C	✓	✓		✓(S)	✓	✓C	✓(C)
36	+++				✓C	✓						
37	+++		✓S		✓C	✓					✓C	✓S
38	+++		✓	✓(S)			✓		✓S	✓(S)	✓(C)	✓S
39	+++						✓			✓(S)	✓	✓
40	+++											
41	+++											
42	+++											
43	+++											
44	+++			✓		✓S				✓	✓C	✓(S)
45	+++				✓C		✓	✓		✓S		
46	N/A		✓S									
47	N/A			✓								✓
48	N/A					✓				✓		

Reference		(50)	(36)	(41)	(35)	(38)	(43)	(33)	(31)	(39)	(40)
Curriculum Aim		Whole: University short- course for UG & PG	Whole: EHR generic workforce skills	Whole: HI Subspecialty	Whole: HI Fellowship	Whole: Generic workforce skills	Whole: HI Professionals	Whole: PG HI Degree	Whole: Generic workforce skills	Whole: PG HI Degree	Whole: Introductory HI training
IMIA+ Domain	Skill Level										
1	+	✓		✓C				✓C		✓	✓C
2	++	✓		✓	✓C	✓C		✓(C)	✓C		✓C
3	++	✓C	✓C	✓			✓C	✓C	✓C	✓	✓C
4	++	✓(C)	✓C	✓	✓(C)		✓C	✓C	✓C		✓C
5	++	✓	✓C	✓(C)	✓	✓C	✓C	✓C	✓C	✓	✓C
6	+	✓C		✓	✓		✓C	✓C	✓C	✓	✓C
7	+++		✓C	✓	✓		✓C	✓C		✓	✓C
8	+	✓	✓C	✓(C)	✓		✓C	✓C	✓C	✓	✓C
9	+	✓(C)	✓C	✓	✓	✓C	✓C	✓C	✓C	✓	✓C
10	+	✓		✓(C)	✓		✓C	✓C		✓	✓C
11	+	✓	✓C	✓	✓	✓C	✓C	✓C	✓C	✓	✓C
12	+	✓	✓C	✓	✓C	✓C	✓C	✓C	✓C	✓	✓C
13	+			✓(C)	✓		✓C	✓(C)			✓C
14	+		✓C	✓		✓C	✓C	✓C	✓C	✓	✓C
15	+++			✓(C)				✓			
16	+		✓C	✓(C)	✓(C)	✓C	✓C	✓C	✓C	✓	✓C
17	+		✓C	✓			✓C			✓	✓C
18	+++		✓C	✓C	✓C		✓C		✓C		✓C
19	+++	✓		✓(C)	✓(C)	✓C	✓C	✓(C)	✓C	✓	✓C
20	+	✓C		✓			✓C	✓C	✓C	✓	✓C
21	+	✓		✓(C)			✓C	✓C		✓	✓C
22	+++		✓C	✓C			✓C	✓C		✓	✓C
23	+	✓		✓(C)	✓	✓C	✓C	✓C	✓C	✓	✓C
24	+	✓	✓C	✓(C)	✓(C)		✓C	✓C		✓	✓C
25	+	✓C	✓C	✓	✓	✓C	✓C	✓C	✓C	✓	✓C
26	++	✓	✓C	✓C	✓C		✓C	✓C	✓C	✓	✓C
27	+++			✓	✓		✓C	✓(C)		✓	✓C
28	+++			✓			✓C	✓C			
29	+++			✓			✓C	✓C			
30	+++	✓		✓	✓		✓C			✓	✓C
31	+			✓	✓		✓C	✓C		✓	✓C
32	+			✓			✓C	✓C		✓	
33	+++			✓				✓C			
34	+++			✓C	✓(C)		✓C	✓C		✓	✓C
35	+	✓(C/S)	✓C	✓	✓		✓C	✓C		✓	✓C
36	+++	✓								✓	
37	+++	✓		✓	✓					✓	
38	+++	✓(C)						✓C			✓C
39	+++	✓(C)									✓C
40	+++									✓	
41	+++										
42	+++										
43	+++										
44	+++										
45	+++	✓		✓C	✓			✓C		✓	✓C
46	N/A			✓C							
47	N/A										
48	N/A		✓C		✓C	✓C	✓C	✓C			

Appendix 3. Curricula keyword search & domain mapping

Key Word Search Terms & Domains	Foundation & Core Training					
	Foundation Program	Acute Common Stem	Broad Based Training	Core Medical Training	Core Psychiatry Training	Core Surgical Training
Informatic						
Technolog	✓	✓	✓	✓	✓	
IT system	✓	✓		✓		
Electronic [health/ clinical/ medical/patient] record	✓					
eHealth/e-Health						
1						
2						
3	x	x	x	x		
4	x	x	x	x	x	
5						
6		x		x		
7						
8						
9						
10						
11		x		x		
12						
13						
14						
15						
16	x					
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19						
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22						
23						
24		x		x		
25						
26	x	x	x	x	x	
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45						
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47						
48						
49		x		x		
50						
Total No. Domains Mapped	4	7	3	7	2	0

Medicine

Key Word Search Terms & Domains	Acute Internal Medicine	Allergy	Audio- Vestibular	Aviation & Space	Cardiology	Clinical Genetics	Clinical Neurophysiology	Clinical Pharmacology & Therapeutics	Dermatology	Endocrinology & Diabetes	Gastroenterology
Informatic						✓					
Technology	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
IT system	✓	✓	✓		✓			✓	✓	✓	✓
Electronic [health/ clinical/ medical/patient] record		✓				✓		✓	✓	✓	✓
eHealth/e-Health											
1											
2											
3	x	x	x	x	x	x	x	x	x	x	x
4	x	x	x	x	x	x		x	x	x	x
5						x					
6	x	x	x		x	x		x	x	x	x
7											
8							x				
9											
10										x	
11	x	x	x	x	x	x		x	x	x	x
12				x		x					
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16			x	x							
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22											
23				x		x					
24	x	x	x		x			x	x	x	x
25											
26	x	x	x	x	x	x	x	x	x	x	x
27											
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29				x							
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45											
46											
47											
48				x		x	x				
49	x	x	x	x	x	x		x	x		x
50			x	x		x					
Total No. Domains Mapped	7	7	9	11	7	11	4	7	7	7	7

Medicine									
Key Word Search Terms & Domains	General Internal Medicine	Genito-Urinary	Geriatrics	Haematology	Immunology	Infectious Diseases	Medical Oncology	Medical Ophthalmology	Neurology
Informatic									✓
Technolog	✓	✓	✓	✓	✓	✓	✓		
IT system	✓			✓	✓	✓		✓	✓
Electronic [health/ clinical/ medical/patient] record	✓			✓	✓			✓	
eHealth/e-Health									
1									
2							x		
3	x	x		x	x	x	x	x	x
4	x			x	x	x	x	x	
5		x					x		
6	x			x	x	x		x	
7									
8							x		
9									
10	x						x		
11	x	x		x	x	x		x	
12							x		
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16							x		x
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18									
19							x		
20									
21	x								
22							x		
23	x						x		x
24	x			x	x			x	
25									
26	x	x	x	x	x	x	x	x	
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48									
49	x		x	x	x			x	
50	x		x			x	x		
Total No. Domains Mapped	11	5	4	7	7	6	14	7	3

Medicine									
Key Word Search Terms & Domains	Nuclear Medicine	Paediatric Cardiology	Palliative	Rehabilitation	Renal	Respiratory	Rheumatology	Sport & Exercise	Tropical
Informatic					✓				
Technolog	✓	✓		✓	✓	✓	✓	✓	✓
IT system			✓		✓	✓	✓	✓	✓
Electronic [health/ clinical/ medical/patient] record			✓			✓		✓	
eHealth/e-Health									
1									
2		x							
3		x	x	x	x	x	x	x	x
4		x	x		x	x	x	x	x
5					x		x		
6			x		x	x	x	x	x
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8				x	x				
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24			x	x	x	x	x	x	
25									
26		x	x		x	x	x	x	x
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46									
47									
48		x					x		
49	x		x		x	x	x	x	
50		x	x				x	x	x
Total No. Domains Mapped	1	11	8	4	13	7	14	8	6

Surgery										
Key Word Search Terms & Domains	Cardiothoracic	General	Paediatric	Plastic	Neurosurgery	Oral & Maxillofacial	Otolaryngology	Trauma & Orthopaedic	Urology	Vascular
Informatic										
Technolog	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
IT system										
Electronic [health/ clinical/ medical/patient] record										
eHealth/e-Health										
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42										
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46										
47										
48										
49	x	x	x	x	x	x	x	x	x	x
50								x		
Total No. Domains Mapped	1	1	1	1	1	1	1	2	1	1

	Anaesthetics		Pathology					Psychiatry					Radiology		
Key Word Search Terms & Domains	Anaesthetics	Intensive Care	Chemical	Paediatric & Perinatal	Diagnostic Neuropathology	Forensic Histopathology	Histopathology	Child & Adolescent	Forensic	General	Learning Disability	Medical Psychotherapy	Old Age	Clinical Oncology	Clinical Radiology
Informatic	✓			✓	✓	✓	✓								✓
Technolog	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓
IT system	✓	✓	✓				✓								✓
Electronic [health/ clinical/ medical/patient] record	✓		✓											✓	✓
eHealth/e-Health															
1															
2															
3	x	x	x	x	x	X	x							x	x
4	x	x	x	x	x	X	x		x	x	x	x	x	x	x
5			x	x	x	X	x								
6	x	x	x				x							x	x
7															
8				x	x	x	x								
9	x		x												
10			x												
11	x	x	x	x	x	x	x							x	x
12	x														
13															
14	x			x	x	x	x								
15															
16	x		x	x	x	x	x								x
17															
18	x	x		x	x		x								
19															
20															
21			x												
22	x														
23	x		x	x	x	x	x								
24	x	x	x												x
25															
26	x	x	x	x	x	x	x		x	x	x	x	x	x	x
27															
28															
29															
30															
31				x											
32															
33															
34															
35	x														
36			x	x											
37															
38				x	x	x	x								x
39															
40															
41															
42															
43															
44															
45															
46															
47															
48															
49	x	x	x	x	x	x	x								x
50			x	x	x	x	x								x
Total No. Domains Mapped	15	8	16	16	14	13	15	0	2	2	2	2	2	5	10

Other												
Key Word Search Terms & Domains	Community Sexual & Reproductive Health	Emergency Medicine	General Practice	Microbiology	Obstetrics & Gynaecology	Occupational Medicine	Ophthalmology	Paediatrics	Pharmaceutical Medicine	Public Health	Virology	
Informatic			✓									
Technolog	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
IT system		✓	✓	✓							✓	
Electronic [health/ clinical/ medical/patient] record			✓				✓					
eHealth/e-Health												
1					x	x						
2				x		x				x	x	
3		x	x	x	x	x	x	x			x	
4		x	x	x	x	x	x	x			x	
5			x		x							
6		x	x	x	x						x	
7												
8			x				x					
9												
10												
11		x	x	x							x	
12												
13												
14					x		x			x		
15												
16			x		x	x						
17												
18			x		x							
19		x								x		
20												
21			x						x			
22			x									
23			x		x	x						
24		x	x									
25												
26		x	x	x	x	x	x	x			x	
27												
28												
29												
30												
31											x	
32												
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35			x									
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42												
43												
44												
45												
46												
47												
48			x			x						
49		x			x							
50	x	x		x	x	x					x	
Total No. Domains Mapped	1	9	15	7	12	9	5	3	1	3	8	