

# MEDICINES INFORMATION

## EXPERT PROFESSIONAL PRACTICE CURRICULUM

Professional curriculum to support members with  
the knowledge, skills, experience and behaviours  
to advance in their practice

2014

## Disclaimer

This publication is intended as a guide and may not always include all information relating to its subject matter.

You should interpret all information and advice in light of your own professional knowledge and all relevant pharmacy and healthcare literature and guidelines.

Nothing in this publication constitutes legal advice and cannot be relied upon as such.

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This curriculum has been produced by RPS Faculty partners to support continued advancement in all areas of pharmacy practice.

During 2014 the Curricula Panel of the RPS Faculty will continue to develop the vision for post graduate development to produce the highest quality pharmacy workforce. The Faculty will continue to work with experts and specialist groups to form new guidance for professional advancement. The layout and themes in these curricula may be subject to change. Reviews of curricula can be expected annually while the Faculty is being set up. Please check that you are using the most up to date version of the curricula on the RPS Faculty website ([www.rpharms.com/faculty](http://www.rpharms.com/faculty)).

# Acknowledgements

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The mapping tables in this document use the Royal Pharmaceutical Society Advanced Pharmacy Framework (APF) which builds on the widely used Advanced to Consultant Level Framework (ACLF) which was developed by the Competency Development and Evaluation Group (CoDEG).

The template and content of this document was developed from the document “Adult Critical Care - Specialist Pharmacy Practice” (London: Department of Health; 2005) produced by the UKCPA Critical Care Pharmacists Group in collaboration with key department of health (DH) personnel and senior NHS pharmacists.

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# Professional Curriculum for Advanced Pharmacy Practice in Medicines Information

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## Pharmaceutical Practice in Medicines Information

This curriculum provides an overview of the knowledge, skills, experiences and behaviours required to practice at advanced level in Medicines Information at two stages: Advanced Stage I and Advanced Stage II, in line with the requirements of the APF.

The document is intended to be used by practitioners to support the development of their practice at an advanced level within Medicines Information. It encourages practitioners to think critically and to use knowledge in Medicines Information supporting informed decision making using knowledge from this and other related therapeutic areas to promote optimal medicines management for patients. The curriculum also encourages the development of skills in informed, critically relevant, effective discussion with other health and social care practitioners, peers and managers, where appropriate, to maximise optimal medicines related care for patients.

It is intended to be as useful to the wider community working within Medicines Information as possible from all sectors of care. The syllabus is not intended to cover every aspect of practice and inevitably overlaps with a number of specialities. Users are encouraged to link this syllabus with others in related fields, e.g. cardiology, rheumatology, mental health (also known as critical adjacencies).

This curriculum will be reviewed annually as to whether any update or changes are required. Every five years there will be an external review including external experts to re-evaluate the curriculum. Feedback is encouraged to ensure that the document is error-free, fit for purpose and accurately reflects the needs of pharmacists working at the specified stages.

# Knowledge, Skills, Experience and Behaviours

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Practitioners will develop their portfolios linked to the APF ([www.rpharms.com](http://www.rpharms.com)). The recommended knowledge, skills, experience and behaviours which practitioners require to demonstrate competence at Advanced Stage I and Advanced Stage II for the Expert Professional Practice and Collaborative Working Relationships clusters of the APF in an area of advanced practice are listed here with additional notes and specific examples for working within Medicines Information. The APF mapping tables in this document link the recommended knowledge, skills, experience and behaviours with the relevant developmental descriptors. Examples of the recommended knowledge, skills, experience and behaviours are included below. For a comprehensive list see the mapping tables.

## Advanced Stage I

- Able to answer a wide range of enquiry types of Levels 1-3 in accordance with UKMi standards
- Able to gather background information appropriate to the enquiry
- Able to employ a comprehensive search strategy appropriate to the task being undertaken (e.g. researching enquiries, drug review, writing a Medicines Q&A)
- Knowledge of strengths and weaknesses of texts/databases/websites included in the UKMi Essential Resources List
- Able to search effectively texts/databases/websites listed in the UKMi Essential Resources List
- Able to identify relevant information from the literature, and apply it to the Medicines Information task being undertaken e.g. enquiries, drug reviews
- Evaluates and provides information and advice where published evidence is available and reasonably consistent
- Able to identify when expert opinion or advice should be sought
- Provides information and/or advice to the enquirer in an appropriate format/method of communication
- Supports the Medicines Information team in the provision and delivery of Medicines Information training to pharmacy, nursing, medical staff and other allied healthcare professionals (AHPs)
- Contributes to production of bulletins and guidelines for local organisation
- Maintains current awareness of professional, pharmaceutical and clinical issues
- Awareness of Horizon Scanning resources and able to use them to identify drugs likely to significantly influence prescribing in the next 12 months
- A robust knowledge of the impact on practice imposed by relevant statutory legislation
- An appreciation of how the seven principles outlined in the RPSGB Code of Ethics and Professional Standards and impacts on medicines information services
- Awareness of relevant Trust policies (including: complaints, confidentiality, Freedom of Information, adverse incident reporting, IT policies, medicines policy, information storage) and how these are implemented in the medicines information centre
- Awareness of need to highlight/appropriately refer/escalate issues when concerned that activity may compromise adherence to the law, the Code of Ethics or local Trust policies
- Able to show that enquiry answering practice is consistently in line with UKMi clinical governance standards - in particular that all information provided to the enquirer is recorded accurately and is retrievable in line with local information storage policy
- Able to show that local policies intended to enhance governance (e.g. independent checking of calculations) are routinely applied
- Able to show that the Medicines Information related-incidents on the quarterly IRMIS database report are accessed and reflected on

- Knowledge and understanding of UKMi Standards and policies, and UKMi Strategy
- Knowledge of how UKMi engages in national consultations concerning provision of MI Service
- Able to use the basic principles of evidence-based medicine when answering enquiries and writing documents e.g. drug reviews
- Able to present an evidence-based review of a trial in a journal club
- Knowledge of evidence-based medicine (EBM) resources available in the NHS and an understanding of the terminology used
- An understanding of the limitations of EBM and an awareness of other factors which may also be taken into account
- Knowledge of potential sources of bias in randomised controlled trials and systematic reviews/ meta-analyses
- Able to manipulate result data to quantify benefit and harm
- Able to explain the meaning of measures of efficacy/effectiveness and safety to a range of service users
- Awareness of limitations in interpreting data from uncontrolled studies and non-superiority studies
- Has highly effective telephone communication skills
- Awareness of the strengths and weaknesses of the different communication methods used e.g. telephone, e-mail, person to person, formal letters, and able to select the most appropriate method depending upon complexity and situation to allow effective communication
- Communicates with a range of people on a range of matters
- Delivers patient specific Enquiry Answering service in accordance with UKMi standards

## Advanced Stage II

- Responsible for provision of Enquiry Answering Service that meets UKMi standards
- Ensures that appropriate and effective search strategies are employed in all areas of MI work, and able to advise on search strategies to be employed for both routine and non-routine tasks undertaken in Medicines Information
- Able to advise on resources and their strengths and weaknesses in addition to those included in the UKMi Essential Resources List
- Able to search effectively texts/databases/websites in addition to those listed in the UKMi Essential Resources List
- Evaluates and provides information and advice where published evidence is lacking or conflicting
- Appropriately utilises the knowledge and experience of experts in any given field for all Medicines Information activities
- Provides information and/or advice to the local groups/committees in an appropriate format/ method of communication
- Develops and provides MI training to pharmacy, nursing, medical staff and other allied healthcare professionals (AHPs)
- Produces evidence based bulletins and local guidelines for local organisation
- Responds to current professional, pharmaceutical and clinical issues, and proactively disseminates this information as appropriate
- Makes appropriate use of Horizon Scanning resources to support and advise colleagues e.g. Directorate Pharmacists/Senior Pharmacy Managers (SPMs) on potential changes in prescribing practices and the associated cost pressures in the next 12 months
- Liaises with other information providers e.g. librarians, Directorate pharmacists, to ensure that resources available to health care professionals and patients are rationalised and used to their maximum benefit
- Able to monitor changes in statutory legislation and adjust work processes/ write SOPs to comply with those changes
- Able to provide advice to staff members concerned that they risk operating outside the law, the Professional Code of Ethics or local Trust policies

- Able to interpret relevant Trust policies and UKMi standards, and adjust work processes to ensure compliance
- Able to educate pharmacy staff on how the law, the Professional Code of Ethics and local Trust policies impact on medicine information services
- Responds to external and internal audits by developing action plans and implementing service improvements
- Ensures that all staff working in the Medicines Information centre are aware of the governance procedures in place and operate within them (unless given explicit permission not to)
- Advises Senior Pharmacy Staff on information governance issues relating to pharmacy
- Uses IRMIS database reports to reflect on service and instigate appropriate changes
- Participates in UKMi discussions regarding national consultations concerning provision of MI Service e.g. via Mi network meetings
- Contributes to discussions and presentations at UKMi seminars
- Contributes to discussions at regional network meetings and UKMi working groups
- Able to provide a peer-review audit of an external medicines information service
- Maintains existing SOPs, and able to identify the need for and develop new SOPs
- Ensures that the basic principles of evidence-based medicine are consistently applied in all Medicines Information outputs
- Able to run an evidence-based journal club
- Able to provide/ support provision of evidence-informed advice when only limited, conflicting or indirect evidence is available
- Able to quantify and explain uncertainty about efficacy/ effectiveness using concepts such as precision and confidence intervals
- Able to utilise cost data to provide basic measures of cost effectiveness such as cost per event avoided
- Publishes evidence-informed drug reviews in peer-reviewed journals or on a UKMI-approved website e.g. NeLM, NHS Evidence
- Provides regular training and updates for relevant pharmacy staff on EBM resources available to NHS users
- Supervises and trains others in highly effective telephone communication
- Supervises and supports others in communicating effectively (includes both verbal and written communication)
- Develops and maintains communication with people about difficult matters and/or in difficult situations
- Responsible for provision of Enquiry Answering Service for patients that meets UKMi standards
- Responds to information needs of patients e.g. via patient help lines
- Supports and reviews patient specific information produced by pharmacy staff e.g. PILs
- Responsible for reporting or promoting appropriate reports, when made aware of drug related adverse events

# Resources for Curriculum Development

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## Useful Websites

UKMi produce a range of resources to enable development of medicines information skills. These are aimed at both specialist practitioners in the area as well as those requiring a general background in Medicines Information skills. In addition, you may contact your regional medicines information centre for detail on specific training available in your area (details in the front of the BNF).

- The UKMi workbook – a textbook teaching MI skills and available to selected individuals through your regional medicines information centre
- The Medicines Information Computer Aided Learning package (MiCAL) – a fully interactive web-based training package which teaches fundamental MI skills (see <http://www.midatabank.com/mical/>)
- Web-based resources and texts listed on the UKMi essential resources list: see <http://www.ukmi.nhs.uk/activities/clinicalGovernance/default.asp?pageRef=4>
- The UKMi National Residential Training Course – contact your individual regional medicines information centre for details on eligibility for enrolment
- Specific content on all aspects of medicines information work available at [www.ukmi.nhs.uk](http://www.ukmi.nhs.uk)
- Content on a range of individual medicines related issues available at [www.nelm.nhs.uk](http://www.nelm.nhs.uk)

## Publications

- Montori V et al Users' guide to detecting misleading claims in clinical research reports BMJ 2004; 329: 1093-1096
- Greenhalgh T. How to read a paper: Getting your bearings (deciding what a paper is about). BMJ 1997; 315: 243-246
- Greenhalgh T. How to read a paper: Assessing the methodological quality of published papers. BMJ 1997; 315: 305-308
- Guyatt GH, et al. Users' Guides to the Medical Literature: II. How to use an article about therapy or prevention. A. Are the results of the study valid? JAMA 1993; 270: 2598-2601
- Guyatt GH, et al. Users' Guides to the Medical Literature: II. How to use an article about therapy or prevention. B. What are the results and will they help me in caring for my patients? JAMA 1994; 271: 59-63
- Statistics in Divided Doses via [www.ukmi.nhs.uk/activities/Research/default.asp?pageRef=27](http://www.ukmi.nhs.uk/activities/Research/default.asp?pageRef=27)
- Statistics for the non-statistician:
  - I: Different types of data need different statistical tests Greenhalgh T BMJ 1997; 315: 364-6
  - II: "Significant" relations and their pitfalls Greenhalgh T BMJ 1997; 315: 422-5
- CASP Tools <http://www.phru.nhs.uk/Pages/PHD/resources.htm>
- Evidence-Based Medicine: How to Practice and Teach EBM. David L. Sackett (Author), W. Scott Richardson MD Dr. (Author), William Rosenberg (Author), R. Brian Haynes MD Dr. (Author)



# APF Mapping Tables

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The following tables list the knowledge, skills, experience and behaviours recommended to demonstrate the APF competencies for the Expert Professional Practice (EPP) and Collaborative Working Relationship (CWR) clusters mapped against the relevant APF developmental descriptors. It is intended primarily to support practitioners to develop their practice, but may be useful for portfolio preparation. All statements relate to the practitioner's area of practice speciality.

The competencies listed for "Advanced Stage I" and "Advanced Stage II" are additive, i.e. those at "Advanced Stage II" build on the competencies established in "Advanced Stage I". Practitioners are expected to demonstrate "Advanced Stage I" first before moving on to "Advanced Stage II". Those wishing to demonstrate "Advanced Stage II" will usually be expected to have demonstrated "Advanced Stage I" previously.

A pharmacist starting to specialise in an area of Expert Professional Practice might be expected to be working towards attaining competencies at Advanced Stage I. A practitioner having attained Advanced Stage I in an area of Expert Professional Practice might be expected to be working towards attaining competencies at Advanced Stage II.

At Advanced Stage I practitioners are expected to build on the General Level Framework (see CoDEG's website: [www.codeg.org](http://www.codeg.org)) competencies and (for the relevant developmental descriptors) to demonstrate experience of caring for patients with disorders, pharmaceutical care issues and co-morbidities that are commonly found within Medicines Information.

At Advanced Stage II practitioners are expected to build on Advanced Stage I competencies and (for the relevant developmental descriptors) to demonstrate experience of caring for patients with complex co-morbidities or pharmaceutical care issues or those with more specialist conditions within Medicines Information.

## Expert Professional Practice – Expert Skills and Knowledge (Cluster I.1)

Improving standards of pharmaceutical care for patients.

I.1 EXPERT SKILLS AND KNOWLEDGE	ADVANCED STAGE I	ADVANCED STAGE II
APF competency developmental descriptors	<p>Demonstrates general pharmaceutical skills and knowledge in core areas.</p> <p>In addition for patient focussed roles: Is able to plan, manage, monitor, advise and review general pharmaceutical care programmes for patients in core areas.</p>	<p>Demonstrates in-depth pharmaceutical skills and knowledge in defined area(s).</p> <p>In addition for patient focussed roles: Is able to plan, manage, monitor, advise and review in-depth/complex pharmaceutical care programmes for patients in defined area(s).</p>
Recommended knowledge, skills, experience and behaviours	<ul style="list-style-type: none"> <li>• Able to gather background information appropriate to the enquiry</li> <li>• Able to employ a comprehensive search strategy as appropriate to the task being undertaken (e.g. researching enquiries, drug review, writing a Medicines Q&amp;A etc)</li> <li>• Knowledge of strengths and weaknesses of texts/databases/websites included in the UKMi Essential Resources List</li> <li>• Able to search effectively texts/databases/websites listed in the UKMi Essential Resources List</li> <li>• Able to identify relevant information from the literature, and apply it to the Medicines Information task being undertaken e.g. enquiries, drug reviews</li> <li>• Evaluates and provides information and advice where published evidence is available and reasonably consistent</li> <li>• Able to identify when expert opinion or advice should be sought</li> <li>• Provides information and/or advice to the enquirer in an appropriate format/method of communication</li> </ul>	<ul style="list-style-type: none"> <li>• Responsible for provision of Enquiry Answering Service that meets UKMi standards</li> <li>• Ensures that appropriate and effective search strategies are employed in all areas of MI work, and able to advise on search strategies to be employed for both routine and non-routine tasks undertaken in Medicines Information</li> <li>• Able to advise on resources and their strengths and weaknesses in addition to those included in the UKMi Essential Resources List</li> <li>• Able to search effectively texts/databases/websites in addition to those listed in the UKMi Essential Resources List</li> <li>• Evaluates and provides information and advice where published evidence is lacking or conflicting</li> <li>• Appropriately utilises the knowledge and experience of experts in any given field for all Medicines Information activities</li> <li>• Provides information and/or advice to the local groups/committees in an appropriate format/method of communication</li> <li>• Develops and provides Medicines Information training to pharmacy, nursing, medical staff and other allied healthcare professionals (AHPs)</li> <li>• Produces evidence based bulletins and local guidelines for local organisation</li> </ul>

## Expert Professional Practice – Expert Skills and Knowledge (Cluster I.1)

Improving standards of pharmaceutical care for patients.

I.1 EXPERT SKILLS AND KNOWLEDGE	ADVANCED STAGE I	ADVANCED STAGE II
<p>APF competency developmental descriptors</p>	<p>Demonstrates general pharmaceutical skills and knowledge in core areas.</p> <p>In addition for patient focussed roles: Is able to plan, manage, monitor, advise and review general pharmaceutical care programmes for patients in core areas.</p>	<p>Demonstrates in-depth pharmaceutical skills and knowledge in defined area(s).</p> <p>In addition for patient focussed roles: Is able to plan, manage, monitor, advise and review in-depth/complex pharmaceutical care programmes for patients in defined area(s).</p>
<p>Recommended knowledge, skills, experience and behaviours</p>	<ul style="list-style-type: none"> <li>• Supports the Medicines Information team in the provision and delivery of Medicines Information training to pharmacy, nursing, medical staff and other allied healthcare professionals (AHPs)</li> <li>• Contributes to production of bulletins and local guidelines for local organisation</li> <li>• Maintains current awareness of professional, pharmaceutical and clinical issues</li> <li>• Awareness of Horizon Scanning resources and able to use them to identify drugs likely to significantly influence prescribing in the next 12 months</li> <li>• A robust knowledge of the restrictions on practice imposed by relevant statutory legislation</li> <li>• An appreciation of how the seven principles outlined in the RPSGB Code of Ethics and Professional Standards and Guidance can potentially impact on medicines information services</li> <li>• Awareness of relevant Trust policies (including: complaints, confidentiality, Freedom of Information, adverse incident reporting, IT policies, medicines policy, information storage) and how these are implemented in the medicines information centre</li> <li>• Awareness of need to highlight/appropriately refer/escalate issues when concerned that activity may compromise adherence to the law, the Code of Ethics or local Trust policies</li> </ul>	<ul style="list-style-type: none"> <li>• Responds to current professional, pharmaceutical and clinical issues, and proactively disseminates this information as appropriate</li> <li>• Makes appropriate use of Horizon Scanning resources to support and advise colleagues e.g. Directorate Pharmacists/SPMs on potential changes in prescribing practices and the associated cost pressures in the next 12 months</li> <li>• Liaises with other information providers e.g. librarians, Directorate pharmacists, to ensure that resources available to health care professionals and patients are rationalised and used to their maximum benefit</li> <li>• Able to monitor changes in statutory legislation and adjust work processes adjust/write SOPs to comply with those changes</li> <li>• Able to provide advice to staff members concerned that they risk operating outside the law, the Professional Code of Ethics or local Trust policies</li> <li>• Able to interpret relevant Trust policies and UKMi standards, and adjust work processes to ensure compliance</li> <li>• Able to educate pharmacy staff on how the law, the Professional Code of Ethics and local Trust policies impact on Medicine Information services</li> <li>• Responds to external and internal audits by developing action plans and implementing service improvements</li> <li>• Ensures that all staff working in the Medicines Information centre are aware of the governance procedures in place and operate within them (unless given explicit permission not to)</li> </ul>

## Expert Professional Practice – Expert Skills and Knowledge (Cluster I.1)

Improving standards of pharmaceutical care for patients.

I.1 EXPERT SKILLS AND KNOWLEDGE	ADVANCED STAGE I	ADVANCED STAGE II
APF competency developmental descriptors	<p>Demonstrates general pharmaceutical skills and knowledge in core areas.</p> <p>In addition for patient focussed roles: Is able to plan, manage, monitor, advise and review general pharmaceutical care programmes for patients in core areas.</p>	<p>Demonstrates in-depth pharmaceutical skills and knowledge in defined area(s).</p> <p>In addition for patient focussed roles: Is able to plan, manage, monitor, advise and review in-depth/complex pharmaceutical care programmes for patients in defined area(s).</p>
Recommended knowledge, skills, experience and behaviours	<ul style="list-style-type: none"> <li>• Able to show that enquiry answering practice is consistently in line with clinical governance standards - in particular that all information provided to the enquirer is recorded accurately and is retrievable in line with local information storage policy</li> <li>• Able to show that local policies intended to enhance governance (e.g. Independent checking of calculations) are routinely applied</li> <li>• Able to show that the Medicines Information related-incidents on the quarterly IRMIS database report are accessed and reflected on</li> <li>• Knowledge and understanding of UKMi Standards and policies, and UKMi Strategy</li> <li>• Knowledge of how UKMi engages in national consultations concerning provision of MI Service</li> <li>• Able to use the basic principles of evidence-based medicine when answering enquiries and writing drug reviews</li> <li>• Able to present an evidence-based review of a trial in a journal club</li> <li>• Knowledge of evidence-based medicine (EBM) resources available in the NHS and an understanding of the terminology used</li> </ul>	<ul style="list-style-type: none"> <li>• Advises Senior Pharmacy Staff on information governance issues relating to pharmacy</li> <li>• Uses IRMIS database reports to reflect on service and instigate appropriate changes</li> <li>• Participates in UKMi discussions regarding national consultations concerning provision of MI Service e.g. via Medicines Information network meetings</li> <li>• Contributes to discussions and presentations at UKMi seminars</li> <li>• Contributes to discussions at regional network meetings and UKMi working groups</li> <li>• Able to provide a peer-review audit of an external medicines information service</li> <li>• Maintains existing SOPs, and able to identify the need for and develop new SOPs</li> <li>• Ensures that the basic principles of evidence-based medicine are consistently applied in all MI outputs</li> <li>• Able to run an evidence-based journal club</li> </ul>

## Expert Professional Practice – Expert Skills and Knowledge (Cluster I.1)

Improving standards of pharmaceutical care for patients.

I.1 EXPERT SKILLS AND KNOWLEDGE	ADVANCED STAGE I	ADVANCED STAGE II
APF competency developmental descriptors	<p>Demonstrates general pharmaceutical skills and knowledge in core areas.</p> <p>In addition for patient focussed roles: Is able to plan, manage, monitor, advise and review general pharmaceutical care programmes for patients in core areas.</p>	<p>Demonstrates in-depth pharmaceutical skills and knowledge in defined area(s).</p> <p>In addition for patient focussed roles: Is able to plan, manage, monitor, advise and review in-depth/complex pharmaceutical care programmes for patients in defined area(s).</p>
Recommended knowledge, skills, experience and behaviours	<ul style="list-style-type: none"> <li>• An understanding of the limitations of EBM and an awareness of other factors which may also be taken into account</li> <li>• Knowledge of potential sources of bias in randomised controlled trials and systematic reviews/ meta-analyses</li> <li>• Able to manipulate result data to quantify benefit and harm</li> <li>• Able to explain the meaning of measures of efficacy/ effectiveness and safety to a range of service users</li> <li>• Awareness of limitations in interpreting data from uncontrolled studies and non-superiority studies</li> <li>• Have highly effective telephone communication skills</li> <li>• Awareness of the strengths and weaknesses of the different communication methods used e.g. telephone, e-mail, person to person, formal letters, and able to select the most appropriate method depending upon complexity and situation to allow effective communication</li> <li>• Communicates with a range of people on a range of matters</li> </ul>	<ul style="list-style-type: none"> <li>• Able to provide/ support provision of an evidence-informed advice when there is only limited, conflicting or indirect evidence available</li> <li>• Able to quantify and explain uncertainty about efficacy/ effectiveness using concepts like confidence intervals</li> <li>• Able to utilise cost data to provide basic measures of cost effectiveness such as cost per event avoided</li> <li>• Publishes evidence-informed drug reviews in peer-reviewed journals or on a UKMi-approved website e.g. NeLM, NHS Evidence</li> <li>• Provides regular training and updates for relevant pharmacy staff on EBM resources available to NHS users</li> <li>• Supervises and trains others in highly effective telephone communication</li> <li>• Supervises and supports others in communicating effectively (includes both verbal and written communication)</li> <li>• Develops and maintains communication with people about difficult matters and/or in difficult situations</li> </ul>

## Expert Professional Practice – Delivery of Professional Expertise (Cluster 1.2)

Improving standards of pharmaceutical care for patients.

1.2 DELIVERY OF PROFESSIONAL EXPERTISE	ADVANCED STAGE I	ADVANCED STAGE II
APF competency developmental descriptors	Demonstrates accountability for delivering professional expertise and direct service provision as an individual.	Demonstrates accountability for the delivery of professional services and expertise via a team or directly to groups of patients/clients/users.
Recommended knowledge, skills, experience and behaviours	<ul style="list-style-type: none"> <li>Delivers patient specific Enquiry Answering service in accordance with UKMi standards</li> </ul>	<ul style="list-style-type: none"> <li>Responsible for provision of Enquiry Answering Service for patients that meets UKMi standards</li> <li>Responds to information needs of patients e.g. via patient help lines</li> <li>Supports and reviews patient specific information produced by pharmacy staff e.g. PILs</li> <li>Responsible for reporting or promoting appropriate reports, when made aware of drug related adverse events</li> </ul>

## Expert Professional Practice – Reasoning and Judgement (Cluster I.3)

Improving standards of pharmaceutical care for patients.

I.3 REASONING AND JUDGEMENT	ADVANCED STAGE I	ADVANCED STAGE II
APF competency developmental descriptors	<p>Demonstrates ability to use skills in a range of routine situations requiring analysis or comparison of a range of options.</p> <p>Recognises priorities when problem-solving and identifies deviations from the normal pattern.</p>	<p>Demonstrates ability to use skills to make decisions in complex situations where there are several factors that require analysis, interpretation and comparison.</p> <p>Demonstrates an ability to see situations holistically.</p>
Recommended knowledge, skills, experience and behaviours	<ul style="list-style-type: none"> <li>• Able to recognise and resolve basic problems</li> <li>• Monitored patient visits under supervision/mentorship</li> <li>• Able to recommend justifiable courses of action</li> <li>• Demonstrates accurate reasoning</li> <li>• Able to make decisions with limited information</li> <li>• Able to critically appraise and interpret published papers</li> <li>• Able to make decisions in a timely manner</li> <li>• Able to prioritise problems</li> <li>• Able to assess prescriptions or work for adherence to local/national guidelines</li> <li>• Recognises own limitations and able to refer appropriately</li> </ul>	<ul style="list-style-type: none"> <li>• Recognises, evaluates and resolves complex problems</li> <li>• Able to appraise information, make an informed decision with the evidence available and be able to justify/defend the decision to others, including in situations where evidence is lacking</li> <li>• Recognises limitations of supporting data</li> <li>• Able to present and explain a critical appraisal of published papers</li> <li>• Is aware of the limitations of some research to non-research settings</li> <li>• Demonstrates an ability to see situations holistically</li> <li>• Able to take into consideration different values and views when making decisions</li> <li>• Able to refer appropriately to others within and outside own team</li> </ul>

## Expert Professional Practice – Professional Autonomy (Cluster I.4)

Improving standards of pharmaceutical care for patients.

I.4 PROFESSIONAL AUTONOMY	ADVANCED STAGE I	ADVANCED STAGE II
APF competency developmental descriptors	Is able to follow legal, ethical, professional and organisational policies/procedures and codes of conduct.	Is able to take action based on own interpretation of broad professional policies/procedures where necessary.
Recommended knowledge, skills, experience and behaviours	<ul style="list-style-type: none"> <li>• Able to follow organisation guidance related to the Medicines Information service</li> <li>• Follows legal, ethical and organisational policy and procedures and codes of conduct</li> <li>• Contribute to the development of policies and procedures specifically for the local Medicines Information service, under supervision</li> <li>• Able to identify areas of practice in Medicines Information requiring pharmaceutical input and development</li> <li>• Able to work for short periods of time in the absence of senior support</li> </ul>	<ul style="list-style-type: none"> <li>• Develops policies, procedures and treatment guidelines specifically for the local Medicines Information service</li> <li>• Involved in the development and implementation supplementary/ independent prescribing in organisations where this is being developed</li> <li>• Participates in organisation or service -wide multidisciplinary groups with respect to pharmacy issues</li> <li>• Able to work for extended periods of time in the absence of senior support</li> </ul>



## Collaborative Working Relationships – Communication (Custer 2.1)

Is able to communicate, establish and maintain professionally-driven working relationships and gain the co-operation of others. Including ability to: Persuade; Motivate; Negotiate; Empathise; Provide reassurance; Listen; Influence and Networking skills; Presentation skills.

2.1 COMMUNICATION		ADVANCED STAGE I	ADVANCED STAGE II
APF competency developmental descriptors		<p>Demonstrates use of appropriate communication to gain the co-operation of relevant stakeholders (including patients, senior and peer colleagues, and other professionals where possible).</p> <p>Demonstrates ability to communicate where the content of the discussion is explicitly defined.</p>	<p>Demonstrates use of appropriately selected communication skills to gain co-operation of small groups of relevant stakeholders within the organisation.</p> <p>Demonstrates ability to communicate where the content of the discussion is based on professional opinion.</p>
Recommended knowledge, skills, experience and behaviours		<ul style="list-style-type: none"> <li>• Able to use clear, concise, appropriate and effective written and oral communication skills to a range of patients, carers and staff from within the Trust</li> <li>• Able to communicate effectively where the content of the discussion is explicitly defined</li> <li>• Able to communicate effectively with individual patients, carers, colleagues and clinicians in a form and manner that is consistent with the individual level of understanding, culture and background</li> <li>• Able to recognise barriers to effective communication and modify communication accordingly</li> </ul>	<ul style="list-style-type: none"> <li>• Able to use clear, concise, appropriate and effective written and oral communication skills, to a range of patients, carers and staff from within and outside the Trust</li> <li>• Able to communicate effectively where the content of the discussion is based on opinion</li> <li>• Able to communicate effectively with groups of patients, carers, staff, colleagues and senior managers in a form and manner that is consistent with the level of understanding, culture and background of the group</li> </ul>
Recommended knowledge, skills, experience and behaviours	Persuade	<ul style="list-style-type: none"> <li>• Able to persuade others within the MDT about individual episodes of care</li> <li>• Able to engage patients in meaningful discussions about medicines, and compliance</li> </ul>	<ul style="list-style-type: none"> <li>• Able to persuade or influence the MDT regarding individual complex clinical or technical issues</li> <li>• Able to engage patients in meaningful discussions about medicines, and compliance</li> <li>• Able to persuade or influence staff with respect to organisational change, research, guidelines and protocols, in line with medicines management agenda</li> </ul>
	Motivate	<ul style="list-style-type: none"> <li>• Demonstrates self-motivation</li> <li>• Able to motivate other staff in the pharmacy team</li> </ul>	<ul style="list-style-type: none"> <li>• Motivates members of the pharmacy team (e.g. to follow a guideline, collect data, to improve the quality of care, to identify areas of practice for development and improvement)</li> </ul>

## Collaborative Working Relationships – Communication (Cluster 2.1)

Is able to communicate, establish and maintain professionally-driven working relationships and gain the co-operation of others.

Including ability to: Persuade; Motivate; Negotiate; Empathise; Provide reassurance; Listen; Influence and Networking skills; Presentation skills.

2.1 COMMUNICATION		ADVANCED STAGE I	ADVANCED STAGE II
APF competency developmental descriptors		<p>Demonstrates use of appropriate communication to gain the co-operation of relevant stakeholders (including patients, senior and peer colleagues, and other professionals where possible).</p> <p>Demonstrates ability to communicate where the content of the discussion is explicitly defined.</p>	<p>Demonstrates use of appropriately selected communication skills to gain co-operation of small groups of relevant stakeholders within the organisation.</p> <p>Demonstrates ability to communicate where the content of the discussion is based on professional opinion.</p>
Recommended knowledge, skills, experience and behaviours	Negotiate	<ul style="list-style-type: none"> <li>Negotiates on pharmaceutical care or technical issues for individual patients</li> <li>Negotiates issues about teamwork and workloads (e.g. rotas, staffing, training requirements)</li> <li>Able to negotiate simple treatment issues with patients and MDT</li> </ul>	<ul style="list-style-type: none"> <li>Negotiates on pharmaceutical care or technical issues for groups of patients</li> <li>Negotiates issues between Medicines Information and pharmacy</li> <li>Able to negotiate complex treatment issues with patients and MDT</li> <li>Able to negotiate on financial issues</li> </ul>
	Empathise/ Provide Reassurance	<ul style="list-style-type: none"> <li>Communicates in an empathetic and respectful manner with patients, carers and staff. Uses appropriate verbal and body language</li> <li>Able to communicate sensitive information and advice to patients in a professional manner and to acknowledge boundaries in behaviour</li> <li>Able to reassure individuals appropriately</li> </ul>	<ul style="list-style-type: none"> <li>Communicates in an empathetic and respectful manner with patients, carers and staff in complex situations. Uses appropriate verbal and body language</li> <li>Manages, mentors and supervises staff in an empathetic manner.</li> <li>Able to reassure groups appropriately</li> </ul>

## Collaborative Working Relationships – Communication (Cluster 2.1)

Is able to communicate, establish and maintain professionally-driven working relationships and gain the co-operation of others. Including ability to: Persuade; Motivate; Negotiate; Empathise; Provide reassurance; Listen; Influence and Networking skills; Presentation skills.

2.1 COMMUNICATION		ADVANCED STAGE I	ADVANCED STAGE II
APF competency developmental descriptors		<p>Demonstrates use of appropriate communication to gain the co-operation of relevant stakeholders (including patients, senior and peer colleagues, and other professionals where possible).</p> <p>Demonstrates ability to communicate where the content of the discussion is explicitly defined.</p>	<p>Demonstrates use of appropriately selected communication skills to gain co-operation of small groups of relevant stakeholders within the organisation.</p> <p>Demonstrates ability to communicate where the content of the discussion is based on professional opinion.</p>
Recommended knowledge, skills, experience and behaviours	Listen	<ul style="list-style-type: none"> <li>• Able to effectively listen and respond to patients, carers, colleagues and members of the MDT</li> </ul>	<ul style="list-style-type: none"> <li>• Able to effectively listen and respond to groups of patients, carers, visitors, members of the MDT and colleagues</li> </ul>
	Influence	<ul style="list-style-type: none"> <li>• Able to use appropriate communication to gain the co-operation of individual patients, colleagues and clinicians</li> <li>• Able to positively influence junior staff within the local clinical pharmacy team to develop and deliver a higher quality of service</li> </ul>	<ul style="list-style-type: none"> <li>• Able to use appropriately selected communication skills to gain the co-operation of small groups of patients, colleagues, senior clinicians and managers within the organisation</li> <li>• Able to positively influence staff delivering the local clinical services. To increase the MDTs awareness of medicine management issues</li> <li>• Demonstrates assertive behaviour</li> <li>• Able to advocate for others</li> <li>• Proactively influences developments in pharmacy services to meet the needs of patients</li> </ul>

## Collaborative Working Relationships – Communication (Cluster 2.1)

Is able to communicate, establish and maintain professionally-driven working relationships and gain the co-operation of others.

Including ability to: Persuade; Motivate; Negotiate; Empathise; Provide reassurance; Listen; Influence and Networking skills; Presentation skills.

2.1 COMMUNICATION		ADVANCED STAGE I	ADVANCED STAGE II
APF competency developmental descriptors		<p>Demonstrates use of appropriate communication to gain the co-operation of relevant stakeholders (including patients, senior and peer colleagues, and other professionals where possible).</p> <p>Demonstrates ability to communicate where the content of the discussion is explicitly defined.</p>	<p>Demonstrates use of appropriately selected communication skills to gain co-operation of small groups of relevant stakeholders within the organisation.</p> <p>Demonstrates ability to communicate where the content of the discussion is based on professional opinion.</p>
Recommended knowledge, skills, experience and behaviours	Networking Skills	<ul style="list-style-type: none"> <li>Is a member of the UKMi or other local/national associations that provide an appropriate level of support</li> <li>Is a fully integrated member of the local MDT</li> <li>Attends relevant external/educational meetings</li> <li>Able to network effectively</li> </ul>	<ul style="list-style-type: none"> <li>Is a participating member of the UKMi</li> <li>Participates in local network groups (or equivalent)</li> <li>Participating member of working groups within the local service</li> <li>Attends relevant national/international conferences</li> </ul>
	Presentation Skills	<ul style="list-style-type: none"> <li>Presents effectively to pharmacy and the multi-disciplinary team (MDT)</li> <li>Communication is always clear, precise and appropriate</li> </ul>	<ul style="list-style-type: none"> <li>Presents effectively to senior MDT including consultant level</li> <li>Presents effectively at Medicines Information network meetings</li> </ul>

## Collaborative Working Relationships – Teamwork and Consultation (Cluster 2.2)

Is able to communicate, establish and maintain professionally-driven working relationships and gain the co-operation of others.

Including ability to: Persuade; Motivate; Negotiate; Empathise; Provide reassurance; Listen; Influence and Networking skills; Presentation skills.

2.2 TEAMWORK AND CONSULTATION		ADVANCED STAGE I	ADVANCED STAGE II
APF competency developmental descriptors		<p>Demonstrates ability to work as a member of a team.</p> <p>Recognises personal limitations and refers to more appropriate colleague(s) when necessary.</p>	<p>Demonstrates ability to work as an acknowledged member of a multidisciplinary team.</p> <p>Consulted within the organisation for advice which requires in-depth professional expertise.</p>
Recommended knowledge, skills, experience and behaviours	Teamwork	<ul style="list-style-type: none"> <li>• Able to work effectively as part of the Medicines Information team, and within the MDT</li> <li>• Able to explain the roles of the members of the MDT, and values other members of the team</li> <li>• Recognises situations outside of own experience or competence and effectively refers to a more appropriate member of the team.</li> <li>• Demonstrates initiative in own work</li> <li>• Able to effectively delegate work/tasks to other members of the team and is willing to take on work/tasks delegated by senior staff</li> </ul>	<ul style="list-style-type: none"> <li>• Able to work as an acknowledged member of an MDT, and as part of a clinical pharmacy team</li> <li>• Shares expertise with both pharmacy and Medicines Information colleagues</li> <li>• Recognition of expertise by the local service</li> <li>• Participates in MDT working groups looking into service development or guidelines development</li> </ul>

## Collaborative Working Relationships – Teamwork and Consultation (Cluster 2.2)

Is able to communicate, establish and maintain professionally-driven working relationships and gain the co-operation of others.

Including ability to: Persuade; Motivate; Negotiate; Empathise; Provide reassurance; Listen; Influence and Networking skills; Presentation skills.

2.2 TEAMWORK AND CONSULTATION		ADVANCED STAGE I	ADVANCED STAGE II
APF competency developmental descriptors		<p>Demonstrates ability to work as a member of a team.</p> <p>Recognises personal limitations and refers to more appropriate colleague(s) when necessary.</p>	<p>Demonstrates ability to work as an acknowledged member of a multidisciplinary team.</p> <p>Consulted within the organisation for advice which requires in-depth professional expertise.</p>
Recommended knowledge, skills, experience and behaviours	Consultation	<ul style="list-style-type: none"> <li>Recognises a situation outside competence and refers to supervising pharmacist (appropriate pharmaceutical problems are always appropriately referred)</li> </ul>	<ul style="list-style-type: none"> <li>Receives and effectively responds to requests for advice in specialist field from within the specialist area within the Trust, trains junior staff to do so</li> <li>Actively participates in multi-disciplinary task forces / service developments.</li> <li>Participates in the Medicines Information meetings (including networks)</li> </ul>

# Syllabus for Advanced Medicines Information Pharmacists

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This syllabus is a recommended list of the specific elements of pharmaceutical and related care that a practitioner developing towards advanced and consultant level will need to know about and apply in their practice in Medicines Information.

*These examples are not about non-medical prescribing or administration of medicines, which falls outside the scope of this document. Their purpose is to be used as an outline intended to guide practice rather than to be a prescriptive list that has to be adhered to in all cases.*

## Advanced Stage I

### Scope

Entry Point: Diploma in General Practice Pharmacy and Statement of Completion of General Level Framework (e.g. Band 6 (DipGPP)) or appropriate proof of equivalent qualification and practice).

Completion Point: Statement of Completion of Advanced Stage I competencies (including application of knowledge during experience in the defined area of practice).

### Description

Whilst working towards Advanced Stage I the aim is for practitioners to develop and deliver competent clinical care with a focus on retrieval and evaluation of information in order to support evidence based medicine (EBM) in clinical practice.

The individual works towards becoming competent at delivering a Medicines Information service for patients and healthcare professionals within their setting.

## Advanced Stage II

### Scope

Entry Point: Statement of Completion of Advanced Stage I competencies with (including application of knowledge during experience in the defined area of practice).

Completion Point: Statement of Completion of Advanced Stage II competencies (including application of advanced knowledge during experience in Medicines Information).

### Description

Whilst working towards Advanced Stage II the aim is for practitioners to continue to develop specialist knowledge and skills in order to deliver a high quality Medicines Information service to the various groups of patients and healthcare professionals. The practitioner is expected to be an integrated member of the wider multi-professional team and as such works alongside other professionals to achieve the aims of the team, leading where appropriate and supporting evidence based decision making.

The following tables are the syllabus for Medicines Information. For illustrative purposes the syllabus has been laid out here in BNF order, with additional categories. Categories have been left blank where there are no syllabus items. A group may decide that another way of ordering the syllabus is more relevant to their expert practice, for example according to the medicines use process or a medicines pathway. The final column of the table shows whether the syllabus item is expected at Advanced Stage I or Advanced Stage II.

It is acknowledged that practitioners may have already covered some of this syllabus at general level. Practitioners are reminded that a piece of evidence of a specific knowledge should not be resubmitted to achieve the requirements for another award as credit can only be awarded once for each piece of evidence. However, knowledge gained previously could be used in conjunction with experience to develop and demonstrate competency at Advanced Stage I or Advanced Stage II.

Specialist knowledge is defined here as knowledge that is specific to surgery, and is not generally used outside this area. Generalist knowledge is defined here as common knowledge that may be pertinent to other areas of practice outside Medicines Information.

1. Gastrointestinal System
2. Cardiovascular System
3. Respiratory System
4. Central Nervous System
5. Infections
6. Endocrine System
7. Obstetrics, gynaecology and urinary-tract disorders
8. Malignant disease and immunosuppression
9. Nutrition and blood
10. Musculoskeletal and joint diseases
11. Eye
12. Ear, nose and oropharynx
13. Skin
14. Immunological products and vaccines
15. Anaesthesia
16. Liver disease
17. Renal impairment
18. Pregnancy
19. Breast-feeding
20. Older People
21. Toxicology
22. Parenteral therapy
23. Palliative and end of life care
24. Clinical Trials
25. Other issues in Medicines Information



1 Gastrointestinal System		
	Specialist or Generalist	Advanced Stage I, Advanced Stage II
Retrieval and evaluation of information relating to gastrointestinal medicine in order to provide evidence based advice that supports decision making in clinical practice	S	Adv I
Knowledge of the factors that affect the rate and extent of absorption of oral drugs	G	Adv I

2 Cardiovascular System		
	Specialist or Generalist	Advanced Stage I, Advanced Stage II
Retrieval and evaluation of information relating to cardiovascular medicine in order to provide evidence based advice that supports decision making in clinical practice	S	Adv I

3 Respiratory System		
	Specialist or Generalist	Advanced Stage I, Advanced Stage II
Retrieval and evaluation of information relating to respiratory medicine in order to provide evidence based advice that supports decision making in clinical practice	S	Adv I
Awareness of the stability, safety and methods of administration of nebulised medicines	S	Adv II

4 Central Nervous System		
	Specialist or Generalist	Advanced Stage I, Advanced Stage II
Retrieval and evaluation of information relating to central nervous system medicine in order to provide evidence based advice that supports decision making in clinical practice	S	Adv I
Knowledge of the pharmacokinetic and pharmacodynamic properties of drugs working on the central nervous system with particular attention to efficacy and safety of the co-prescribing of antiepileptic medicines and co-prescribing of psychotropic medicines.	G	Adv II

5 Infections		
	Specialist or Generalist	Advanced Stage I, Advanced Stage II
Retrieval and evaluation of information relating to the management of infections in order to provide evidence based advice that supports decision making in clinical practice	S	Adv I

6 Endocrine System		
	Specialist or Generalist	Advanced Stage I, Advanced Stage II
Retrieval and evaluation of information relating to endocrine medicine in order to provide evidence based advice that supports decision making in clinical practice	S	Adv I

7 Obstetrics, Gynaecology and Urinary-Tract Disorders		
	Specialist or Generalist	Advanced Stage I, Advanced Stage II
Retrieval and evaluation of information relating to medicines use in obstetrics, gynaecology and urinary tract disorders in order to provide evidence based advice that supports decision making in clinical practice	S	Adv I
Aware of the variety of hormonal contraception methods available, understands their differences and the risks associated with their use.	G	Adv I
Knowledge of the factors that influence choice of hormonal method, implications of missed doses, indications for emergency contraception and clinical significance of drug interactions with concurrent medicines.	G	Adv II

8 Malignant Disease and Immunosuppression		
	Specialist or Generalist	Advanced Stage I, Advanced Stage II
Retrieval and evaluation of information relating to malignant disease and immunosuppression in order to provide evidence based advice that supports decision making in clinical practice	S	Adv II

9 Nutrition and Blood		
	Specialist or Generalist	Advanced Stage I, Advanced Stage II
Retrieval and evaluation of information relating to nutrition and medicines use in blood disorders in order to provide evidence based advice that supports decision making in clinical practice	S	Adv II

10 Musculoskeletal and Joint Diseases		
	Specialist or Generalist	Advanced Stage I, Advanced Stage II
Retrieval and evaluation of information relating to medicines use in musculoskeletal and joint diseases in order to provide evidence based advice that supports decision making in clinical practice	S	Adv I

11 Eye		
	Specialist or Generalist	Advanced Stage I, Advanced Stage II
Retrieval and evaluation of information relating to ophthalmic medicine in order to provide evidence based advice that supports decision making in clinical practice	S	Adv II

12 Ear, Nose and Oropharynx		
	Specialist or Generalist	Advanced Stage I, Advanced Stage II
Retrieval and evaluation of information relating to medicines use ear, nose and throat (ENT) disorders in order to provide evidence based advice that supports decision making in clinical practice	S	Adv I

13 Skin		
	Specialist or Generalist	Advanced Stage I, Advanced Stage II
Retrieval and evaluation of information relating to medicine use in skin disorders in order to provide evidence based advice that supports decision making in clinical practice	S	Adv I

14 Immunological Products and Vaccines		
	Specialist or Generalist	Advanced Stage I, Advanced Stage II
Retrieval and evaluation of information relating to immunological products and vaccines in order to provide evidence based advice that supports decision making in clinical practice	S	Adv II
Knowledge of the differences between live and inactivated vaccines, and the precautions that need to be observed with respect to timing when administering more than one vaccine, from the same group, or different groups.	S	Adv II
Aware of the specific patient groups and diseases states that need special consideration when administering vaccines and understands why.	S	Adv II

15 Anaesthesia		
	Specialist or Generalist	Advanced Stage I, Advanced Stage II
Retrieval and evaluation of information relating to anaesthetic agents in order to provide evidence based advice that supports decision making in clinical practice	S	Adv II

16 Liver Disease		
	Specialist or Generalist	Advanced Stage I, Advanced Stage II
Retrieval and evaluation of information relating to medicine use in the presence of liver disease in order to provide evidence based advice that supports decision making in clinical practice	S	Adv II
Knowledge of the principles of drug selection and drug dosing in liver impairment	G	Adv I
Knowledge of the liver function tests, signs symptoms and markers of liver damage that indicate the type and extent of liver impairment with an appreciation of their limitations	S	Adv II

17 Renal impairment		
	Specialist or Generalist	Advanced Stage I, Advanced Stage II
Retrieval and evaluation of information relating to renal medicine in order to provide evidence based advice that supports decision making in clinical practice	S	Adv I
Knowledge of the laboratory test results that are used to assess the nature and extent of renal impairment with an appreciation of their limitations	G	Adv II

18 Pregnancy		
	Specialist or Generalist	Advanced Stage I, Advanced Stage II
Retrieval and evaluation of information relating to medicine use in pregnancy in order to provide evidence based advice that supports decision making in clinical practice	S	Adv I
Knows the meaning of "teratogen" and the incidence of major congenital malformations during pregnancy in the general population, regardless of drug/medicine use.	S	Adv I
Knowledge of the timescale of a normal female menstrual cycle, and the importance of establishing the date of the last period to estimate the date of conception.	S	Adv I
Knowledge of the three main stages of foetal development (i.e. pre-embryonic, embryonic and foetal phase) and the implication of these stages in determining the possible effects of exposure to drugs. This includes understanding of the "all or nothing principle" as applied to exposure to a drug during the pre-embryonic phase	S	Adv II
Knows the relevance and limitations of animal drug data when providing advice in relation to drug use in pregnancy.	S	Adv II
Aware of some of the common problems experienced by women during pregnancy.	G	Adv I
Aware of the range of adverse outcomes associated with drug exposure during pregnancy.	S	Adv II
Understands the importance of considering the potential benefit and harm to both the mother and foetus, of treatment and non-treatment	S	Adv II

19 Breastfeeding		
	Specialist or Generalist	Advanced Stage I, Advanced Stage II
Retrieval and evaluation of information relating to medicine use breast feeding mothers in order to provide evidence based advice that supports decision making in clinical practice	S	Adv II
Knowledge of the factors which affect the choice of drug treatment in woman who is breast-feeding. This includes a) the main drug characteristics which determine the extent to which the drug will pass into breast milk and b) the baby's gestational age and health and assessing the risk of exposure.	S	Adv II
Aware of the number of ways to reduce the risk to the baby associated with drug use in breast-feeding	S	Adv II

20 Older People		
	Specialist or Generalist	Advanced Stage I, Advanced Stage II
Retrieval and evaluation of information relating to medicine use in older people in order to provide evidence based advice that supports decision making in clinical practice	S	Adv I
Knowledge of how the pharmacokinetic and pharmacodynamic properties of medicines differ, in older people, in comparison to a younger population.	G	Adv I

21 Toxicology		
	Specialist or Generalist	Advanced Stage I, Advanced Stage II
Retrieval and evaluation of information relating to poisoning and toxic effects of medicines in order to provide evidence based advice that supports decision making in clinical practice	S	Adv II

## 22 Parenteral Therapy

	Specialist or Generalist	Advanced Stage I, Advanced Stage II
Knowledge of the differences between peripheral and central intravenous lines (e.g. site of insertion, number of lumens, etc), and factors that may influence choice of line.	S	Adv I
Knowledge of "Y-site" administration as applied to intravenous administration.	G	Adv I
Knowledge of the clinical situations when drugs and fluids are normally administered via the subcutaneous route.	G	Adv I
Knowledge of situations when the intramuscular route is indicated or necessary, and awareness of clinical situations when the intramuscular route is not appropriate.	G	Adv I
Knowledge of the factors that can aid in predicting compatibility and incompatibility of drugs in infusion fluids and drug admixtures.	S	Adv I
Knowledge of the different types of tubes/methods that are used to deliver enteral feeds and factors that need to be taken into consideration when advising on the administration of drugs via enteral feeding tubes.	G	Adv I

## 23 Palliative and end of life care

	Specialist or Generalist	Advanced Stage I, Advanced Stage II
Retrieval and evaluation of information relating to palliative care medicine in order to provide evidence based advice that supports decision making in clinical practice	S	Adv II

## 24 Clinical Trials

	Specialist or Generalist	Advanced Stage I, Advanced Stage II
Awareness of legal and ethical considerations applicable to clinical trials and the regulatory role of the MHRA	S	Adv II

## 25 Other issues in Medicines Information. Complementary Medicine, Travel Medicine, unlicensed medicines

	Specialist or Generalist	Advanced Stage I, Advanced Stage II or Mastery
Aware of the broad range of therapies that are considered to be alternative/complementary medicines.	G	Adv I
Aware of the general principles of herbal medicines, homeopathic medicines and dietary supplements, and the main differences between them.	S	Adv I
Knowledge of the regulations that exist for herbal medicines, homeopathic medicines and dietary supplements.	S	Adv I
Knowledge of the safety issues surrounding herbal medicines, homeopathic medicines and dietary supplements, and the potential for interactions with conventional medicines/disease states.	S	Adv I
Aware of the general precautions that travellers should observe to reduce risk of contracting malaria/being bitten by mosquitoes, ii) avoid GI upset when eating and drinking and iii) reduce possible sun induced skin damage.	G	Adv I
Knowledge of the mechanism of action, characteristics and clinical use of the 4 main prophylactic malaria regimes, and able to advise on the most appropriate regime specific to the patient(s) travelling to the stated area.	S	Adv II
Aware of the cautions and contraindications to travel vaccines and able to advise on the most appropriate vaccination regimes specific to the patient(s) travelling to the stated area.	S	Adv II
Knowledge of factors to be taken into consideration when sourcing medicines from Specials manufacturing units and from other countries.	S	Adv II
Knowledge of the risks associated with the use of unlicensed medicines	S	Adv II
Knowledge of the risks associated with the 'off label' use of licensed medicines	S	Adv II
Knowledge of the regulation of the manufacture of licensed medicines and the role of the MHRA and EMA	S	Adv II
Awareness of the ABPI code of practice	S	Adv I





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