

What are the competencies required to be a good antibiotic prescriber?

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- London School of Hygiene & Tropical Medicine.
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Learning Outcomes

Reflect in an international audience for the first time on:

- Approach used in England to agree Antimicrobial Prescribing Competencies for all prescribers (doctors, dentists, pharmacists, nurses, podiatrists etc...)
- Clarity and Appropriateness of the draft English Antimicrobial Prescribing Competencies
- Future actions to learn from how these competencies are being used by the prescribers' various professional bodies

England Dept. of Health Antimicrobial
Resistance and Healthcare Associated
Infection Committee

(ARHAI)

Antimicrobial Prescribing Competencies

- Barry Cookson asked to Chair this group (Feb 2011)
- National Prescribing Centre (NICE: NPC)
Prescribing Competencies (May 2011 – May 2012)
- Our Competencies then became the first example of specialised competencies referred to by NPC
- Final document March 2012: awaiting DH approval

NPC Prescribing Competencies

- Provided a firm basis for ours
- Members shared between the groups ensuring seamlessness
- Generic competencies: no attempt to explore different levels of skills throughout careers
- Both groups included ALL prescribers (apart from supplementary prescribers)

Definitions

- A competency related to effective/superior performance
- Competencies can be described as a combination of:
 - Knowledge
 - Skills
 - Motives & Personal traits e.g. attitudes, beliefs
- Competency framework is a collection of those competencies thought to be central to effective performance
- Goal: their development assists individuals:
 - to continually improve performance and so patient safety and quality of care and to work more effectively

External reference group

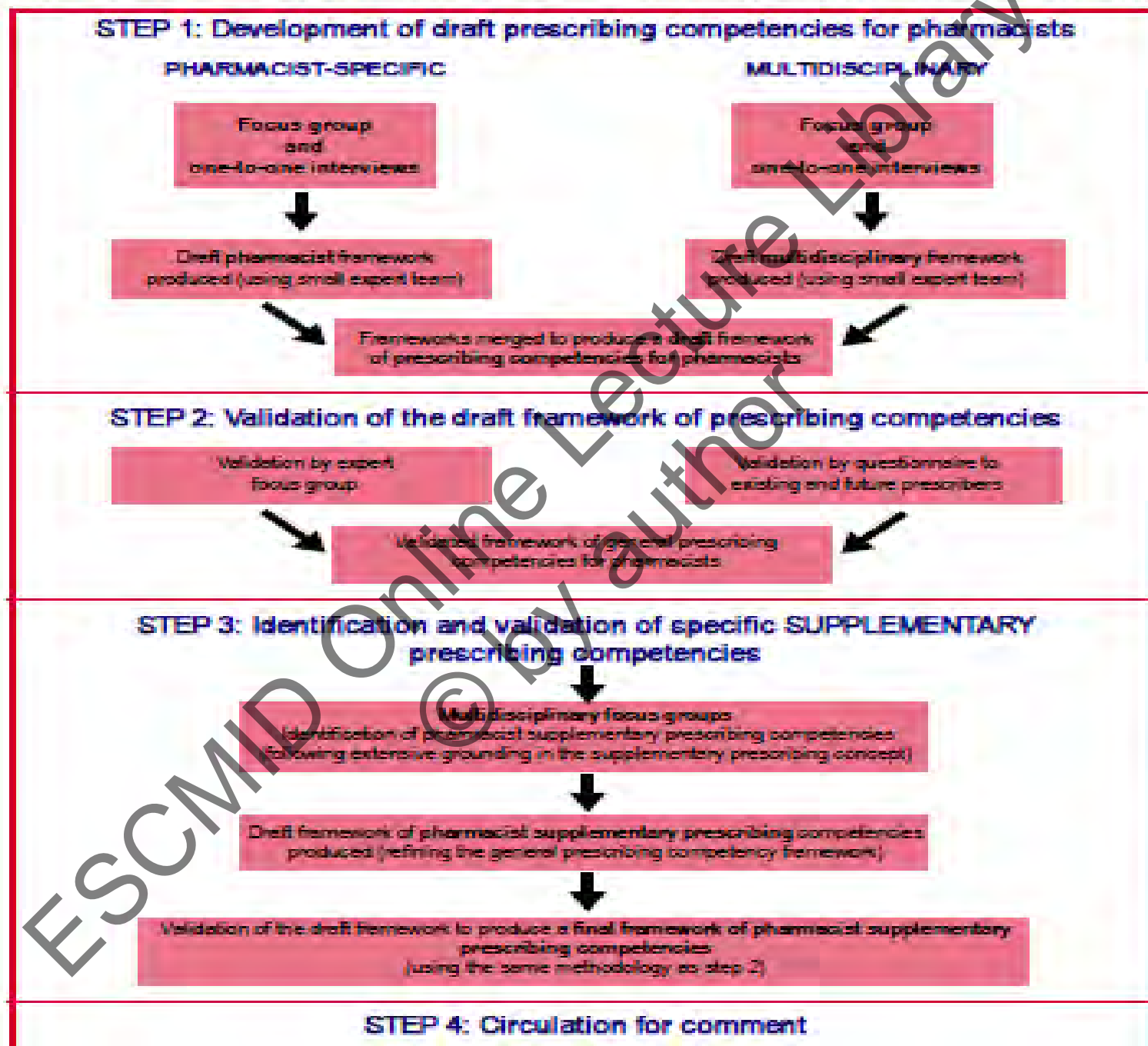
Organisations contacted – cross membership with steering group

- ✓ General Medical Council
- ✓ General Pharmaceutical Council
- ✓ Nursing and Midwifery Council (SG)
- ✓ General Optical Council
- ✓ Health Professions Council
- ✓ General Dental Council
- ✓ MHRA
- ✓ British Pharmacological Society
- ✓ Academy of Medical Royal Colleges
- ✓ Royal Pharmaceutical Society
- ✓ Royal College of Nursing
- ✓ College of Optometrists (SG)

DH representatives

- ✓ Pharmacy (SG)
- ✓ AHPs (SG)
- ✓ Medical (SG)
- ✓ Dental
- ✓ Medical Schools Council (SG)
- ✓ Council of Deans (SG)
- ✓ Medical Education England (SG)

Figure 2: Schematic representation of how the prescribing competencies were developed



Important Context of NPC Prescribing Competencies

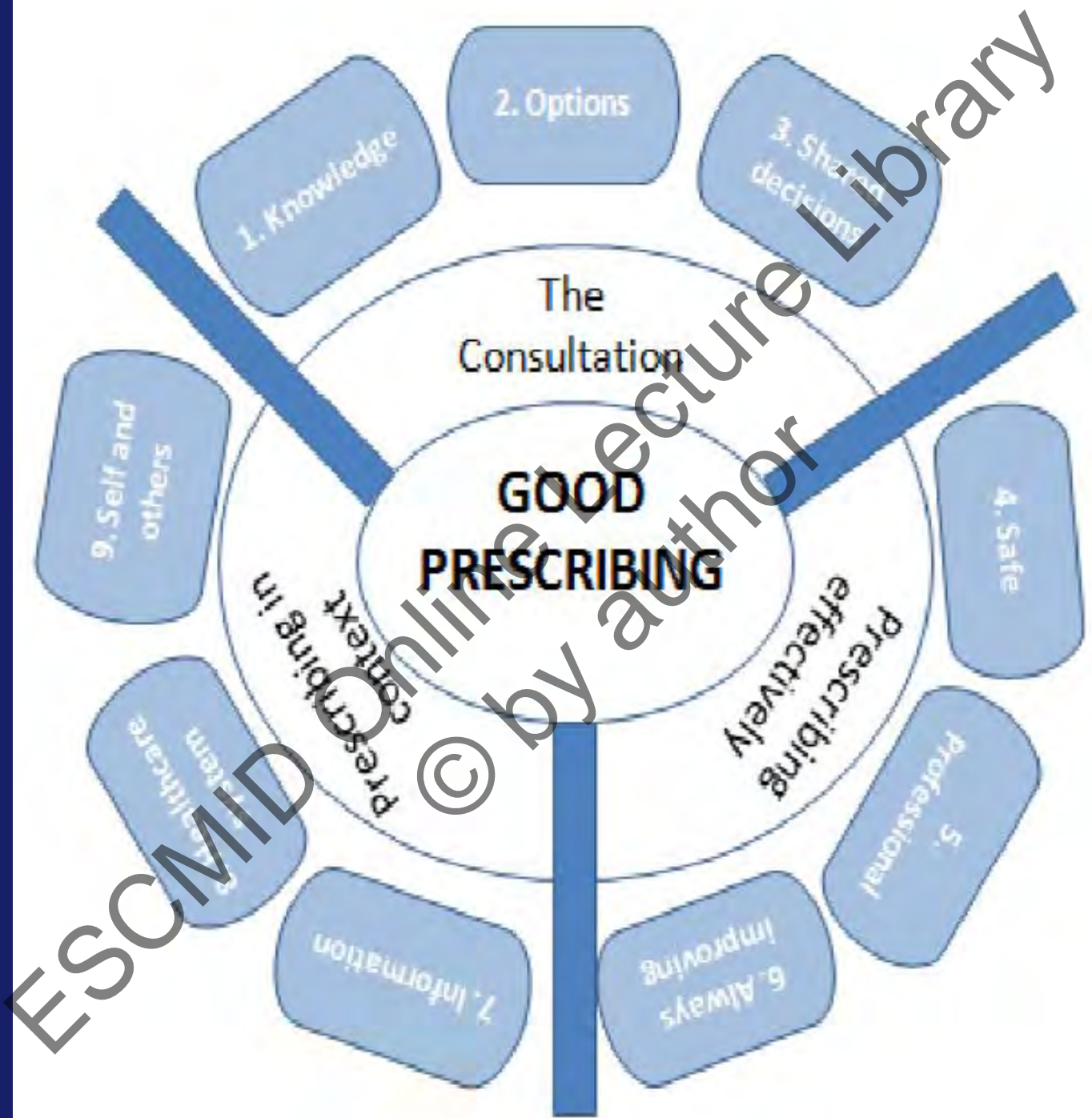
- Need for all prescribers to practice continuing professional development
- Generic prescribing competency framework complements and is consistent with General Medical Council's requirements

How competencies can be used (1)

- Emphasis on multidisciplinary expertise.
- Initial point for discussion of competencies required by an individual, or groups of, prescribers from new (or training) prescribers, through to specialist level.
- Regulators, Education providers & Professional bodies to inform standards & guidance.
- Education: curricula, design, delivery & validation training courses & materials.

How competencies can be used (2)

- Portfolio writing & Agreeing goals for personal development plans & individual appraisals.
- Multi-disciplinary discussions: relevant competencies & organisational changes.
- Recruitment procedures e.g. initial testing, questioning & benchmarking of candidates.



ARHAI Competencies

- > 25 Royal Colleges and Professional Bodies
 - RCP, RCPATH, RCN
 - BSAC, HIS, IPS
- Three Parts to them
- Three cycles of document review with templates for comments
- Two teleconferences

ARHAI ANTIMICROBIAL PRESCRIBING COMPETENCES

Overarching Competency

“Understands the nature of micro-organisms and antimicrobial resistance in diagnosing and treating infections (or related conditions), and the roles of infection prevention and control and antimicrobial stewardship measures”

COMPETENCY 1

Infection: Diagnosis, Prevention and Control

All independent prescribers must understand the principles *and demonstrate competency* in diagnosing, preventing and controlling infections, including those that are healthcare associated infections, and applies this as a routine part of their prescribing practice:

ESCMID

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Online Lecture Library

COMPETENCY 1:

Infection: Diagnosis, Prevention & Control

- Classification of micro-organisms; pathogenesis: colonisation & infection
- Vaccines benefit prescribing practices
- Microbial transmission: community & healthcare settings
- Mechanisms & genetics of antimicrobial resistance
- Use of microbiological & other investigations to diagnose & monitor responses to treatment of infections
- Use of antimicrobial agents for prophylaxis & treatment of infections, appropriately to prevent resistance & avoidance of collateral damage e.g. *C. difficile* infection, candida super-infection, etc”
- Understand modes of antimicrobial action
- **Principles/practice prevention & control of infection**

COMPETENCY 2: Prescribing

- All independent prescribers must be competent in antimicrobial prescribing by demonstrating:

COMPETENCY 2: Prescribing

- knowledge of the spectrum of activity for commonly prescribed antimicrobials
- an understanding of the key elements of prescribing an antimicrobial including:
 - the choice of agent.
 - the route of administration.
 - its pharmacokinetics and how this affects the choice of dosage regimen.
 - how to monitor levels and adjust doses e.g. in the aged or renally impaired, or where to seek advice to so do.
 - decisions to switch agent e.g. from intravenous to oral (in secondary care), narrower to broader spectrum (or vice versa) or based on microbiological results.
 - the duration of treatment and when to consider review/stop dates. (Also see Section 3)

COMPETENCY 2: Prescribing (2)

- knowledge of when to use a delayed antimicrobial prescription and how to negotiate this with the patient.
- knowledge of when not to prescribe antimicrobials, including the use of alternatives such as the removal of intravenous or urinary catheters and incision and drainage of abscesses.

COMPETENCY 2: Prescribing (3)

- an understanding of common side-effects, including allergy, the contraindications of the main classes of antimicrobials, and the importance of monitoring for these, and what to do when these are suspected e.g. documenting allergic reactions in patient records.
- an understanding of being aware of trade and generic names, and the class, of a prescribed antimicrobial to avoid possible harm to patients in whom that antimicrobial is contra-indicated e.g. due to hypersensitivity, coagulopathy or organ impairment.

COMPETENCY 2:

Prescribing (4)

- an understanding of the common antimicrobial and drug/food interactions.
- knowledge of how to select the appropriate antimicrobial, paying due consideration to local guidance, how, and where, to access this.
- an understanding of local microbial antimicrobial susceptibility patterns when considering empiric treatments.

COMPETENCY 3: Antimicrobial Stewardship

All independent prescribers must demonstrate clinical competence in antimicrobial stewardship by understanding the importance of:

COMPETENCY 3: Antimicrobial Stewardship (1)

- using local guidelines to initiate prompt effective antimicrobial treatment within one hour of presentation, or as soon as possible, in patients with life-threatening infections.
- obtaining relevant microbiological cultures or relevant tests before commencing treatment, or changing treatment if infection is still suspected.
- engaging the views of others involved in treatment and stewardship decisions and antimicrobial policy, including championing best practice, and that it is a duty of care to co-operate with others more expert than oneself when such expertise is required.

COMPETENCY 3: Antimicrobial Stewardship (2)

- reviewing antimicrobial prescriptions for hospital inpatients on all ward rounds (see 12).
- avoiding the unnecessary use of broad-spectrum antimicrobials.
- documentation in the prescription chart and in medical records important details such as the clinical indication, duration/review date of antimicrobials.
- using only single doses of antimicrobials for surgical and other procedures for which prophylaxis has been shown to be effective, unless the duration of the operation/procedure is prolonged, there has been excessive blood loss or published national recommendations suggest otherwise.

COMPETENCY 3: Antimicrobial Stewardship (3)

- switching to the correct antimicrobial when susceptibility testing indicates resistance, or to a cheaper or more cost effective antimicrobial that is also compatible with the clinical presentation.
- regular engagement in team-based measurement of the quality and quantity of antimicrobial use and understanding that this should be shared with prescribers, as well as informing antimicrobial surveillance/infection prevention and control measures.
- using locally agreed process measures of quality (e.g. compliance with guidance), outcome and balancing measures, such as unintended adverse events or complications.

COMPETENCY 3: Antimicrobial Stewardship (4)

- using the results of adverse event monitoring, laboratory susceptibility reports, antimicrobial prescribing audits and antimicrobial usage data to inform, in a timely manner, best antimicrobial prescribing practices, and so produce sustained improvements in the quality of patient care.

COMPETENCY 3:

Antimicrobial Stewardship (5)

- appropriately choosing one of the five antimicrobial prescribing decisions 48 hours after initiating antimicrobial treatment (**ARHAI Guidance – *Start Smart – then Focus***):
 - Stop antibiotics if there is no evidence of infection
 - Switch antibiotics from intravenous to oral administration
 - Change antibiotics – ideally to a narrower spectrum – or broader if required
 - Continue and review again at 72 hours
 - Outpatient Parenteral Antibiotic Therapy (OPAT)
- educating patients and their carers, nurses and other supporting paramedical staff, as to when antibiotics are not required and complying with the duration and frequency of administration of their prescribed antimicrobial.

Future Work

- Group will consider whether they have the time and inclination to develop three levels of these competencies
- Develop a cross-roads site where we can share experiences in the professions

Possible Model for Cross-Roads Site

Professional “Body”	Competency document	Syllabus including learning Objectives	Assessmen t methods	Outcomes from assessments including reflection and improvement recommendations
e.g. Royal College of Surgeons	www link	www link	www link	www link