

# Core Module 3: Information Technology, Clinical Governance and Research

#### Learning outcomes:

- To understand and demonstrate the appropriate knowledge, skills and attitudes in the use and management of health information.
- To have an understanding of the context, meaning and implementation of clinical standards and governance.
- To know and understand the audit cycle, and to have knowledge of research methodology.

Knowledge criteria	GMP	Clinical competency	GMP	Professional skills and attitudes	GMP	Training support	Evidence/assessment
		USE OF INFOR	MATION	TECHNOLOGY			
Understand the principles of storage, retrieval, analysis and presentation of data  Understand the effective use of computing systems including ePortfolios to support training  Understand the range of uses of clinical data and its effective interpretation  Be aware of the confidentiality issues	1,2,4	Retrieve and use data recorded in clinical systems  Search medical literature including use of PubMed, Medline, Cochrane Reviews and the internet  Demonstrate appropriate use of IT for patient care and for personal development  Demonstrate competent use of databases, word processing techniques, statistics programmes and electronic mail  Undertake searches, and access web sites, and health- related databases  Present data in an understandable manner  Engage with ePortfolios as required	1	Demonstrate the ability to apply IT solutions in the management of patients  Adopt a proactive and enquiring attitude to new technology	1	Local IT training courses  StratOG.net: The obstetrician and gynaecologist as a Teacher and Researcher: Data handling. Research and Assessing evidence etutorials  NHS Connecting for Health website	Use of ePortfolio  MRCOG Part One  MRCOG Part Two  Mini CEX
	•	CLINICAL G	OVERNA	NCE: AUDIT	•		
Understand the audit cycle  Understand clinical effectiveness:  Principles of evidence-based practice Types of clinical trial/evidence classification Grades of recommendation  Understand guidelines and integrated care	1	Perform an audit project:  Define standard Prepare project Collate data Formulate policy  Repeat audit cycle; perform clinical audit Define standard based on evidence Prepare project and collate data Re-audit and close audit loop	2	Show how the use of audit can improve clinical practice  Listen to and reflect on the views of patients and carers, dealing with complaints in a sensitive and cooperative manner  Recognise the need for audit in clinical practice to promote standard setting and	2	RCOG. Understanding Audit RCOG website.  National Institute for Clinical Excellence (NICE). Principles for best practice in audit  Ability to perform a clinical audit	Audit project Presentation at audit meeting Logbook Reflective diary





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pathways. Know how to formulate these and be aware of the advantages and disadvantages  Understand the different methods of obtaining data for audit including patient feedback questionnaires, hospital sources and national reference data  Understand the role of audit i.e. improving patient care and services, risk management etc  Understand the steps involved in completing the audit cycle  Describe the working uses of national and local databases used for audit such as specialty data collection systems, cancer registries etc, and for reporting and learning from clinical incidents and near misses in the UK		Develop and implement a clinical guideline Purpose and scope Identify and classify evidence Formulate recommendations Identify auditable standards  Contribute to the construction, review and updating of local (and national) guidelines of good practice using the principles of evidence based medicine  Contributes to local and national audit projects as appropriate e.g. NCEPOD, SASM  Support audits being undertaken by junior medical trainees and within the multidisciplinary team		quality assurance		StratOG.net: The Obstetrician and Gynaecologist as a Professional. Clinical governance e-tutorial.	
		CLINICAL GOVERNA	NCE: CLI	NICAL STANDARDS			
Understand the definitions and relevance of levels of evidence  Understand the development and implementation of clinical guidelines, integrated care pathways and protocols  Understand the organisational framework for clinical governance at local, regional and national levels  Understand standards e.g. NSF, NICE, RCOG guidelines  Understand quality improvement methodologies and a range of methods	1 1,2 2 2	Review evidence  Evaluate guidelines  Prepare a protocol  Critically appraise publications and evaluate multicentre trials to address a clinical question  Critically evaluate a care pathway  Apply conclusions from critical appraisal to clinical care  Analyse feedback and comments and integrate them into the service  Recognise the common need to practice outside	1,3	Have the skills to be able to discuss the relevance of evidence in the clinical situation  Aims for the best clinical practice (clinical effectiveness) at all times, as informed by evidence-based medicine  Recognises knowledge gaps and keeps a logbook of clinical questions  Keeps up to date with national reviews, key new research and guidelines of practice e.g. NICE and SIGN  Acknowledge and show regard for individual patient needs when using guidelines	1,3	RCOG. Searching for Evidence guideline.  StratOG.net: The Obstetrician and Gynaecologist as a Professional. Clinical governance e-tutorial.	Logbook Reflective diary Presentation to colleagues Log of experiences Reflective diary MSF (TO1 and TO2)





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		clinical guidelines  Act as an advocate for the service		Be aware of advantages and disadvantages of guidelines and protocols, and use them appropriately.  Accept responsibility	1		
		CLINICAL GOVE	RNANCE:	RISK MANAGEMENT			
Know the principles of risk management and	1,2	Report and review critical incidents	3,4	Demonstrate respect and accept patients' views and choices	1,4	RCOG. Clinical Risk	Logbook
their relationship to clinical governance		Use a reflective approach to practice with an ability to		views and choices		Management for Obstetricians and	Reflective diary
Understand the basic measures of risk and		learn from previous experience		Seek advice/assistance when concerned		Gynaecologists. RCOG	,,
uncertainty				about patient safety		website.	Presentation at risk
Be aware of particular issues pertinent to the		Participate in risk management		Display eagerness to use evidence in	2	GMC Management for	management meetings
specialty and to trainees specifically		Be able to access advice on occupational hazards from		support of patient care when evaluating	_	Doctors. GMC website.	MSF (TO1 and TO2)
Understand potential sources of risk and risk		a range of sources		risk			
management tools, techniques and protocols		Assess and analyse situations, services and facilities in		Communicate risk information, and risk		Department of Health. Clinical Governance	
Understand best practice, transparency and		order to minimise risk to patients, the public and		benefit trade-offs, in ways appropriate for		Bulletin series	
consistency		colleagues		individual patients			
Outline the features of a safe working		Monitor the quality of equipment and safety of	1,4	Willingness to take responsibility for		StratOG.net: The Obstetrician and	
environment		environment relevant to the specialty	1,4	clinical governance activities, risk		Gynaecologist as a	
				management and audit in order to		professional. Clinical	
Outline the hazards of clinical equipment in common use		Adopt strategies to reduce risk		improve the quality of the service		governance e-tutorial	
common asc		Discuss risks with patients	1,2,3	Show probity by being truthful and be	1,4	Attend a perinatal	
Recall side effects and contraindications of				able to admit error to patients, relatives		morbidity and	
prescribed medications		Document adverse incidents		and colleagues		mortality multidisciplinary	
Recall the components of safe working		Investigate a critical incident		Demonstrate the ability to act	1,4	meeting	
practice in the personal, clinical and		<ul> <li>Assess risk</li> </ul>		constructively when a complaint is made			
organisational settings		<ul><li>Formulate recommendations</li><li>Debrief staff</li></ul>		and use assessment, appraisal and reflection as insight to understand ones'		Clinical Negligence Scheme for Trusts	
Outline human factors theory and		- Debrief Staff		own development needs		website.	
understand its impact on safety		Prepare a report relating to an adverse incident		·			
Lindorstand root cause analysis		Pacagnica limits of own professional competer		Awareness of equity in healthcare access			
Understand root cause analysis		Recognise limits of own professional competence and only practices within these		and delivery			
Understand significant event analysis		7 6 11112		Maintain a high level of safety awareness			
		Recognise when a patient is not responding to		and consciousness at all times			





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Outline local procedures and protocols for optimal practice including early warning systems  Understand root cause analysis  Understand significant event analysis		treatment, reassess the situation, and encourages others to do so  Ensure the correct and safe use of clinical equipment, ensuring that faulty equipment is reported appropriately		Encourage feedback from all members of the team on safety issues and encourages discussion amongst colleagues on evidence-based practice			
Understand processes for dealing with and learning from clinical errors, including the management of complaints procedures risk management incidents/ near miss reporting complaints management litigation and claims management  Keep abreast of national patient safety initiatives including NPSA. NCEPOCD reports, NICE guidelines  Be aware of how healthcare governance influences patient care, research and educational activities at a local, regional and national level  Ensure patient/ user involvement		Improve patients' and colleagues' understanding of the side effects and contraindications of therapeutic intervention  Sensitively counsel a colleague following a significant untoward event, or near incident, to encourage improvement in the practice of individuals and the unit		Show willingness to take action when concerns are raised about performance of members of the healthcare team, and act appropriately when these concerns are voiced to you by others  Continue to be aware of own limitations, and operates within them competently  Maintain a portfolio of information and evidence, drawn from own clinical practice  Engage with an open no blame culture  Respond positively to outcomes of audit and quality improvement		National Patient Safety Agency website The National Confidential Enquiry into Patient Outcome and Death (NCEPOD) website	
Outline methods and associated problems of quantifying risk e.g. cohort studies  Outline the concepts and drawbacks of quantitative assessment of risk or benefit e.g. numbers needed to treat  Describe commonly used statistical methodology  Know how relative and absolute risks are derived and the meaning of the terms: predictive value, sensitivity and specificity, in relation to diagnostic tests		Construct concise and applicable problem lists using available information  Apply quantitative data of risks and benefits of therapeutic intervention to an individual patient  Search and comprehend medical literature to guide reasoning		Co-operate with changes necessary to improve service, quality and safety			





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			RESE	ARCH			
Understand the difference between audit and research	1	Appraise a scientific paper	1	Be receptive to innovations resulting from research publications	1	GMC Duties of a Doctor	Logbook
Know how to apply statistics in scientific and		Evaluate a multicentre trial		Acquire skills to put research into practice	1	Local courses and RCOG courses	Presentations at Journal Club meetings
medical practice		Understand the principles of critical reading, and undertake critical review of scientific literature	1,2				Reflective diary
Understand how to plan and analyse a research project		Compare and benchmark healthcare services		Understand issues and potential solutions before acting	4	StratOG.net: The Obstetrician and Gynaecologist as a	Presentations of research
Understand statistical methods		Use critical appraisal skills and applies these when reading literature		Be aware of the issues underlying plagiarism and how this relates to the duties of a doctor		Teacher and Researcher e-tutorials	Log of experiences
Know the principles of research ethics and conflicts of interest		Demonstrate the ability to write a scientific paper					
Outline the GMC guidance on good practice in research		Apply for appropriate ethical research approval		Fallows avidation on athird and water		lakas du aktora ka	
Know about local and national research guidelines		Demonstrate the use of literature databases		Follows guidelines on ethical conduct in research and consent for research		Introduction to Research Methodology RCOG book	
Know the principles of research governance.  Describe how clinical guidelines are produced		Understand the difference between population-based assessment and unit-based studies and is able to evaluate outcomes for epidemiological work		Shows willing to encourage and take part in research  Be aware of situations where patient			
Demonstrate a knowledge of research principles				consent, where desirable, is not required for disclosure e.g. serious communicable diseases, public interest			
Outline the principles of formulating a research question and designing a project							
Comprehend principal qualitative, quantitative, biostatistical and epidemiological research methods	3						
Demonstrate good verbal and written presentations skills							
Have knowledge of research methods and how to evaluate scientific publications							





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including the limitations of different methodologies for collecting data							
Define the role of the Caldicott Guardian and Information Governance lead within an institution, and outline the process of attaining Caldicott approval for audit or research							
	PATIENT PUBLIC INVOLVEMENT						
Understand the principles of patient and public involvement  Involve patients in decision making  Know about quality improvement methodologies including a range of methods for obtaining feedback from patients and the public	1,2	Undertake a project on patient and public involvement  With respect to management and leadership, consider the involvement of the public and patients in decision-making	1,2	Aim to practice patient-centred care at all times  Involve patient/carers in decision making at all times  Demonstrate skill in information giving at a level the patient will understand	3,4	Local courses  NHS Direct website	Observation of clinical practice  Patient surveys  Project on patient involvement





	nce level Basic level	Ш "	termediate level	Advanced I	evel Not required		
Level 1			Level 2		Level 3		
Date	Signature	Date	Signature	Date	Signature		
	Date						





Training Courses or sessions						
Title	Signature of educational supervisor	Date				

Authorisation of signatures (to be completed by the clinical trainers)					
Name of clinical trainer (please print)	Signature of clinical trainer				





COMPLETION OF MODULE 3 I confirm that all components of the module have been successfully completed:						
Date	Name of educational supervisor Signature of educational supervisor					