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**OXFORD HANDBOOK FOR  
THE FOUNDATION  
PROGRAMME**

Tim Raine | George Collins  
Fraser Brown | Sophie Howarth

Updated in line with the latest clinical guidelines

Reflects the latest changes to the Foundation  
Programme curriculum and junior doctor  
career structures

Features two new chapters on care at the end  
of life and primary care with updated content  
on healthcare-acquired infections

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- Oxford Handbook of Sport and Exercise Medicine 2e
- Handbook of Surgical Consent
- Oxford Handbook of Tropical Medicine 5e
- Oxford Handbook of Urology 4e

Oxford Handbook for the

# Foundation Programme

Sixth Edition

## **Tim Raine**

Consultant Gastroenterologist  
Cambridge University Hospitals NHS Foundation Trust, UK

## **George Collins**

Cardiology Registrar  
Barts Health NHS Trust, UK

## **Fraser Brown**

Medical Registrar  
NHS Greater Glasgow and Clyde, UK

## **Sophie Howarth**

Internal Medicine Trainee  
Cambridge University Hospitals NHS Foundation Trust, UK

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# Preface

There's a lot to learn in medicine and being inseparable from societal shifts and scientific discovery, it relies on an ever-changing body of knowledge. So how should the junior doctor decide what to learn? This book offers one source of help, containing all the information we think you need to know based on recent guidelines and our experience of UK Foundation Training. Separated by speciality and with new chapters on end-of-life care and general practice, we hope it provides a valuable reference for your current or next rotation. But even the information in this introductory text can seem daunting. How do you know what is important? This is best deciphered on the wards and in the clinic, while working with or shadowing colleagues at work. Does it matter if you can distinguish between type 1 and 2 respiratory failure if you don't know the login for the gas machine, how to bleep the respiratory registrar, or how to document in the notes? This book must therefore be accompanied by proactivity, observation, immersion, and experience. And although there are many similarities between hospitals and surgeries, all work slightly differently. Some of these clerical differences can be mundane, but are as important as clinical understanding, and can only be understood by showing up, observing, enquiring, and replicating. This handbook is therefore designed to supplement not supplant real-world experience.

What other advice do we have for new starters that we wish we'd known when we started? First, be on the lookout for an area of medicine you are interested in. It may come to you suddenly after meeting an inspiring colleague or managing a complex patient, or gradually, after excluding things of less interest or enjoying a particular rotation or part of the job. In the busyness of everyday work and the credentialized system we operate in, the often-quiet voice of personal preference can be drowned out by external influences. Second, find mentors beyond your named supervisors. If you meet a colleague you like or look up to, try to understand why. You'll learn something about yourself, they will tell you things not in any book, and you never know when you could help each other. Medicine is a small world. Third, within your level of confidence and competence, seek and accept responsibility whenever you can. Few people will freely give it to you, but you need it to learn and meet your potential. Current trends are to shift responsibility up not down medical hierarchies, but this is not sustainable in the long run.

Finally, remember that gratitude helps. Never forget how lucky we are to have the chance to endlessly learn interesting things, change direction without changing profession, be trusted by our patients, be exposed to all sides of life and all types of people, and directly help them to live better, longer lives. Stifled by bureaucracies and inefficiencies, it is easy to forget how fortunate we are to do what we do, and see what we see. Above all, give it time. Life is lived forwards, but understood backwards. By its nature a book like this implies that learning can be expedited, but medicine is a long road and there is no substitute for time on the wards, time in reflection, and time trying different things. All experiences will shape the type of doctor you become, whatever path you go down.

GC, TR, 2024

*To every doctor who's ever stood there thinking:  
'What on earth do I do now?'*

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- Giulia Lipparini
- Karen Moore

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# Symbols and abbreviations

	definition
	topics covered elsewhere
	cross reference
	supplementary information
	emergency
	don't dawdle
	website
	increased
	decreased
	normal
	leading to
	plus/minus
	greater than
	less than
	female
	male
A+E	accident and emergency
AAA	abdominal aortic aneurysm
ABG	arterial blood gas
ABPI	ankle–brachial pressure index
ABx	antibiotics
ACCS	acute care common stem
ACEi	angiotensin-converting enzyme inhibitor(s)
ACF	academic clinical fellowship
ACR	albumin:creatinine ratio
ACS	acute coronary syndrome
ACTH	adrenocorticotrophic hormone
ADH	antidiuretic hormone
ADL	activities of daily living
AED	automated external defibrillator/antiepileptic drug
AF	atrial fibrillation
AFB	acid-fast bacilli
αFP (AFP)	α-fetoprotein
AIDS	acquired immunodeficiency syndrome
AKI	acute kidney injury

ALL	acute lymphoblastic leukaemia
ALP	alkaline phosphatase
ALS	Advanced Life Support®
ALT	alanine aminotransferase
AML	acute myeloid leukaemia
AMPH	approved mental health professional
AMPLE	Allergies; Medications; Past medical history; Last meal; Events leading to presentation
ANA	antinuclear antibody
ANCA	antineutrophil cytoplasmic antibody
AP	anteroposterior
APH	ante partum haemorrhage
APLS	Advanced Paediatric Life Support
APTT	activated partial thromboplastin time
AR	aortic regurgitation
ARB	angiotensin receptor blocker
ARDS	acute respiratory distress syndrome
ARVC	arrhythmogenic right ventricular cardiomyopathy
AS	aortic stenosis
ASA	American Society of Anesthesiologists
ASAP	as soon as possible
ASD	atrial septal defect
AST	aspartate transaminase
AT	angiotensin
ATLS	Advanced Trauma Life Support
ATN	acute tubular necrosis
AV	atrioventricular
AVN	atrioventricular node
AVR	aortic valve replacement
AXR	abdominal X-ray
Ba	barium
BAL	bronchoalveolar lavage
BBB	bundle branch block
BCG	bacille Calmette–Guérin (TB vaccination)
BD	<i>bis die</i> (twice daily)
BE	base excess
β-hCG	β-human chorionic gonadotropin
BIH	benign intracranial hypertension
BiPAP	biphasic positive airways pressure
BKA	below knee amputation
BLS	Basic Life Support

BM	Boehringer Mannheim meter (capillary blood glucose) or bone marrow
BMA	British Medical Association
BMI	body mass index
BNF	<i>British National Formulary</i>
BNP	brain natriuretic peptide
BP	blood pressure
BPH	benign prostatic hypertrophy
BPM	blood pressure monitoring
BX	biopsy
C+S	culture and sensitivity
Ca	carcinoma
Ca <sup>2+</sup>	calcium
CABG	coronary artery bypass graft
CAD	coronary artery disease
CAH	congenital adrenal hyperplasia
CAP	community-acquired pneumonia
CAPD	continuous ambulatory peritoneal dialysis
CBD	case-based discussion/common bile duct
CBG	capillary blood glucose
CBT	cognitive behavioural therapy
CCF	congestive cardiac failure
CCG	clinical commissioning group
CCT	Certificate of Completion of Training
CCU	coronary care unit
CD	controlled drug
CDT	<i>Clostridium difficile</i> toxin
CEA	carcinoembryonic antigen
CEPOD	Confidential Enquiry into Perioperative Deaths
CEX	Clinical Evaluation Exercise
cf	compared with
CHD	coronary heart disease
CI	contraindication
CJD	Creutzfeldt–Jakob disease
CK	creatine kinase
CK-MB	heart-specific creatine kinase (MB-isoenzyme)
CKD	chronic kidney disease
CLL	chronic lymphocytic leukaemia
CLO	<i>Campylobacter</i> -like organism
CML	chronic myeloid leukaemia
CMV	cytomegalovirus
CNS	central nervous system

CO	carbon monoxide
CO <sub>2</sub>	carbon dioxide
COAD	chronic obstructive airway disease
COC	combined oral contraceptive
COPD	chronic obstructive pulmonary disease
CPAP	continuous positive airway pressure
CPK	creatine phosphokinase
CPN	community psychiatric nurse
CPR	cardiopulmonary resuscitation
CQC	Care Quality Commission
CRP	C-reactive protein
CRT	capillary refill time/cardiac resynchronization therapy
CSF	cerebrospinal fluid
CSU	catheter specimen of urine
CT	computed tomography/core training/core trainee
CTCA	CT coronary angiogram
CTG	cardiotocograph
CTPA	CT pulmonary angiogram
CVA	cerebrovascular accident
CVP	central venous pressure
CVS	cardiovascular system
CXR	chest X-ray
d	day(s)
D+C	dilatation and curettage
D+V	diarrhoea and vomiting
DBS	Disclosure and Barring Service
DC	direct current
DCCV	direct current cardioversion
DCM	dilated cardiomyopathy
DEXA	dual-energy X-ray absorptiometry (DXA)
DH	drug history/Department of Health
DHS	dynamic hip screw
DI	diabetes insipidus
DIB	difficulty in breathing
DIC	disseminated intravascular coagulation
DIP(J)	distal interphalangeal (joint)
DKA	diabetic ketoacidosis
DLB	dementia with Lewy bodies
DM	diabetes mellitus
DMARD	disease-modifying antirheumatic drug
DNA	deoxyribonucleic acid/did not attend
DNAR	do not attempt resuscitation

DOAC	direct oral anticoagulant
DoB	date of birth
DOPS	Direct Observation of Procedural Skills
DRE	digital rectal examination
DSM-5	<i>Diagnostic and Statistical Manual of Mental Disorders</i> 5th edition
DTP	diphtheria, tetanus, and pertussis
DU	duodenal ulcer
DVLA	Driver and Vehicle Licensing Agency
DVT	deep vein thrombosis
d/w	discuss(ed) with
Dx	diagnosis
EBM	evidence-based medicine
EBV	Epstein–Barr virus
ECG	electrocardiogram
Echo	echocardiogram
ECV	external cephalic version
ED	emergency department (formerly A+E)
EDD	expected due date (pregnancy)
EEG	electroencephalogram
EF	ejection fraction
EMD	electromechanical dissociation or pulseless electrical activity (PEA)
EMG	electromyogram
ENP	emergency nurse practitioner
ENT	ear, nose, and throat
EØ	eosinophil
EPO	erythropoietin
ERCP	endoscopic retrograde cholangiopancreatography
ERPC	evacuation of retained products of conception
ESM	ejection systolic murmur
ESR	erythrocyte sedimentation rate
ESRF	end-stage renal failure
ET	endotracheal
EtOH	ethanol (alcohol)
ETT	endotracheal tube
EUA	examination under anaesthetic
EVD	extra-ventricular drain
EWTD	European Working Time Directive
F1/F2	Foundation year one/two
FAST	focused assessment with sonography in trauma

FB	foreign body
FBC	full blood count
FDP	fibrin degradation product
FEV <sub>1</sub>	forced expiratory volume in 1 second
FFP	fresh frozen plasma
FH	family history/foetal heart
FiO <sub>2</sub>	fraction of inspired oxygen
FNA	fine needle aspiration
FOB	faecal occult blood
FOOSH	fall on outstretched hand
FP	Foundation Programme
FPP	flexible pay premia
FRC	functional residual capacity
FSH	follicle-stimulating hormone
FTSTA	fixed-term specialty training appointment
FVC	forced vital capacity
G+S	group and save
G6PD	glucose-6-phosphate dehydrogenase
GA	general anaesthetic
GB	gall bladder
GBS	Group B <i>Streptococcus</i> /Guillain–Barré syndrome
GCS	Glasgow Coma Scale
GFR	glomerular filtration rate
γGT (GGT)	gamma-glutamyl transpeptidase
GH	growth hormone/gynae history
GI	gastrointestinal
GMC	General Medical Council
GN	glomerulonephritis
GORD	gastro-oesophageal reflux disease
GOSWH	guardian of safe working hours
GP	general practitioner
GTN	glyceryl trinitrate
GTT	glucose tolerance test
GU(M)	genitourinary (medicine)
h	hour(s)
h@N	hospital at night
HAART	highly active antiretroviral therapy
HAI	hospital-acquired infection
HAV	hepatitis A virus
Hb	haemoglobin
HbA <sub>1c</sub>	glycosylated haemoglobin

HBV	hepatitis B virus
HCA	healthcare assistant
HCC	hepatocellular carcinoma
hCG	human chorionic gonadotropin
HCM	hypertrophic cardiomyopathy
HCSA	Hospital Consultants and Specialists Association
HCT	haematocrit
HCV	hepatitis C virus
HDL	high-density lipoprotein
HDU	high dependency unit
HEE	Health Education England
HELLP	haemolysis, elevated liver enzymes, low platelets (syndrome)
HF	heart failure
HHS	hyperglycaemic hyperosmolar state
HIV	human immunodeficiency virus
HLA	human leucocyte antigen
HONK	hyperosmolar non-ketotic state
HPA	Health Protection Agency
HPC	history of presenting complaint
HR	heart rate/human resources
HRCT	high-resolution computed tomography scan
HRT	hormone replacement therapy
HSP	Henoch–Schönlein purpura
HSV	herpes simplex virus
HTN	hypertension
HUS	haemolytic uraemic syndrome
HVS	high vaginal swab
I+D	incision and drainage
IBD	inflammatory bowel disease
IBS	irritable bowel syndrome
ICD	implantable cardiac defibrillator
ICD-10	<i>International Classification of Diseases 10th revision</i>
ICP	intracranial pressure
ICS	inhaled corticosteroid
ICU	intensive care unit
ID	identification/infectious diseases
IE	infective endocarditis
IFG	impaired fasting glucose
Ig	immunoglobulin
IGT	impaired glucose tolerance

IHD	ischaemic heart disease
ILS	Immediate Life Support
IM	intramuscular
Imp	impression (clinical)
IN	intranasal
INH	by inhalation
INR	international normalized ratio
ITP	idiopathic thrombocytopenic purpura
ITU	intensive care unit/intensive therapy unit
IU	international unit
IUCD	intrauterine contraceptive device
IUP	intrauterine pregnancy
IV	intravenous
IVDU	intravenous drug user
IVI	intravenous infusion
IVP	intravenous pyelogram
IVU	intravenous urogram
Ix	investigation(s)
JDC	Junior Doctors' Committee of BMA
JVP	jugular venous pressure
K-nail	Küntscher nail
kPa	kilopascal
KUB	kidneys, ureter, bladder (X-ray)
K-wire	Kirschner wire
L	litre(s)
LA	local anaesthetic/left atrium
LABA	long-acting $\beta$ -agonist
LACS	lacunar circulation stroke
LAD	left axis deviation/left anterior descending
LAMA	long-acting muscarinic agonist
LBBB	left bundle branch block
LDH	lactate dehydrogenase
LDL	low-density lipoprotein
LETB	Local Education and Training Board
LFT	liver function test
LH	luteinizing hormone
LHRH	luteinizing hormone-releasing hormone
LIF	left iliac fossa
LMA	laryngeal mask airway
LMN	lower motor neuron
LMP	last menstrual period

LMWH	low-molecular-weight heparin
LN	lymph node
LØ	lymphocyte
LOC	loss of consciousness
LP	lumbar puncture
LRTI	lower respiratory tract infection
LSCS	lower segment Caesarean section
LTFT	less than full-time training
LTOT	long-term oxygen therapy
LUQ	left upper quadrant
LVEF	left ventricular ejection fraction
LVF	left ventricular failure/left ventricular function
LVH	left ventricular hypertrophy
MAOI	monoamine oxidase inhibitor
mane	in the morning
MAP	mean arterial pressure
M,C+S	microscopy, culture, and sensitivity
MCP(J)	metacarpal phalangeal (joint)
MCR	mineralocorticoid receptor
MCV	mean cell volume
MDR	multi-drug resistant
MDT	multidisciplinary team
MDU	Medical Defence Union
ME	myalgic encephalitis
MEWS	Modified Early Warning Score
mg	milligram(s)
MI	myocardial infarction
min	minute(s)
mL	millilitre(s)
MMC	Modernising Medical Careers
mmH <sub>2</sub> O	millimetres of water
mmHg	millimetres of mercury
MMR	measles, mumps, and rubella
MMSE	Mini-Mental State Examination
MND	motor neuron disease
MPS	Medical Protection Society
MR	mitral regurgitation/modified release/magnetic resonance
MRA	mineralocorticoid receptor antagonist
MRCP	magnetic resonance cholangiopancreatography
MRI	magnetic resonance imaging
MRSA	meticillin-resistant <i>Staphylococcus aureus</i>

MS	multiple sclerosis/mitral stenosis
MST	morphine sulfate
MSU	mid-stream urine
MTPJ	metatarsal phalangeal joint
mth	month(s)
MVR	mitral valve replacement
N+V	nausea and vomiting
NAD	nothing abnormal detected
NAI	non-accidental injury
NBM	nil by mouth
NEB	by nebulizer
NEWS2	National Early Warning Score
NG	nasogastric
NHS	National Health Service
NHSI	NHS improvement
NICE	National Institute for Health and Care Excellence
NICU	neonatal intensive care unit
NJ	nasojejunal
NNU	neonatal unit
NØ	neutrophil
nocte	at night
NPA	nasopharyngeal aspirate
NPSA	National Patient Safety Agency
NSAID	non-steroidal anti-inflammatory drug
NSTEMI	non-ST elevation myocardial infarction
NTN	national training number
NVD	normal vaginal delivery
NYHA	New York Heart Association
O <sub>2</sub>	oxygen
OA	osteoarthritis
Obs	observations
OCD	obsessive–compulsive disorder
OCP	oral contraceptive pill
OD	<i>omni die</i> (once daily)/overdose
OGD	oesophagogastrroduodenoscopy
OHA	<i>Oxford Handbook of Anaesthesia</i>
OHAM	<i>Oxford Handbook of Acute Medicine</i>
OHCC	<i>Oxford Handbook of Critical Care</i>
OHCLI	<i>Oxford Handbook of Clinical and Laboratory Investigation</i>
OHCM	<i>Oxford Handbook of Clinical Medicine</i>
OHCS	<i>Oxford Handbook of Clinical Specialties</i>

OHEM	<i>Oxford Handbook of Emergency Medicine</i>
OHFP	<i>Oxford Handbook for the Foundation Programme</i>
OHGP	<i>Oxford Handbook of General Practice</i>
OHOG	<i>Oxford Handbook of Obstetrics and Gynaecology</i>
OM	<i>omni mane</i> (in the morning)
ON	<i>omni nocte</i> (at night)
ORIF	open reduction and internal fixation
OSA	obstructive sleep apnoea
OSCE	objective structured clinical examination
OT	occupational therapy
OTC	over the counter
P	pulse
PA	posteroanterior
PaCO <sub>2</sub>	partial pressure of arterial carbon dioxide
PACS	partial anterior circulation stroke/picture archiving and communication systems
PAD	peripheral arterial disease
PAN	polyarteritis nodosa
PaO <sub>2</sub>	partial pressure of arterial oxygen
PAT	Peer Assessment Tool
PBC	primary biliary cirrhosis
PCA	patient-controlled analgesia
pCO <sub>2</sub>	partial pressure of carbon dioxide
PCOS	polycystic ovary syndrome
PCR	polymerase chain reaction
PCT	primary care trust
PCV	packed cell volume
PD	Parkinson's disease
PDA	patent ductus arteriosus
PE	pulmonary embolism
PEA	pulseless electrical activity
PEEP	positive end-expiratory pressure
PEFR	peak expiratory flow rate
PERLA	pupils equal and reactive to light and accommodation
PET	positron emission tomography
PICU	paediatric intensive care unit
PID	pelvic inflammatory disease
PIP	peak inspiratory pressure
PIP(J)	proximal interphalangeal (joint)
PMH	past medical history
PMT	pre-menstrual tension

PND	paroxysmal nocturnal dyspnoea
PNS	peripheral nervous system
PO	<i>per os</i> (by mouth)
pO <sub>2</sub>	partial pressure of oxygen
POCS	posterior circulation stroke
PONV	postoperative nausea and vomiting
POP	plaster of Paris/progesterone-only pill
PPH	postpartum haemorrhage
PPI	proton pump inhibitor
PR	<i>per rectum</i> (by rectum)
PRHO	pre-registration house officer (old training system but still occasionally used)
PRN	<i>pro re nata</i> (as required)
PROM	premature rupture of membranes (pregnancy)
PRV	polycythaemia rubra vera
PSA	prostate-specific antigen/Prescribing Safety Assessment
PSH	past surgical history
PT	prothrombin time
PTH	parathyroid hormone
PU	passed urine/peptic ulcer
PUD	peptic ulcer disease
PUO	pyrexia of unknown origin
PV	plasma viscosity/ <i>per vagina</i> (by vagina)
PVD	peripheral vascular disease
QDS	<i>quater die sumendus</i> (four times daily)
RA	rheumatoid arthritis
RAST	radioallergosorbent test
RBBB	right bundle branch block
RBC	red blood cell
RDW	red cell distribution width
REM	rapid eye movement (sleep stage)
RF	rheumatic fever
Rh	rhesus
RhF	rheumatoid factor
RIF	right iliac fossa
ROM	range of movement
ROS	review of systems
RR	respiratory rate
RS	respiratory system
RSI	rapid sequence induction
RTA	road traffic accident

RTI	road traffic incident
RUQ	right upper quadrant
RVH	right ventricular hypertrophy
Rx	prescription
s	second(s)
SABA	short-acting $\beta$ -agonist
SAH	subarachnoid haemorrhage
SALT	speech and language therapy
SAMA	short-acting muscarinic agonist
SARS	severe acute respiratory syndrome
Sats	O <sub>2</sub> saturation
SBE	subacute bacterial endocarditis
SBP	systolic blood pressure
SC	subcutaneous
SCBU	special care baby unit
SCC	squamous cell carcinoma
SE	side effect(s)
SH	social history
SHDU	surgical high dependency unit
SHO	senior house officer (old training system but still widely used)
SIADH	syndrome of inappropriate antidiuretic hormone secretion
SIRS	systemic inflammatory response syndrome
SJS	Stevens–Johnson syndrome
SL	sublingual
SLE	systemic lupus erythematosus
SOA	swelling of ankles
SOB	short(ness) of breath
SOBAR	short of breath at rest
SOBOE	short of breath on exertion
SOL	space-occupying lesion
SpO <sub>2</sub>	oxygen saturation in peripheral blood
SpR	specialist registrar (old training system but still widely used)
SR	slow release/sinus rhythm
SSRI	selective serotonin re-uptake inhibitor
STAT	<i>statim</i> (immediately)
ST	specialty training/trainee
STD	sexually transmitted disease
STEMI	ST elevation myocardial infarction
STI	sexually transmitted infection
STOP	surgical termination of pregnancy

StR	specialty training registrar
SVC	superior vena cava
SVR	systemic vascular resistance
SVT	supraventricular tachycardia
Sx	symptoms
T1DM	type 1 diabetes mellitus
T2DM	type 2 diabetes mellitus
T <sub>3</sub>	tri-iodothyronine
T <sub>4</sub>	thyroxine
TAB	team assessment of behaviour
TACS	total anterior circulation stroke
TB	tuberculosis
TBG	thyroxine-binding globulin
TCA	tricyclic antidepressant
TDS	<i>ter die sumendus</i> (three times daily)
TEDS	thromboembolism deterrent stockings
Temp	temperature
TEN	toxic epidermal necrolysis
TENS	transcutaneous electrical nerve stimulation
TFT	thyroid function test
THR	total hip replacement
TIA	transient ischaemic attack
TIBC	total iron binding capacity
TIMI	Thrombolysis in Myocardial Infarction
TIPS	transjugular intrahepatic porto-systemic shunting
TKR	total knee replacement
TLC	total lung capacity/tender loving care
TMJ	temporomandibular joint
TNM	tumour, nodes, metastases—cancer staging
TnT	troponin T
TOE	transoesophageal echocardiogram
TPHA	treponema pallidum haemagglutination assay
TPN	total parenteral nutrition
TPR	total peripheral resistance
TSH	thyroid-stimulating hormone
TTA	to take away
TTO	to take out
TTP	thrombotic thrombocytopenic purpura
TURP	transurethral resection of prostate
TWOC	trial without catheter
Tx	treatment

u/U	units (write out 'units' when prescribing)
U+E	urea and electrolytes
UA	unstable angina
UC	ulcerative colitis
UMN	upper motor neuron
UO	urine output
URTI	upper respiratory tract infection
US(S)	ultrasound scan
UTI	urinary tract infection
UV	ultraviolet
V/Q	ventilation/perfusion scan
VA	visual acuity
VBG	venous blood gas
VC	vital capacity
VDRL	venereal disease research laboratory (test)
VE	vaginal examination/ventricular ectopic
VF	ventricular fibrillation
VMA	vanillylmandelic acid
VP shunt	ventriculoperitoneal shunt
VSD	ventriculoseptal defect
VT	ventricular tachycardia
VZV	varicella zoster virus
WB	weight bear(ing)
WBC	white blood cell
WCC	white cell count
WCT	wide complex tachycardia
WHO	World Health Organization
wk	week(s)
WPW	Wolff–Parkinson–White (syndrome)
wt	weight
X-match	crossmatch
yr	year(s)
ZN	Ziehl–Neelsen

# Introduction

Welcome to the 6th edition of the *Oxford Handbook for the Foundation Programme*—the ultimate FP doctor's survival book. It is set out differently from other books; please take 2 minutes to read how it works:

**Being a doctor** (↻ pp. 1–68) covers the non-clinical side of being a junior doctor:

- *The FP* (↻ pp. 2–11) how to get a place, what it's all about, the ePortfolio
- *Starting as an F1* (↻ pp. 12–19) essential kit, efficiency, being organized
- *Communication* (↻ pp. 22–6) breaking bad news, translators, languages
- *Quality and ethics* (↻ pp. 27–31) confidentiality, consent, capacity
- *When things go wrong* (↻ pp. 32–7) errors, incident forms, hating your job
- *Boring but important stuff* (↻ pp. 38–44) NHS structure, money, benefits
- *Your career* (↻ pp. 45–68) exams, CVs, getting ST posts, audits, research.

**Life on the wards** (↻ pp. 69–119) is the definitive guide to ward jobs; it includes advice on ward rounds, being on-call, night shifts, making referrals, and writing in the notes. A section on common forms includes TTOs and 'fit' notes. There's an important section on death—covering attitudes, palliative care, certifying, death certificates, and cremation forms as well as new material on the structure of the NHS. Ward dilemmas including nutrition, pain, death, and aggression are covered in detail, along with a section designed to help surgical juniors pick their way through the hazards of the operating theatre and manage their patients perioperatively.

**History and examination** (↻ pp. 121–63) covers these old medical school favourites, from a 'real-world' perspective, to help you rapidly identify pathology and integrate your findings into a diagnosis.

**Prescribing** (↻ pp. 165–77) and **Pharmacopoeia** (↻ pp. 179–219) cover how to prescribe, best practice, complex patients, interactions, and specific groups of drugs; commonly prescribed drugs are described in detail, with indications, contraindications, side effects, and dosing advice.

**Clinical chapters** (↻ pp. 221–538) cover common clinical and ward cover problems. They are described by symptoms because you are called to see a breathless patient, not someone having a PE:

- **Emergencies** The inside front cover of this handbook has a list of emergencies according to symptom (cardiac arrest, chest pain, seizures) with page references. These pages give step-by-step instructions to help you resuscitate and stabilize an acutely ill patient while waiting for senior help to arrive
- **Symptoms** The clinical pages are arranged by symptom; causes are shown for each symptom, along with what to ask and look for, relevant investigations, and a table showing the distinguishing features of each disease. Relevant diseases are described in the pages following each symptom
- **Diseases** If you know the disease you can look it up in the index to find the symptoms, signs, results, and correct management.

**Procedures** (➔ pp. 539–91) contains instructions on how to perform specific procedures, along with the equipment needed and contraindications.

**Interpreting results** (➔ pp. 593–625) provides a guide to understanding investigations including common patterns, the important features to note, and possible causes of abnormalities.

**Appendices** (➔ pp. 627–41) are several pages of useful information including contact numbers, growth charts, unit conversion charts, driving regulations, blank timetables, and telephone number lists.

# 10 tips on being a safe junior doctor

These tips are adapted from the National Confidential Enquiry into Patient Outcome and Death (NCEPOD) report *An Acute Problem?*<sup>1</sup> NCEPOD is an independent body which aims to improve the quality and safety of patient care. The report summarizes a survey over 1 month of admissions to UK intensive care units. The findings are now nearly two decades old, but sadly remain as relevant and current as when they were first written.

1. More attention should be paid to patients exhibiting **physiological abnormalities**. This is a marker of increased mortality risk (↩ p. 222)
2. The importance of **respiratory rate** monitoring should be highlighted. This parameter should be recorded at any point that other observations are being made (↩ p. 222)
3. Use of early warning scores can help to monitor patients and trigger appropriate escalation of care. Use them with care as they can still miss some acutely unwell patients (↩ pp. 222–3)
4. It is inappropriate for referral and acceptance to ICU to happen at junior doctor (<ST3) level (↩ pp. 224–5)
5. Training must be provided for junior doctors in the **recognition of critical illness** and the immediate management of fluid and oxygen therapy in these patients (↩ p. 226)
6. Consultants must **supervise** junior doctors more closely and should actively support juniors in the management of patients rather than only reacting to requests for help
7. Junior doctors must **seek advice** more readily. This may be from specialized teams such as outreach services or from the supervising consultant
8. Each hospital should have a track and trigger system that allows **rapid detection** of the signs of early clinical deterioration and an early and appropriate response (↩ pp. 222–3)
9. All entries in the **notes** should be dated and timed and should end with a legible name, status, and contact number (bleep or telephone) (↩ p. 76)
10. Each entry in the notes should clearly identify the name and grade of the most **senior doctor** involved in the patient episode (↩ p. 76).

The **full report** and several other NCEPOD reports are available online<sup>1</sup> and are well worth reading; there are many learning points for doctors of all grades and specialties.

<sup>1</sup> *An Acute Problem?* NCEPOD (2005) at [www.ncepod.org.uk/2005aap.html](http://www.ncepod.org.uk/2005aap.html) See also *Emergency Admissions: A journey in the right direction?* (2007) at [www.ncepod.org.uk/2007report1/Downloads/EA\\_report.pdf](http://www.ncepod.org.uk/2007report1/Downloads/EA_report.pdf), *Deaths in Acute Hospitals: Caring to the End?* (2009) at [www.ncepod.org.uk/2009dah.html](http://www.ncepod.org.uk/2009dah.html), and *Peri-operative Care: Knowing the risk* (2011) at [www.ncepod.org.uk/2011poc.html](http://www.ncepod.org.uk/2011poc.html)

## 10 tips on being a happy doctor

1. **Book your annual leave** Time off is essential; failing to take leave doesn't make you hard-working or more likely to get ahead, but making a major error due to fatigue will have repercussions for the patient and your career. Spend leave doing things you enjoy with people you like. If you have fixed leave, at least you'll get what you're owed, but swaps can be a pain and take persistence. If you have to book time off, it will usually be your responsibility to swap on-calls. You usually need to book your leave 6wk in advance and summer is always popular. Sit down early with your team and discuss leave plans
2. **Be organized** This is important but difficult when you first start as a doctor. Come in early, keep a list of useful names and numbers (there are pages in the appendices to help you with this, ↻ p. 628), and pick up hints and tips from your predecessors
3. **Smile** You cannot cure most diseases, you cannot make procedures pleasant, you cannot help the fact that you, ward staff, and patients are in the hospital, but smiling and being friendly can make all the difference. Above all else, never shout at anyone. Shouting or being insulting is unprofessional. If you have a problem, it should be addressed in private. The job rapidly becomes unpleasant if you get a reputation for being rude and reputations (good and bad) travel quickly
4. **Don't underestimate the impact of night shifts on your energy levels and health** Consider your plans before, during, and after night shifts carefully to allow sufficient time to sleep and recover. Everyone will give advice on how best to cope with night shifts, so try various approaches until you find the best routine for you
5. **Ask for senior help** Never feel you cannot ask for help, even for something you feel you 'should' know. It is always better to speak to someone senior rather than guess, even if it is in the middle of the night
6. **Check in the BNF** If you are not familiar with a drug then always check in the BNF before you give it. Trust nobody: it will be your name next to the prescription
7. **Look at the obs** Acutely ill patients nearly always have abnormal observations. Always remember to look at the respiratory rate as this is the observation most commonly ignored by junior doctors
8. **Stay calm** It is easy to panic the first time you are called to an acutely ill patient, but staying calm is important to help you think clearly about how to manage the situation. Take a deep breath, work through the 'ABC' while performing initial investigations and resuscitation (the emergency pages will guide you through this) and call someone senior
9. **Be reliable** If you say you are going to do something then do it. If you are unable to do so then let someone know—nursing staff in particular also have many things to remember and constantly reminding doctors of outstanding jobs is frustrating
10. **Prepare for the future** Medicine is competitive, you need to give yourself the best chance. Over the first 2 years you should:
  - Think about your career
  - Create a CV and portfolio
  - Get good referees and mentors
  - Participate in audit
  - Present interesting cases
  - Organize specialty taster sessions
  - Consider sitting examinations
  - Enjoy being a 'proper' doctor.

# Being a doctor

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## The Foundation Programme

 'Training is patient safety for the next 30 years.'<sup>1</sup>

### The concept

The UK Foundation Programme (FP) was established in 2005 as part of a series of reforms to UK medical training, known collectively as Modernising Medical Careers (MMC). The intention was to provide uniform, 2yr structured training for all newly qualified doctors working in the UK, to build upon medical school education and form the basis for subsequent training. Sadly, much of the introduction of MMC was a shambles. In relative terms the FP fared well, although the early days were not without problems and in 2010 it was still criticized for lacking a clearly articulated purpose.<sup>2</sup> Two reports gave a number of recommendations that were taken forward through a series of workstreams that were reviewed in 2015.<sup>3</sup> Though the FP continues to evolve, this review did find progress in a number of important domains, including trainee empowerment, assessment outcomes, and the variety of rotations available to trainees. Nationally, new curricula were introduced in 2016 and 2021. This process is an iterative one that trainees are encouraged to get involved in. Significant changes have been afoot since the 2013 'Shape of Training report' ( Box 1.18). Essentially the FP aims to train doctors to a state of pluripotency from which they can differentiate into any UK training programme.

### The structure

The FP lasts 2yr, and, in >90% of programmes, each year involves rotating through three different 4mth placements, which may be in hospital or community-based medicine. Despite a shift towards the management of chronic disease in the community, much of the FP emphasis remains on the acute care of adult patients in a hospital setting. At the start of the FP, you will be required to hold 'provisional registration' with the General Medical Council (GMC) (Table 1.1). Strictly speaking, the first FP year (F1) represents the final year of basic medical education and your medical school remains responsible for signing you off; this responsibility may be delegated for those doctors completing F1 in a different region from their medical school. After successfully completing F1, you will be issued with a Certificate of Experience, which entitles you to apply for full GMC registration and start F2. Successful completion of F2 results in the awarding of a Foundation Programme Certificate of Completion (FPCC) which opens the door to higher specialty, core, or GP training ( p. 45).

<sup>1</sup> Temple J. *Time for Training: A Review of the Impact of the European Working Time Directive on the Quality of Training*. London: Medical Education England, 2010.

<sup>2</sup> Professor John Collins, 'Foundation for Excellence: An Evaluation of the Foundation Programme', available at <http://cmec.info/wp-content/uploads/2014/07/Foundation-for-Excellence-An-evaluation-of-The-Foundation-Programme-The-Collins-Report.pdf>

<sup>3</sup> Health Education England, 'Better Training, Better Care', available at <https://www.hee.nhs.uk/our-work/better-training-better-care>

## The Foundation Programme Office

All administrative aspects of the FP are overseen by the UK Foundation Programme Office (UKFPO) which provides many important documents at [www.foundationprogramme.nhs.uk](http://www.foundationprogramme.nhs.uk), including the application handbooks, reference guide (the 'rules'), curriculum (list of educational objectives), and advice for overseas applicants.

**Table 1.1** *The FP hierarchy*

The GMC	Overall responsibility for setting the standards for medical practice and training in the UK
The UKFPO	Manages applications to and delivery of the FP
Local Education Training Boards (LETBs)	Part of the Department of Health's 'Health Education England'. They deliver the FP regionally & support financial costs of training & trainee salaries (➡ p. 38)
Foundation schools	Deliver the FP locally. May overlap with the LETB
Director of postgraduate education	Responsible for overseeing all medical training in a hospital (➡ p. 39)
Foundation training programme director (FTPD)	Responsible for the management and quality control of the FP in a hospital. Oversees the panel that reviews your annual progress. Responsible for signing off on successful completion of each Foundation year
Acute trust/Local Education Provider	Acute trusts provide the employment contract, salary, and HR for Foundation doctors. For community placements (eg GP practice), the responsibility for education passes to the 'Local Education Provider', but the contract of employment remains with the acute trust. There can be tension between the needs of the acute trusts (doctors on the wards delivering services to patients) & some FP educational requirements (➡ p. 61)
Educational supervisor	Doctor responsible for the training of individual Foundation doctors. Ideally for a whole year but occasionally for a single attachment. Will review your progress regularly, check that your assessments are up to date, and help you plan your career
Clinical supervisors	Doctors who supervise your learning and training, day to day, for each attachment. In some posts (often your first) the roles of the educational supervisor and clinical supervisor may be merged
Specialised FP supervisor	Those undertaking a Specialised FP (which replace Academic FPs, and can include a designated period of research) will be assigned an individual to oversee academic work and provide feedback
Local administrator	Individuals in each trust and Foundation school who help with FP registration and administration
FP representative	Leadership position(s) where self-selecting/willing trainees voluntarily facilitate two-way feedback between their peers and their local or regional educationalists
The Foundation doctor	This is you! You are an adult learner with responsibilities for your own learning. You are expected to integrate with the educational processes of the FP, including providing feedback on the programme to your supervisors, trainee representatives, and via local and national training surveys

## Applying to the Foundation Programme

All applications to the FP are through the online FP Application System (FPAS) at [www.foundationprogramme.nhs.uk](http://www.foundationprogramme.nhs.uk). There are several stages (Boxes 1.1 and 1.2).

**Registration for FPAS** You will need to be nominated. For final year medical students in the UK your medical school will do this. Those applying from outside the UK should contact the UKFPO Eligibility Office in good time to allow checks to take place.<sup>4</sup> Before nomination you can register for an account but cannot access the application form.

**Completing the application form** Within a designated window each year (usually in early September), nominated applicants will be able to access the application form. This has a number of parts:

**Personal** Name, contact details, DoB, and relevant personal health info.

**Eligibility** GMC status, right to work in the UK, and immigration status.

**Fitness** Criminal convictions and fitness to practise proceedings.

**Referee** Details of one referee. Their knowledge of your performance is more important than their seniority because they contribute to your pre-employment checks (re suitability for work) rather than your actual programme allocation.

**Competences** Educational qualifications ± postgraduate experience.

**Equality** To monitor NHS recruitment practices.

**Declarations** You are required to sign various declarations of probity.

**Foundation Priority Programme** You will be asked if you wish to apply to a priority programme (➡ p. 6).

**Specialised Foundation Programme** You will be asked if you wish to apply to one of the specialized programmes, which replace Academic Foundation posts. Selection and application procedures are determined locally for these posts.

**Linked applications** Two applicants can join their applications (➡ pp. 6–7).

**Foundation school preferences** You will be asked to rank all Foundation schools in order of preference. Tables showing vacancies and competition ratios for previous years are available on the UKFPO website but these do tend to vary between years (Box 1.3).

**Allocation process** The Preference Informed Allocation process, introduced from 2023, entails each applicant being given a computer-generated rank. This is then used to allocate applicants a post based on their preferences. This system is designed to match as many applicants as possible to their first-choice preference.

<sup>4</sup> These include evidence of the right to work in the UK; of having taken medical training solely in English or having a sufficiently high international English language testing system/occupational English test score; of complying with GMC requirements for provisional registration which may include passing the Professional and Linguistic Assessments Board test; a statement of support from your medical school dean; academic transcripts; proof of medical qualifications; and a practical clinical assessment exam. You should allow sufficient time for this complex process of verification.

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## Body mass index (BMI)

### BMI calculation

BMI = weight (kg)/height<sup>2</sup> (m<sup>2</sup>)

eg: 77kg, 1.83m

$77/(1.83 \times 1.83) = 23$  (normal)

### BMI

<18.5

18.5–24.9

25.0–29.9

≥30

≥40

### Weight status

Underweight

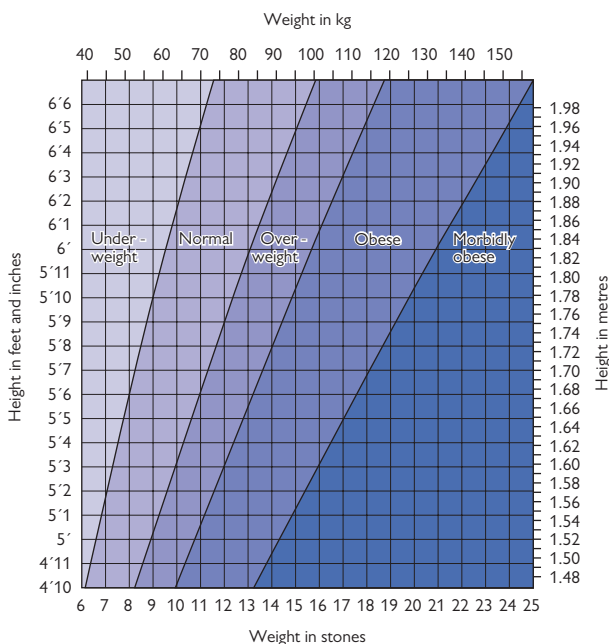
Normal

Overweight

Obese

Morbidly obese

### Body mass index chart for adults



**Fig. A1** Body mass index ranges. Plotting weight against height helps categorize weight status.

- anaemia 286t, 414–19  
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