

# **College of Paramedics Conference**

## **9th Meeting of the International Roundtable on Community Paramedicine**

**Competence Assessment of Specialist Paramedics  
The Medical Model**

**Dr John V Howard FRCGP FRCP**

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# **The Paramedic Practitioner Programme 2006 - 2013**

South East Coast Ambulance NHS Trust

Kent Surrey Sussex PG GP Deanery

South East Coast Strategic Health Authority

# Evidence

## BMJ November 2007

Editorials represent the opinions of the authors and not necessarily those of the *BMJ* or BMA

For the full versions of these articles see [bmj.com](http://bmj.com)

### EDITORIALS

#### Paramedic practitioners and emergency admissions

Evidence suggests a positive effect, but future programmes need rigorous assessment before being expanded



Research, p 919

Malcolm Woollard professor in prehospital and emergency care, Coventry University, Richard Crossman Building, Coventry CV1 5FB  
M.woollard@coventry.ac.uk

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In this week's *BMJ*, Mason and colleagues report a cluster randomised controlled trial examining the effects of a "paramedic practitioner" service in a UK urban setting.<sup>1</sup> The trial focused on managing older patients without life threatening conditions who accessed the emergency ambulance service. It aimed to increase the proportion receiving care in the community and reduce admissions to the emergency department. It found that people in the intervention group were less likely to attend the emergency department (relative risk 0.72, 95% confidence interval 0.68 to 0.75) or need hospital admission within 28 days (0.87, 0.81 to 0.94). However, use of secondary care services after the initial episode increased (1.21, 1.06 to 1.38).

Paramedic practitioners undertook a three week theory course followed by 45 days of supervised clinical experience. Their scope of practice was restricted to common presentations considered unlikely to result in serious injury, including falls, lacerations, epistaxis, and minor burns. Skills acquired beyond those normally practised by UK paramedics included wound care and suturing; examination of the joints; examination of the neurological, cardiovascular, respiratory, and ear, nose, and throat systems; social needs assessment; administration of antibiotics, simple analgesics, and tetanus toxoid; and referral of patients for radiography or to a general practitioner, district nurse, or social services.

As long ago as 1994, it was reported that services that deputised for general practitioners often could not cope with the demand for out of hours consultations.<sup>2</sup> In addi-

tion the International Roundtable on Community Paramedicine ([www.ircp.info](http://www.ircp.info)).

Emergency care practitioners were introduced with the aim of reducing admissions to the emergency department for a broader range of patients than those discussed by Mason and colleagues.<sup>3</sup> A pilot programme began in the Warwickshire Ambulance Service in 2002, with the support of Coventry University and the changing workforce programme. It was subsequently expanded to encompass 17 pilot sites.<sup>4</sup> Although this was intended to promote a standardised 15 week university based course, with all practitioners having a similar scope of practice, several centres opted for alternative approaches, including that described by Mason and colleagues.<sup>5</sup> Most emergency care practitioners are paramedics working in ambulance services, but some are nurses or physiotherapists, and most work in out of hours and primary care services or emergency departments. Similar paramedic based programmes in other countries include those of the Queensland and New South Wales Ambulance Services in Australia.

Few high quality evaluations of the emergency care practitioner scheme and other extended scope paramedic practitioner schemes have been published to date. A changing workforce programme review reported that emergency care practitioners could reduce admissions to emergency departments by 100 to 358 patients each year in rural and urban settings, respectively. For a training investment of £24250 (£34800; \$50000), this would save the National Health Service £62000-£72000 each year for each

# BMJ

### RESEARCH

#### Effectiveness of paramedic practitioners in attending 999 calls from elderly people in the community: cluster randomised controlled trial

Suzanne Mason, reader in emergency medicine,<sup>1</sup> Emma Knowles, research fellow,<sup>1</sup> Brigitte Colwell, research associate,<sup>1</sup> Simon Dixon, senior lecturer,<sup>3</sup> Jim Wardrope, consultant in emergency medicine,<sup>2</sup> Robert Gorringe, lead emergency care practitioner,<sup>4</sup> Helen Snooks, professor of health services research,<sup>5</sup> Julie Perrin, nurse consultant in emergency medicine,<sup>2</sup> Jon Nicholl, professor<sup>1</sup>

#### ABSTRACT

**Objective** To evaluate the benefits of paramedic practitioners assessing and, when possible, treating older people in the community after minor injury or illness. Paramedic practitioners have been trained with extended skills to assess, treat, and discharge older patients with minor acute conditions in the community. **Design** Cluster randomised controlled trial involving 56 clusters. Weeks were randomised to the paramedic practitioner service being active (intervention) or inactive (control) when the standard 999 service was available. **Setting** A large urban area in England.

**Participants** 3018 patients aged over 60 who called the emergency services (n=1549 intervention, n=1469 control).

**Main outcome measures** Emergency department attendance or hospital admission between 0 and 28 days; interval from time of call to time of discharge; patients' satisfaction with the service received. **Results** Overall, patients in the intervention group were less likely to attend an emergency department (relative risk 0.72, 95% confidence interval 0.68 to 0.75) or require hospital admission within 28 days (0.87, 0.81 to 0.94) and experienced a shorter total episode time (235 v

treatment skills for paramedics, has been recommended to help manage ever increasing demands for health care.<sup>2</sup> Current evidence concerning safety, effectiveness, and costs to support these changes in practice, however, is lacking.<sup>3</sup>

Paramedics can be trained to assess and treat or refer patients with a range of conditions such as wounds,<sup>4</sup> hypoglycaemia,<sup>5</sup> falls, and epistaxis.<sup>6</sup> The merits of a pre-hospital practitioner working in certain geographical areas such as rural locations in fulfilling a broader public health and primary care outreach role in the local community have also been discussed.<sup>7</sup> Other authors, however, have cast doubt on the safety, feasibility, and cost effectiveness of paramedics assessing and treating apparently minor problems in the community.<sup>8,9</sup>

Elderly people make 12-21% of visits to emergency departments. Many of them attend after an accident or fall.<sup>10,11</sup> Recently completed studies suggest that an alternative approach to an emergency ambulance response would have the greatest chance of improving patients' experience, as well as potentially helping to reduce demand, if it was targeted at elderly patients with minor complaints.<sup>12,13</sup>

<sup>1</sup>Health Services Research, School of Health and Related Research, University of Sheffield, Sheffield S1 4DA

<sup>2</sup>Department of Emergency Medicine, Sheffield Teaching Hospitals Trust, Sheffield S5 7AU

<sup>3</sup>Health Economics and Decision Science, School of Health and Related Research, University of Sheffield, Sheffield

<sup>4</sup>South Yorkshire Ambulance Service, Rotherham S60 2BQ

<sup>5</sup>Centre for Health Information Research and Evaluation, School of Medicine, Swinburn University, Swinburn S62 0PP

Correspondence to S Mason [s.mason@sheffield.ac.uk](mailto:s.mason@sheffield.ac.uk)

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# Pilot of Paramedic Practitioners 2006 - 2007

## Townhill Medical Practice, Caterham, Surrey





# Inter-professional training of Primary Care Health Professionals



# Evaluation

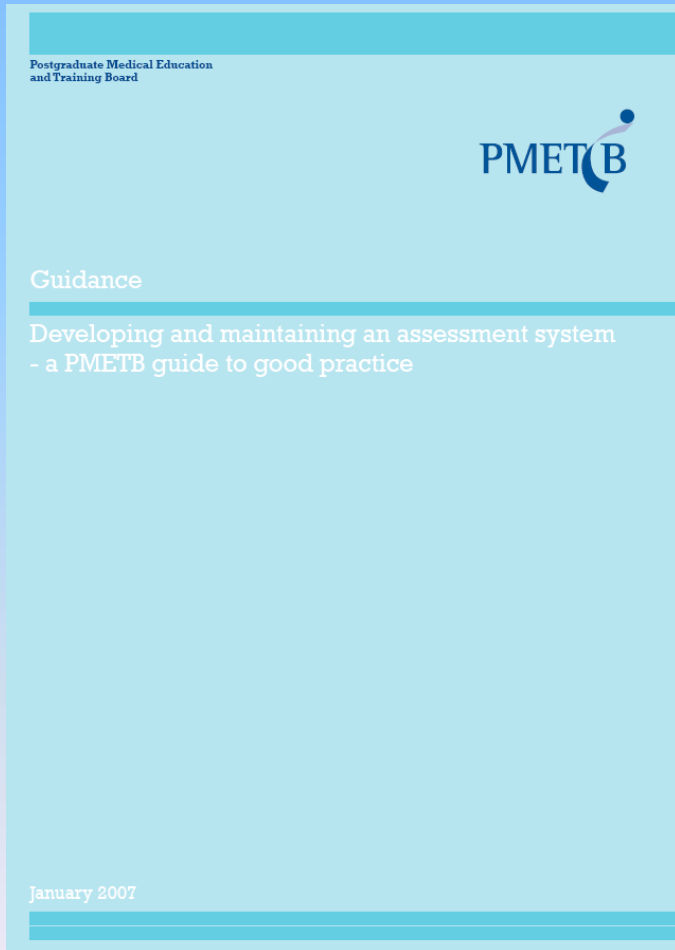
## **Academic needs**

- Curriculum development
- Teaching and learning environment
- Faculty development
- 'Fit for purpose' Assessment development

## **Workforce needs**

- Career pathway – College of Paramedic 'Specialist Paramedic'
- Changes in volume and pattern of 999 demand
- Congruence with DoH NHS strategy

# Unifying Medical Assessment 2005 - 2008



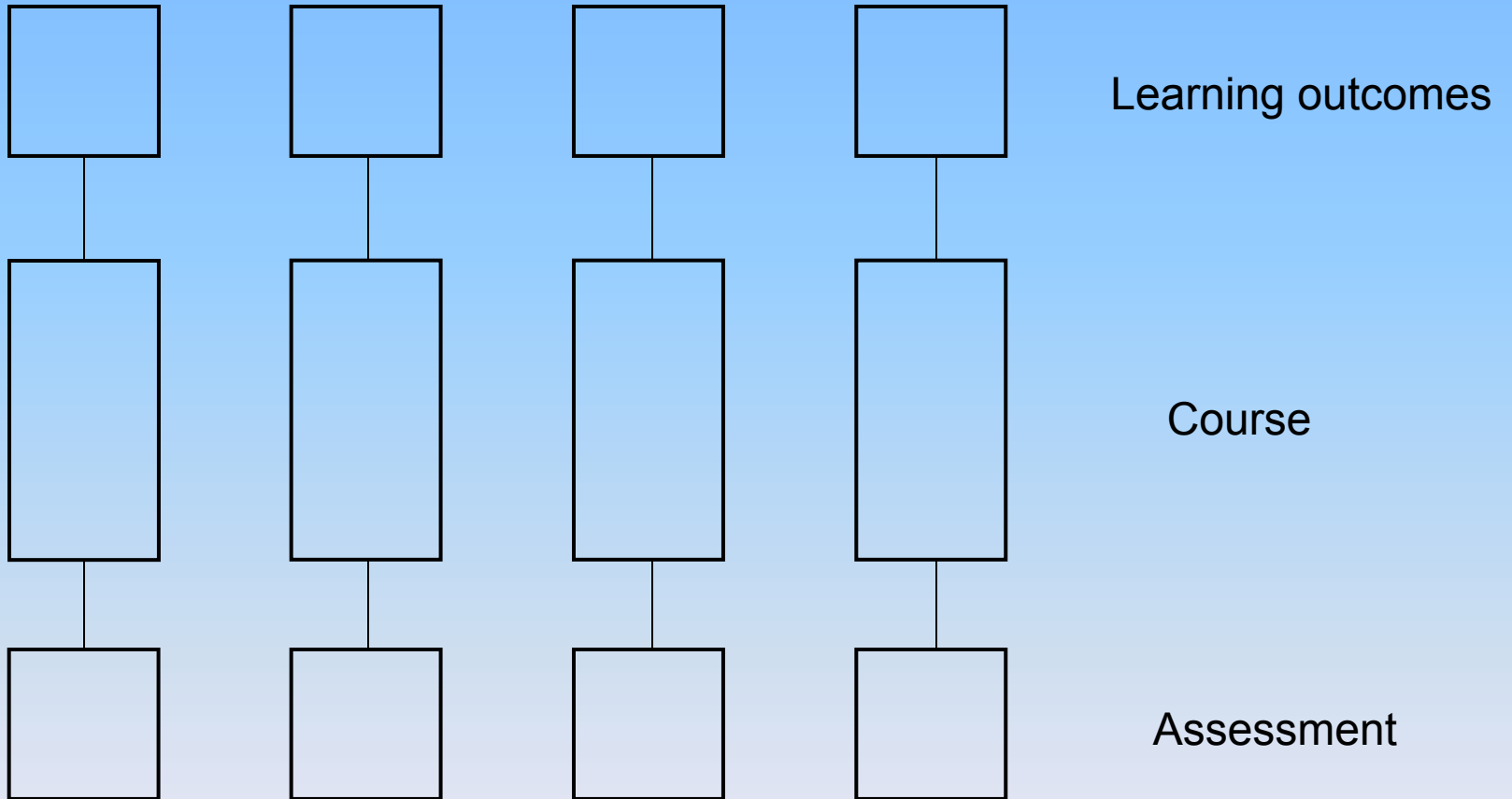
Postgraduate Medical Education and Training Board established to develop a single, unifying framework for postgraduate medical education and training

Current best practice for medical assessment

All medical Royal Colleges membership exams

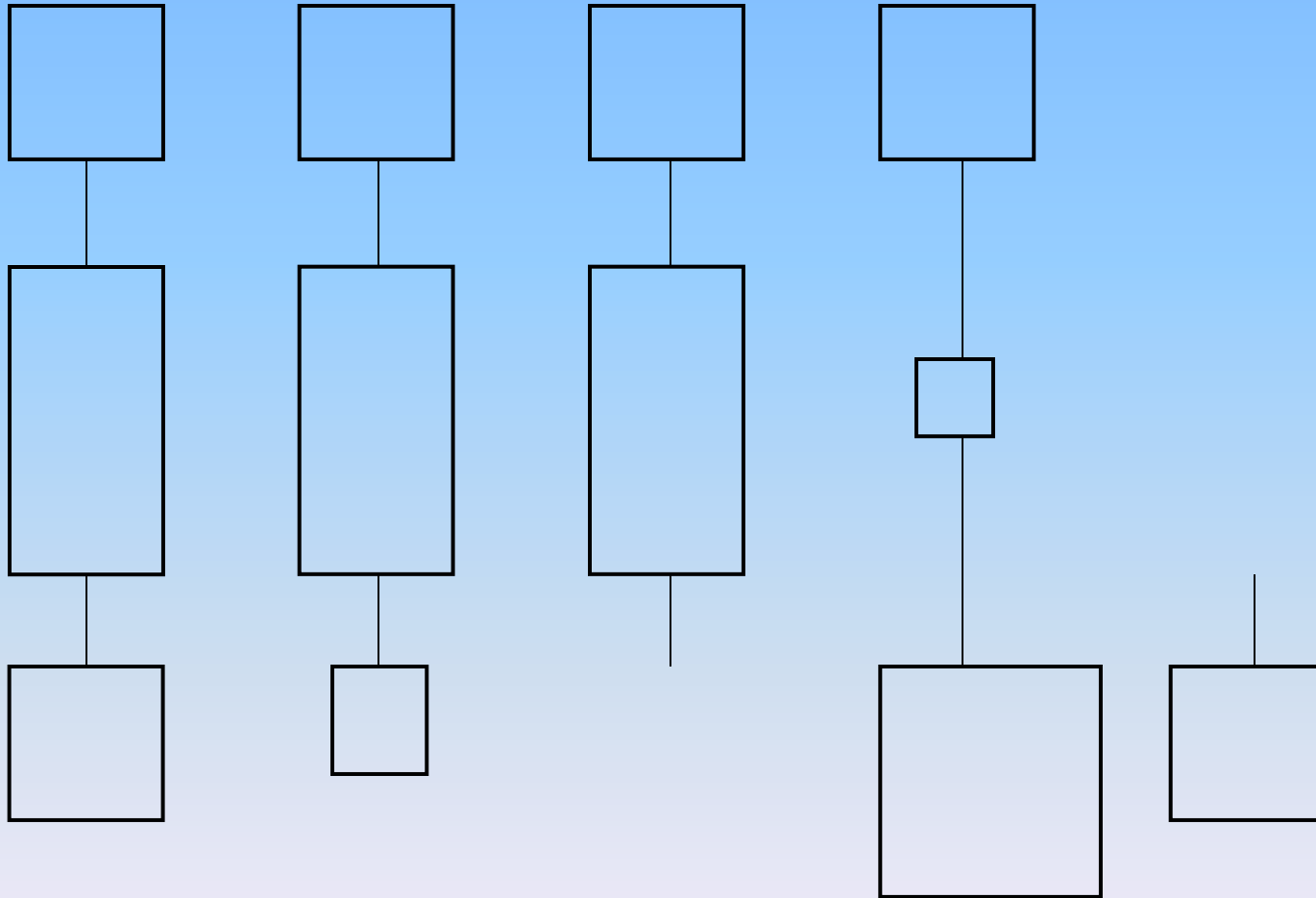
Merged with General Medical Council April 2010

# The Ideal Curriculum



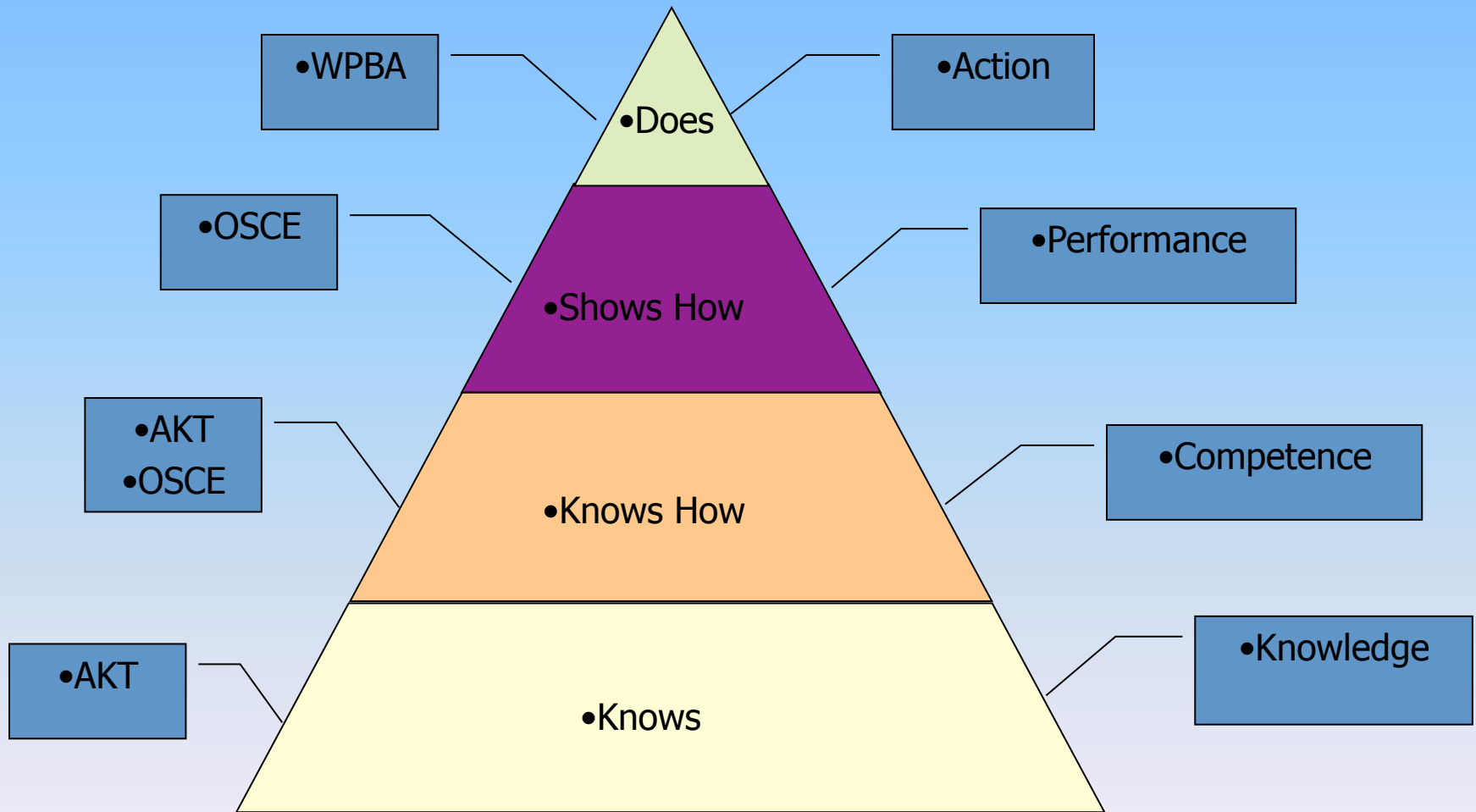


# The Real Curriculum



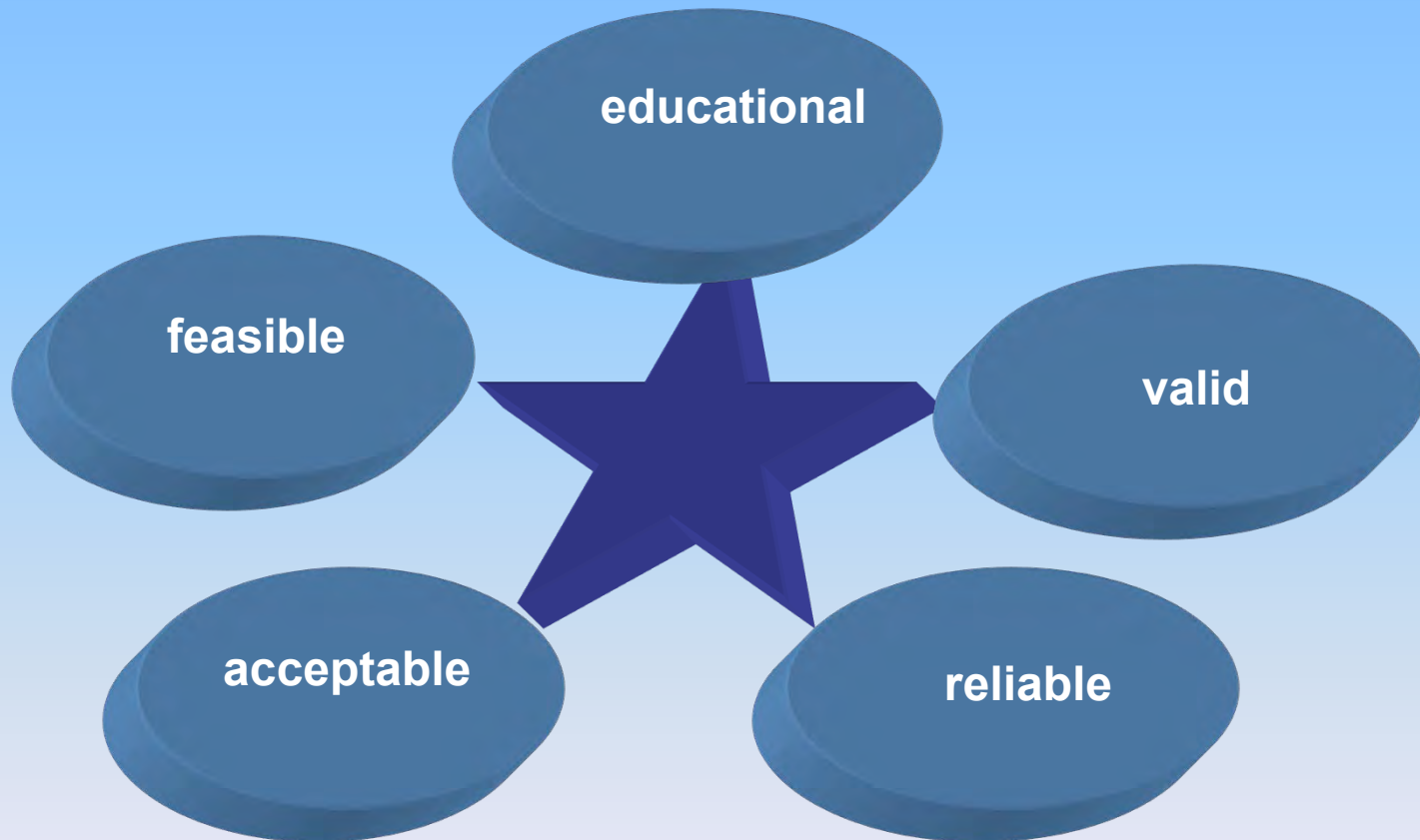
# Moving up Miller's Pyramid

Miller GE. The assessment of clinical skills/competence/performance. *Acad Med* 1990;S63-7.



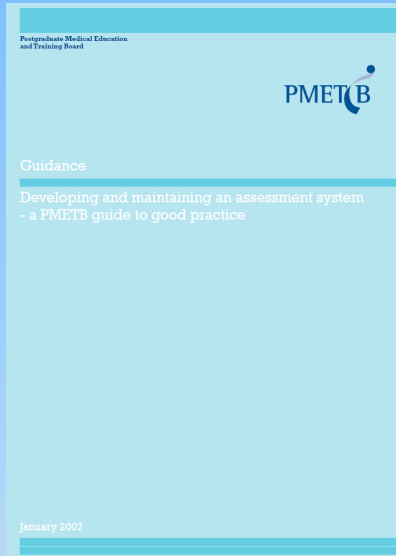
# Differences in Assessment Package 'Utilities' of Cees van der Vleuten

*Adv in Health Sci Educ 1996; 1:41-67*



# Fit for purpose assessment of the SP

## Introducing the medical [RCGP] model



- **Applied Knowledge Test**
  - 150 Single Best Answer questions mapped to blueprint
- **Clinical Skills Assessment**
  - 14 x 10 minute OSCE stations mapped to blueprint
- **Workplace Based Assessments during GP placements**
  - Case-based Discussion
  - Consultation Observation Tool
  - Multi-Source Feedback
  - Patient Satisfaction Questionnaire
  - Direct Observation of Procedures
  - Clinical Supervisors Report

# Blueprinting

- Content of the **assessment** should align with the **learning outcomes** of the course
- **Blueprinting**
  - allows mapping of test items to specific learning outcomes
  - ensures adequate sampling across subject area and skill domains





# Writing MCP questions in Single Best Answer format



# Diagnosis : Endocrine

## Scenario

You are called to the home of a 61 year old woman by concerned neighbours. She has been feeling unwell for a while but has not seen her GP. You note a restless patient who appears to be mentally excitable. She has a HR of 120 bpm with PVCs noted on the 12 lead ECG. On questioning she reports sweating, weight loss and difficulty sleeping.

## Lead in

What endocrine disorder would cause these signs?

## Options

A	Diabetes mellitus
B	Chronic adrenal cortex insufficiency (Addison's disease)
C	Hypersecretion of glucocorticoids (Cushing's syndrome)
D	Hyperthyroidism
E	Hypothyroidism

**Answer: D**

**Difficulty index Easy**

# Clinical science : CVS

## Scenario

You are called to the home of an 82 year old woman who has had an episode of unconsciousness. She is fully recovered on your arrival and as part of your assessment you carry out cardiovascular checks. You auscultate her heart in the four recommended areas and hear normal sounds S1 & S2.

## Lead in

What valves of the heart closing, do the sounds S2 relate to?

## Options

A	Aortic valve and pulmonary valve
B	Aortic valve and tricuspid valve
C	Mitral valve and pulmonary valve
D	Tricuspid valve and mitral valve
E	Tricuspid valve and pulmonary valve

**Answer: A**

**Difficulty index Medium**

# Physical examination : GUM

## Scenario

Whilst seeing a 39 year old woman with abdominal pain at home. You decide to carry out a pregnancy test, which shows a positive bHCG.

## Lead in

Apart from pregnancy, what other circumstances could give a positive test?

## Options

A	Endometriosis
B	Infertility treatment
C	Menstruation
D	Polycystic ovaries
E	Urinary tract infection

**Answer: B**

**Difficulty index Hard**

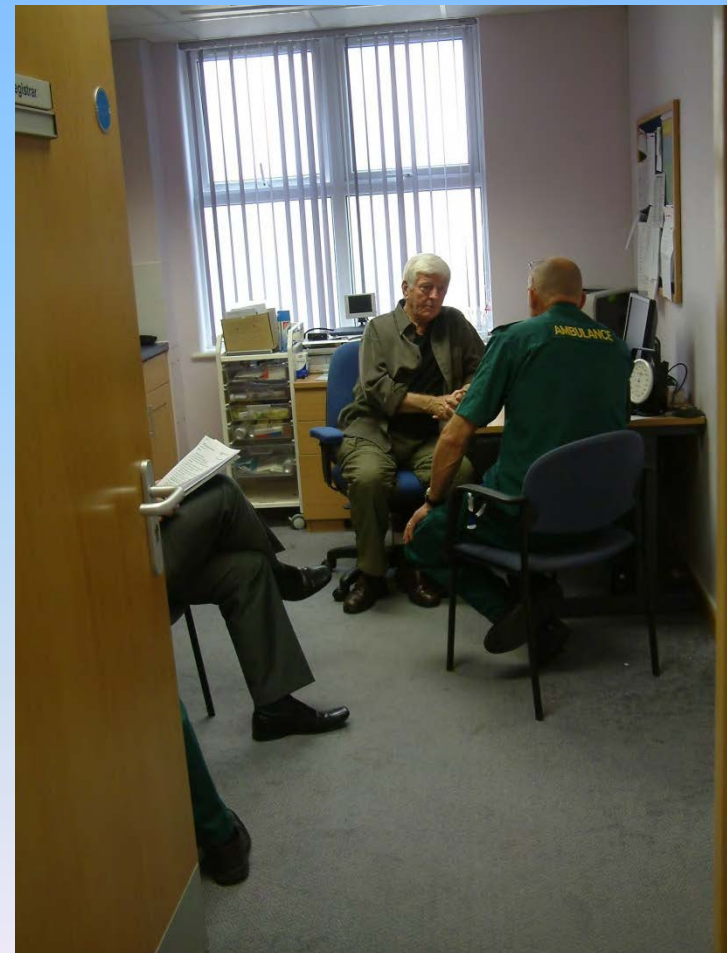


# PP OSCE Blueprint

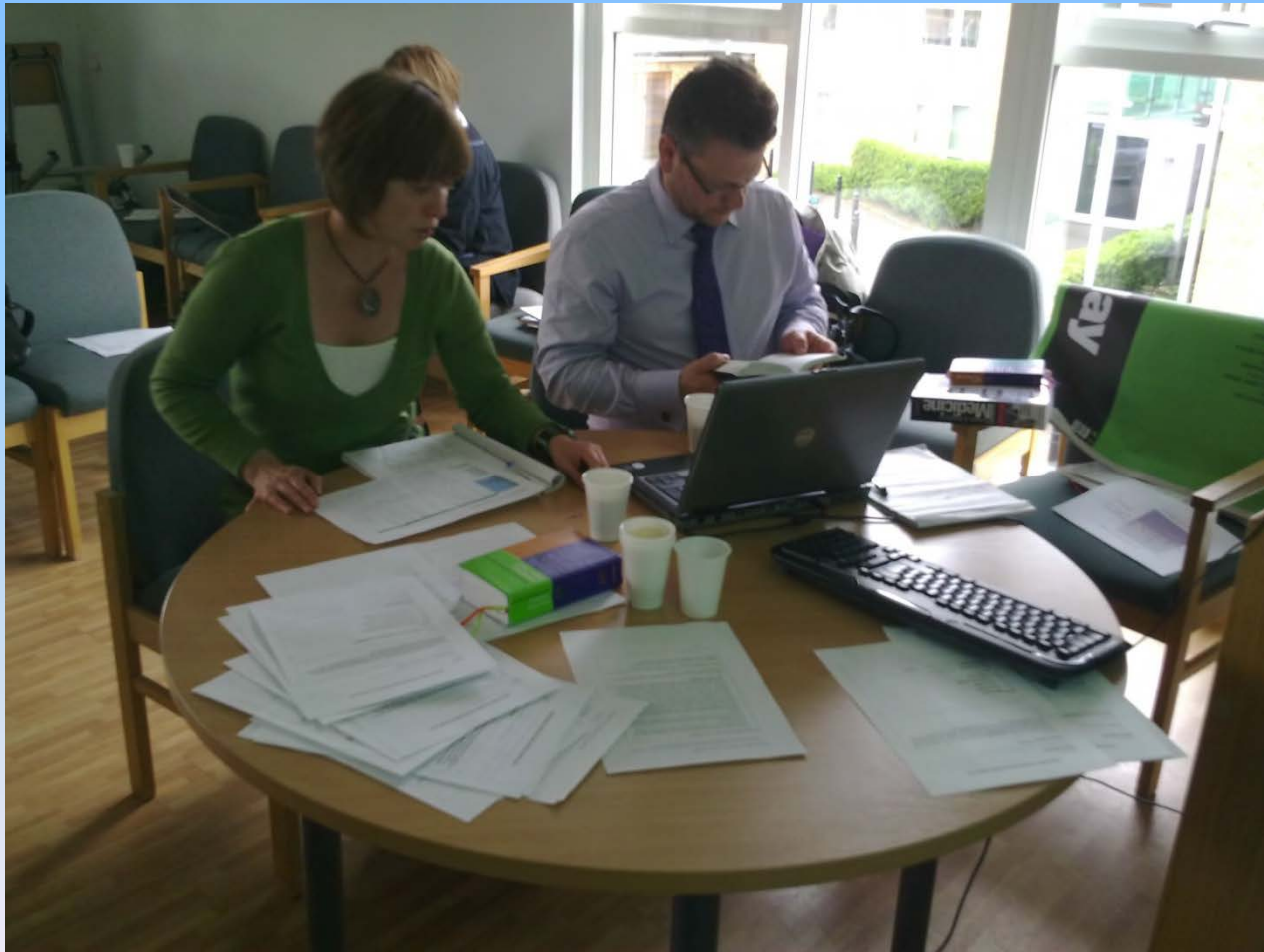
	History-taking/ Assessment	Examination	Procedure	Explaining/ giving information	Management/ Therapeutics
Cardiovascular					
Respiratory					
Gastrointestinal					
Endocrine					
Neurology					
ENT					
Specialities e.g. Skins/eyes					
Infectious diseases/ infect					
Musculoskeletal					
Renal/ urology/O&G					
Mental health					
Other (MLE)					

# OSCE : Fall with UTI

- **SECamb**
- **Paramedic Practitioner Assessment**
- 
- 
- **Practice OSCE**
- 
- **Candidate Instructions**
- 
- **This is a 10-minute station.**
- 
- You are a Paramedic Practitioner responding to a 999 call from a 72-year-old man who has fallen at home today.
- 
- **Tasks:**
- Please take a focused and relevant history from this patient
- After you have completed your history, you will be given the patient's base line observations and results of further investigations
- 
- **At 8 minutes, you will be asked:**
- Your impression of the most likely cause of this patient's fall
- To explain your treatment and management plan to your patient



# Writing OSCE stations



# OSCE station planning



# PP OSCE Blueprint 2011

	History Taking	Examination	Procedure	Explaining*	Management*	Therapeutics	Writers	Helpers
Cardiovascular			Atrial fibrillation -ecg, doesn't need admission				8	
	Cellulitis/DVT	Cellulitis			Cellulitis		11	Sal
		Vasovaqal attack		Vasovaqal attack			11	
Respiratory				Asthma	Inhaler and spacer		14	
	CAP-CRB	CAP-CRB			CAP-CRB	CAP-CRB	5	Paul
	COPD	COPD			COPD		7	
GI	Constipation			Constipation	Constipation		2	Stuart
		? Appendix			? Appendix		6	Paul
Endocrine	Hyperthyroid			Hyperthyroid	Hyperthyroid		4	Stuart
	DKA				DKA		10	
Neurology	New falls				New falls		12	Sal
		Head injury - Cranial nerves			Head injury - Cranial nerves		7	
ENT	Acute sinusitis			Acute sinusitis - headache			6	Paul
	Ear Pain	Ear Pain			Ear Pain	Ear Pain	8	
Specialities*			Wound care 1				1	
	Epistaxis			Epistaxis	Epistaxis		13	
			wound A&S	wound A&S			3	
	Eye - sub conj haem			Eye - sub conj haem	Eye - sub conj haem		13	
Infections	Cellulitis?DVT	Cellulitis			Cellulitis		11	Sal
	Infectious Presentation		Infectious Presentation		Infectious Presentation		10	
MSS		Back pain			Back pain	Back pain	7	
		Ankle		Ankle	Ankle	Ankle	12	Sal
	Chest pain - minor injury after RTA			Chest pain - minor injury after RTA			5	Paul
Renal/Urology	UTI falls				UTI falls		1	
	Pyelonephritis	Pyelonephritis			Pyelonephritis		2	Stuart
	Dysuria-STD-M			Dysuria-STD-M	Dysuria-STD-M		14	
Mental Health	Suicide risk			Suicide risk	Suicide risk		1	
	Acopia		Acopia		Acopia		1	
	Elder Abuse				Elder Abuse		3	

\*Specialties = Skin, Eyes, GUM & Haematology

Explanation = Giving information

Management = Risk Management



# Standards

## 'Setting the passmark'

- **Criterion-referenced Assessment**
  - compares an individual's performance with some stated criterion of competence
  - standard is determined before exam is conducted rather than waiting for all the results to be in before doing so
  - **Using an Angoff exercise before the exams**

Angoff WB. American Council on Education.1971: 508-600

# Paramedic Practitioner OSCE Exam: SGUL / RCGP external assessment 2010



# Paramedic Practitioner OSCE Exam: SGUL / RCGP external assessment 2011



# Paramedic Practitioner OSCE Exam 2011

## The Examination Development Team





# OSCE 2012 : St George's Hospital

**Examiner briefing**

**What the candidate finds**



Demonstration OSCE video, available at [http://youtu.be/3UpLyhAk7\\_w](http://youtu.be/3UpLyhAk7_w)

# Post exam outcomes

## **Examination review**

- Performance of questions
- Performance of candidates
- Performance of examiners
  
- Identify gaps in curriculum
- Identify gaps in teaching and learning
- Plan the 6 monthly exams

## **Candidate support**

- Personal feedback
- Remedial support
- Re-sit opportunities
  
- Clinical management plans
- Patient group directions
- Improve statutory CPD
- Strengthen Appraisal

# **The Specialist Practitioner Exam**

## **Now available to other Ambulance Trusts**

**QA**

RCGP External Examiner

College of Paramedics

St George's Hospital Medical School

**AKT** at various sites in Kent, Surrey and Sussex

And locally delivered on site

**OSCE** at St George's Hospital Medical School

**Contact** Stuart Rutland PP Exam Chief Examination Officer

[Stuart.Rutland@secamb.nhs.uk](mailto:Stuart.Rutland@secamb.nhs.uk)

# Workplace based assessment

## The Reality in Primary Care

Undifferentiated presentations

Schon's 'Swampy lowlands'

Not often clear cut

and unambiguous





# Donald Schön

‘Professional practice has been described as a swamp, an area of lowland where messy confusing problems mean that the high ground of evidence and protocols don’t strictly apply’

Educating the Reflective Practitioner  
1987

# The Workplace Based Assessments

## **'Formal WPBA':**

In GP Training Practice Placements

1. Consultation Observation Tool
2. Case Based Discussion
3. Directly Observed Procedures
4. Mini Clinical Experiences
5. Multi Source Feedback
6. Patient Satisfaction  
Questionnaire
7. Clinical Supervisor Report

## **"Naturally Occurring Evidence"**

In other contexts

Audits

Significant Event Analysis

Journal Clubs

Projects

Research

Log Entries

**"To balance and complement  
formal WPBA"**

# **The GP Placement Content**

## **In Partnership with KSS PG GP Deanery**

- **Acute presentations in GP in Primary Care:**
  - working in different environments.
  - clinical assessment, management,
  - communication, continuity of care.
  - risk assessment / management
- **Consulting skills:**
  - GP models vs traditional medical model
- **Clinical examination skills:**
  - beyond traditional paramedic training
- **Team-working in primary care teams**

# **The GP Placement Content In Partnership with KSS PG GP Deanery**

## **2**

- **Introduction of the Generalist Role**
- **Treatment skills:**
  - Minor abscess drainage, suturing, wounds
  - Appropriate management
  - ‘The paramedic as the drug’
- **Inter-professional teaching and learning**
- **Familiarity with GP IT systems**
- **Workplace based assessments**
  
- **Formal Evaluation and ongoing development**